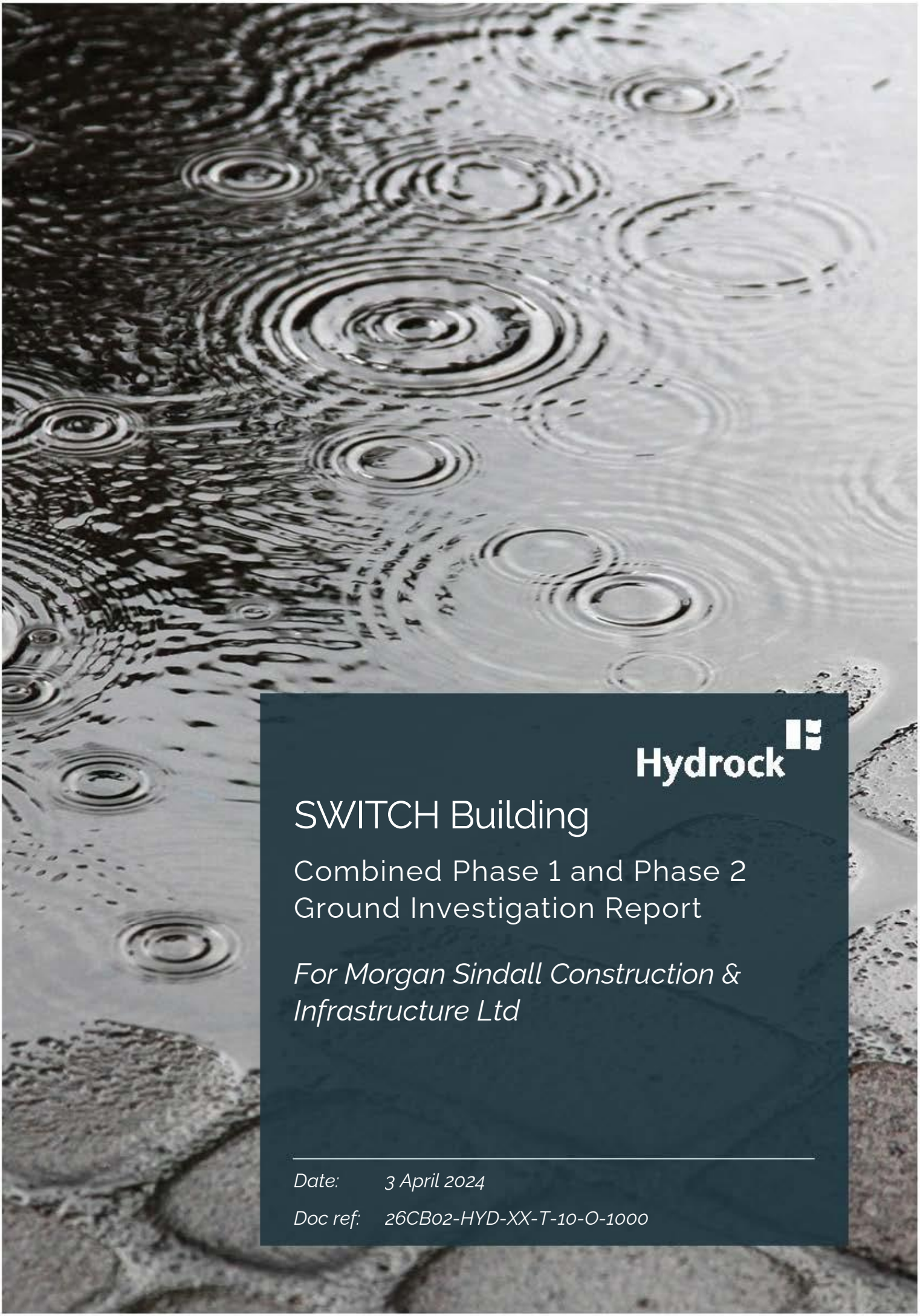

Hydrock

SWITCH Building

Combined Phase 1 and Phase 2 Ground Investigation Report

For Morgan Sindall Construction & Infrastructure Ltd

Date: *3 April 2024*

Doc ref: *26CB02-HYD-XX-T-10-O-1000*

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Executive summary

Site information and setting	
Objectives	The objectives of the Phase 1 Desk Study are to formulate a preliminary Ground Model and an Initial Conceptual Site Model of the site to identify and make a preliminary assessment of any potential geo-environmental and geotechnical risks to the proposed development. The objectives of the Phase 2 Ground Investigation are to resolve any geotechnical and geo-environmental uncertainties identified in the Phase 1 Desk Study by refining and updating the outline Ground Model, to identify any geo-environmental mitigation requirements to enable development to progress, and provide preliminary geotechnical recommendations for development design.
Client	Morgan Sindall Construction & Infrastructure Ltd.
Site name and location	South Wales Industrial Transition from Carbon Hub (SWITCH) building, Port Talbot.
Proposed development	The site development proposals are understood to comprise a carbon hub research facility for Swansea University, with areas of car parking, and soft landscaping.
Site description	The site is irregular in shape, and covers an approximate area of 2.07 hectares. The site is bordered to the north by a footpath running between the site and car parking for Port Talbot Parkway train station, The site is bound to the west by a fence line which marks the limit of the site, and to the south by Harbour Way (dual carriageway). The site is bound to the east by Cramic Way, which provides vehicle access from Harbour Way to Port Talbot Parkway station.
Desk study summary	
Topography	The site is largely level, with standing water present and is therefore poorly draining.
Hydrology	Drainage ditch - on site, orientated east west in the centre of the site. Pond - on site, in the south-east of the site. Former harbour – off site, 50m south of the site.
Site History	The site has previously featured a gasholder, chemical storage tanks and railway sidings which formed part of Port Talbot Steelworks. WSP and Andrew Scott Ltd have undertaken historic remediation at the site, which consisted of removal of hydrocarbon impacted soils, skimming of LNAPL from open excavations across the site, and installation of a 600mm thick capping layer.
Geology	Surface Covering: Landscaped Made Ground Superficial: Tidal Flat Deposits Solid: South Wales Middle Coal Measures
Hydrogeology	Superficial: Tidal Flat Deposits – Secondary Undifferentiated Solid: South Wales Middle Coal Measures – Secondary A Aquifer
UXO risk	A non-specialist UXO assessment indicates a low risk from UXO.

Preliminary conceptual site model based on desk study	
Potential contaminant sources	On site sources: » Made Ground, associated with historical construction activities and imported fill, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S01). » Hydrocarbon fuels, lubricants, and solvents from the operation of the former chemical works on the site including leakage from Underground Storage Tanks (USTs), Above Ground Storage Tanks (ASTs), the pipework between tanks and pumps, and general spillage, together with uncontrolled disposal and spillage from waste receptacles (S02). » Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / Tidal Flat Deposits (S03). » Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks (S04). Off-site sources: » PCBs and oils from transformers in the electricity sub-station off site (S05).
Potential contaminant linkages (for receptors for which there is or will be a pathway)	» People (neighbours, site end users) (R01). » Development end use (buildings, utilities and landscaping) (R02). » Groundwater: Secondary A aquifer status of the South Wales Middle Coal Measures (R03). » Surface water: on-site drainage ditch and harbour off site 50m to the south (R04).
Ground model proven by investigation	
Ground and groundwater conditions encountered by investigation	The ground conditions as proven by the investigation undertaken at the site comprise: » Made Ground – between 0.0m and 2.8m below ground level (bgl), comprising brownish red to brownish dark grey slightly sandy subangular to angular fine to coarse GRAVEL of limestone, sandstone, asphalt, concrete, brick and slag.; over » Tidal Flat Deposits – between 2.1m and 3.6m bgl, firm to stiff grey slightly silty slightly silty CLAY, with fine to coarse sands (not recorded in all locations); over » Alluvial Fan Deposits – between 2.2m and 8.50m bgl, comprising dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low sandstone cobble content. Sands were fine to coarse. Groundwater was encountered at depths between 0.4m bgl and 2.6m bgl during the investigation. Water levels recorded post-fieldwork ranged from 1.76m bgl to 2.14m bgl (5.62m OD to 5.24m OD). There is olfactory evidence of petroleum hydrocarbon contamination in soils and groundwater.

Summary of geotechnical conclusions	
Groundwork	Obstructions associated with former development, including foundations, floor slabs and services, should be anticipated. Excavation to proposed founding depth generally should be readily achievable with standard excavation plant. Heavy duty excavation plant/breaking equipment may be required. Trial pit faces were noted to remain generally stable, during excavation, with slight spalling in some locations where groundwater or the Alluvial Fan Deposits were encountered.
Foundations	The Made Ground on site is un-suitable for shallow foundations in its current conditions. Foundations are recommended to comprise: » Piled foundations; or » Vibro Stone Column Ground improvement with pad foundations.
Roads and pavements	For road / pavement design, a design CBR in excess of 4% is anticipated to be achievable across the whole site.
Sustainable drainage	Soakaway drainage has not been considered for this site due to thickness of Made Ground and contamination encountered.
Buried concrete	Design Sulfate Class - DS-1 and ACEC Class AC-1.
Summary of geo-environmental assessment	
Human Health	Unacceptable exceedances of Hydrock's GAC were recorded in Made Ground for asbestos (chrysotile) and lead.
Phytotoxicity	Exceedances of the GAC in Made Ground for chromium (III), copper and lead, and in Tidal Flat Deposits for zinc.
Controlled waters	Soil leachate samples exceed EQS (other) for arsenic, copper, mercury, vanadium, zinc and PAHs. Groundwater samples exceed EQS (other) for copper, mercury, and a number of petroleum hydrocarbons.
Radon:	The site is not in a Radon Affected Area (less than 1% of homes at or above the action level)
Potable water supply pipes	Brownfield site with organic contamination and barrier pipe is considered to be required for this site. However, confirmation should be sought from the water supply company at the earliest opportunity.
Ground gases or vapours:	Elevated ground gases (methane) have been recorded and CS2 conditions apply. It is also considered necessary for the membrane to be hydrocarbon vapour resistant based on the presence of hydrocarbons & BTEX within the soils.
Enabling works	
Proposed mitigation measures	The mitigation measures proposed to remove unacceptable risks include: » Installation of ground gas protection measures to comply with CS2 conditions and to prevent organic vapour intrusion. » Installation of an engineered clean cover system in soft landscaped areas, to provide a barrier between sources of contamination in soils and human receptors.

	The methodology for the remediation should be presented in a Remediation Strategy, which will need to be submitted to the warranty provider and the regulatory authorities for approval. Verification reports by a competent independent geo-environmental specialist will be required following completion of any remedial works.
Waste management	Excavated soils to be disposed of as waste, are likely to be classed as hazardous.
Future considerations	

Further work	Following the ground investigation works undertaken to date, the following further works will be required:
	» discussion and agreement with utility providers regarding the materials suitable for pipework;
	» discussions with regulatory bodies and the warranty provider regarding the conclusions of this report;
	» discussions with Vibro-stone Column Contractors regarding the viability of, and potential improvement by, VSCs;
	» discussions with piling Contractors regarding conclusions of this report and design of the piles;
	» provision of geotechnical design for the Category 2 structures (floor slabs / foundations);
	» production of a Remediation Strategy and Verification Plan (and agreement with the regulatory bodies and the warranty provider);
	» production of a Materials Management Plan relating to reuse of soils at the site and import of soils to the site;
	» remediation and mitigation works;
	  » installation of a clean cover system;
	  » installation of a CS2 ground gas and vapour resistant membrane;
	» verification of the earthworks, remediation and mitigation works.

This Executive Summary forms part of Hydrock Consultants Limited report number 26CB02-HYD-XX-T-10-O-1000 and should not be used as a separate document.

1. Introduction

1.1 Terms of reference

In September 2023, Hydrock Consultants Limited (Hydrock) was commissioned by Morgan Sindall Construction & Infrastructure Ltd(the Client) (Morgan Sindall) to undertake a site investigation, comprising a Phase 1 ground conditions desk study and Phase 2 ground investigation. The nearest address for the site is Oakwood Road, Port Talbot, SA13 1DE.

The site is currently derelict scrub land, with a roadway dividing the site into north and south areas. Access down this road is presently restricted, as large boulders barrier the entrances to the road.

Hydrock understands that the proposed development is to comprise a two-storey carbon hub research building with associated car parking and soft landscaping. A sprinkler tank and substation are also included within the proposed development. A proposed development layout (Intelligence Buildings Infrastructure (IBI) 01/08/23 Site Plan SWITCH Harbourside 26CB03-ARC-30-00-D-A-100001_P02) is presented in Appendix A

The investigation works have been undertaken in accordance with Hydrock's proposal referenced (Geo Phase 1 & 2 Ground Investigation 31 July 2023) and the Client's instructions to proceed (Ref James Harding Email: 25/09/23 PO Number CE001).

1.2 Objectives

The works have been commissioned to assist with the design of the development.

The objectives of the Phase 1 Desk Study are to formulate a preliminary Ground Model and an Initial Conceptual Site Model of the site to identify and make a preliminary assessment of any potential geo-environmental and geotechnical risks to the proposed development.

The objectives of the Phase 2 Ground Investigation are:

- to resolve any geotechnical and geo-environmental uncertainties identified in the Phase 1 Desk Study by refining and updating the preliminary Ground Model, based on the conditions met in accordance with the principles of Environment Agency (EA) 'Land Contamination: Risk Management' (LCRM) (2020);
- to identify any geo-environmental mitigation requirements to enable development to progress; and
- to provide preliminary geotechnical recommendations for design.

1.3 Scope

The site investigation includes a Phase 1 Desk Study and a Phase 2 Ground Investigation.

The scope of the Phase 1 Desk Study comprises:

- a field reconnaissance (walkover) to determine the nature of the site and its surroundings including current and former land uses, topography and hydrology;
- acquisition and review of:
  - historical Ordnance Survey maps, to identify any; former potentially contaminative uses shown at the site and immediately surrounding it, and an assessment of the associated contamination risks;
  - a third-party environmental report to identify any; flooding warning areas, local landfills, pollution incidents, abstractions, environmental permits etc. All of which may have had the potential to have environmental impact on the site;
  - topographical, geological and hydrogeological maps;

    - regional UXO risk maps;
    - a site-specific Coal Authority 'Consultants Coal Mining Report';
    - the Coal Authority's Interactive Viewer;
- development of a preliminary Ground Model representing ground conditions at the site;
- development of an initial Conceptual Site Model (iCSM), including identification of potential contaminant linkages;
- a qualitative assessment of any geo-environmental risks identified; and
- identification of any plausible geotechnical hazards.

The scope of the Phase 2 Ground Investigation comprises:

- a ground investigation including trial pitting, dynamic probing, and cable percussive boring to:
    - obtain data on the ground and groundwater conditions of the site;
    - allow collection of samples for geotechnical and chemical laboratory analysis;
    - allow geotechnical field tests to be undertaken;
- geotechnical and chemical laboratory analysis;
- updating of the preliminary Ground Model;
- preparation of a geotechnical risk register;
- presentation of an initial geotechnical design recommendations;
- formulation of an updated Conceptual Site Model (CSM), including identification of any plausible contaminant linkages;
- completion of a generic quantitative risk assessment of any identified chemical contaminants to establish 'suitability for use' under the current planning regime;
- discussion of any potential environmental liabilities associated with land contamination (soil, water and gas); and
- identification of outline mitigation requirements to ensure the site is 'suitable for use'.

1.4 Available information

The following drawings have been provided to Hydrock by Morgan Sindall for use in the preparation of this report:

- Intelligence Buildings Infrastructure (IBI) August 2023. 'Site Plan SWITCH Harbourside' 26CB03-ARC-30-00-D-A-100001_P02.
- Gwalia Surveyors, August 2023. ' Topographical Survey, SWITCH-Port Talbot' 3292-T.

The following reports and documents have been provided to Hydrock by Morgan Sindall as Information. Hydrock acknowledges that these documents are not assigned to The Client defined in Section 1.1, and has used them for information purposes only. No formal reliance can be placed upon their contents for the current works.

- Opus, July 2017, Neath Port Talbot Harbourside Ground Investigation Phase 1 Desk Study Report, ref: V-C8602.01/OIC/00/XX/RP/01.
- Opus, October 2017, NPT Harbourside – Addendum Ground Gas Letter Report, ref: V-X8602.01-OIC-20171012-NPTCBC-L-01.
- Opus, March 2018, Neath Port Talbot Harbourside Interpretive Geo-Environmental Ground Investigation Report, ref: V-C8602.01/OIC/00/XX/RP/02.
- WSP, February 2020, Port Talbot Harbourside Controlled Waters Quantitative Risk Assessment, ref: 62253048-002.

- WSP, March 2020, Port Talbot Harbourside Generic Quantitative Risk Assessment Supplementary Site Investigation Report, ref: 62253048_001.
- WSP, March 2020, Port Talbot Harbourside Factual Report – Additional Product Investigation, ref: 62253048-003.
- WSP, May 2020, Port Talbot Harbourside Geotechnical Assessment – R2 (Memorandum).
- WSP, June 2020, Remediation Strategy Port Talbot Harbourside, ref: 622530-48-004.
- WSP, April 2022, Port Talbot Harbourside Remediation Verification Report, ref: 70057278-RV1.

1.5 Regulatory context and guidance

The investigation work has been carried out in general compliance with recognised best practice, including (but not limited to) BS 5930:2015, BS 10175:2011+A2:2017 and the AGS (2006) 'Good Practice Guidelines for Site Investigations'.

The geo-environmental section of this report is written in broad accordance with BS 10175:2011+ A2:2017, EA LCRM), (2021) and the AGS (2006) 'Good Practice Guidelines for Site Investigations'.

The methods used follow a risk-based approach, the first stage of which is a Phase 1 desk study and field reconnaissance, with any potential geo-environmental risks assessed qualitatively. This is done using the 'source-pathway-receptor contaminant linkage' concept to assess risk as introduced in the Environmental Protection Act 1990 (EPA, 1990). Any potential geotechnical risks are also assessed from the Phase 1 desk study and site reconnaissance stage.

Phase 2 comprises intrusive ground investigation work and testing. The factual information from the desk study and the ground investigation are used to develop the Conceptual Site Model (CSM). This CSM is based on a ground model of the site physical conditions and an exposure model of the possible contaminant linkages. The CSM forms the basis for Generic Quantitative Risk Assessment (GQRA) in accordance with current guidelines. This GQRA might lead to more Detailed Quantitative Risk Assessment (DQRA).

Professional judgement is then used to evaluate the findings of the risk assessments and to provide recommendations for the development.

The geotechnical section of this report is prepared in general accordance with BS EN 1997-1+A1: 2013, BS EN 1997-2:2007 and BS 8004:2015. This report constitutes a Ground Investigation Report (GIR) as described in Part 2 of Eurocode 7 (BS EN 1997-2) (EC7). However, it is not intended to fulfil the requirements of a Geotechnical Design Report (GDR) as specified in EC7.

Where relevant the relevant requirements of the current edition of NHBC Standards have also been applied.

The geo-environmental and geotechnical aspects are discussed in separate sections. Throughout the report the term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements). The term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential contamination). However, it should be appreciated that this is an integrated investigation and these two main aspects are inter-related. Designers should take all aspects of the investigation into account.

2. Desk study (and field reconnaissance)

2.1 Data

A number of desk study sources have been used to assemble the following information. These are presented in Appendix C and Appendix D and include:

- Third-party environmental report (Envirocheck report, reference 317152831_1_1);
- Historical Ordnance Survey mapping;
- BGS Archive Records;
- Zetica UXB Risk Maps (https://zeticauxo.com/downloads-and-resources/risk-maps/);
- Coal Authority 'Consultants Coal Mining Report' (Reference: 51003379055001);

As part of the desk study information, a number of previous ground investigations undertaken at the site have been reviewed (see Section 1.4). Where suitable, the data from the previously referenced reports is included within this desk study.

2.2 Site referencing

Table 2.1: Site referencing information

Item	Brief Description
Site name	South Wales Industrial Transition from Carbon Hub (SWITCH Building)
Site address	The nearest address is Oakwood Road, Port Talbot, SA13 1DE.
Site location and grid reference	The site is located approximately 50m north of Port Talbot Harbour, and 100m south of Port Talbot Parkway train station. The National Grid Reference of the approximate centre of the site is 276610E, 189470N. The site is approximately 2.07 Ha in area and is irregular in shape.
Site boundaries	The site is bound to the north by a walkway and a car park for the nearby train station. The site is bound to the south by a fence line which separates the site from Harbour Way. The site bounds to the east of the site are not formally demarked, although run parallel to the rear of the Cramic Way car park. The western limit of the site is marked by a fence line, disrupted in the centre by the access road.

Figure 2.1: Site location

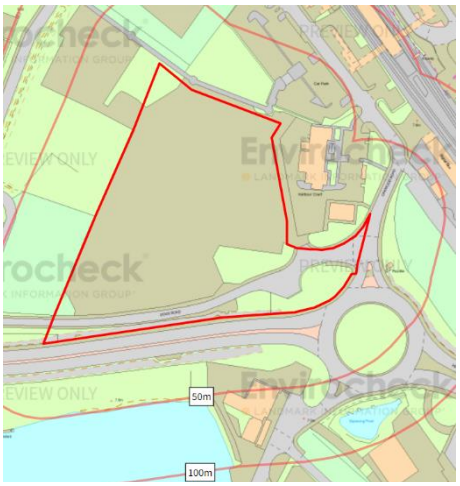

Figure 2.2: Extract from the Ordnance Survey Map.

A site location plan (Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1000) is presented in Appendix A

2.3 Site description and field reconnaissance survey

A field reconnaissance survey was undertaken on 20 September 2023, to visually identify and assess potential geotechnical hazards, contaminant sources for future investigation and identification of possible source-pathway-receptor linkages. The weather during the field reconnaissance survey was rainy and overcast.

A description of the site is presented in Table 2.2 and selected photographs are presented in Figure 2.3 to Figure 2.6. Additional photographs are presented in Appendix B.

Table 2.2: Site description

Item	Brief Description
Site access	The site was accessed from the entrance to the road in the east of the site, which continues through the site to the west.
Site area	The site is irregular in shape and has an area of approximately 2.07 ha.
Elevation, topography and any geomorphic features	The site is generally flat, with small changes in levels of 0.5m down to the base of the drainage ditch running parallel to the south of the access road. The level of the site reduces further in the east of the site by circa 1m to accommodate a SuDs pond feature. At the time of the walkover, the depth to the water shown on the level was 0.69m from the base of the pond.
Site boundaries and surrounding land	The site is bound to the south by Harbour Way, and to the north by a public walkway and the Port Talbot Parkway train station car park. The west of the site is bound by a fence line, which is interrupted by an access road that passes through the centre of the site (west to east orientation). The boundary to the east of the site follows the fence line between the site, and the Cramic Way car park.
Present land use	The land is presently open derelict land, with an access road dividing the site into north and south. At the time of the walkover, the site was covered by Made Ground which appeared to comprise gravel, concrete, asphalt, slag and brick. The north and south sections of the site either side of the access road were covered by approximately 40mm of standing water.
Vegetation	The site had patchy coverage of shrub and scrub across the site, with thicker vegetation occupying the site perimeter.
General site sensitivity	The site is within a generally industrial area of Port Talbot.

A site walkover plan (Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1001) is presented in Appendix A.

Figure 2.3: Access from the east of the site.

Figure 2.4: SuDs pond feature in the south-east of the site.

Figure 2.5: View across the north of the site.

Figure 2.6: View across the southern portion of site.

2.4 Site history

A study of historical Ordnance Survey maps (Appendix C) has been undertaken to identify any former land uses at the site and surrounding areas which may have geotechnical or geo-environmental implications for the proposed development. The key findings are summarised in Table 2.3.

Table 2.3: Site history review

Reference	Key features on site	Key features off-site
OS Map[1] 1876 -1877: 1:2,500	The site is open fields with areas of marshland in the south. The eastern most portion of the site intersects railway sidings orientated north-east to south-west.	The site is bordered to the south by docklands, connected to the various industrial works by tramways and railways. Port Talbot Station lies 140m north-west of the site, with adjacent railway lines trending north-west to south-east. A smithy is mapped 175m north-west of the site. Remains of a chapel are cited 15m east of the site. Mansel Tin Plate Works and Afon-Vale Tin Plate Works lie 400m and 525m north-west of the site respectively. Port Talbot Wharf lies 450m south-west of the site. 425m north-west of the site is the River Afan.Cwm-Afon Tramway lies 550m north-west of the site. 675m north-east of the site is Margam Tin Plate Works (lower forge). Port Talbot Chemical Works lie 760m north-west of the site. Margam Copper Works are 800m south-east of the site, with a gas works adjacent 925m south-east of the site. The river Ffrwd-wyllt is 775m south-east of the site, and is trending north-east to south-west, and outlets into the docklands
OS Map 1884 – 1885: 1:10,560	No significant change.	No significant change.
OS Map 1899: 1:2,500	No significant change.	Taibach Tin Plate Works constructed 125m south-east of the site. 375m north-west of site, an iron foundry has been constructed Beyond Taibach Tin Plate Works are Ffrwdwyllt Tin Plate Works, 525m south-east of the site. Afon Tin Plate Works, and Margam Tin Plate Works are labelled as disused. New Dock constructed 550m south-west of the site, with new railway lines to support transport of imports/exports. The new rail lines include the Rhondda and Swansea Bay Railway 725m north-west,

[1] Ordnance Survey Historical Map Information provided by Envirocheck.

OS Map 1900: 1:10,560	No significant change.	No significant change.
OS Map 1917 – 1919: 1:2,500	A series of new rail lines pass through the south of the site. A building has been constructed in the north-west corner of the site.	A series of tanks are located circa 135m north-west of the site around a new construction. Significant residential expansion has occurred to the east of the site.
OS Map 1921: 1:10,560	No significant change.	The construction to the west of the site is labelled Port Talbot Steel Works.
OS Map 1936-1940: 1:2,500	A tank is recorded on the map in the east of the site. New rail lines have been constructed on the site, to support expansion of the Port Talbot Steel Works, with the addition of a new building crossing the south of the western boundary, and a second building added in the north-west corner of the site.	Port Talbot Steel Works have expanded to the south, with the inclusion of new tanks, and a pipeline.
OS Map 1938 – 1952: 1:10,560	No significant change.	No significant change.
OS Map 1952-1968: 1:1,250	Expansion of the steelworks has resulted in the addition of new tanks (tank farm) in the west of the site.	Taibach Tin Plate Works no longer mapped.
OS Map 1964-1969: 1:2,500	The site of the tank farm is now labelled as a Chemical Works. The gasholder is no longer recorded on site, with an education and training centre taking its place.	Port Talbot Steel Works is partially labelled as disused, with the remainder reclassified as an engineering works, Former Mansel Tin Plate Works become disused.
OS Map 1978-1991: 1:1,250	The tanks at the chemical works which intersect the site boundary are no	No significant change.

	longer detailed on maps. A new roundabout has been constructed in the south-east of the site.	
OS Map 1993: 1:1,250	No significant change.	No significant change.
OS Map 1993-1996: 1:10,000	No significant change.	No significant change.
OS Map 1999: 1:10,000	No significant change.	Former Ffrwdwyllt Tin Plate Works building no longer shown on maps.
Aerial photograph 2000	The site appears to be in use as a stockyard. The footprint of the former gasholder in the east of the site is visible.	No significant change.
OS Map 2006: 1:10,000	No significant change.	The docks to the south of the site are marked as disused.
OS Map 2013: 1:10,000	No significant change.	A new link road has been constructed 175m to the east of the site, to better connect the industrial estate to the M4.
OS Map 2016: 1:10,000	No significant change.	Three new buildings have been constructed circa 60m west of the site.
Google Earth Pro: September 2022.	Road constructed through the centre of the site in an east west orientation.	No significant change.
OS Map 2023: 1:10,000	No significant change.	No significant change.

2.5 Geology

The geology of the site area is shown on the 1:10,000 British Geological Survey (BGS) map extract reproduced as part of the Envirocheck report and is summarised below:

Table 2.4: Geology

Ref. for Figures	Location	Stratigraphic Name	Description
Superficial Deposits (Figure 2.7)			
LSGR	On site.	Landscaped Ground	Significantly remodelled area where it is impossible to delineate separate zones of Made Ground or Disturbed Ground, with variable composition.
TFD	On site	Tidal Flat Deposits	Variable clay, silt, sand and gravel.
Solid Geology (Figure 2.8)			
SWMCM	On site.	South Wales Middle Coal Measures	Mudstone, siltstone and sandstone.

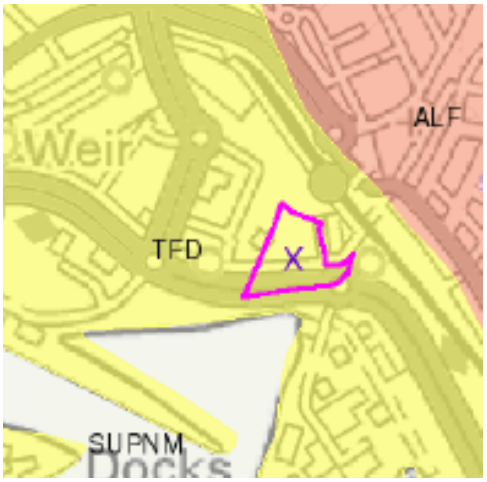

Figure 2.7: Superficial deposits.

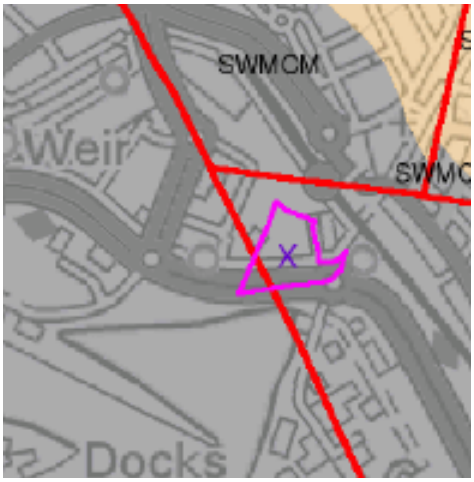

Figure 2.8: Solid geology.

Figure 2.9 Artificial Ground

A fault crosses the south-west corner of the site, along a north-west to south-east orientation.

Previous investigation was undertaken by WSP in April 2022. Hydrock has no formal reliance on the report provided by the Client, and thus the report discussed is used for information only. The ground conditions encountered are summarised below:

- Clean cover system between ground level and 0.60m bgl;
- Made Ground up to 3.50m bgl comprising ash slag brick stone and other deleterious materials.
- Alluvial Silts recorded between 1.60m and 4.00m bgl
- Alluvial Gravel Deposits between 1.60m and >10.00m bgl

The South Wales Middle Coal Measures were only encountered in one borehole at approximately 6.90m bgl. Groundwater was recorded between 1.00m bgl and 4.00m bgl.

2.6 Hydrogeology

2.6.1 Aquifer designations

Based on the inferred geological sequence presented in Section 0 the aquifer system presented in Table 2.5 applies.

Table 2.5: Aquifer system

Stratum	Aquifer Designation	Comments
Superficial Deposits		
Tidal Flat Deposits	Secondary Undifferentiated Aquifer	Permeability will differ between the cohesive deposits at shallow depth and granular deposits at depth. The cohesive deposits are expected to have a low porosity and low permeability where the granular deposits are expected to have a medium porosity and permeability.
Solid Geology		
South Wales Middle Coal Measures	Secondary A Aquifer	Likely to be generally characterised by low permeability and isotropic. Stratification suggests kh is likely to be greater than kv in the unmined parts of the sequence. Coal workings are likely to have created a significant secondary porosity and permeability and large volumes of groundwater can be present in abandoned workings, with associated potentially high rates of flow.

2.6.2 Groundwater abstraction

There are no active licensed groundwater abstractions within 1000m of the site.

2.6.3 Groundwater source protection zones and groundwater vulnerability

The site is not within a groundwater Source Protection Zone (SPZ).

2.6.4 Groundwater levels, recharge, and flow

Groundwater is expected to be shallow in line with the water level of the docks and sea 50m to the south of the site. Groundwater is expected to flow south towards the docks under the hydraulic gradient on a local scale, but on a regional scale, groundwater is thought to be flowing to the sea to the south-west of the site. Groundwater recharge is expected to be impeded by the Landscaped Ground as this is likely to comprise of impermeable Made Ground.

2.6.5 Groundwater quality

The groundwater body beneath the site (Swansea Carboniferous Coal Measures) is currently (2021, Cycle 3) classified under the Water Framework Directive as 'poor'.

The water body is currently given a 'poor' status due to 'chemical groundwater dependant water body' conditions. This is typical for groundwater bodies within heavily industrialised areas and the South Wales Coal Field.

2.6.6 Groundwater flooding

The environmental data report indicates potential for groundwater flooding to occur at surface.

2.7 Hydrology

2.7.1 Surface water system and drainage

The surface water features in the vicinity of the site are listed in Table 2.6.

Table 2.6: Surface water features

Feature	Location Relative to Site
Drainage ditch.	On site, orientated east west in the centre of the site.
Pond.	On site, in the south-east of the site.
Former harbour.	50m south of the site.

2.7.2 Surface water abstractions and discharges

There are no active licensed surface water abstractions or discharges within 500m of the site.

2.7.3 Surface water quality

Reference to the Natural Resource Wales web site shows the site is not located within a river catchment. The nearest catchment is circa 100m west of the site and is known as the Afan – confluence with Pelenna to tidal limit, and the nearest specific river water body being the River Avan. The current (2021, Cycle 3) overall status under the Water Framework Directive is described as 'good'.

2.7.4 Surface water flooding

The desk study information indicates the proposed development is in a low flood risk area (a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%)).

No further consideration of flood risk is undertaken in this report. Specialist flood risk advice should be sought with regard to drainage and flooding.

2.8 Mining and mineral extraction

Reference to the Consultants Coal Mining Report commissioned by Hydrock for the site has indicated an absence of past underground mining, shallow workings and mine entries. The Coal Authority Interactive Viewer (https://mapapps2.bgs.ac.uk/coalauthority/home.html) also does not indicate the presence of any coal seams below, or adjacent to the site. Overall, it is considered unlikely that the site will be affected by historic coal mining in the Port Talbot area.

2.9 Waste management

There are no current or historical waste management sites recorded within 250m of the site.

2.10 Regulatory Information

Information in the Envirocheck Report (Appendix D), relating to various regulatory controls has been reviewed, with a summary presented below in Table 2.7.

Table 2.7: Regulatory information within 500m of the site.

Regulatory Data	Distance from Site	Details	Potential Risk	Comment
Local Authority Pollution Prevention and Controls	N/A	No entries on pollution controls were recorded within 500m of the site.	No.	-
Pollution Incidents	22m south-east.	May 1991, sewage – septic tank effluent, Category 3 – minor incident	No.	Due to the duration of time passed, and the Category 3 classification of the incident.
	32m east.	October 1997, crude sewage, Category 3 – minor incident	No.	Due to the duration of time passed, and the Category 3 classification of the incident.
	75m north-east.	July 1997, creosote, Category 3 – minor incident.	No.	Due to the duration of time passed, and the Category 3 classification of the incident.
	106m south.	September 1994, mud/clay/soil, Category 2 - significant incident.	No.	Due to the duration of time since the event.
	107-111m south.	March 1998, oils – diesel, Category 3 – minor incident (3 entries)	No.	Due to the duration of time passed, and the Category 3 classification of the incident.
Trade Directory Entries	103m north.	Active M P G Tyres & Exhausts Ltd – tyre repairs.	No.	Due to the lack of potential contaminants.
	212m south-east.	Active Rhino Doors – door manufacturers.	No.	Due to the small volumes of potential contaminants and its distance from the site.
	247m north-east.	Active Astra Park Service Centre Ltd – garage services.	No.	

	251m north.	Active Town Tyre Services – tyre dealers.	No.
	280m south.	Active Planguard – garage services.	No.
	291m north-east.	Active Paul's Tyres – tyre dealers.	No.
	291m south-east.	Active Fairwood Engineering Ltd – precision engineering.	No.
	304m south.	Active Talbot Hydraulics – hydraulic equipment sales.	No.
	306m north-west.	Active L B S Builders Merchants	No.
	309m south.	Active Spraytech – car body repairs.	No.
	327m east.	Active Evolve Electrical Engineering.	No.
	363m south.	Active Runtech Hauliers – haulage services.	No.
	403m south.	Active J M Fabweld Ltd – mechanical engineers.	No.
	403m south.	Active Pump Supplies – sales, servicing and repairs.	No.
	420m north-west.	Active A W D Group – recycling services.	No.
	421m south-east.	Active Whirlpool Laundrette – dry cleaners.	No.
	427m east.	Active	No.

		Phil Reed Cleaning – carpet and upholstery cleaners.		
	470m south-east.	Active M R M Automotive – garage services.	No.	
Fuel Station Entries	122m east.	Open Petrol station	Yes.	As the hydrogeological gradient is likely to be flowing towards the site.
Control of major accident hazards sites (COMAH)	N/A	No entries on COMAH sites were recorded within 500m of the site.	No.	-
Registered radioactive substances	N/A	No entries on registered radioactive substances were recorded within 500m of the site.	No.	-
Notification of installations handling hazardous substances	N/A	No entries on notification of installations handling hazardous substances were recorded within 500m of the site.	No.	-

2.11 Natural soil chemistry

Information contained within the environmental report (Appendix D) gives indicative (estimated) concentration values for the natural soils at the site for a selection of Contaminants of Potential Concern (CoPC). These have been reproduced in Table 2.8.

Table 2.8: Natural soil chemistry

Element	Arsenic	Cadmium	Chromium	Lead	Nickel
Concentration (mg/kg)	25-35	<1.8	60 - 90	<100	15 - 30

The data in Table 2.8 have been compared against Hydrock's Generic Assessment Criteria (GAC), which indicated no exceedances for human health for the commercial end use scenario.

2.12 Radon

The radon risk is reported in reference to the UK Radon Interactive Map Viewer (http://www.ukradon.org/information/ukmaps])

The guidance indicates that the site is in an area where less than 1% of homes are at or above the action level, and therefore no radon protection measures are required.

2.13 Unexploded ordnance (UXO)

In general accordance with CIRIA Report C681 (Stone et al 2009) a non-specialist UXO screening exercise has been undertaken for the purposes of ground investigation and is presented in Table 2.9.

Table 2.9: Non-specialist UXO screening (for the purposes of ground investigation)

Data	Comment	Further Assessment Required
Site History	The site was part of the Port Talbot Steel prior to WW2 and post WW2. The post was mapping 1952 does not record any 'ruins' and as the site was a live steel works it is considered unlikely that any bombs would remain undetected.	No
Post War Development	No bomb damage can be viewed on historical maps and aerial photographs of the site, and therefore it is unlikely the site has previously been bombed.	No.
Geology Type	The site has undergone significant relandscaping following demolition of the Port Talbot Steel Works and now comprises a significant proportion of Landscaped Made Ground. It is unlikely UXO would have remained undetected during the reprofiling of the ground surface.	No.
Surface Cover during WWI	The surface cover during WWII comprised a significant proportion of bituminous bound pavement, concrete and buildings. It is unlikely UXO would remain undetected.	No.
Indicator of Aerial Delivered UXO	Screening against the regional bomb risk map (**Appendix D**) indicates the site to be in an area where the bomb risk is low.	No.

The non-specialist UXO screening exercise has indicated that no further assessment is required with regard to UXO in relation to ground investigation as no damage was noted on historic mapping to the chemical and gasworks – if the works had been impacted, it is unlikely that UXO would have remained unexploded.

3. Initial conceptual site model

3.1 Introduction

The initial Conceptual Site Model (iCSM) incorporates evidence from the site walkover, the Desk Study and previous investigations carried out at the site. The formulation of an initial Conceptual Site Model is a key component of the LCRM methodology. The iCSM incorporates a ground model of the site physical conditions and an exposure model of the possible contaminant linkages; it forms the basis for Generic Quantitative Risk Assessment (GQRA) in accordance with current guidelines.

3.2 Ground model

The preliminary ground model provides an understanding of the ground conditions and is the basis for preparing the preliminary geotechnical hazard assessment (Section 3.3) and the preliminary geo-environmental exposure model (Section 3.4).

3.3 Geotechnical hazard identification

3.3.1 Context

The preliminary geotechnical hazard identification has been undertaken in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622.

The following section sets out the identified geotechnical hazards and the development elements potentially affected (see Table J.1 in **Appendix J** for further information).

3.3.2 Plausible geotechnical hazards

Plausible geotechnical hazards identified at the site are:

- Uncontrolled Made Ground (variable strength and compressibility).
- Soft / loose compressible ground (low strength and high settlement potential).
- Shrinkage / swelling of the clay fraction of soils under the influence of vegetation.
- Variable lateral and vertical changes in ground conditions.
- Attack of buried concrete by aggressive ground conditions.
- Adverse chemical ground conditions, (e.g. expansive slag).
- Obstructions.
- Shallow groundwater.
- Changing groundwater conditions.
- Risk from erosion or flooding.
- Loose Made Ground, leading to difficulty with excavation and collapse of side walls.

3.3.3 Potential development elements affected

Development elements potentially affected by geotechnical hazards are:

- Buildings – foundations.
- Buildings – floor Slabs
- Roads and pavements.
- Services.
- General slopes.

» Construction staff, vehicles and plant operators.

Health and safety risks to site Contractors and maintenance workers have not been assessed during these works and will need to be considered separately during design.

The above plausible geotechnical hazards and development elements affected have been carried forward for investigation and assessment. The investigation is presented in Section 0 and the assessment is presented in Section 0.

3.4 Geo-environmental exposure model

3.4.1 Context

The preliminary exposure model is used to identify geo-environmental hazards and to establish potential contaminant linkages, based on the source-pathway-receptor (SPR) approach.

A viable contaminant linkage requires all the components of an SPR to be present. If only one or two are present, there is no linkage and no further assessment is required.

3.4.2 Potential contaminants

For the purpose of this assessment the potential contaminants have been separated according to whether they are likely to have originated from an on-site or off-site source.

3.4.2.1 Potential on-site sources of contamination

» Made Ground, associated with historical construction activities and imported fill, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S01).

» Hydrocarbon fuels, lubricants, and solvents from the operation of the former chemical works on the site including leakage from Underground Storage Tanks (USTs), Above Ground Storage Tanks (ASTs), the pipework between tanks and pumps, and general spillage, together with uncontrolled disposal and spillage from waste receptacles (S02).

» Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / Tidal Flat Deposits (S03).

» Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks (S04).

3.4.2.2 Potential off-site sources of contamination

» PCBs and oils from transformers in the electricity sub-station off site, immediately east of the site boundary (S05).

3.4.3 Potential receptors

The following potential receptors in relation to the proposed land use have been identified.

» People (neighbours, site end users) (R01).

» Development end use (buildings, utilities and landscaping) (R02).

» Groundwater: Secondary A aquifer status of the South Wales Middle Coal Measures (R03).

» Surface water: on-site drainage ditch and harbour off site 50m to the south (R04).

3.4.4 Potential pathways

The following potential pathways have been identified.

» Ingestion, skin contact, inhalation of dust and outdoor air by people (P01).

» Methane ingress via permeable soils and/or construction gaps (P02).

- VOC and petroleum hydrocarbon vapour ingress via permeable soils and/or construction gaps (P03).
- Surface water via overland flow (P04).
- Surface water, via drainage discharge (P05).
- Surface water via base flow from groundwater (P06).
- Root uptake (P07).

Health and safety risks to site development contractors and maintenance workers have not been assessed as part of this study and will need to be considered separately.

The above sources, pathways and receptors have been considered as part of the Preliminary Risk Assessment in accordance with LCRM (2021), are considered to be plausible in the context of this site and have been carried forward for investigation and assessment. The investigation is presented in Section 4 and the assessment is presented in Section **7** An assessment of the Source – Pathway – Receptor linkages is undertaken following the assessment (Section **7**) and is presented in **Appendix K** (Table K.1).

A summary of the plausible linkages is presented on the Initial Conceptual Model provided in Appendix A. (Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1002).

3.4.5 Potential implications of climate change

Climate change has the potential to change the risk profile for conceptual site models and associated contaminant linkages. The impact of climate change on the CSM is site-specific, and a qualitative assessment of the potential impact of climate change on the CSM for this site is summarised below. The assessment has primarily utilised the guidance in Environment Agency (2010)[2] and SoBRA (2022)[3] which set out the UK context to climate change and land contamination. Both guidance documents advocate a "what if" scenario approach in the context of changes in ambient temperatures, an increase in the frequency of extreme rainfall/storm events and heatwaves/droughts, and long-term changes in groundwater and sea levels.

Those "what if" scenarios that are relevant to this CSM are:

- Increased long-term rainfall leading to increased infiltration and seasonally higher groundwater and water levels in surface waters.
- Rising sea-level leading to increased coastal erosion and/or coastal flooding.
- Rising sea-level leading to rise in groundwater levels and/or saline intrusion.
- Increased frequency and/or magnitude of extreme rainfall events leading to short-term surface flooding, surface water run-off, groundwater flooding, and/or land-based erosion.
- Increased frequency and/or magnitude of storm events leading to short-term drops in barometric pressure and/or high winds.
- Occurrence of extreme cold and hot weather events leading to changes in ground conditions such as soil temperature, evapo(trans)piration, and soil moisture (for example freeze-thaw effects and desiccation), decreased infiltration and fall in groundwater and surface water levels.
- Long-term decrease in rainfall leading to lower infiltration and fall in groundwater and surface water levels.

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[2] *Environment Agency, 2010. Guiding Principles for Land Contamination. Part 2. FAQs, technical information, detailed advice and references, March 2010.*

[3] *SoBRA, 2022. Guidance on Assessing Risk to Controlled Waters from UK Land Contamination Under Conditions of Future Climate Change, Society of Brownfield Risk Assessment, August 2022.*

4. Ground investigations

4.1 Site works

The ground investigation works, including the rationale which was based on the findings of the preliminary risk assessment is summarised in Section 3 For the investigation rationale of the historical investigations, please refer to the historical reports in Appendix D.

The fieldwork took place between 26 September and 29 September 2023. The ground investigation locations were surveyed in using a Total Station GPS survey instrument and are shown on the Exploratory Hole Location Plan (Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1003) in Appendix A.

The logs, including details of ground conditions, soil sampling, in situ testing and any installations, are also presented in Appendix E.

The weather conditions during the Hydrock fieldwork and for the previous week were windy with intermittent rain.

Table 4.1: Summary of site works

Activity	Method	No	Name	Depth (m bgl)	In situ tests	Rationale/comments
Drilling, Pitting and Probing						
Boreholes	Cable percussive	2	BH01-BH02	8.50	SPT	To assess ground conditions and install groundwater and ground gas monitoring wells.
Trial pits	Machine (JCB 13T)	10	TP01 – TP10	3.30	-	For collection of samples to characterise soils.
Probes	TRL dynamic cone penetrometer (TRL-DCP)	2	TRL-DCP-TP04/TP06	-	California Bearing Ratio (CBR)	To correlate CBR for road and pavement design. Refused in Made Ground no further TRLs were attempted due to high cobble content.

Wells for monitoring groundwater levels and ground gas concentrations, and to facilitate the sampling of groundwater, were installed in both cable percussion boreholes. A summary of the monitoring well installations is presented in Table 4.2.

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Table 4.2: Summary of monitoring installations

Location	Ground level (m OD)	Standpipe / piezometer diameter	Screen top and base depth (m bgl)	Strata targeted
BH01	7.38	50	1.00 to 2.00 3.50 to 5.50	Made Ground Alluvial Fan Deposits
BH02	7.41	50	1.00 to 2.00 3.60 to 6.00	Made Ground Alluvial Fan Deposits

4.2 Geo-environmental testing

4.2.1 Sampling strategy and protocols

Exploratory hole positions were determined by reference to the site conditions and uncertainties identified in the Initial Conceptual Model.

No specific features were identified during the desk study as requiring targeted investigation and a reasonably even spacing was used. No specific sampling statistics or grid were utilised in this instance.

Samples were taken, stored and transported in general accordance with BS 10175:2011+A2:2017.

4.2.2 Geo-environmental monitoring

Gas monitoring boreholes have been monitored on 3 occasions. The results are presented in Appendix G.

4.2.3 Geo-environmental laboratory analyses

The chemical test certificates for testing undertaken as part of Hydrock's investigation are provided in Appendix H and summarised in the table below. Wherever possible, UKAS and MCERTS accredited procedures have been used.

The geo-environmental analyses undertaken on soils are summarised in Table 4.3.

Table 4.3: Geo-environmental analyses of soils

Determinand Suite	Made Ground	Tidal Flat Deposits	Alluvial Fan Deposits
Hydrock minimum suite of determinands for solids*	24	5	6
Speciated aliphatic and aromatic banding Total petroleum hydrocarbons by HS-GC/MS and GC/FID (Hydrock Tier 2 TPH Suite)	19	5	6
Benzene, toluene, ethylbenzene and xylene (BTEX) by HS-GC/MS	19	5	6
MTBE (Methyl Tertiary Butyl Ether) by HS-GC/MS	19	5	6
Volatile organic compounds (VOC target list plus TIC) by HS-GC/MS	13	5	2
Semi-volatile organic compounds (SVOC target list plus TIC) by GC-MS	13	5	2
Asbestos quantification	2	-	1
BRE full suite	23	-	4

*Hydrock minimum soil suite comprises: As, B (water soluble), Be, Cd, Cr (total), Cr (VI), Cu, Hg, Ni, Pb, S (elemental), Se, V, Zn, cyanide (total), sulfide, pH, asbestos fibres, speciated polynuclear aromatic hydrocarbons (PAH, by GC-FID), total phenols and fraction of organic carbon

The soils chemical test data are interpreted and assessed in Sections 7.3 and 7.4.

The geo-environmental analyses undertaken as part of Hydrock's investigation on leachates are summarised in Table 4.4

Table 4.4: Geo-environmental analyses of leachate

Determinand Suite	Soil leachates
Hydrock minimum suite of determinands for leachates	6
Speciated aliphatic and aromatic banding Total petroleum hydrocarbons by HS-GC/MS and GC/FID (Hydrock Tier 2 TPH Suite)	3
Volatile organic compounds (VOC target list plus TIC) by HS-GC/MS	6
Semi-volatile organic compounds (SVOC target list plus TIC) by GC-MS	3

The geo-environmental analyses undertaken as part of Hydrock's investigation on waters are summarised in Table 4.5. Note that at the time of issue, one round of water samples is still outstanding.

Table 4.5: Geo-environmental analyses of waters

Determinand Suite	Groundwater
Hydrock minimum suite of determinands for waters	6
Speciated aliphatic and aromatic banding Total petroleum hydrocarbons by HS-GC/MS and GC/FID (Hydrock Tier 2 TPH Suite)	6
Volatile organic compounds (VOC target list plus TIC) by HS-GC/MS	6
Semi-volatile organic compounds (SVOC target list plus TIC) by GC-MS	6

4.3 Geotechnical laboratory testing

The geotechnical laboratory tests instructed by Hydrock are summarised in Table 4.6 and the test certificates are provided in Appendix F. Wherever possible, UKAS accredited procedures have been used.

The geotechnical tests undertaken as part of historical investigations are provided in the relevant reports in Appendix F.

Table 4.6: Summary of sample numbers for geotechnical tests

Test	MG	TFD	AFD
Natural moisture content	-	2	-
Atterberg limits	-	2	-
Particle size distribution (wet sieve)	20	-	-
John Emery rapid slag expansion	8	-	-

The geotechnical test data are summarised in Section 5.5 and interpreted in Section 0.

5. Ground investigation records and data

5.1 Physical ground conditions

5.1.1 Summary of strata encountered

The following presents a summary of the properties of the ground and groundwater conditions encountered, based on field observations, interpretation of the field data and laboratory test results, taking into account drilling, excavation and sampling methods, transport, handling and specimen preparation.

All relevant data from the Hydrock investigation discussed in Section 4 are used from this point forward.

Details of the Hydrock ground investigation works are provided in the logs in Appendix E, previous data are provided in Appendix D, a summary of the ground model is presented in Table 5.1 and the individual strata are described in the sections below.

Table 5.1: Strata encountered

Stratum	Depth to top (m bgl)	Depth to base (m bgl)	Thickness (m) (range)	Thickness (m) (average)
'Landscaped' Made Ground	0.0	2.1 -2.8	2.1-2.80	2.53
Tidal Flat Deposits	2.1 - 2.8	2.7 - 3.6	0.10-1.00	0.34
Alluvial Fan Deposits	2.2 - 3.6	2.5 - > 8.50*	0.10-5.10	1.33

*base not proven.

5.1.2 Landscaped Made Ground

Made Ground was recorded across the entire site as shown on Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1002 in Appendix A. Made Ground was recorded to a maximum depth/thickness of 2.8m bgl. The Made Ground generally comprised brownish red to brownish dark grey slightly sandy subangular to angular fine to coarse GRAVEL of limestone, sandstone, asphalt, concrete, brick and slag.

5.1.3 Tidal Flat Deposits

Tidal Flat Deposits were encountered underlying the Made Ground all but the south-east and north-west corner of the site. The Tidal Flat Deposits are between 0.10m and 1.00m thick, with an average thickness of 0.34m.

The strata generally consisted of firm to stiff grey slightly silty slightly silty CLAY, with fine to coarse sands.

5.1.4 Alluvial Fan Deposits

Alluvial Fan Deposits were encountered underlying the Tidal Flat Deposits, and where these were not recorded, the Alluvial Fan Deposits undelay Made Ground. The Alluvial Fan Deposits were between 0.10m and 5.10m thick, with an average thickness of 1.33m. The Alluvial Fan Deposits were typically comprised of dense dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low sandstone cobble content. Sands were fine to coarse. SPTs ranged between 45 and 50 (refusal) which translates the Alluvial Fan Deposits being categorised as dense.

5.2 Visual and olfactory evidence of contamination (soil)

In addition to the more common man-made constituents (ash, clinker, brick, etc), described above, visual and olfactory evidence of contamination was noted in a number of locations, summarised in Table 5.2.

Table 5.2: Visual and olfactory evidence of contamination - soils

Stratum	Location	Depth (m bgl)	Description
MG	TP01	0.75 – 2.40	Slight hydrocarbon odour
MG	TP02	0.30 – 2.50	Slight hydrocarbon odour
MG	TP03	1.00 – 2.00	Slight fish odour (amine hydrocarbon)
MG	TP04	1.60 – 2.10	Moderate hydrocarbon odour
TFD	TP04	2.10 – 2.20	Slight hydrocarbon odour
AFD	TP04	2.20 – 2.70	Slight hydrocarbon odour with oily sheen
MG	TP06	0.75 – 1.20	Strong hydrocarbon odour
MG	TP06	1.20 – 2.20	Mild organic odour
MG	TP06	2.20 – 2.70	Strong hydrocarbon odour and oily sheen
AFD	TP07	2.90 – 3.30	Strong hydrocarbon odour and bright oily sheen
AFD	TP08	2.30 – 3.00	Slight hydrocarbon odour
MG	BH01	2.00 – 2.50	Strong hydrocarbon odour
AFD	BH01	2.50	Slight hydrocarbon odour

5.3 Groundwater

5.3.1 Groundwater observations and levels

Groundwater encountered during the investigation is listed in Table 5.3. A groundwater observation represents the depth at which groundwater was first observed and is likely to be deeper than the actual water table level at that location.

Table 5.3: Groundwater occurrence

Stratum	Date	Location	Fieldwork		Comment
			Groundwater observation (m bgl)	Rose to after 20 mins (m bgl)	
AFD	26/09/23	TP01	2.40	-	Groundwater inflow.
MG	26/09/23	TP02	2.40	-	Groundwater inflow.
MG	26/09/23	TP03	2.20	-	Groundwater inflow.
MG	27/09/23	TP04	0.40	-	Slow water seepage.
AFD	27/09/23	TP04	2.60	2.40	Groundwater strike.
MG	27/09/23	TP05	2.20	-	Groundwater strike.
MG	27/09/23	TP06	2.30	-	Groundwater strike.
MG	28/09/23	TP07	2.30	-	Groundwater strike.

MG	29/09/23	TP08	1.00	-	Seepage.
MG/AFD	29/09/23	TP08	2.30	-	Groundwater strike.
MG	29/09/23	TP09	0.60	-	Rapid water ingress.
MG	29/09/23	TP09	2.60	-	Groundwater strike.
MG	29/09/23	TP10	0.44	-	Slight seepage.
MG	29/09/23	TP10	2.20	-	Groundwater strike.
MG	27/09/23 / 28/09/23	BH01	2.50	1.90	Groundwater strike.
MG	28/09/23 / 29/09/23	BH02	2.60	2.10	Groundwater strike.

Groundwater levels recorded during post-fieldwork monitoring are summarised in Table 5.4.

Table 5.4: Groundwater level and PID data summary

Stratum	Date range	Location	Post-fieldwork monitoring		
			Depth to groundwater (range) (m bgl)	Groundwater elevation (range) (m OD)	Interface probe (free phase product) (mm)
Made Ground	05/10/23 – 03/11/23	BH01A	1.84 - 2.14	5.54 – 5.24	0.0
Made Ground	05/10/23 – 03/11/23	BH01B	1.76	5.62	0.0
Made Ground	05/10/23 – 03/11/23	BH02A	1.85 - 2.14	5.56 – 5.27	0.0
Made Ground	05/10/23 – 03/11/23	BH02B	1.84	5.57	0.0

5.3.2 *Visual / olfactory evidence of contamination (water)*

Visual and olfactory evidence of contamination in water was noted in a number of trial pits and boreholes and is summarised in Table 5.5.

Table 5.5: Visual and olfactory evidence of contamination - waters

Stratum	Location	Depth (m bgl)	Description
AFD	TP07	3.0	Oily sheen on water surface.
MG	TP09	2.6	Oily sheen on groundwater.

5.3.3 *Groundwater summary*

In general, shallow groundwater was encountered within the Made Ground towards the base of the stratum The groundwater flows north to south across the site towards the harbour/former docks.

Free phase petroleum hydrocarbon was not encountered during the monitoring visits undertaken by CJ Associates.

5.4 Ground gases (carbon dioxide and methane)

Records from the gas monitoring boreholes are presented in Appendix G and summarised in Table 5.6.

3 monitoring visits have been undertaken and the monitoring programme is complete.

Table 5.6: Range of ground gas data

Stratum	Methane (%)	Carbon dioxide (%)	Hydrogen sulphide (%)	Oxygen (%)	Carbon monoxide (%)	Steady flow rate (l/hr)
Made Ground	0.8 – 4.4	0.0 – 0.1	0.0-0.0	0.3 – 2.2	0.0 – 3.0	0.20 - 0.60
Alluvial Fan Deposits	0.0 – 0.4	0.1 – 0.2	0.0-0.0	15.1 – 20.8	2.0 – 19.0	0.40 – 1.10

PID testing was also carried out at the site, on three occasions, and is summarised below.

Stratum	PID reading (ppm) (range)
Made Ground	0.0– 2.4
Alluvial Fan Deposits	0.0 – 2.4

5.5 Geotechnical data

5.5.1 Introduction

Laboratory test results are contained in Appendix F with *in situ* test results shown on the relevant exploratory hole log or datasheet in Appendix E. The following sections summarise the main findings and provide interpretation where appropriate.

5.5.2 Plasticity

The volume change potentials in terms of BRE Digest 298 have been determined from the results of plasticity index tests on samples of soil. These are summarised in Table 5.7.

Table 5.7: Volume change potential

Stratum	No. of tests	Plasticity Index			Modified Plasticity Index			Plasticity designation	Volume Change Potential
		Min.	Max.	Av.	Min.	Max.	Av.		
Tidal Flat Deposits	2	20	20	20	13.6	14.2	13.9	Low	Low

5.5.3 Particle size distribution

Particle Size Distribution test (PSDs) results are summarised in Table 5.8 and summary descriptions and PSD plots of the material analysed are presented in **Appendix F**.

Table 5.8: PSD results summary

Stratum	No. of tests	Silt/Clay %	Sand %	Gravel %	Cobbles %	General description
Made Ground	20	2-12	7-35	53-84	0-33	Brownish red to brownish dark grey slightly sandy subangular to angular fine to coarse GRAVEL of limestone, sandstone, asphalt, concrete, brick and slag.

5.5.4 Relative density

Table 5.9 summarises information pertaining to the relative density of the granular soils according to geological stratum. Factual results are summarised for laboratory tests, field tests (e.g. SPT, CPT, dynamic probe correlation). A SPT 'N' value versus depth profile is summarised in Table 5.9 Plots are presented in Appendix F.

Table 5.9: Relative density results and derived values

Stratum	No. of tests	Method	SPT (N-value) (Range)	phi' (°)
Made Ground	4	SPT – cable percussion (Peck et. al. (1967).	41-50	40
Alluvial Fan Deposits	10		45-54	41

5.5.5 Sulfate content

In accordance with BRE (Special Digest 1), the Design Sulfate (DS) classification and the Aggressive Chemical Environment for Concrete (ACEC) classification are presented in Table 5.10. The assessment summary sheet is presented in Appendix F.

Table 5.10: Aggressive chemical environment concrete classification

Stratum	No. tests	DS	ACEC
Made Ground	23	DS-1	AC-1
Tidal Flat Deposits	-	-	-
Alluvial Fan Deposits	4	DS-1	AC-1

5.5.6 Expansive slag testing

Rapid slag expansion testing was conducted on 8 samples from across the development area. The results are summarised in Table 5.11 below, and the testing certificates are presented in Appendix D.

Table 5.11: Rapid slag expansion test results

Stratum	No. of tests	Bulk density (Mg/m³)			Expansion (%)			Potential heave (mm)	
		Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.
Made Ground	8	2.11	2.17	2.15	0.16	0.22	0.19	0.24	0.28

6. Geotechnical assessment

6.1 Geotechnical categorization of the proposed development

Eurocode 7, Section 2 advocates the use of geotechnical categorization of the proposed structures to establish the design requirements.

The proposed development is shown on Intelligence Buildings Infrastructure (IBI) drawing 01/08/23 Site Plan SWITCH Harbourside 26CB03-ARC-30-00-D-A-100001_P02 in Appendix A. This comprises a two storey carbon hub research building with associated car parking and soft landscaping. A sprinkler tank and substation are also included within the proposed development.

Based on the above, for the purposes of this investigation, the proposed structures have been classed as Geotechnical Category 2.

For Category 2 structures, the Geotechnical Category should be re-assessed at the design stage and specific geotechnical design (in addition to this investigation), is required.

Following ground investigation and as part of the assessment provided in the following section, the preliminary geotechnical hazard identification undertaken in Section 3.3 has been updated.

Assessment has been undertaken in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622. The preliminary Geotechnical Risk Register following investigation is provided in Appendix J (Table J.3) and will need to be updated during future design works.

6.2 Characteristic design values

In accordance with BS EN ISO 1997-1 (EC 7), Hydrock consider the proposed structures would be classified as Category 2 structures. As part of the separate geotechnical design, the designer should determine the geotechnical design values. Table 6.1 provides characteristic geotechnical values to assist the designer. These are based on laboratory testing, *in situ* testing and by professional judgement using published data together with knowledge and experience of the ground conditions. Care should be exercised in using these assumed soil strength parameters for any purpose beyond the scope of this report because it may be that additional sampling and testing are required for certain purposes. The reader should refer to the original test results provided in Appendix E and Appendix F.

Table 6.1: Characteristic geotechnical values

Parameter	Bulk unit weight kN/m³	Effective angle of internal friction °	Effective cohesion kN/m²	Undrained shear strength kN/m²	Coefficient of compressibility m²/MN
Stratum	γ [a]	ϕ' [b c]	c' [d]	c_u [e]	m_v [f]
Made Ground	20	35	-	-	-
Tidal Flat Deposits	18	27	0	65	0.30
Alluvial Fan Deposits	22	40	-	-	-

Parameter	Bulk unit weight kN/m³	Effective angle of internal friction °	Effective cohesion kN/m²	Undrained shear strength kN/m²	Coefficient of compressibility m²/MN
Stratum	γ [a]	ϕ' [b c]	c' [d]	c_u [e]	m_v [f]

a. *Measured as part of the triaxial strength test and estimated based on the recommendations of BS 8004-2015.*
b. *Internal friction (φ') values for the granular* in situ *material derived from SPT data following the recommendations of Peck et al., (1967).*
c. *Internal friction (φ') values for the cohesive in-situ material derived from BS 8004-2015, where φcv' is derived from plasticity index. The use of φcv' in the analysis is considered to provide a conservative estimate of φ'.*
d. *BS 8002:1994 Code of practice for Earth retaining structures, British Standards institution.*
e. *Site measurements and laboratory data.*
f. *Laboratory data. Based upon the equilibrium long term CBR from DMRB IAN 73/06 Rev 1 Table 5.1.*

6.3 Groundwork

6.3.1 Site preparation

One buried steel obstruction was encountered in TP06 (1.2m bgl) by this investigation, and the possibility of further buried obstructions being encountered remains. Therefore, it is recommended that an allowance be made for breaking out obstructions, for example provision of pneumatic breakers for site plant. If underground structures cannot be removed, they will need to be surveyed in three dimensions and the new structures will need to be designed to accommodate them.

6.3.2 Groundworks

Excavation of shallow soils should be readily undertaken by conventional plant and equipment. However, excavation through any buried construction or fused slag may require heavy-duty excavation plant/ripping plant.

Trial pit faces were noted to remain generally stable, during excavation, with slight spalling in some locations where groundwater or the Alluvial Fan Deposits were encountered.

Temporary trench support, or battering of excavation sides, is recommended for all excavations that are to be left open for any length of time and will definitely be required where man entry is required.

A risk assessment of the stability of any open excavation should be undertaken by a competent person and appropriate measures adopted to ensure safe working practise in and around open excavations. Further guidance on responsibilities and requirements for working near, and in, excavations can be obtained from the Construction Design and Management Regulations (2015); Construction Information Sheet 47: Inspections and Reports (2005) and HSG47: Avoiding Danger from Underground Services.

To ensure no loads are imposed on the sides of the excavation, spoil should not be placed immediately adjacent to the excavation. Spoil should be placed a suitable distance from the side of the excavation (as assessed by a competent person).

Based on site observations, the rate of water ingress to the proposed excavations is likely to be significant through the Alluvial Fan Deposits or at depths below 2.3m. In these circumstances, groundwater control by sump pumping is unlikely to be sufficient to deal with anticipated flows and alternative methods of dewatering, such as well points, or use of impermeable cut-offs should be allowed for.

However, it should be recognised that groundwater levels may vary from those at the time of the investigation, for example in response to seasonal fluctuations and the timing of construction may dictate the extent of groundwater control required.

Any water pumped from excavations may need to be passed via settlement tanks (to reduce suspended solids) before being discharged to the sewer. Discharge consents may also be required.

6.3.3 Earthworks/reuse of site-won materials

At this stage, Hydrock is not aware of proposals for earthworks at the site.

Should earthworks be required, supplementary earthworks testing and an earthworks Specification will be necessary to ensure the appropriate management and reuse of the existing soils.

If significant earthworks are required, the works may be Category 2 in accordance with BS EN ISO 1997-1 (EC 7) and further geotechnical design may be necessary. Once site proposals have been further defined more specific consideration will need to be given to the reuse of materials and reference should be made back to this office.

6.4 Ground improvement

6.4.1 Vibro Stone Columns (VSC)

Treatment by vibro-replacement at suitable spacing (to be determined by a specialist contractor) should lead to significant improvement of the soils by both the creation of stone columns and the densification of the existing granular made ground horizon. Full depth treatment of the Made Ground will be required and pre-boring may be required locally at least to ensure penetration through the occasional boulders present within the Made Ground. The columns should penetrate through the Made Ground and cohesive Tidal Flat deposits and found into the granular Alluvial Fan Deposits. Where penetration to the design depth is not possible, the obstructions should be removed, or if this is not practicable, the column layout redesigned to allow foundations to span/cantilever over the untreated area.

Different contractors use different methods of emplacing the stone columns and it would be prudent to ensure that the method deployed ensures that the soils surrounding the columns are given a high level of compaction from horizontal vibrations by the vibrating poker.

Hydrock have undertaken preliminary discussion with Gemech Foundations Ltd about the viability of VSC on site. When considering the allowable bearing capacity following treatment of the ground, this will be determined by the density of treatment and degree of improvement achieved. As such it will be a function of the approach adopted by the specialist contractor during detailed design, which will be heavily influenced by the loading requirements of the development. Following treatment, an allowable net bearing pressure of between 150kN/m^2 may be anticipated. Higher loading may be achievable subject to discussions with a specialist installer. This allowable net bearing pressure should be confirmed by in-situ maintained load testing.

6.5 Piled foundations

Should ground improvement not be viable then consideration should be given to a piled solution. Given the nature of the soils, bored piles with the use of casing should be suitable for the site along with Continuous Flight Auger may also be viable although additional casing may be required for CFA to prevent collapse or necking of the pile.

6.6 Piling systems / Pile design

The choice of piling system and detailed design of piles are beyond the scope of this report, and should be undertaken by the specialist piling contractor. Considerations for piling should include the following:

- Boring of piles in coarse soils us likely to result in loosening of the soils, with resultant reduced shaft friction.
- Shallow groundwater (circa 2.3m) is present at the site, and therefore temporary casing is likely to be required for bored piles, unless CFA piles with concrete placement as the pile is withdrawn are used.
- Care should be taken for bored piles taken through the Made Ground, Tidal Flat Deposits and Alluvial Fan Deposits where collapse of the pile shaft could lead to 'necking' of the pile.

As an example, a pile diameter of 450mm and pile length of 7m is likely to be the most economical providing an allowable working load of 500kN. Due to the issues surround loosening of soils in granular deposits this has been based of end bearing only, and high capacities may be viable. A specialist piling contractor should be consulted to carry out a detailed design of the final solution.

6.7 Ground Floor Slabs

As Made Ground greater than 600mm thick is present at the site, it is generally recommended that suspended floor slabs should be adopted.

However, should a ground improvement approach to foundations be utilised this ground improvement should also be able to support a ground bearing floor slab. Gemech have indicated that the ground improvement would be able to offer 50kn/m^2 for a ground bearing floor slab. This should be confirmed through the detail design of the proposed ground improvement.

Prior to the placement of the founding materials and the construction of the ground bearing floor slab, the sub-formation and formation will need to be inspected and checked by a geotechnical engineer to ensure the ground conditions are as expected. In accordance with The Concrete Society Technical Report 34 (The Concrete Society 2013), this shall include the measurement of modulus of sub-grade reaction (k) determined by static plate load testing to confirm the ground conditions at time of construction are consistent with the design parameters derived from this ground investigation.

Following excavation and testing, suitable imported granular material should be placed and compacted in accordance with a suitable specification such as the Specification for Highway Works (Highways Agency 2014). Incorporation of triaxial geogrid reinforcement at sub-formation level, directly below the compacted granular material, will minimise required excavation depths and help provide a suitable foundation for the ground bearing slab.

The floor slab should be of sufficient thickness and sufficiently reinforced to accept the likely loading from commercial vehicles parked on it and any other applied loads, without unacceptable total or differential movement.

Ground floor slabs should be designed to incorporate the gas mitigation measures recommended in Section 7.9.

6.8 Roads and pavements

Based on the visual inspection of the on-site soils and subject to *in situ* testing during construction, it is considered likely an equilibrium CBR of 4% will be achievable over the majority of the site. Proof rolling of the formation level will be required and any loose or soft spots should be removed and replaced with an engineered fill, in accordance with a suitable Specification. The formation level will also need to be protected during inclement weather from deterioration; all slopes should be trimmed to falls to shed rain water and the surface sealed to limit infiltration.

Prior to the placement of the founding materials and the construction of the road pavement, the sub-formation and formation will need to be inspected and checked in accordance with a suitable specification to ensure the ground conditions are as expected. All testing should be carried out in

accordance with DMRB IAN 73/06 to confirm that the ground conditions at time of construction are consistent with the previous design parameters.

Where the CBR is found to be less than 2.5%, the sub-grade may be unsuitable for both the trafficking of site plant and as support for a permanent foundation, without improvement works being undertaken. Improvement works should be carried out in accordance with DMRB IAN 73/06 Rev 1 Chapter 5.

6.9 Buried concrete

Based on guidelines provided in BRE Special Digest 1 (BRE 2005) and the information presented in Section 5.5.5;

- The shallow soils (Made Ground) can be classified as Design Sulfate Class DS-1 and ACEC Class AC-1.

The deeper soils:

- Tidal Flat Deposits were not assessed.
- Alluvial Fan Deposits can be classified as Sulfate Class DS-1 and ACEC Class AC-1.

The designer should check and confirm the classification of concrete using the information presented in Section 5.5.5 and Appendix D during the design.

7. Geo-environmental assessment

7.1 Updated conceptual model

7.1.1 Updated ground model

The initial conceptual site model developed from the desk study and field reconnaissance survey Section 3 has been updated using the findings of the ground investigation and is presented in Section 5. This CSM is the basis for the geo-environmental assessment presented in this section.

7.1.2 Updated exposure model

Following the ground investigation, the plausible contaminant sources, receptors and pathways identified in the preliminary geo-environmental exposure model (Section 3) have been updated or confirmed as follows.

7.1.2.1 Sources

The following sources have been removed from the conceptual model;

» PCBs and oils from transformers in the electricity sub-station off site, immediately east of the site boundary (S05). No PCBs were recorded to be present on site following laboratory testing.

7.1.2.2 Receptors

No potential receptors have been removed from, or added to, the exposure model.

7.1.2.3 Pathways

No potential pathways has been removed from or added to, the exposure model.

7.2 Risk assessment approach

Using the updated CSM, a Tier 2 generic quantitative risk assessment (GQRA) for identified receptors based on all media sampled has been undertaken in accordance with the principles of LCRM.

Firstly, the risks associated with the identified potential contaminant linkages have been estimated using standardised methods (typically involving comparison of site data with published 'screening values'). Secondly, where screening values are exceeded, the result has been evaluated in an authoritative review of the findings with other pertinent information to determine whether or not the exceedance is or is not acceptable in the site-specific circumstances.

The data sets used in the assessment comprise the analytical results obtained by Hydrock as listed in Section 5.

In cases where potentially unacceptable risks are indicated and/or the land is potentially unsuitable for its intended use, actions such as more advanced stages of risk assessment (Tier 3, detailed quantitative risk assessment (DQRA)) or remediation are proposed in Section 7.3.

7.3 Human health risk assessment

7.3.1 Soils Assessment

7.3.1.1 Generic Assessment Criteria

The soil screening values used are generic assessment criteria (GAC) (i.e. derived in accordance with EA CLEA guidance (2009) using the updated exposure model detailed in Defra SP1010 (2014), with the exception of published C4SLs. The term 'GAC' used in this report is inclusive of all generic soil screening values.

Based on the proposed development, generic assessment criteria (GAC) based on a commercial / industrial CLEA land use scenarios have been adopted.

GAC are selected based on the following hierarchy:

» Category 4 Screening Levels (C4SL), where available.
» SoBRA Acute GAC for free cyanide, as acute dose toxicity is the primary risk driver.
» Hydrock GAC, derived by Hydrock as detailed in **Appendix H**.

The results of the assessment are presented in **Appendix H**.

7.3.1.2 *Data sets*

The data set(s) used in this report is based on the conceptual site model and the proposed development, and is taken to be the entire area of the site.

GAC based on a soil organic matter (SOM) of 6%, and 'commercial' end use scenario have been adopted for all soils based on laboratory results, as it is anticipated that the development will include some areas of soft landscaping. Assessment sheets are presented in Appendix H

7.3.1.3 *Assessment Results*

Based on individual test results that exceed the GAC, the chemicals of potential concern (CoPC) which require further assessment are summarised in Table 7.1.

Table 7.1: CoPC in soils which require further assessment (human health)

CoPC	GAC (mg/kg)	GAC Source	No. samples	Min. (mg/kg)	Max. (mg/kg)	No. samples >GAC
Made Ground						
Lead	1300	C4SL	24	21	48000	1
Tidal Flat Deposits						
No Exceedances						
Alluvial Fan Deposits						
No Exceedances						

These exceedances require further consideration. The phrase 'further assessment required' is used to denote soil concentrations that exceed a GAC. This does not necessarily mean that the soil is 'contaminated' or not otherwise suitable for use. The assessment and any mitigation required are to ensure the site does not pose an 'unacceptable risk' as defined under Planning and Part 2A of EPA 1990.

7.3.2 *Asbestos*

Asbestos fibres have been identified by laboratory testing of soil samples as provided in Table 7.2.

Table 7.2: Asbestos in soil samples (laboratory testing)

Location	Depth (m bgl)	% Asbestos (w/w)	Comment
TP01	0.30	0.005	Chrysotile.
TP01	1.20	0.002	Chrysotile.
TP09	3.00	0.001	Chrysotile.

The presence of asbestos fibres in soil requires further consideration.

7.3.3 Risk evaluation

The screening exercise has identified lead and asbestos in Made Ground, and asbestos in Alluvial Fan Deposits at concentrations above the GAC. These are considered further here to assess if the exceedance may be acceptable with respect to the proposed development. The phrase 'further assessment' does not necessarily mean that the soil is 'contaminated' or not fit for use.

7.3.3.1 Lead in Made Ground

Lead is present in the Made Ground with one exceedance of the GAC in TP03 at 2.4m bgl. The GAC indicates the maximum safe levels for human health for lead in soils (commercial 6% SOM) is 2300mg/kg. The exceedance recorded was 48,000mg/kg, which is a significant exceedance of the GAC. This significant exceedance is considered to be an unacceptable risk, which could be found elsewhere on-site as the made ground was not particularly different in this area than elsewhere, and therefore requires mitigation for the proposed end use.

7.3.3.2 Asbestos

Asbestos fibres (between <0.001%v/v and 0.005%v/v of chrysotile have been detected in Made Ground, and Alluvial Fan Deposits.

Hydrock consider it plausible for asbestos to be present in any of the Made Ground soils and asbestos, (even at low concentrations), represents an unacceptable risk and mitigation measures will be required in this area of the site.

Guidance on the assessment of risk associated with asbestos in soils was published by CIRIA (C733) in 2014 and by SoBRA (2021) and whilst there is no published UK-specific GAC for asbestos in soil, further consideration of the potential risk from asbestos in soil is recommended.

7.4 Phytotoxicity risk assessment

7.4.1 Risk estimation

Priority phytotoxic chemical concentrations have been screened against published values to determine the likely risk to plant growth (phytotoxic GAC). Phytotoxic GAC based on a pH of >7% have been adopted for all soils based on laboratory results.

As with human health, individual sample test results are compared directly with the phytotoxic GAC.

Based on individual test results that exceed the phytotoxic GAC, CoPC which require further assessment are summarised in Table 7.3.

Table 7.3: CoPC which require further assessment (phytotoxic)

CoPC	GAC (mg/kg)	Basis for GAC	No. samples	Min. (mg/kg)	Max. (mg/kg)	No. samples >GAC
Made Ground						
Chromium (III)	400	MAFF 1998	24	24	715	3
Copper	200	BS3882:2015	24	15	503	1
Zinc	300	BS3882:2015	24	68	537	4

CoPC	GAC (mg/kg)	Basis for GAC	No. samples	Min. (mg/kg)	Max. (mg/kg)	No. samples >GAC
Tidal Flat Deposits						
Zinc	300	BS3882:2015	5	45	366	1
Alluvial Fan Deposits						
No exceedances.						

7.4.2 Risk evaluation

Detriment to plant life is difficult to quantify and many of the GAC are based on agricultural crop yields rather than harm to particular plant species.

Within the Made Ground, concentrations of chromium (III), copper and zinc are significantly elevated when compared to the GAC. Whilst detriment to plant life is difficult to quantify as many of the GAC are based on agricultural crop yields rather than harm to particular plant species, the significant exceedance of the GAC indicates the probability of an unacceptable risk to plant life and mitigation may be required.

Within the Tidal Flat deposits, one recorded concentration of zinc (366mg/kg) was slightly elevated when compared to the GAC (300mg/kg).

7.5 Pollution of controlled waters risk assessment

7.5.1 Risk estimation

The risks to groundwater and surface water from contaminants on site have been assessed in accordance with the Environment Agency (2006) Remedial Targets Methodology (RTM).

Site contaminant loadings are compared with relevant screening values (Water Quality Targets (WQTs), which are linked to the CSM.

Acceptable WQT are defined for protection of human health (based on Drinking Water Standards (DWS)) and for protection of aquatic ecosystems (Environmental Quality Standards (EQS)).

As related specifically to this site, the data are compared with criteria selected in accordance with the methodology presented in **Appendix H**. This methodology involves selecting which of several alternative risk scenarios apply in this case. The assessment is presented in Table 7.4 below, with the justification for the scenarios selected explained in the following text:

The Tidal Flat Deposits secondary undifferentiated aquifer underlying the site was not encountered in all exploratory hole positions, however where present, featured shallow groundwater. The shallow groundwater levels encountered are likely to be in continuity with the water levels in the disused harbour 50m to the south of the site. A deeper groundwater body is anticipated to be present in the South Wales Middle Coal Measures, although this stratum was not encountered during the investigation. The groundwater below the site is thought to be flowing south towards the harbour waters, and unlikely to further contaminate land to the south. Transmission of contaminants is likely to occur laterally between the strata, however it is also anticipated that contaminants may be able to migrate onto site from the north, due to the industrial setting of the site area.

Table 7.4: Summary of water quality risk assessment protocol

Hydrock scenario	Water body receptors	Secondary receptors	Example contaminant linkages	RTM level and data used	Water quality targets
C	Groundwater Surface water	Aquatic ecosystem	Contaminants from site leach or seep into a groundwater body that feeds coastal/transitional surface water by base flow. The surface water may be an aquatic ecosystem.	RTM Level 1 - Soil leachate/pore water/calculation. AND RTM Level 2 - Groundwater. Direct comparison of surface water samples	EQS inland AND EQS (other)

Notes:

Inland waters EQS applicable to freshwater, 'other' waters EQS applicable to coastal or transitional waters.

This table and the results of the assessment are considered as a first screening for potential risks of pollution of Controlled Waters. More specific requirements may be stipulated by the relevant Agency.

The results of the screening assessment are presented in **Appendix H** and are summarised in

Table 7.5 and Table 7.6.

There are no WQT for petroleum hydrocarbons in water. Consequently, Hydrock has calculated risk-based guidelines for drinking water based on a methodology proposed by the WHO and using the tolerable daily intakes for the various TPH fractions as used in the derivation of the soil GAC. The results are included in

Table 7.5.

In some instances, the reporting limit (or detection limit) quoted by the laboratory may be greater than the WQT that it is being assessed against. As the current exercise is an initial screening assessment, further assessment of these elements has not been undertaken.

Table 7.5: CoPC which require further assessment (controlled waters) EQS inland.

CoPC	WQT (µg/l)	Basis for WQT	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Soil Leachate Data – Made Ground							
Silver	0.05	EQS inland	6	1	<0.13	0.2	1
Copper	1	Bioavailable EQS inland	6	4	<5	29	4
Mercury	0.07	EQS inland	6	5	0.18	0.61	3
Vanadium	20	EQS dependant on receiving surface water hardness.	6	5	<5	594	5
Zinc	12.3	Bioavailable EQS inland	6	6	4	23	1
Anthracene	0.1	EQS inland	6	2	<0.01	0.2	1
Benzo(a)pyrene	0.00017	EQS inland	6	3	<0.01	0.04	3
Fluoranthene	0.0063	EQS inland	6	3	<0.05	0.39	3
Naphthalene	2	EQS inland	6	4	<0.1	2.49	1
Benzene	10	EQS inland	6	1	<1	17	1
Shallow groundwater – Alluvial Fan Deposits							
Copper	1	Bioavailable EQS inland	6	5	<0.2	34.2	4
Mercury	0.07	EQS inland	6	4	<0.04	2.2	4
Manganese	123	Bioavailable EQS inland	6	5	<5	2530	4
Nickel	4	Bioavailable EQS inland	6	5	1.4	5.9	1
Vanadium	20	EQS inland	6	2	<0.2	85.9	2
Fluoranthene	0.0063	EQS inland	6	1	<0.01	0.04	1
Naphthalene	2	EQS inland	6	3	<0.01	82.45	1
Aro EC5-EC7	10	EQS inland (benzene)	6	2	<10	133	2
Aro >EC7-EC8	10	EQS inland (toluene)	6	1	<10	134	1

CoPC	WQT (µg/l)	Basis for WQT	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Aro >EC8-EC10	10	EQS inland (mostly ethylbenzene/ xylene fraction)	6	2	<10	187	2
Aro >EC10-EC12	10	EQS inland (mostly naphthalene fraction)	6	2	<10	168	2
Aro >EC35-EC44	10	EQS inland	6	2	<10	331	2
Benzene	10	EQS inland	6	2	<1	133	2
Toluene	74	EQS inland	6	1	<5	134	1
Ethylbenzene	20	EQS inland	6	1	<5	55	1
O-Xylene	30	EQS inland for total xylene	6	2	<5	154	1
M,p-Xylene	30	EQS inland for total xylene	6	2	<10	395	2

Note: the maximum recorded value is compared with the water quality target.

** Hydrock calculated DWS for petroleum hydrocarbon fractions based on WHO methodology.

Table 7.6: CoPC which require further assessment (controlled waters) EQS other.

CoPC	WQT (µg/l)	Basis for WQT	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Soil Leachate Data – Made Ground							
Arsenic	25	EQS other	6	5	6	28	1
Copper	3.76	EQS other	6	4	<5	29	4
Mercury	0.07	EQS other	6	5	0.18	0.61	5
Vanadium	100	EQS other	6	5	<5	594	5
Zinc	7.9	EQS other	6	6	4	23	5
Anthracene	0.1	EQS other	6	2	<0.01	0.2	1

CoPC	WQT (µg/l)	Basis for WQT	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Benzo(a)pyrene	0.00017	EQS other	6	3	<0.01	0.04	3
Fluoranthene	0.0063	EQS other	6	3	<0.05	0.39	3
Naphthalene	2	EQS other	6	4	<0.1	2.49	1
Benzene	8	EQS other	6	1	<1	17	1
Shallow groundwater – Alluvial Fan Deposits							
Copper	3.76	EQS other	6	5	0.6	34.2	1
Mercury	0.07	EQS other	6	4	<0.04	3.99	4
Fluoranthene	0.0063	EQS other	6	1	<0.01	0.04	1
Naphthalene	2	EQS other	6	3	<0.01	82.45	1
Aro EC5-EC7	10	EQS other (benzene)	6	2	<10	133	2
Aro >EC7-EC8	10	EQS other (Toluene)	6	1	<10	134	1
Aro >EC8-EC10	10	EQS other (mostly ethylbenzene/ xylene fraction)	6	2	<10	187	2
Aro >EC10-EC12	10	EQS other (mostly naphthalene fraction)	6	2	<10	168	2
Aro >EC35-EC44	10	EQS other	6	2	<10	331	2
Benzene	8	EQS other	6	2	<1	133	2
Toluene	74	EQS other	6	1	<5	134	1
Ethylbenzene	20	EQS other	6	1	<5	55	1
O-Xylene	30	EQS other for total xylene	6	2	<5	154	1
M,p-Xylene	30	EQS other for total xylene	6	2	<10	395	2

Note: the maximum recorded value is compared with the water quality target.

** Hydrock calculated DWS for petroleum hydrocarbon fractions based on WHO methodology.

7.5.2 Risk evaluation

The EQS inland for silver, copper, mercury, vanadium and zinc have been exceeded, and in addition PAHs have been identified in groundwater which exceed EQS. All of these exceedances, except for vanadium are minor, and likely reflect the natural background concentrations for the site as it lies within a heavily industrial area. Although vanadium is harmful to human health in high concentrations, there are no potable abstraction wells within 500m of the site, which means the likelihood of contaminated water being ingested by humans very low. As there are no abstraction wells in proximity to the site, contaminants have also been screened against the EQS 'other' scenario, which has outlined marginally more exceedances of the EQS. However, although silver and nickel can be disregarded from the risk evaluation when using the EQS other criteria, arsenic now exceeds this EQS criteria.

The groundwater gradient is north to south and the groundwater in the Made Ground provides base flow to the harbour located 50m to the south.

In general, it can be concluded that the shallow groundwater within the Made Ground is contaminated with metals, PAH and petroleum hydrocarbons. This water is in hydraulic connection with the underlying groundwater bodies and as the water moves to the underlying strata and then laterally away from the site (southerly), dilution and degradation of the leachate is occurring. In addition, no free phase product was recorded during the 3 groundwater monitoring and sampling visits.

WSP have undertaken remediation of the site with a total of 21,160L of LNAPL being removed during skimming activities and 618m3 of hydrocarbon impacted soils being removed. The remediation strategy was submitted as part of Planning Application P2020/0294 in April 2020. The remediation verification report was submitted to discharge associated conditions and accepted by the local authority as part of Planning Application P2022/0823

Therefore, whilst there are concentrations of Chemicals of Potential Concern elevated above the water quality criteria, based on the remediation and investigation works undertaken to date and subject to agreement with Natural Resources Wales, Hydrock does not believe the site poses a significant risk to Controlled Waters, and no further remediation is required.

7.6 Ground gases risk assessment

7.6.1 Data

It is judged from the available evidence that the gas generation potential at the site is very low as no organic material noted in the soils on site and that the sensitivity of the development is low (due to the commercial end use criteria). Consequently, an appropriate minimum monitoring regime is 3 readings over 6 weeks, provided other monitoring requirements are also met, such as prevailing atmospheric pressure conditions (for example, BS 8485:2015 +A1:2019 suggests monitoring should include a period of falling atmospheric pressure), this is largely in accordance with CIRIA C665 (Table 5.5a and 5.5b),

3 readings have been undertaken by CJ Associates on behalf of Hydrock as a starting point as no real source of ground gas is present, including during periods of low atmospheric pressure, but not during periods of falling pressure.

7.6.2 Assessment

The risks associated with the ground gases methane (CH_4) and carbon dioxide (CO_2) have been assessed using BS 8485:2015 +A1:2019, which cites the guidelines published by CIRIA (C655, 2007) (known as Situation A).

The assessment guidelines set out in Table 2 of BS 8485 are based on interpretation of the gas concentrations and the gas flow rates. The quantitative assessment has been carried out by comparing the individual gas concentrations and gas screening values (GSV[4]) in Appendix D with the published CS thresholds (BS 8485 Table 2), in addition to a worst-case GSV assessment in accordance with section 6.3.7 of BS 8485. The assessment is summarised in Table 7.7 and the full assessment is presented in Appendix G.

Table 7.7: Ground gas risk assessment

	Min	Max	Typical [(i)]	Comment
Carbon Dioxide (%v/v)	0.0	0.2	0.2	CS1
Carbon Dioxide GSV (l/hr)	0.0	0.0022	0.001	CS1
Methane (%v/v)	0.0	4.4	4.2	CS2
Methane GSV (l/hr)	0.0	0.0484	0.025	CS1
Oxygen (%v/v)	0.3	20.8	18.2	Oxygen was significantly depleted in the shallow installs in BH01 and BH02, with the percentage values recorded less than 2%.

[(i)] Hydrock assume that values are considered to be atypical if 95% or more of the remaining data are less than the value under consideration

For the purposes of the calculation, where the recorded gas flow rate is below the manufacturer's limit of detection for the instrument used, the detection limit has been adopted for the gas flow rate.

As indicated in Table 7.14 the carbon dioxide indicates CS1 conditions in all wells as there is low flow and the concentrations is typically below 5%. The GSV for methane would indicate CS1 conditions, however there are multiple occasions where the methane is recorded above 1% which would constitute CS2 Conditions.

The shallow installations in BH01 and BH02 recorded significantly depleted oxygen as well as a slight increase in methane. However, the balance of gases within the borehole is not correct. This indicates that potentially the hydrocarbon vapours are creating issues with the PID and methane modules incorrectly recording the gas concentrations. It is therefore considered that the vapour/methane concentrations could be higher than actually recorded. Therefore, due to the depleted oxygen and vapours recorded the site should be classified as Characteristic Situation 2. Any ground gas mitigation measures should incorporate a suitable VOC vapour resistant barrier membrane.

Based on the data, mitigation measures are required. These are described in Section 7.9.

7.7 Construction materials risk assessment

7.7.1 Water pipelines

A formal water pipe investigation and risk assessment is beyond the scope of this report. However, the findings of this investigation have been compared to the threshold values in Water UK HBF (2014), Table 1 as far as is practicable.

[4] Note: GSV is synonymous with 'site characteristic hazardous gas flow rate' (Q_{hgs}) of BS 8485:2015 +A1:2019 Table.

The site is brownfield and organic contamination (PAH, VOC, SVOC and BTEX) has been identified in exceedance of the threshold values and Hydrock believes barrier pipe is required. However, confirmation should be sought from the water supply company at the earliest opportunity.

7.7.2 Other construction materials

Plastic pipes for drains and sewers are manufactured from unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) or polyethylene (PE). These materials may be affected by the presence of organic compounds in the soil.

In accordance with the British Plastics Federation Guidance (August, 2018), as the concentrations of petroleum hydrocarbons (TPH) are above 200 mg/kg, the pipework manufacturer should be consulted with regard the suitability of the pipework.

7.8 Findings of the generic contamination risk assessments

The potential sources, pathways and receptors identified in the desk study and assessed A Source-Pathway-Receptor linkage assessment has been undertaken and is presented in Appendix K (Table K.2).The final CSM is illustrated on Hydrock Drawing 26279-HYD-XX-XX-DR-GE-1004 in Appendix A.

A summary of the Source-Pathway-Receptor (SPR) contaminant linkages for which the risks may be unacceptable and require mitigation (those that are moderate or higher) are discussed in Table 7.8.

Table 7.8 assumes the following SPR linkages which have been discounted (subject to agreement) at the risk evaluation stage are confirmed by the regulators and the warranty provider as not requiring further consideration (mitigation). If these assumptions are not agreed during regulatory discussions, the conclusions as noted in Table 7.8 will need to be updated:

- Elevated concentration of lead in Made Ground which significantly exceeds the GAC.
- Detection of asbestos (chrysotile) fibres in the Made Ground in two exploratory locations (3 different depths) across the site.
- Reduced oxygen, increased methane recorded and low levels of vapour recorded within the Made Ground on site.

Table 7.8: Residual risks following risk evaluation

Contaminant Linkage				Comments	
Pollutant Linkage	Sources	Pathways	Receptors	General	Mitigation
PL 1.	Pervasive lead in the Made Ground.	Ingestion, inhalation or direct contact.	Human health.	Significant exceedance of the GAC in one location.	Mitigation required in the form of an engineered cover system.
PL 2.	Asbestos fibres in soil in Made Ground and Alluvial Fan Deposits.	Inhalation of fugitive dust.	Human health.	Asbestos (chrysotile) fibres measured in soil samples.	Mitigation required in the form of an engineered cover system.

Contaminant Linkage				Comments	
Pollutant Linkage	Sources	Pathways	Receptors	General	Mitigation
PL 3.	Ground gas and vapours in the Made Ground.	Inhalation.	Human health.	The ground gas records for the site following monitoring indicated CS2 conditions.	Mitigation required in the form of ground gas protection measures and hydrocarbon vapour resistant membrane.

7.9 Mitigation measures

The outline remediation strategy presented below is provided for guidance only, and does not represent a 'Remediation Options Appraisal', or a 'Remediation Strategy', prepared in accordance with LCRM (2021).

As shown in Table 7.9 (and subject to regulatory (and NHBC) agreement), Hydrock consider the following mitigation is required to ensure the site is suitable for use for the proposed end use. The mitigation measures include:

- The installation of a clean cover system in soft scaped areas of the site;
- Installation of ground gas protection measures to comply with CS2 conditions and a hydrocarbon vapour resistant membrane.

The methodology for the remediation should be set out in a Remediation Strategy (which will include the 'Implementation Plan', the 'Verification Plan' and the 'Long Term Monitoring and Maintenance Plan'), which will need to be submitted to the warranty provider and the regulatory authorities for approval.

Verification reports by a competent independent geo-environmental specialist will be required following completion of any remedial works.

7.9.1 Gas protection measures

Mitigation of the risk from ground gases needs to be undertaken in accordance with BRE 414, CIRIA 665, BS 8485:2015 +A1:2019, and CIRIA C735. In accordance with BS 8485:2015 +A1:2019, the design of gas protection measures needs to be undertaken in accordance with the Characteristic Situation and the building type:

- The site is provisionally classified as Characteristic Situation 2.
- The SWITCH facility is categorised as a type C building.

As such, the faculty requires 2.5 points of protection; this is illustrated in Table 7.10.

Table 7.9: Gas protection score by CS and type of building (after BS 8485:2015 +A1:2019)

Characteristic Situation	Minimum gas protection score (points)			
	High risk		Medium risk	Low risk
	Type A building	Type B building	Type C building	Type D building
1	0	0	0	0
2	3.5	3.5	2.5	1.5
3	4.5	4	3	2.5
4	6.5[(A)]	5.5[(A)]	4.5	3.5
5	_ [(B)]	6.0[(A)]	5.5	4.5
6	_[(B)]	_ [(B)]	_ [(B)]	6.0

A) Residential buildings should not be built on CS4 or higher sites unless the type of construction or site circumstances allow additional levels of protection to be incorporated, e.g. high-performance ventilation or pathway intervention measures, and an associated sustainable system of management of maintenance of the gas control system, e.g. in institutional and/or fully serviced contractual situations.

B) The gas hazard is too high for this empirical method to be used to define the gas protection measures.

The final design of ground gas protection measures is subject to a detailed design in accordance with section 7.4 and 8.3 of BS 8485:2015 + A1:2019 and is to be specified by the designer (in accordance with CIRIA 665, and BS 8485:2015 +A1:2019). The protection will need to be achieved by a combination of two or more of the following three types of protection measures:

- the structural barrier of the floor slab;
- ventilation measures; and
- gas/vapour resistant membrane (created from a virgin polymer).

Where design elements are required to meet certain standards to qualify for the protection points (e.g. cast *in situ* monolithic reinforced floor slab), it is up to the designer to ensure the minimum requirements of the standards are met.

Where used, gas resistant membranes should be:

- sufficiently impervious to methane and carbon dioxide;
- capable, after installation, of providing a complete barrier to the entry of the relevant gas;
- sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas emissions;
- sufficiently strong to withstand in service stresses (e.g. due to ground settlement if placed below a floor slab);
- sufficiently strong to withstand the installation process and following construction activities until covered (e.g. penetration from steel fibres in fibre reinforced concrete, penetration of reinforcement ties, tearing due to working above it, and dropping tools); and
- chemically resistant to degradation by other contaminants that might be present.

As preliminary guidance, Hydrock would suggest the following:

Either:

- Beam and block or pre-cast concrete floor slab (0 points);
- passive sub floor ventilation e.g. void (good performance 1.5 points); and

- 2000g gas resistant and vapour resistant membrane (created from virgin polymer) (2.0 points).

Or:

- Cast *in situ* ground-bearing floor slab (with only nominal mesh reinforcement) (0.5 points);
- 2000g gas resistant and vapour resistant membrane (created from virgin polymer) (2.0 points).

Other variations are possible. It is up to the designer to design and specify ground gas protection measures.

Where a gas resistant membrane is required as part of the design, all joints and penetrations are to be sealed and the installation is to be verified in accordance with CIRIA C735 (Mallet et al 2014) or it will score zero points and will not be deemed to afford any protection. This verification will involve verification by the Contractor and independent verification on a selected number of plots by Hydrock or alternative qualified independent third-party.

Whilst tape can be utilised to seal the seams Hydrock would recommend the membranes are sealed using welded seams and the use of specialist seals around penetrations (top hats etc.). The installer is to present an installation methodology and a QA/QC plan for installation to Hydrock for comment, with particular attention given to sealing the membrane.

In order to achieve the points specified for ventilation, the architect is to design passive ventilation to meet at least 'good performance', as described in Annex B of BS 8485:2015 +A1:2019.

8. Waste and materials management

8.1 Introduction

The Waste Framework Directive (WFD) (2009/98/EC) defines waste as '*any substance which the holder discards or intends to discard.*' In a geo-environmental context, the waste is most often 'soil' and the two main scenarios are offsite disposal of the material as a waste and/or reuse of the material on site. For cost and sustainability reasons, reuse is preferred to off-site disposal.

Section 8.2 below describes the key issues relating to off-site disposal to landfill and Section 8.3 considers requirements relating to reuse of soils and materials management.

8.2 Waste disposal

8.2.1 Principles

Based on the WFD, any material excavated on site may be classified as waste and it is the responsibility of the producer of a material to determine whether or not it is waste. Where off-site disposal is undertaken, the following guidance applies.

Classification is a staged process:

- A hazardous waste is defined under the WFD as one which possesses one or more of fifteen defined hazardous properties. If a waste is not defined as hazardous, then it is non-hazardous.
- Where the materials are soil, it is then be assigned using the 'List of Waste Codes', which classifies the material as either:
  - hazardous (17-05-03), which is defined as "*soil and stones containing hazardous substances*"; or
  - non-hazardous (17-05-04), which is defined as "*soil and stones other than those mentioned in 17-05-03*".
  - Hydrock utilise the proprietary assessment tool, HazWasteOnline™ to undertake this assessment.
- Waste Acceptance Criteria (WAC) testing is then undertaken if required, and are only applicable following classification of the waste, and only where the waste is destined for disposal to landfill. The WAC are both qualitative and quantitative. The WAC and the associated laboratory analyses (leaching tests) are not suitable for use in the determination of whether a waste is hazardous or non-hazardous.

It should be noted that some non-hazardous wastes may be suitable for disposal at an inert landfill as non-hazardous waste, subject to meeting the appropriate waste acceptance criteria.

It should be noted that classification must be undertaken on the waste produced, by the waste producer. Necessary sampling frequency to adequately characterise a soil population is defined within WM3.

Further discussion with regards to the characterisation process for different scenarios and waste types is provided below.

Topsoil and Peat

Topsoil and peat are biodegradable, therefore if they are surplus to requirements and cannot be re-used in accordance with a Materials Management Plan, they cannot be classified as inert. As such, topsoil and peat need to be classified by a staged assessment and sampling process and would either be classified as hazardous or non-hazardous, depending upon the results of the assessment.

Contaminated or potentially contaminated sites

If the site is brownfield, contaminated or potentially contaminated, the waste must undergo an initial waste classification exercise using background information on the source and origin of the waste and assessment of chemical test data in accordance with Environment Agency Technical Guidance WM3.

If following the initial waste classification exercise, the soils are acceptable for disposal to a non-hazardous landfill, further qualitative Waste Acceptance Criteria (WAC) testing is not required.

However, if soils are potentially able to be disposed to an inert landfill as non-hazardous waste, or require testing to determine if they can be disposed of to a stable non-reactive hazardous or hazardous class of landfill, the next stage of assessment is to undertake qualitative WAC testing. This will determine the Basic Characterisation and the landfill category at which the soils can be accepted.

Hazardous material must be subjected to WAC testing to determine whether it requires treatment before it can be accepted at the hazardous landfill, while non-hazardous material can be tested to determine whether it may be suitable for placement in an inert landfill.

8.2.2 HazWasteOnline™ assessment .

As the site is brownfield, in order to inform the preliminary waste characterisation process, Hydrock has undertaken an exercise using the proprietary web-based tool HazWasteOnline™. The output of the HazWasteOnline™ assessment is provided in Appendix I and a summary of the preliminary waste classification is provided below in Section 8.2.4.

8.2.3 WAC testing

The site is brownfield. However, WAC testing has not been undertaken to date but will be required on the excavated soils that are to be disposed of, to assist with waste disposal options prior to disposal. A summary of the preliminary waste disposal options is provided below in Section 9.2.4.

8.2.4 Preliminary waste disposal options

The site is brownfield and based on the site history and the HazWasteOnline™ assessment, if suitable segregation of different types of waste is put in place, for soils to be disposed of, it is considered that:

- The 'General' Made Ground is likely to be classified as hazardous.
- The natural uncontaminated subsoils are likely to be classified as non-hazardous waste, however there are hazardous areas of contamination at depth (circa 3m bgl) in the Tidal Flat and Alluvial Fan Deposits in TP02, TP07, TP09 and TP10.
- The elevated areas of contamination within TP02, TP07, TP09 and TP10 are classed as hazardous waste due to elevated concentrations of petroleum hydrocarbons.
- Any soils containing > 0.1% asbestos or visible asbestos containing materials would be considered as hazardous. The asbestos fibres detected during the soil screening exercise does not exceed the HazWasteOnline™ criteria, however if Asbestos Containing Materials were encountered, these would be classified as hazardous wastes.

8.2.5 General waste comments

It should be noted that:

- It is the waste producer's responsibility to segregate the waste at source and waste producers must not mix waste materials/streams or dilute hazardous components, for example by mixing with less or non-hazardous waste on site to meet WAC limit values.
- The above preliminary assessment has been made on the basis of the soils tested as part of the ground investigation, using the HazWasteOnline™ assessment. However, the formal classification of waste can only be undertaken on the material to be disposed of, and by the waste producer and the receiving landfill as license conditions vary from landfill to landfill.
- Basic Characterisation should be undertaken in accordance with Environment Agency guidance by the waste producer. Hydrock can assist if required and this report will assist the characterisation. However, Basic Characterisation does not form part of the current commission and would require further assessment and testing on the wastes actually to be disposed.
- Once the waste producer has undertaken an initial Basic Characterisation on each waste stream, they can manage the soils as part of the on-site processing programme (for example, stockpiling, treatment, screening and separation). The waste producer and landfill operator will then need to agree the suite of compliance testing for regularly generated waste to demonstrate compliance with the initial Basic Characterisation prior to disposal.
- At the time of disposal, additional testing on the excavated soils to be disposed of, will likely be necessary.
- Non-hazardous and hazardous soils require pre-treatment (separation, sorting and screening) prior to disposal.

- The costs for disposal of non-hazardous and hazardous soils are significant compared to disposal of inert material.
- In addition to disposal costs, landfill tax will be applicable. Non-hazardous and hazardous waste will generally be subject to the Standard Rate Landfill Tax. Inert or inactive waste will generally be subject to the Lower Rate Landfill Tax. The landfill tax value changes each April and can be found at https://www.gov.uk/government/publications/rates-and-allowances-landfill-tax/landfill-tax-rates-from-1-april-2013.
- Before a waste producer can move waste to a landfill site for disposal, they need to check the landfill site has the appropriate permit and must have completed the following[5]:
  - Duty of care transfer note / Hazardous Waste consignment note, including comment as to if pre-treatment has been undertaken; and
  - Basic Characterisation of the waste, to include: description of the waste; waste code (using list of wastes); composition of the waste (by testing, if necessary) and; WAC testing (if required).

8.3 Materials management

8.3.1 Introduction

Soils that are to remain on site, should be managed and reused in accordance with a Materials Management Plan (MMP), prepared in accordance with 'The Definition of Waste: Development Industry Code of Practice', Version 2 (CL:AIRE), known as the DoWCoP. Where all aspects of the DoWCoP are followed the soils are considered not to be waste, because they were never discarded in the first place.

Version 2 of the DoWCoP clearly sets out the principles and an outline of the requirements of a MMP. The following compliance criteria must be seen to apply to the MMP for the site:

- Factor 1: Protection of human health and protection of the environment.
- Factor 2: Suitability for use, without further treatment.
- Factor 3: Certainty of Use.
- Factor 4: Fixed Quantity of Material.

The reuse of soils at sites should be considered during the planning and development design process so that compliance with issues such as fixed quantity and certainty of use clearly relate to agreed site levels. Suitability of Use is normally evident from the remediation strategy or the design statement, which form an integral part of a MMP. However, some soils may need to be tested post-excavation to prove they are suitable for use.

Once the MMP is finalised, it must be declared by a Qualified Person (QP). The Declaration is an on-line submission as part of which the QP is required to confirm that the declaration is being made before the relevant works have commenced (i.e. it is not a retrospective application).

Once all material movements have been completed in accordance with the MMP a verification report must be produced, kept for 2 years and provided to the EA on request.

It should be noted that failure to comply with the requirements of the DoWCoP when re-using materials has potentially significant consequences for the waste holder. The risk is that the reused materials are still regarded as a waste that has been illegally deposited. From 1 April 2018, the scope of Landfill Tax has been extended to sites operating without the appropriate environmental

[5] ENVIRONMENT AGENCY. November 2010. Guidance on waste acceptance procedures and criteria. Waste acceptance at landfills. The Environment Agency.

disposal permit, and operators of illegal waste sites will now be liable for Landfill Tax. Further information is available at: https://www.gov.uk/government/publications/landfill-tax-disposals-not-made-at-landfill-sites/landfill-tax-disposals-not-made-at-landfill-sites.

If soils are excavated and reused on sites (or moved to another site) without a MMP, exemption, or appropriate Permit in place, anyone who knowingly facilitates the disposal may be '*jointly and severally liable*' to any assessment of tax, fines or prosecution.

8.3.2 Materials management scenarios

The materials management scenarios present on site are discussed below.

It should be noted that more than one scenario may apply, dependent upon where the soils are proposed for reuse.

8.3.2.1 Made Ground and other contaminated soils

On sites where Made Ground or contaminated soils are present, any soils excavated will be a waste as soon as they are excavated (even if they are clean, naturally occurring materials), unless they are subject to reuse in accordance with the DoWCoP. As such, for any brownfield site or a site where Made Ground is present and soils are being moved and reused, the materials could be deemed a waste, subject to either:

- a Materials Management Plan (MMP), to prevent the material being classified as a waste following reuse; or
- an exemption (for limited volumes); or
- an environmental permit, dependant on its status.

8.3.2.2 Geotechnical improvement requirements

Construction activities carried out on uncontaminated soils solely for the purpose of improving geotechnical properties e.g. lime / cement modification, are not generally regarded as waste treatment operations and do not require a permit.

However, should processing be needed (such as screening, treatment or improvement), that would constitute a waste activity and require a mobile treatment permit. This may be as simple as removing oversize material with an excavator bucket, to using a riddle bucket to remove hardcore to full mechanical screening.

9. Uncertainties and limitations

9.1 Site-specific comments

The environmental laboratory testing undertaken by DETS on Hydrock's instruction was completed in two instalments. For leachates, the limits of detection (LODs) for the samples have been updated between the issue of the two reports to Hydrock. Therefore, two leachate assessment sheets have been included in this report, with varying limits of detection, as it would not be appropriate to present this data in the same worksheet. This is also the case for the groundwater sampling undertaken after the completion of the site works, and therefore the data has been processed separately.

All three rounds of monitoring have been completed with respect to gas and groundwater, however only two of the three batches of water samples have been screened due to delays in laboratory reporting.

9.2 General comments

Hydrock Consultants Limited (Hydrock) has prepared this report in accordance with the instructions of Morgan Sindall Construction & Infrastructure Ltd (the Client), by e-mail from James Harding, dated 25 September 2023, PO number CE001 under the terms of appointment for Hydrock, for the sole and specific use of the Client and parties commissioned by them to undertake work where reliance is placed on this report. Any third parties who use the information contained herein do so at their own risk. Hydrock shall not be responsible for any use of the report or its contents for any purpose other than that for which it was prepared or for use of the report by any parties not defined in Hydrock's appointment.

This report details the findings of work carried out in September-November 2023. The report has been prepared by Hydrock on the basis of available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, not all potential environmental constraints or liabilities associated with the site may have been revealed.

Hydrock has used reasonable skill, care and diligence in the design of the investigation of the site and in its interpretation of the information obtained. The inherent variation of ground conditions allows only definition of the actual conditions at the locations and depths of trial pits and boreholes at the time of the investigation. At intermediate locations, conditions can only be inferred.

Groundwater data are only representative of the dates on which they were obtained and both levels and quality may vary.

Unless otherwise stated, the recommendations in this report assume that ground levels will remain as existing. If there is to be any re-profiling (e.g. to create development platforms or for flood alleviation) then the recommendations may not apply.

Information provided by third parties has been used in good faith and is taken at face value; however, Hydrock cannot guarantee its accuracy or completeness.

Where the existing report(s) prepared by others have been provided by the Client, it is assumed that these have been either commissioned by the Client, or can be assigned to the Client, and can be relied upon by Hydrock. Should this not be the case Hydrock should be informed immediately as additional work may be required. Hydrock is not responsible for any factual errors or omissions in the supplied data, or for the opinions and recommendations of others. It is possible that the conditions described may have since changed through natural processes or later activities.

The work has been carried out in general accordance with recognised best practice. Unless otherwise stated, no assessment has been made for the presence of radioactive substances or unexploded ordnance. Where the phrase 'suitable for use' is used in this report, it is in keeping with

the terminology used in planning control and does not imply any specific warranty or guarantee offered by Hydrock.

The chemical analyses reported were scheduled for the purposes of risk assessment with respect to human health, plant life and controlled waters as discussed in the report. Whilst the results may be useful in applying the Hazardous Waste Assessment Methodology given in Environment Agency Technical Guidance WM3, they are not primarily intended for that purpose and additional analysis will be required at the time of disposal to fully classify waste. Discussion and comment with regards to waste classification are preliminary and do not form the requirements of 'Basic Characterisation' as required.

Assessment and testing for the presence of coal tar has only been completed at the locations of exploratory holes undertaken for risk assessment purposes. This investigation is not designed to provide a definitive assessment of the risk from coal tar, nor the waste classification for bituminous bound pavement arisings at the site.

Unless otherwise stated, at the time of this investigation the future routes of water supply pipes had not been established. This investigation and sampling strategy may not be fully compliant with UKWIR recommendations. Consequently, a targeted investigation and specific sampling and chemical testing may be required at a later date once the routes of the supply pipes are known. In addition, it is recommended that the relevant water supply company be contacted at an early stage to confirm its requirements for assessment, which may not necessarily be the same as those recommended by UKWIR.

Whilst the preliminary risk assessment process has identified potential risks to construction workers, consideration of occupational health and safety issues is beyond the scope of this report.

The non-specialist UXO screening has been undertaken for the purposes of ground investigation only (i.e. low risk activity in accordance with CIRIA Report C681). Further assessment should be undertaken with regards to other higher risk activities e.g. construction.

Please note that notwithstanding any site observations concerning the presence or otherwise of archaeological sites, asbestos-containing materials or invasive weeds, this report does not constitute a formal survey of these potential constraints and specialist advice should be sought.

Any site boundary line depicted on plans does not imply legal ownership of land.

10. Recommendations for further work

Following the ground investigation works undertaken to date, the following further works will be required:

- discussion and agreement with utility providers regarding the materials suitable for pipework;
- discussions with regulatory bodies and the warranty provider regarding the conclusions of this report;
- discussions with Vibro-stone Column Contractors regarding the viability of, and potential improvement by, VSCs;
- discussions with piling Contractors regarding conclusions of this report and design of the piles;
- provision of geotechnical design for the Category 2 structures (floor slabs / foundations);
- production of a Remediation Strategy and Verification Plan (and agreement with the regulatory bodies and the warranty provider);
- production of a Materials Management Plan relating to reuse of soils at the site and import of soils to the site;
- remediation and mitigation works;
  - installation of a clean cover system;
  - installation of a gas vapour membrane;
- verification of the earthworks, remediation and mitigation works.

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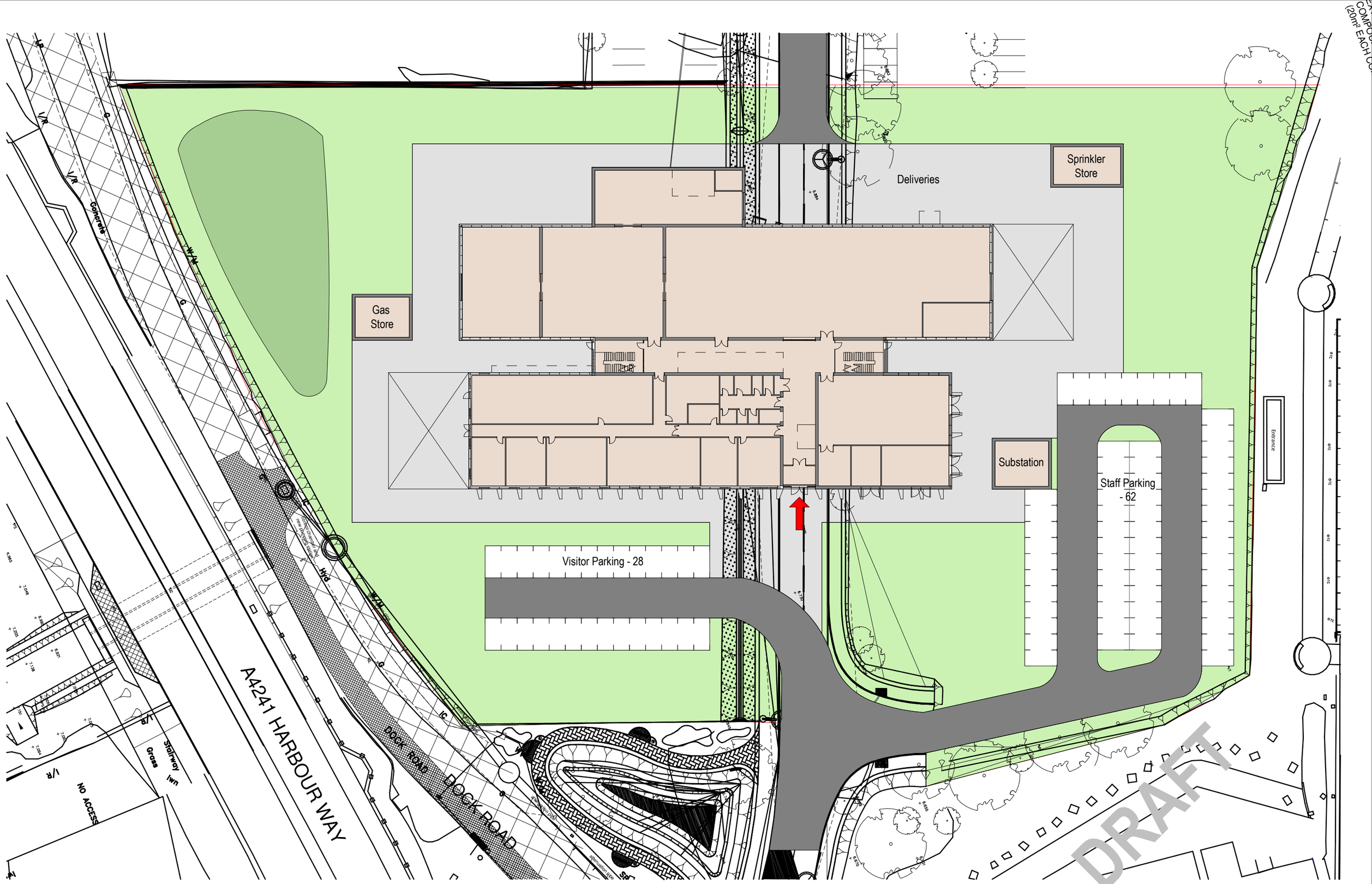
Appendix A Drawings



Intelligence Buildings Infrastructure

Site Plan

SWITCH Harbourside

Scale@A3	Date	Drawing Number	Revision
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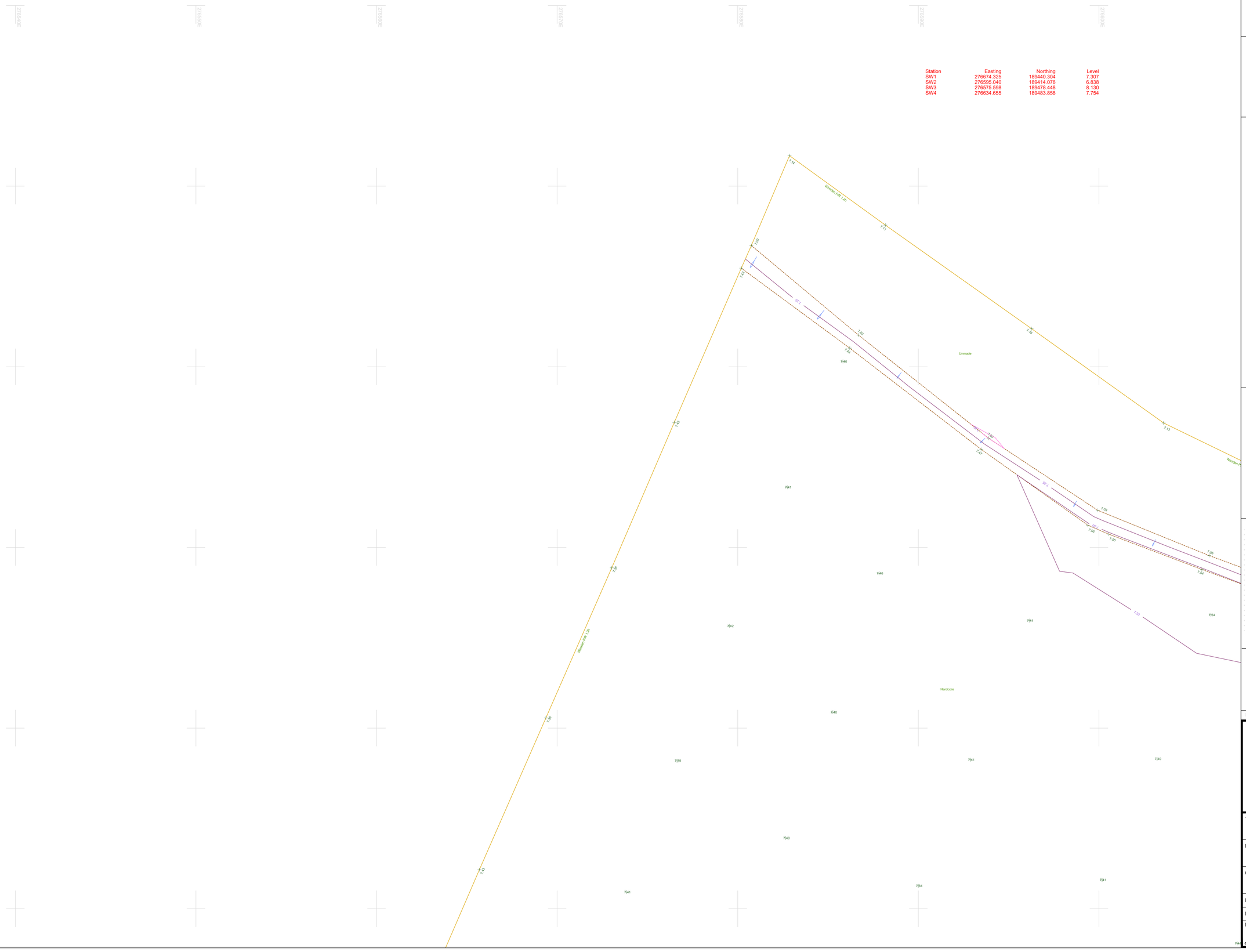

Station	Easting	Northing	Level
SW1	276674.325	189440.304	7.307
SW2	276595.040	189414.076	6.838
SW3	276575.598	189478.448	8.130
SW4	276634.655	189483.858	7.754

Coordinate System

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Linetypes & Symbols

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- Building Overhead
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- Kerbs
- Overhead Cables
- Ridges & Eaves
- Steps
- Walls
- Vegetation
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- Combined Water
- Foul Water
- Storm Water
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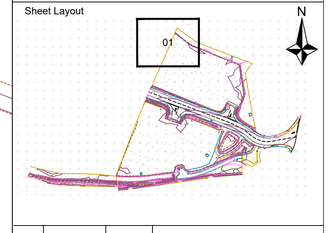
Sheet Layout



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W: gwaliasurveyors.co.uk

LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-001 Rev. -

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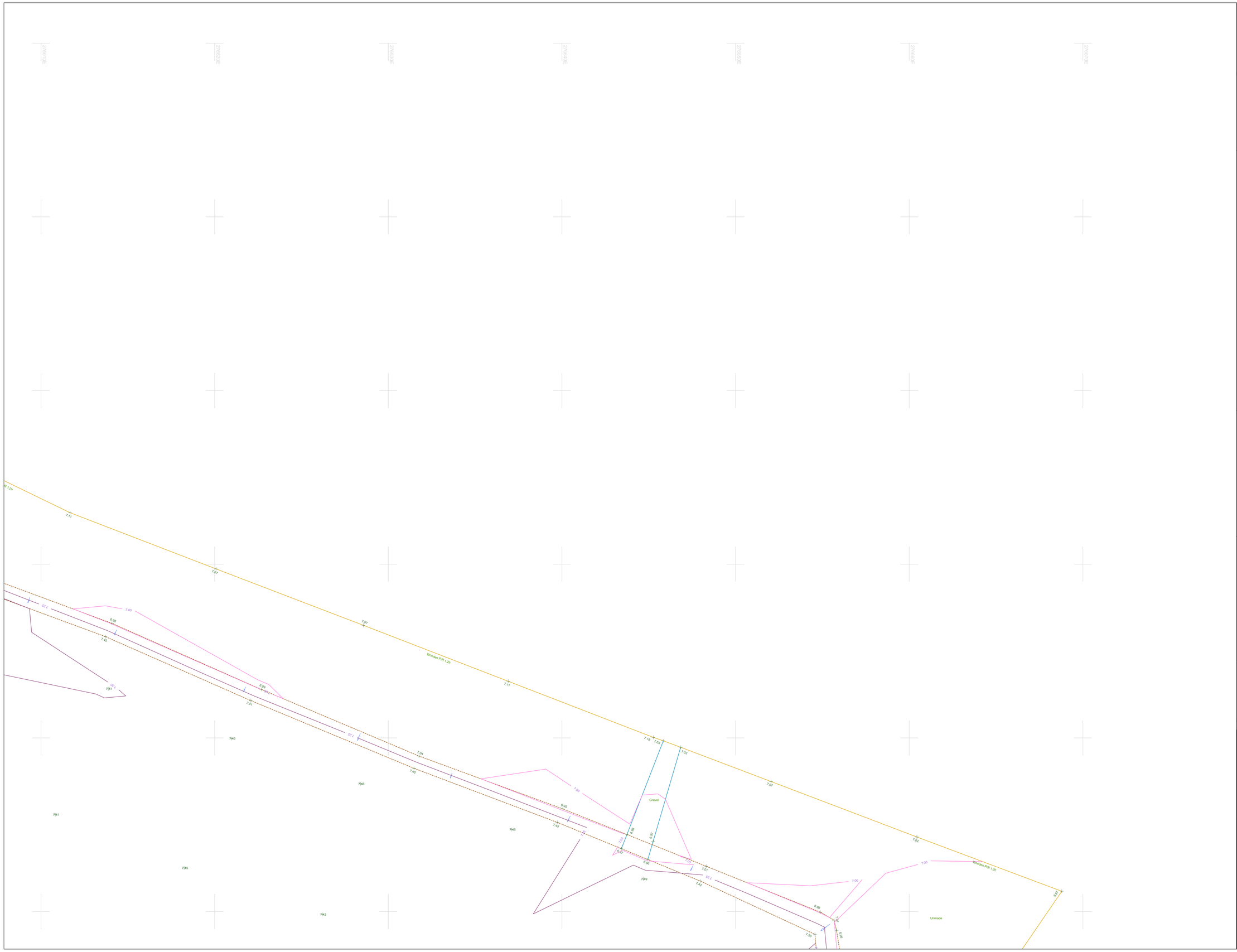

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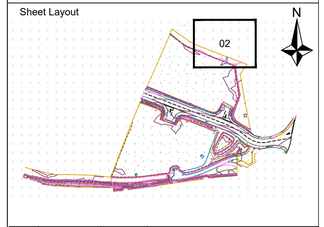

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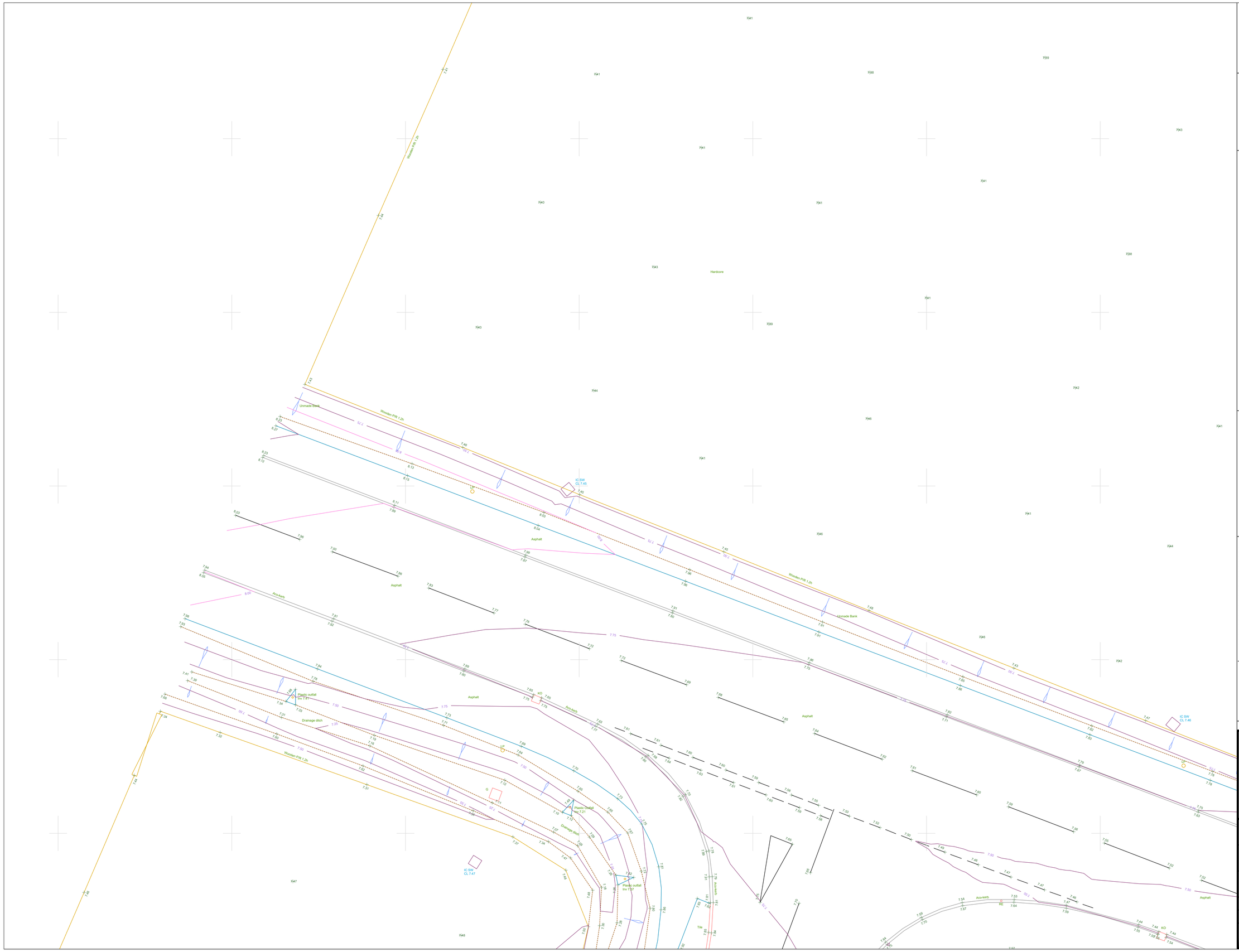

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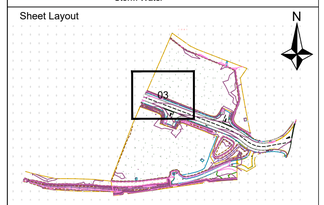

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Penarth Road, Cardiff, CF11 8TQ.
Cardiff: 029 2111 1700 London: 020 3011 1099
W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1
Drawing Number:	3292-T-003	Rev.	-

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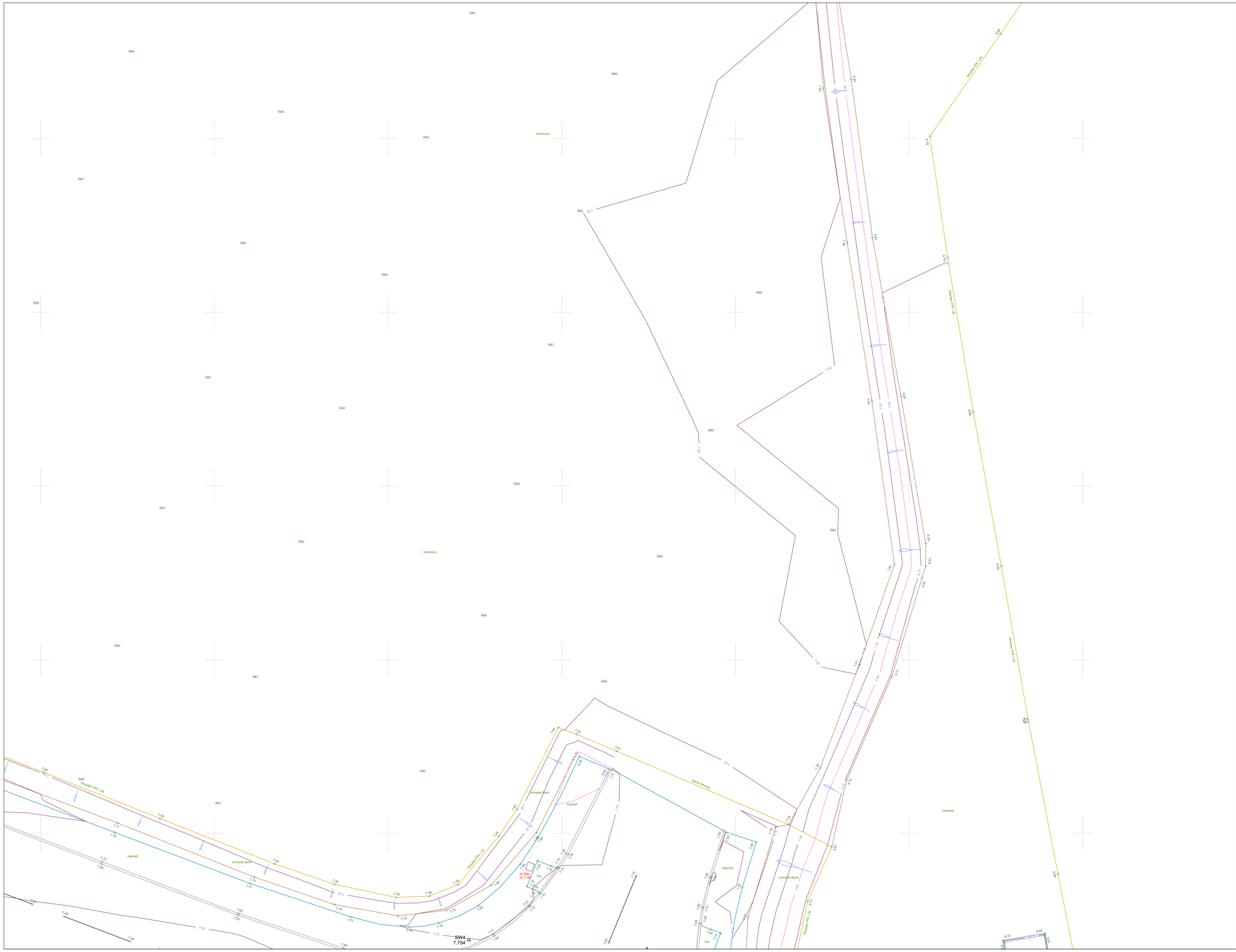

Coordinate System

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Key to Abbreviations

Inspection Covers & Chambers

AV	Air Valve
BH	Borehole
BT	British Telecom Cover
CDP	Cable Draw Pit
CW	Combined Water
Dr.Ch.	Drainage Channel
Elec.	Electric Inspection Cover
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Ground Surface Types

Asp.	Asphalt
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Pav.	Concrete Paving
Tac.	Tactile Paving

Measurement Descriptions

CL	Cover Level
d	Depth (m)
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Street Furniture

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BB	Belisha Beacon
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- Overhead Cables
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- Steps
- Walls
- Vegetation
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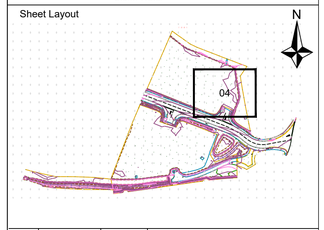
- Banking
- Flow Direction
- Gate
- Survey Station
- Tree

Sheet Layout



Rev.	Date	Drawn	Details

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W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1
Drawing Number:	3292-T-004	Rev.	-

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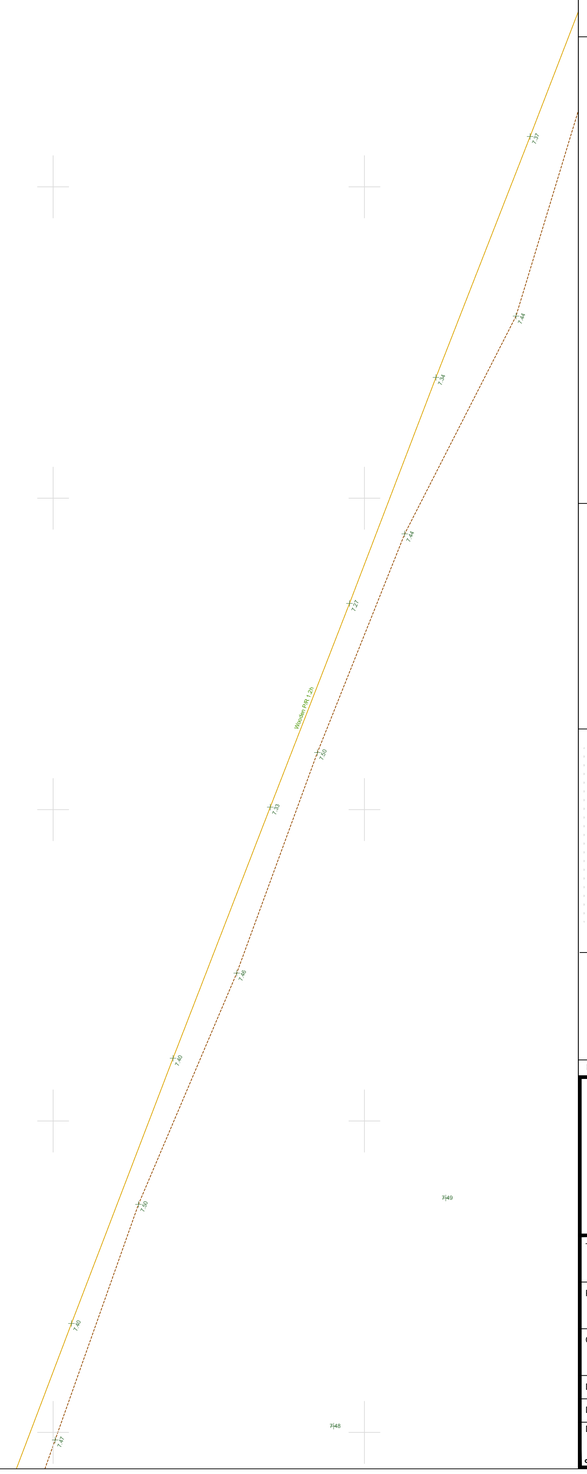
7.27
7.44
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7.40
7.35
7.46
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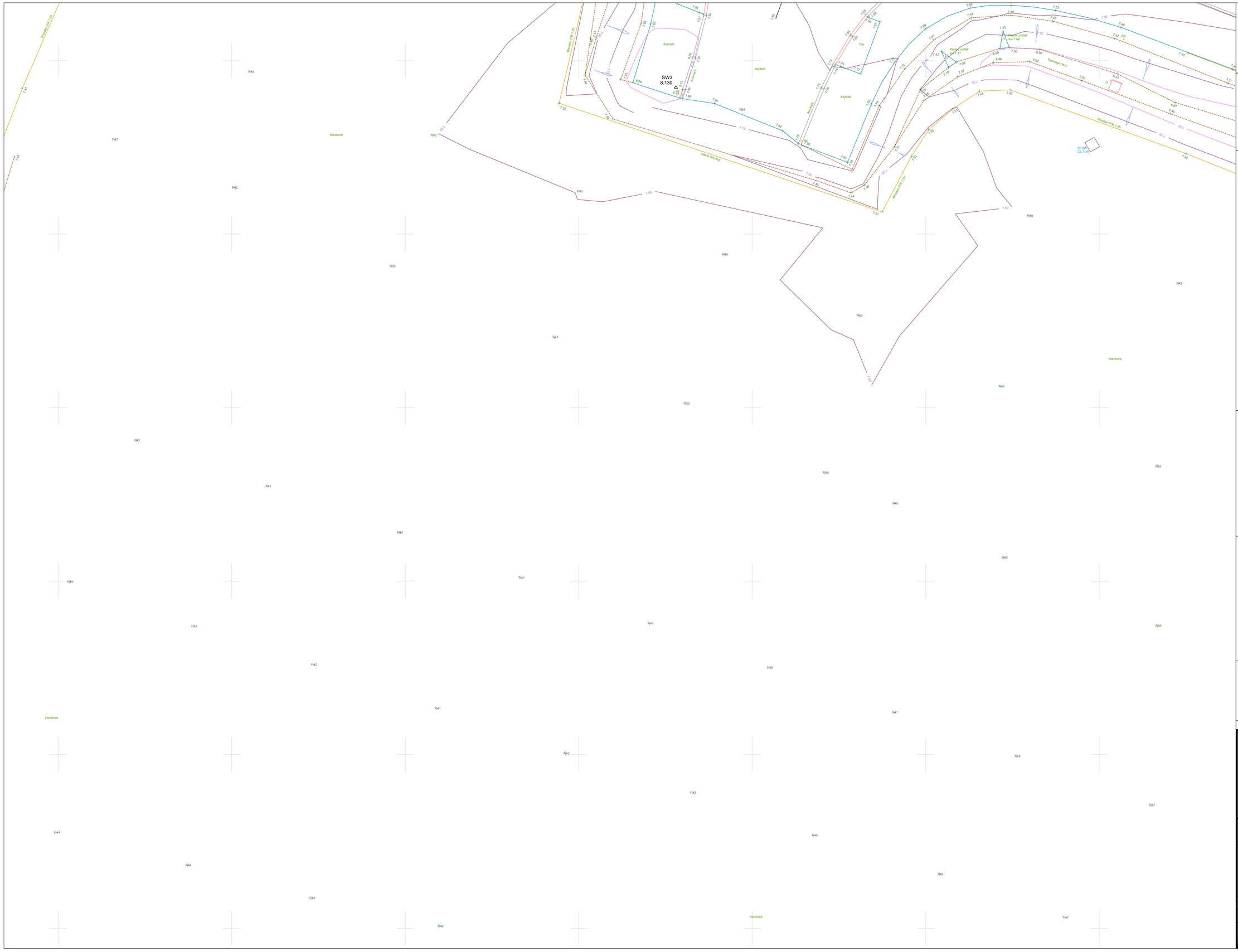
7.40
7.40



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- Gate
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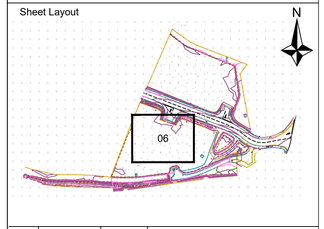
Sheet Layout



Rev.	Date	Drawn	Details

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W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-006

Rev. -

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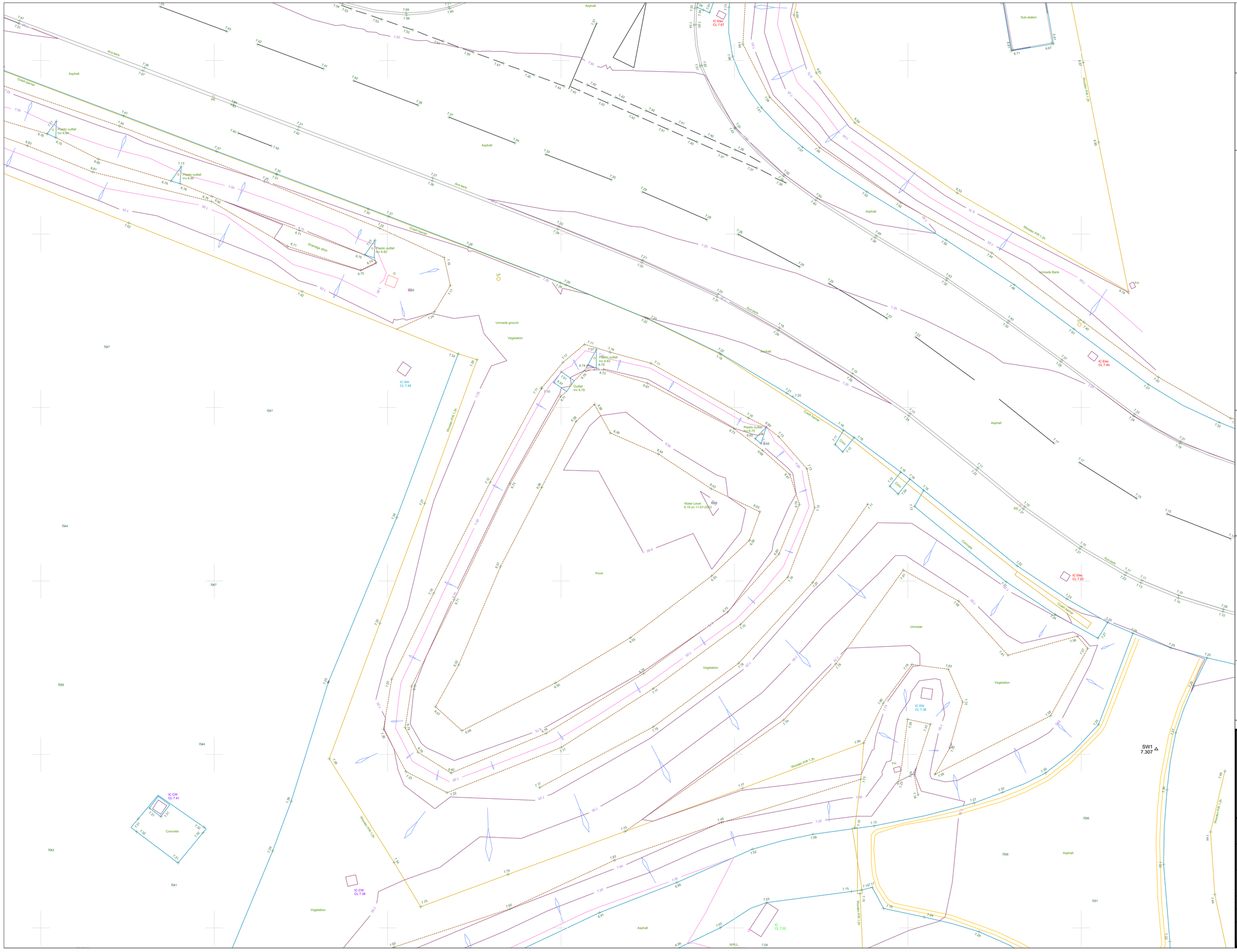

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- Steps
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- Vegetation
- Tree Canopy
- Banking
- Flow Direction
- Gate
- Survey Station
- Tree
- CW Combined Water
- FW Foul Water
- SW Storm Water

Sheet Layout

Rev.	Date	Drawn	Details

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Cardiff: 029 2111 1700 London: 020 3011 1099
W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-007 Rev. -

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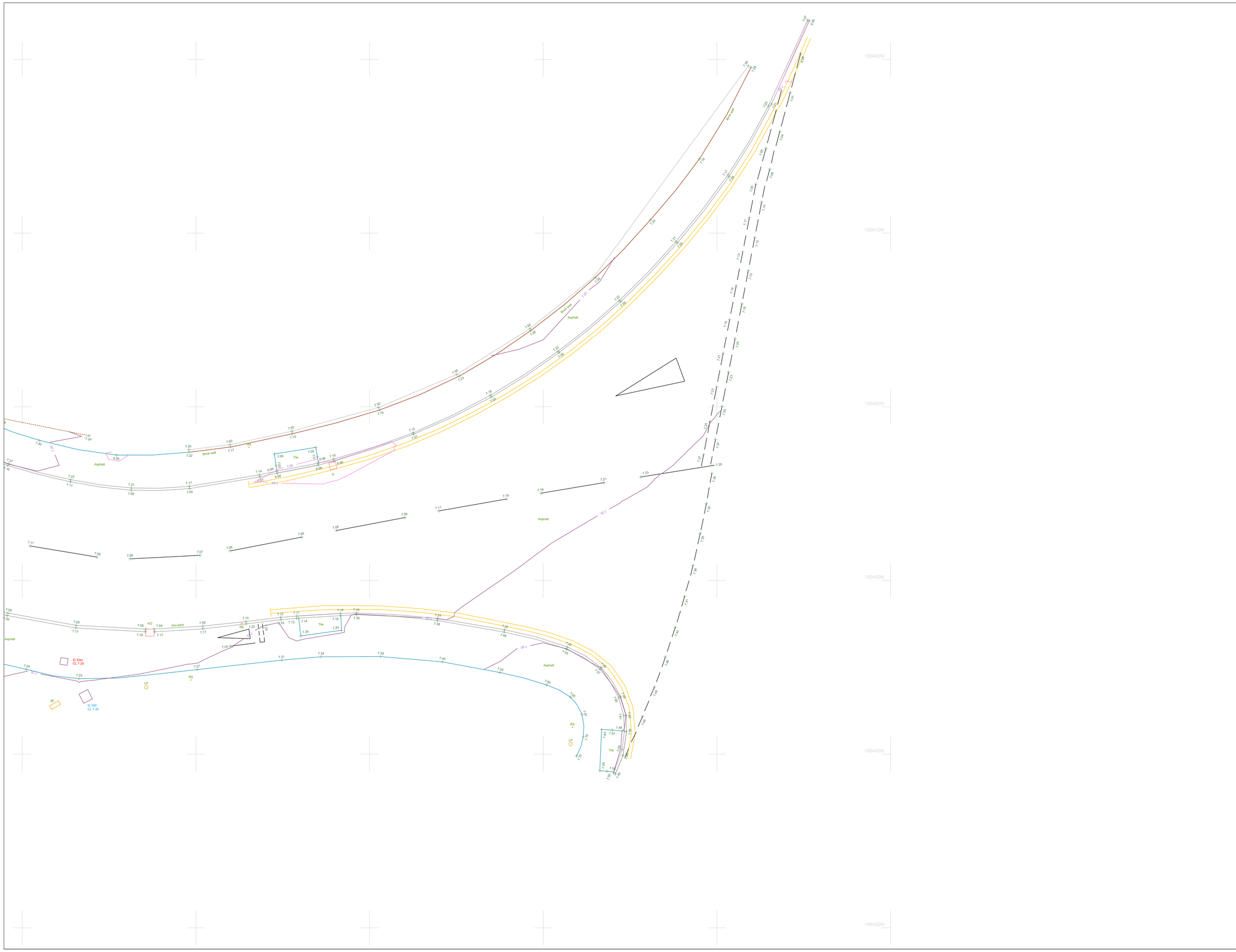

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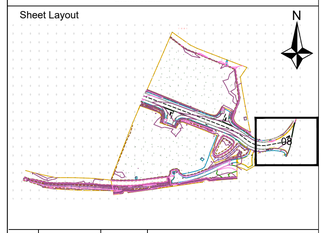

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W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-008 Rev. -

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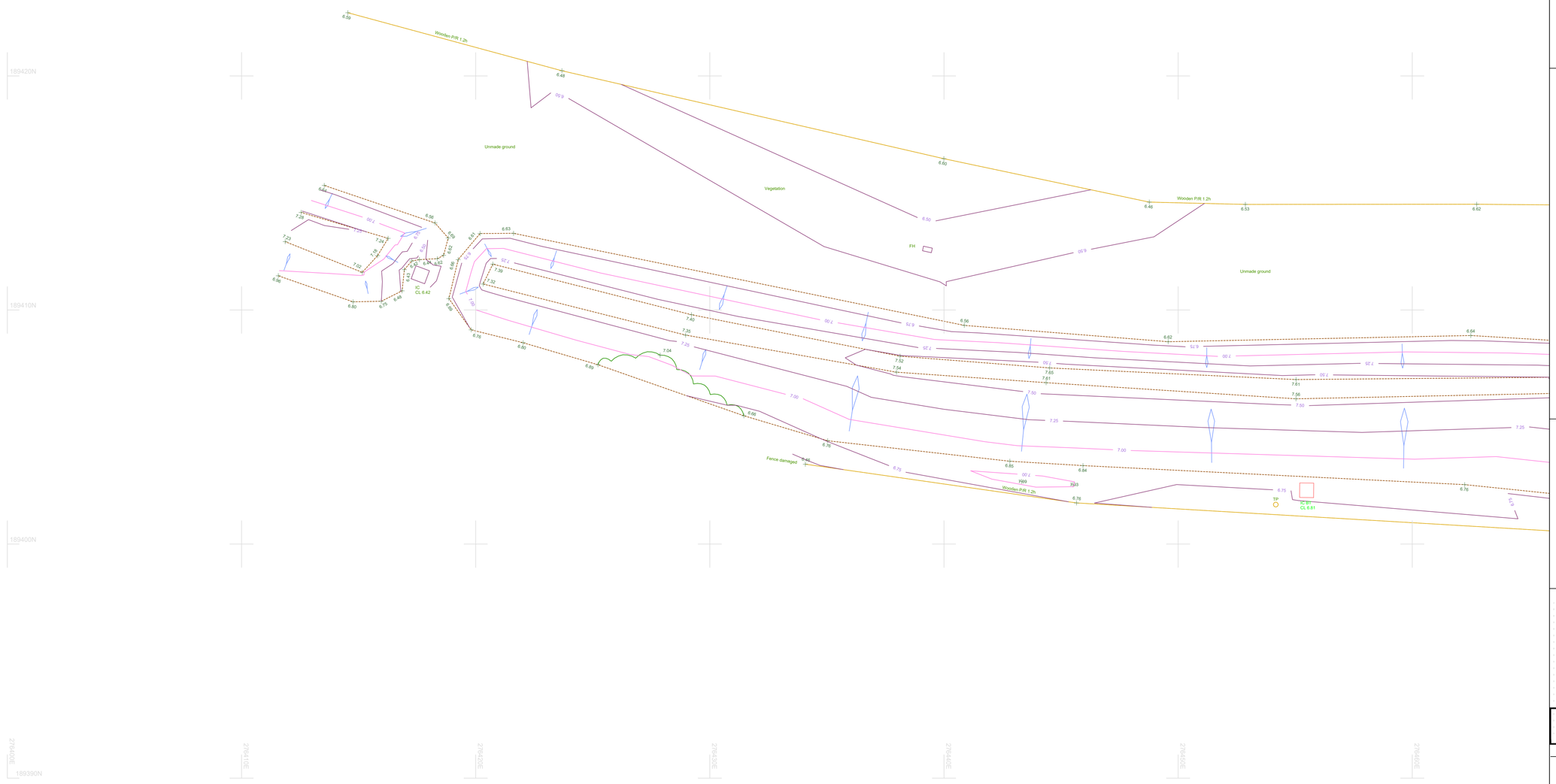

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LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-009 Rev. -

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- Foul Water (FW)
- Storm Water (SW)
- Banking
- Flow Direction
- Gate
- Survey Station
- Tree

Sheet Layout

Rev.	Date	Drawn	Details

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Penarth Road, Cardiff, CF11 8TQ.
Cardiff: 029 2111 1700 London: 020 3011 1099
W: gwaliasurveyors.co.uk
LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-010 Rev. -

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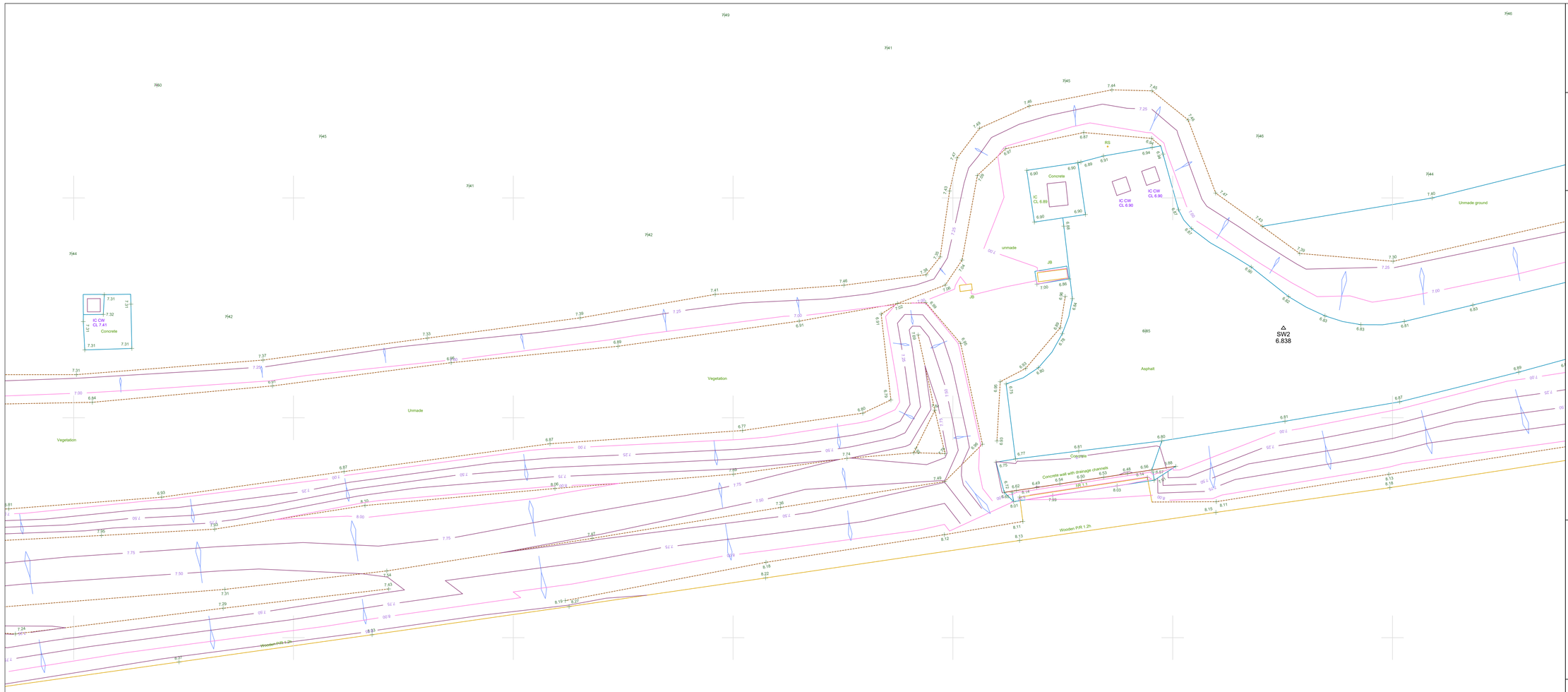

Coordinate System

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Linetypes & Symbols

- Banks
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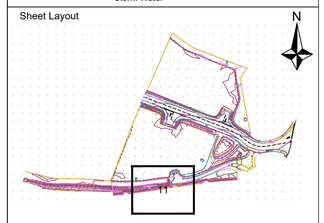

Rev.	Date	Drawn	Details

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LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title: Topographical Survey

Project: Switch-port Talbot

Client: Morgan Sindall

Drawn:	NJ	Checked:	DR
Date:	04.08.2023	Scale:	1:100 @ A1

Drawing Number: 3292-T-011 Rev. -

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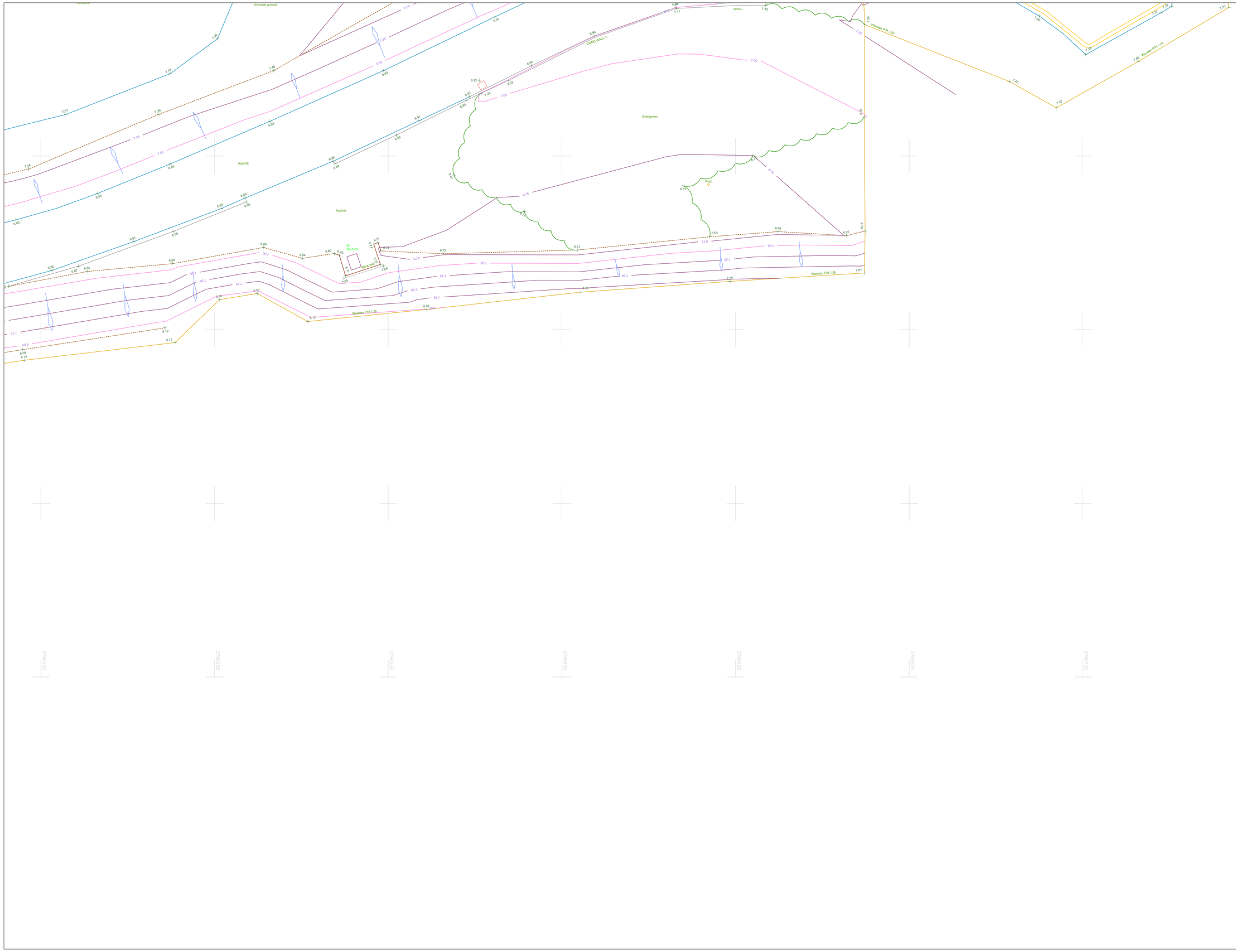

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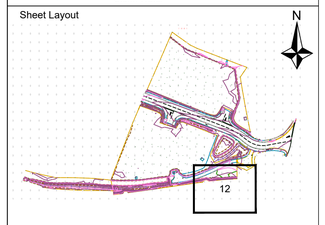

Rev.	Date	Drawn	Details

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LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title:	Topographical Survey
Project:	Switch-Port Talbot
Client:	Morgan Sindall
Drawn: NJ	Checked: DR
Date: 04.08.2023	Scale: 1:100 @ A1
Drawing Number: 3292-T-012	Rev. -

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Rev.	Date	Drawn	Details

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Cardiff: 029 2111 1700 London: 020 3011 1099
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LAND | UTILITIES | BUILDING | BOUNDARY | BIM

Title:	Topographical Survey
Project:	Switch-Port Talbot
Client:	Morgan Sindall
Drawn: NJ	Checked: DR
Date: 04.08.2023	Scale: Not to scale
Drawing Number: 3292-T-Overview	Rev. -

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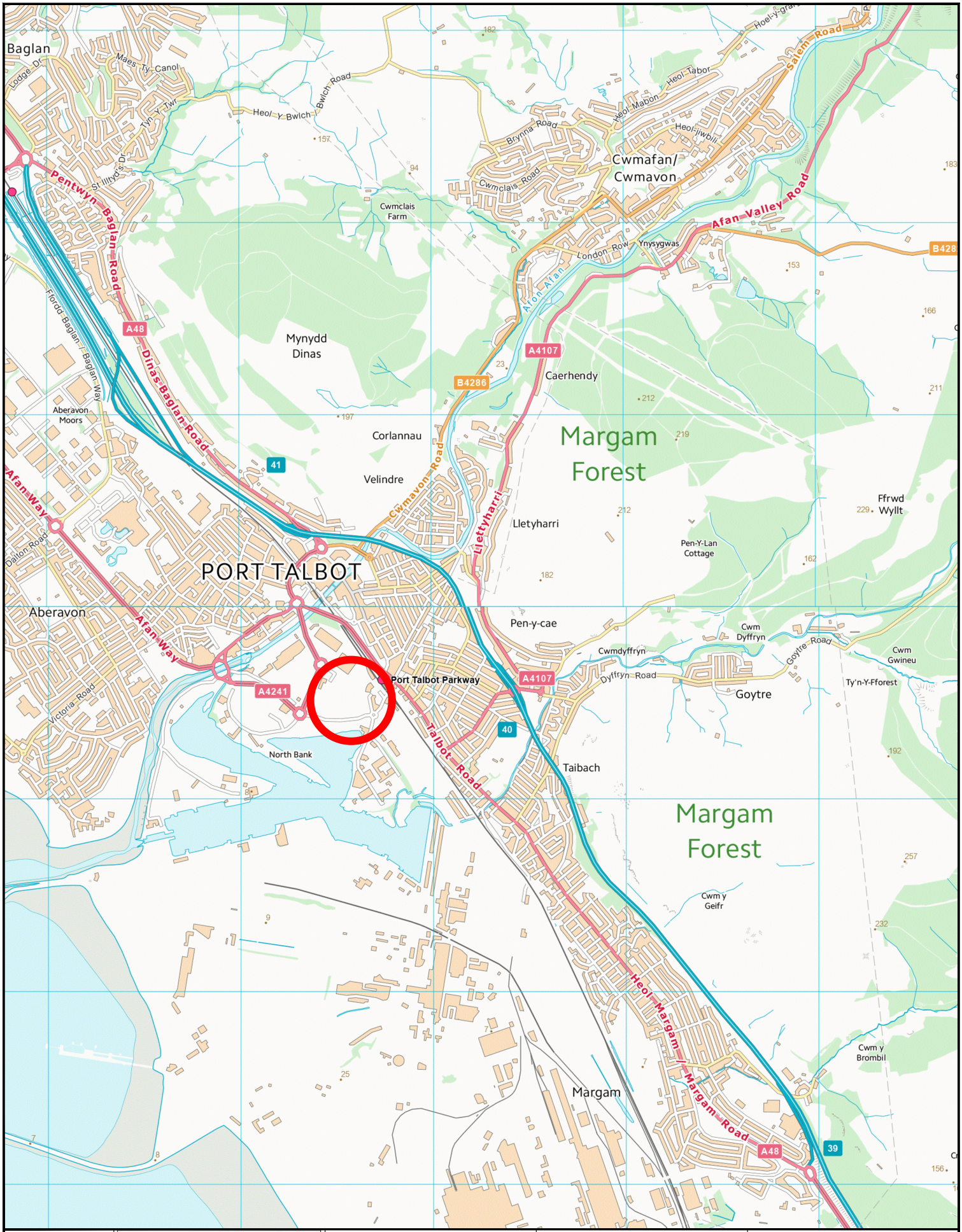
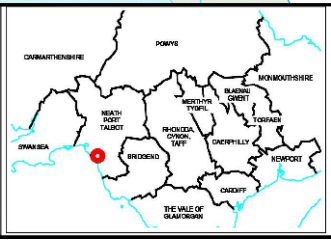


OS NORTH

Site Ref: SS78

0 500
Metres



REV.	FIRST ISSUE					
P1	EP	19/10/23	EW	19/10/23	EW	19/10/23
	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

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e: cardiff@hydrock.com

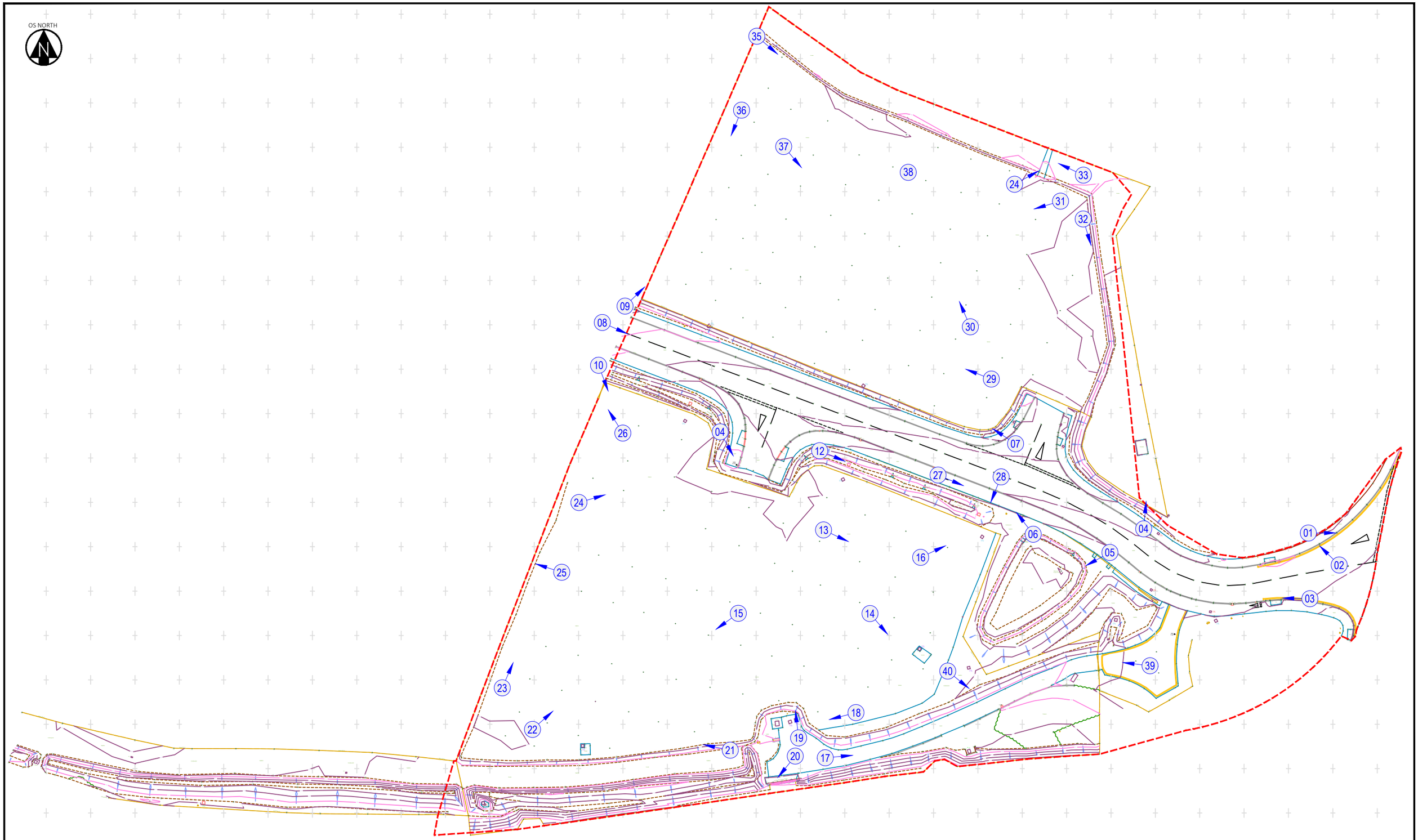
CLIENT
MORGAN SINDALL

PROJECT
SWITCH BUILDING, PORT TALBOT

TITLE
SITE LOCATION PLAN

HYDROCK PROJECT NO.	SCALE @ A4
26279	1:25,000

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)	REVISION
26279-HYD-XX-XX-DR-GE-1000	P1



KEY

Site investigation boundary

ii Photo location and reference

NOTES

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	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE					
	EP	19/10/23	EW	19/10/23	AE	19/10/23

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e: cardiff@hydrock.com

CLIENT
MORGAN SINDALL

PROJECT
SWITCH BUILDING, PORT TALBOT

TITLE
SITE WALKOVER PLAN

HYDROCK PROJECT NO.
26279

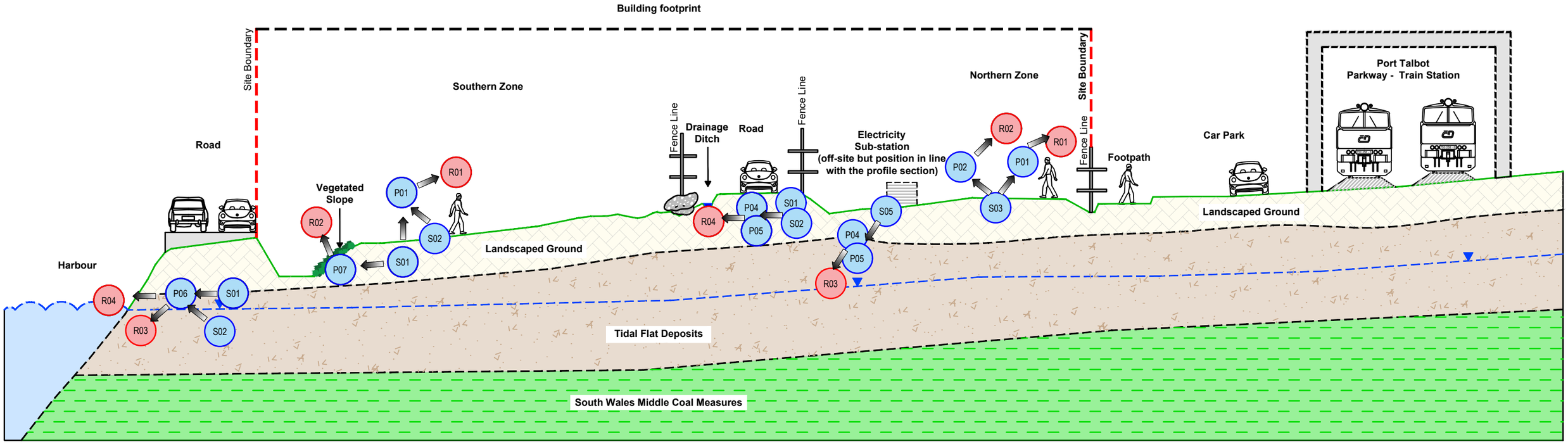
SCALE @ A3
1:750

PURPOSE OF ISSUE
SUITABLE FOR INFORMATION

STATUS
S2

DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)
26279-HYD-XX-XX-DR-GE-1001

REVISION
P1



Potential on-site sources of contamination

S01. Made Ground, associated with historical construction activities and imported fill, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons.

S02. Hydrocarbon fuels, lubricants, and solvents from the operation of the former chemical works on the site including leakage from Underground Storage Tanks (USTs), Above Ground Storage Tanks (ASTs), the pipework between tanks and pumps, and general spillage, together with uncontrolled disposal and spillage from waste receptacles.

S03. Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / Tidal Flat Deposits.

S04. Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks.

Potential off-site sources of contamination

S05. PCBs and oils from transformers in the electricity sub-station off site.

Potential receptors

R01. People (neighbours, site end users).

R02. Development end use (buildings, utilities and landscaping).

R03. Groundwater: Secondary A aquifer status of the South Wales Middle Coal Measures.

R04. Surface water: on-site drainage ditch and harbour off-site 50m to the south.

Potential pathways

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P02. Methane ingress via permeable soils and/or construction gaps.

P03. VOC and petroleum hydrocarbon vapour ingress via permeable soils and/or construction gaps.

P04. Surface water via overland flow.

P05. Surface water via drainage discharge.

P06. Surface water via base flow from groundwater.

P07. Root uptake.

KEY

- Existing ground profile
- Conjectural geological boundary
- Groundwater elevation
- Landscaped Ground
- Tidal Flat Deposits
- South Wales Middle Coal Measures

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P1	FIRST ISSUE					
	EP	19/10/23	EW	19/10/23	AE	19/10/23

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CLIENT
MORGAN SINDALL

PROJECT
SWITCH BUILDING, PORT TALBOT

TITLE
OUTLINE CONCEPTUAL SITE MODEL

HYDROCK PROJECT NO. 26279

SCALE @ A3 NTS

PURPOSE OF ISSUE SUITABLE FOR INFORMATION

STATUS S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 26279-HYD-XX-XX-DR-GE-1002

REVISION P1

KEY

Trial pit

Borehole

NOTES

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3292-switch-U.DWG

REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE					
	MH	20/09/23	MH	20/09/23	AE	20/09/23

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CLIENT

MORGAN SINDALL

PROJECT

SWITCH, PORT TALBOT

TITLE

EXPLORATORY HOLE
LOCATION PLAN

HYDROCK PROJECT NO.	SCALE @ A3
C-26279-C	1:200

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

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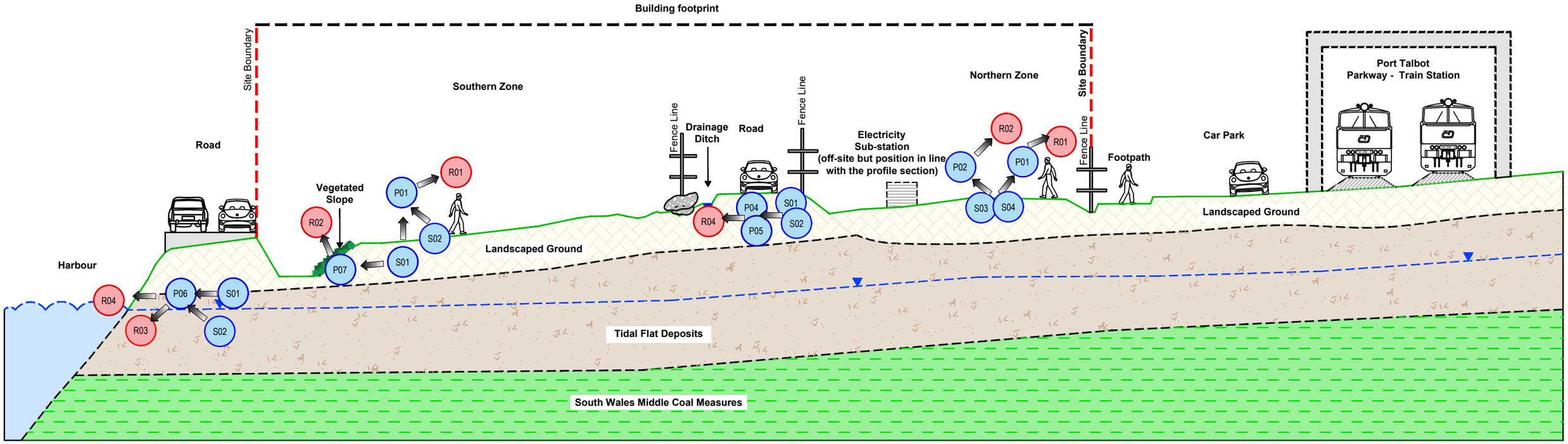
26279-HYD-XX-XX-DR-GE-1003	P1



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CLIENT
MORGAN SINDALL

PROJECT
SWITCH BUILDING, PORT TALBOT

TITLE
FINAL CONCEPTUAL SITE MODEL

HYDROCK PROJECT NO. 26279

SCALE @ A3 NTS

PURPOSE OF ISSUE SUITABLE FOR INFORMATION

STATUS S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 26279-HYD-XX-XX-DR-GE-1004

REVISION P1

Appendix B Field reconnaissance photographs

Desk Study Photograph 1	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: Boulders at eastern access point to the site.	

Desk Study Photograph 2	
Date: 20/09/23	
Direction Photograph Taken: North-west.	
Description: Eastern site access point.	

Desk Study Photograph 3	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: Road passing through the centre of the site.	

Desk Study Photograph 4	
Date: 20/09/23	
Direction Photograph Taken: North.	
Description: Electricity substation off-site to the east of the site boundary.	

Desk Study Photograph 5	
Date: 20/09/23	
Direction Photograph Taken: South-west.	
Description: SuDS attenuation pond to the south of the road passing through site.	

Desk Study Photograph 6	
Date: 20/09/23	
Direction Photograph Taken: North-west.	
Description: Looking towards the northern area of the site.	

Desk Study Photograph 7	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: View to the west across the northern half of the site. Note the standing water.	

Desk Study Photograph 8	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: Boulders preventing through access onto the site from the west.	

Desk Study Photograph 9	
Date: 20/09/23	
Direction Photograph Taken: North-east.	
Description: Looking along the western site boundary in the northern area of the site.	

Desk Study Photograph 10	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: View along the western site boundary in the southern area of the site.	

Desk Study Photograph 11	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: Access point into the southern zone of the site.	

Desk Study Photograph 12	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: Drainage ditch concealed by vegetation running parallel to the south of the road.	

Desk Study Photograph 13	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: View across waterlogged southern zone of the site.	

Desk Study Photograph 14	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: View across southern zone of site, with Harbour Road in the background to the southern site boundary.	

Desk Study Photograph 15	
Date: 20/09/23	
Direction Photograph Taken: South-west.	
Description: Standing water at the surface in the southern area of the site.	

Desk Study Photograph 16	
Date: 20/09/23	
Direction Photograph Taken: North-east.	
Description: Fence line running between the north of the southern zone of the site, and the through road.	

Desk Study Photograph 17	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: View along maintenance access road in the south of the site.	

Desk Study Photograph 18	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: View along southern site boundary line.	

Desk Study Photograph 19	
Date: 20/09/23	
Direction Photograph Taken: North-west.	
Description: Electricity sub-station and view across the south of the site looking north-west.	

Desk Study Photograph 20	
Date: 20/09/23	
Direction Photograph Taken: South-west.	
Description: Pollution control valve running below Harbour Way.	

Desk Study Photograph 21	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: Vegetated slope in the south of the site.	

Desk Study Photograph 22	
Date: 20/09/23	
Direction Photograph Taken: North-east.	
Description: View across the southern site area.	

Desk Study Photograph 23	
Date: 20/09/23	
Direction Photograph Taken: North-east.	
Description: View along western site boundary.	

Desk Study Photograph 24	
Date: 20/09/23	
Direction Photograph Taken: East.	
Description: Standing water in the southern site area.	

Desk Study Photograph 25	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: View over the western site boundary.	

Desk Study Photograph 26	
Date: 20/09/23	
Direction Photograph Taken: North-west.	
Description: Looking over the western site boundary.	

Desk Study Photograph 27	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: Drainage ditch south of the road approximately 0.5m below the level of the site.	

Desk Study Photograph 28	
Date: 20/09/23	
Direction Photograph Taken: South.	
Description: Drainage outfall.	

Desk Study Photograph 29	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: View across the northern area of the site to the west.	

Desk Study Photograph 30	
Date: 20/09/23	
Direction Photograph Taken: North-west.	
Description: Standing water visible across the northern zone of the site.	

Desk Study Photograph 31	
Date: 20/09/23	
Direction Photograph Taken: South-west.	
Description: Looking across the site from the north-east.	

Desk Study Photograph 32	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: Slight decrease in levels between the north-east of the site, and the land beyond to the east.	

Desk Study Photograph 33	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: View along northern site boundary.	

Desk Study Photograph 34	
Date: 20/09/23	
Direction Photograph Taken: North.	
Description: Linear strip of gravel adjacent to the northern site boundary, which possibly is associated with buried utilities.	

Desk Study Photograph 35	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: Looking south-east from the north-west corner of the site.	

Desk Study Photograph 36	
Date: 20/09/23	
Direction Photograph Taken: South-west.	
Description: Looking along the western site boundary into the south of the site.	

Desk Study Photograph 37	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: View of northern site with patchy scrub and shrubs.	

Desk Study Photograph 38	
Date: 20/09/23	
Direction Photograph Taken: N/A.	
Description: Composition of the surface covering in the north and south areas of the site, containing possible slag fragments.	

Desk Study Photograph 39	
Date: 20/09/23	
Direction Photograph Taken: West.	
Description: Access to maintenance road that runs through the south of the site.	

Desk Study Photograph 40	
Date: 20/09/23	
Direction Photograph Taken: South-east.	
Description: Change in levels from the main site area down to the maintenance road in the south of the site.	

Appendix C Historical ordnance survey maps

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Sloping Masonry
Pylon
Pole
Electricity Transmission Line
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

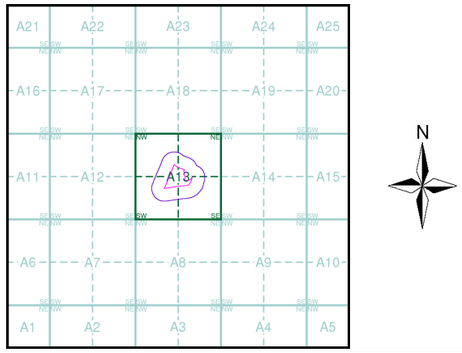
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Mud
Sand
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

Hydrock

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884 - 1885	2
Glamorganshire	1:10,560	1900	3
Glamorganshire	1:10,560	1921	4
Glamorganshire	1:10,560	1938 - 1952	5
Historical Aerial Photography	1:10,560	1949	6
Glamorganshire	1:10,560	1951	7
Ordnance Survey Plan	1:10,000	1964 - 1965	8
Ordnance Survey Plan	1:10,000	1974	9
Ordnance Survey Plan	1:10,000	1980 - 1982	10
Ordnance Survey Plan	1:10,000	1993 - 1996	11
10K Raster Mapping	1:10,000	1999	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2023	14

Historical Map - Slice A



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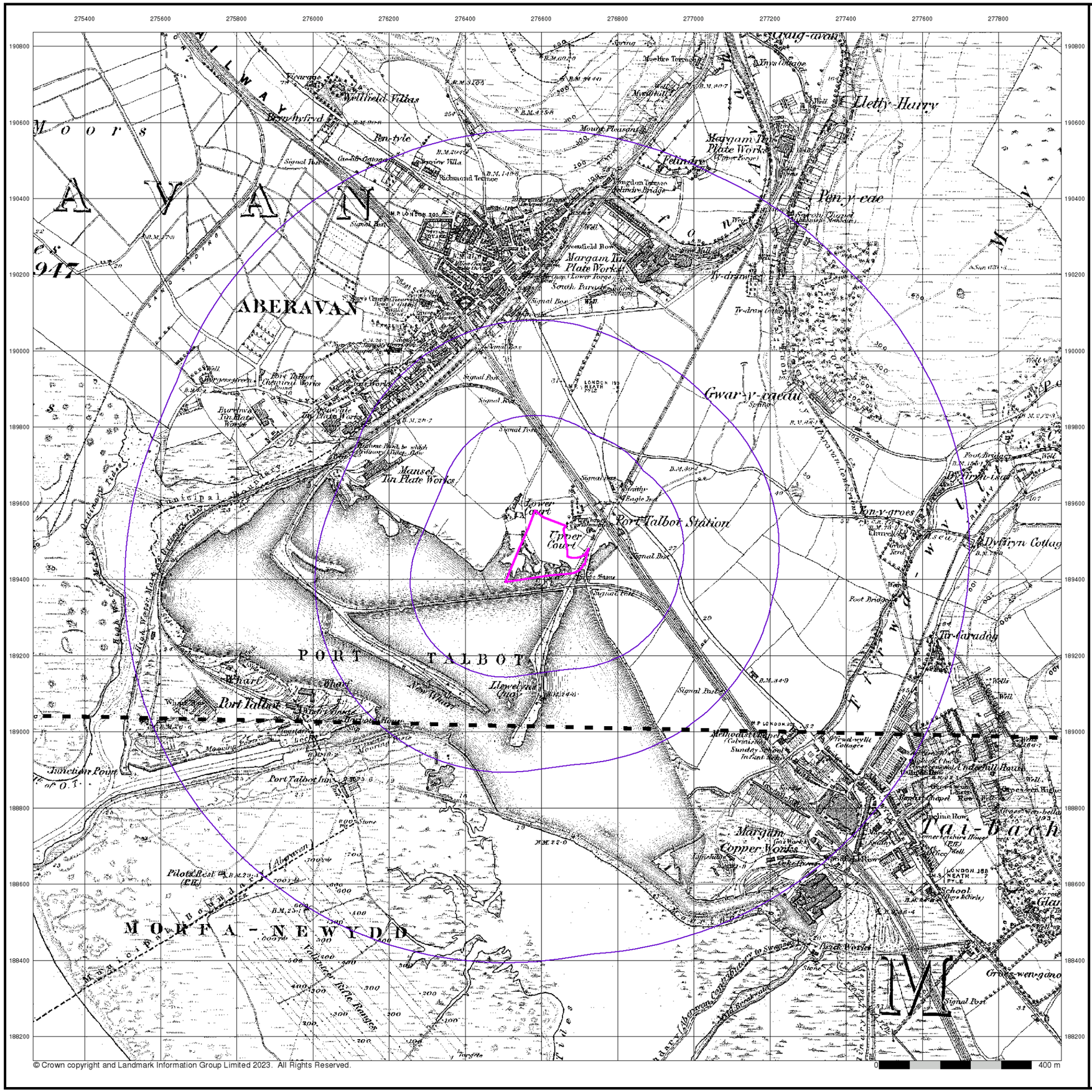
ABERAVAN
PORT TALBOT
MORFA-NEWYDD
Margam Tin Plate Works
Margam Copper Works
Manset Tin Plate Works
Port Talbot Station
Llety-Harry
Pen-y-cae
Gwar-y-caedu
Tai-bach
Pen-y-groes
Tir-faradoy
Llewelyn Quay
Pilots Rest (P.H.)
Port Talbot Inn
Junction Pour
Volunteer Rifle Ranges
Aberavon Cathedral to Swansea
Aberavon
Margam Tin Plate Works (Upper Forge)
Margam Tin Plate Works (Lower Forge)
Tyr-dran
Tyr-dran (Colliery)
Mount Pleasant
Pelindre
Richmond Terrace
Wellfield Villas
Pen-tyle
Bryn-hyfred
Garage
Signal Post
Signal Box
Wharf
New Wharf
Tidal Harbour
Tidal Basin
Tidal Basin Entrance
Tidal Harbour Entrance
Tidal Harbour Pier
Tidal Harbour Quay
Tidal Harbour Sidings
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Tidal Harbour Tramway
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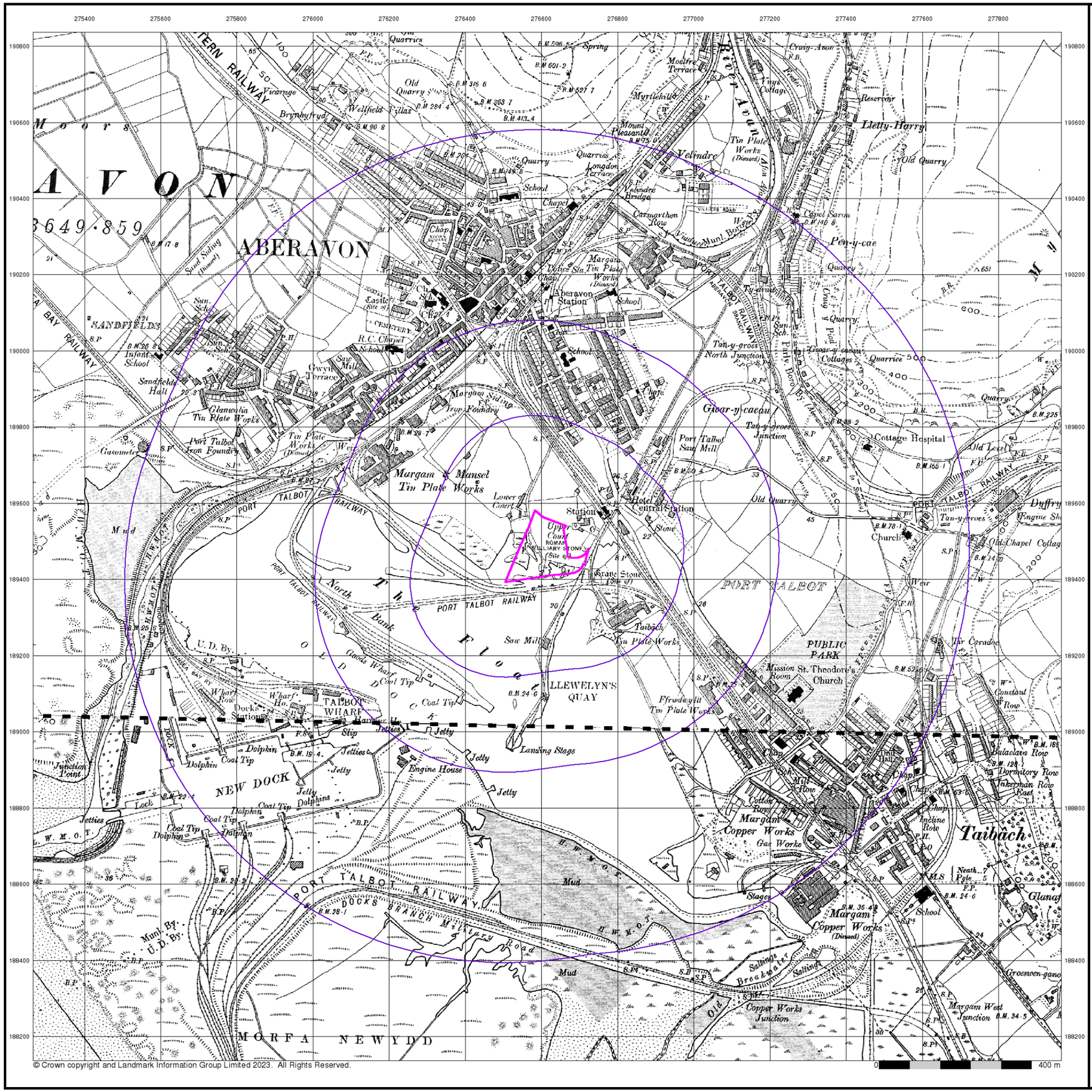

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Glamorganshire

Published 1900

Source map scale - 1:10,560

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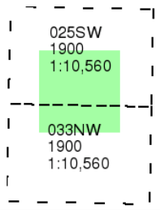
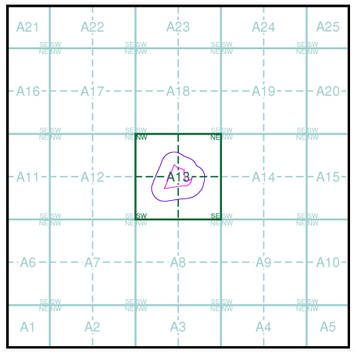


Historical Map - Slice A



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Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

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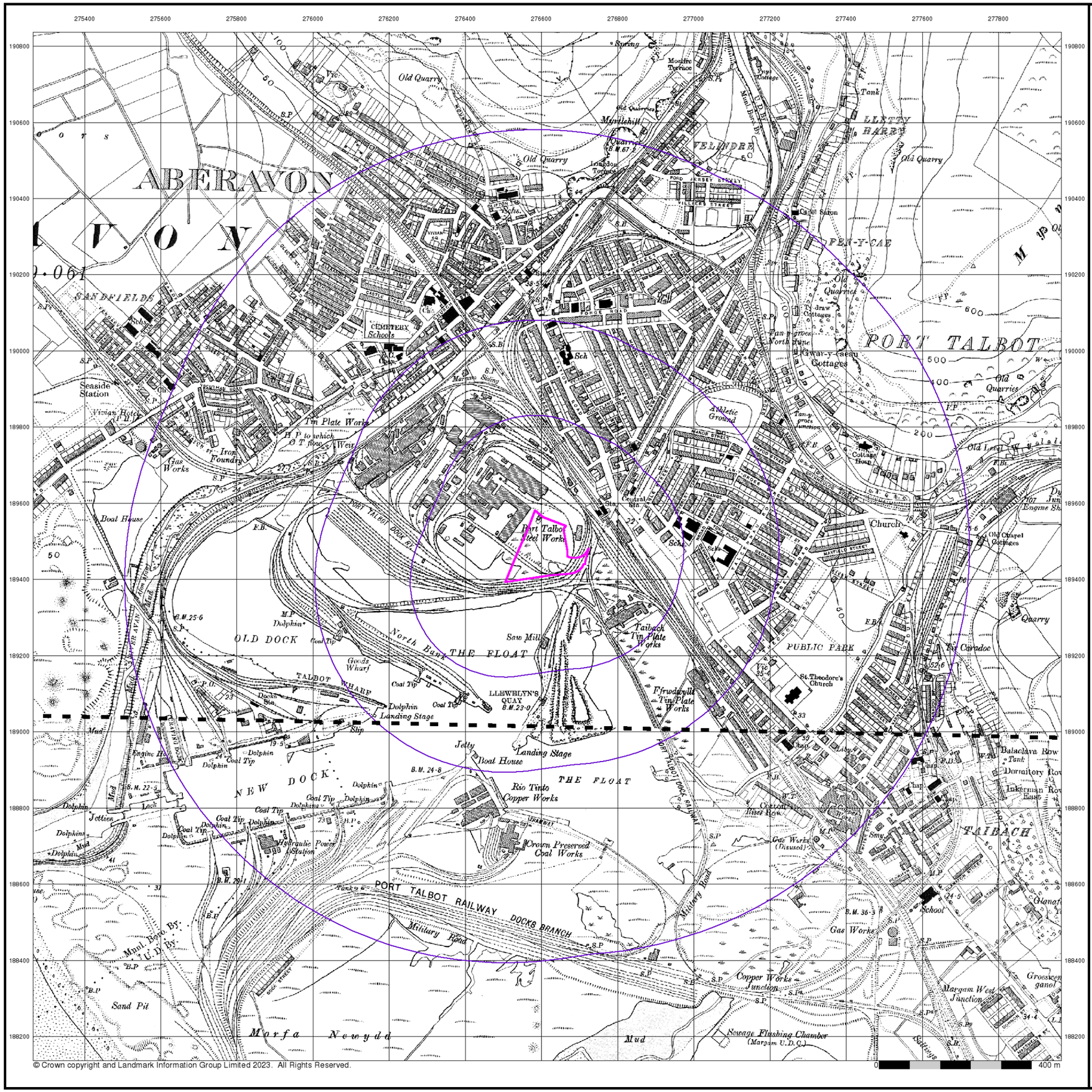
ABERAVON
PORT TALBOT
VELINDRE
LLETTY BARRY
PEN-Y-CAE
SANDFIELDS
CEMETERY
Schools
Seaside Station
Tin Plate Works
Iron Foundry
Gas Works
Boat House
Port Talbot Steel Works
Athletic Ground
Church
Old Quarries
Old Quarry
OLD DOCK
NEW DOCK
THE FLOAT
North Bank
Goods Wharf
TALBOT WHARF
LLEWELYN'S QUAY
Dolphin Landing Stage
Jetty
Rio Tinto Copper Works
Crown Preserved Coal Works
Hydraulic Power Station
PORT TALBOT RAILWAY DOCKS BRANCH
Military Road
Taibach Tin Plate Works
Ffrodwylle Tin Plate Works
Saw Mill
PUBLIC PARK
St. Theodore's Church
Fort Caradoc
TAIBACH
Balaclava Row
Dormitory Row
Inkerman Row
Gas Works (Disused)
Copper Works Junction
Margam West Junction
Sewage Flushing Chamber (Margam U.D.C.)
Sand Pit
Morfa Newydd
Mud
Quarry
Tank
Cottage Hotel
Old Chapel Cottages
Gwar-y-caeau Cottages
Tan-y-graig Cottages
Tan-y-graig Junction
Old Level
Engine Sh
Mond Bay By.
Mumi. Bord. By.
U.D. By.
Port Talbot Docks Railway
Mud Bay
Mud Lock
Jetties
Dolphins
Coal Tip
Docks Sta.
Slip
Engine Hse
Central Sta.
Sch.
Ch.
Vic.
Cemetery
Spring
Moslem Terrace
Mynydd Bach
Mynydd Bach Sidings
Mynydd Bach Tunnel
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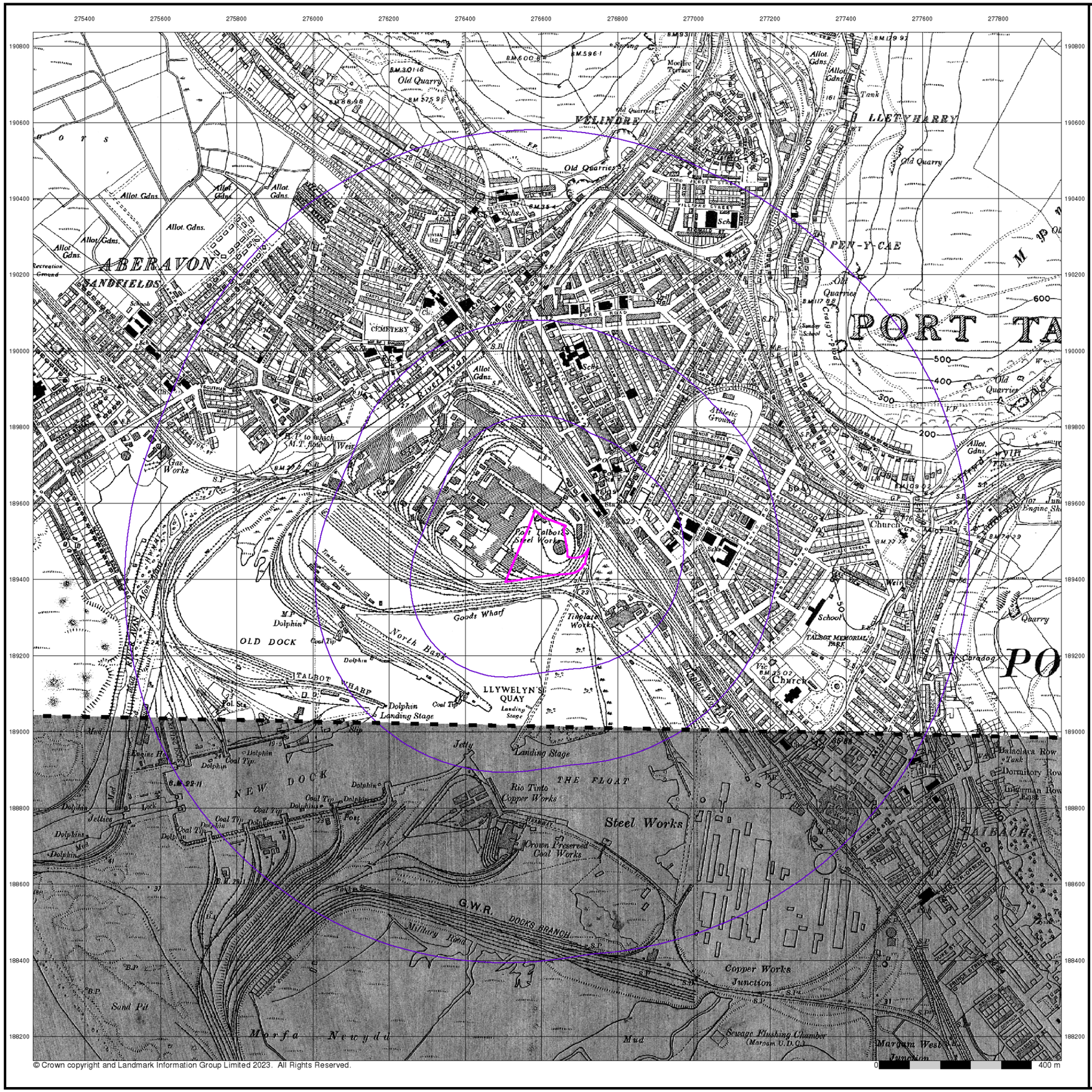
Mynydd Bach Tunnel



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Glamorganshire

Published 1938 - 1952

Source map scale - 1:10,560

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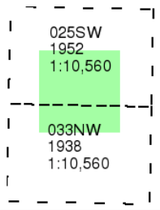
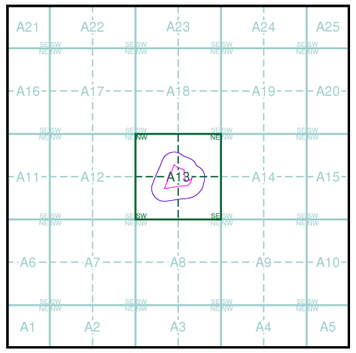


Historical Map - Slice A



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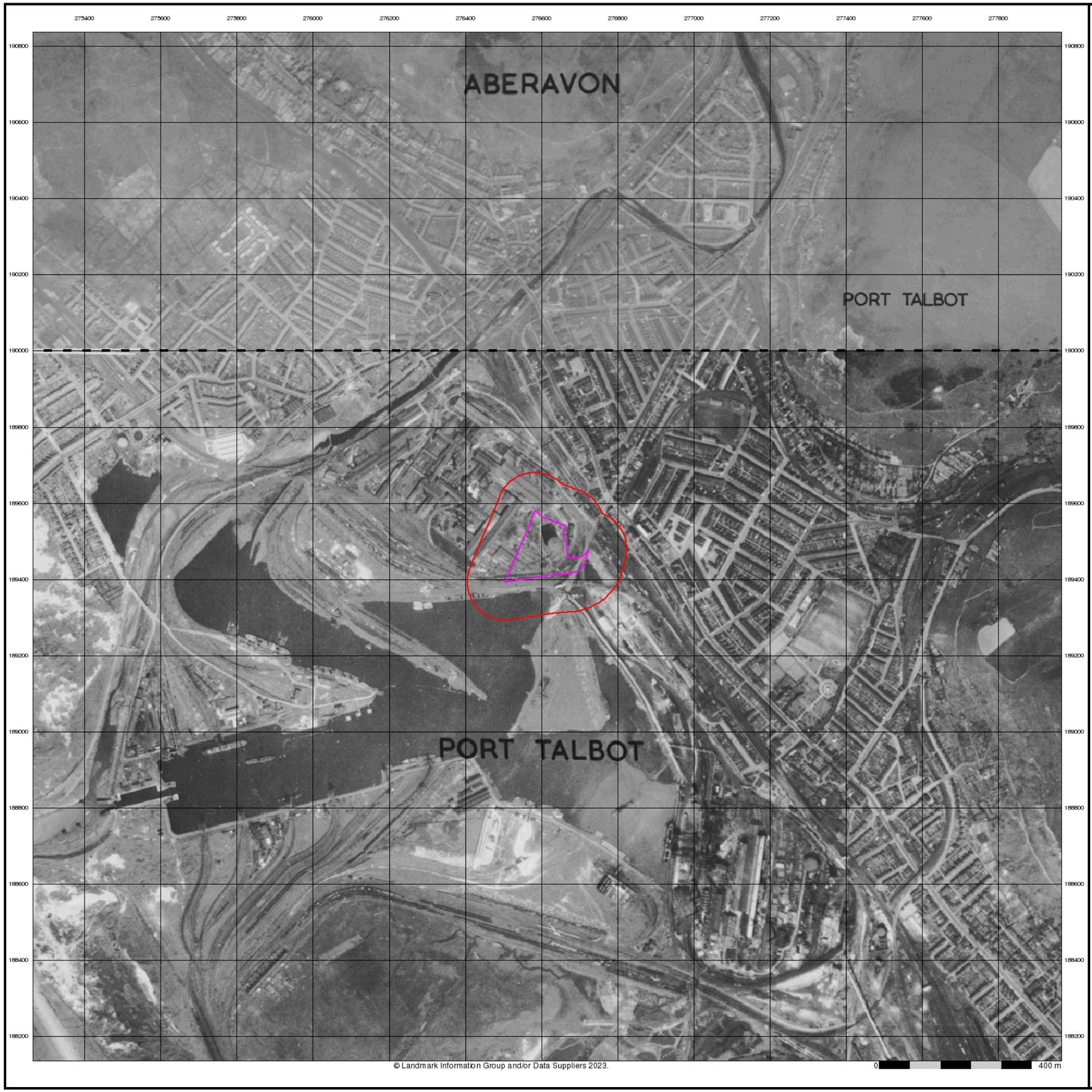
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Hydrock

Historical Aerial Photography

Published 1949

Source map scale - 1:10,560

The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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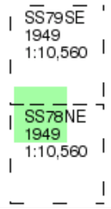
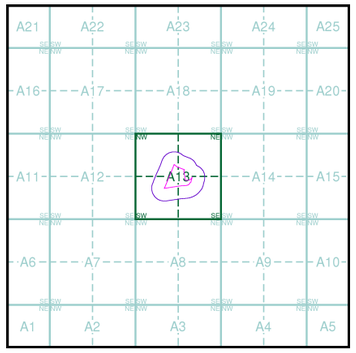
Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



BRITISH LIBRARY

Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP

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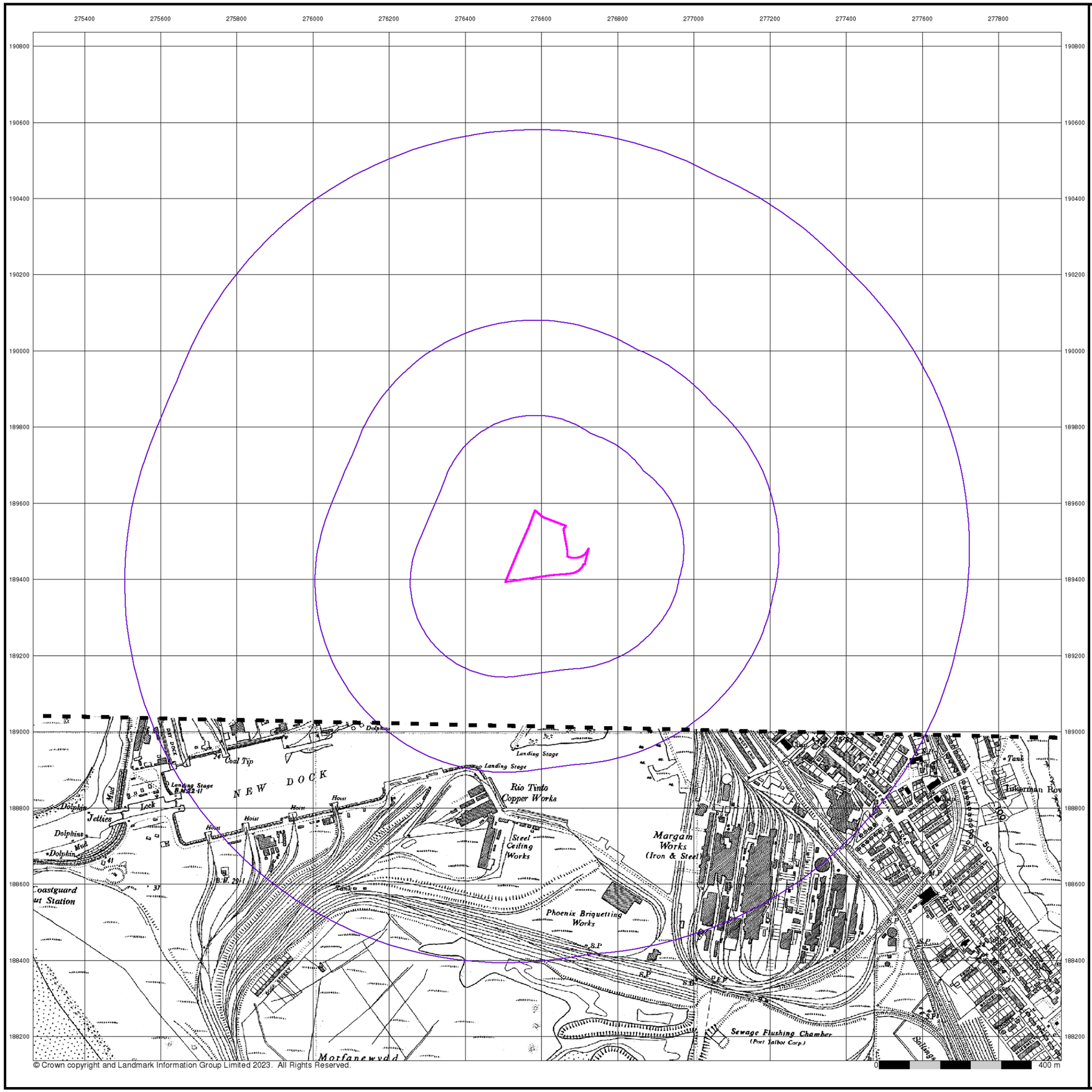
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Hydrock

Glamorganshire

Published 1951

Source map scale - 1:10,560

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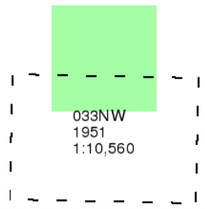
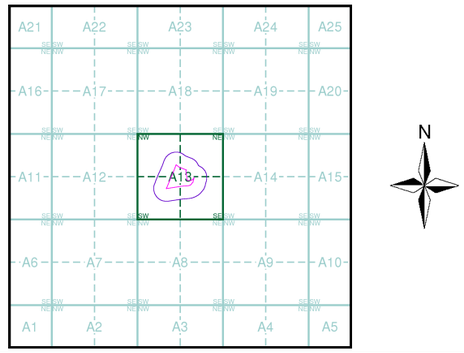
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
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Hydrock

Ordnance Survey Plan

Published 1964 - 1965

Source map scale - 1:10,000

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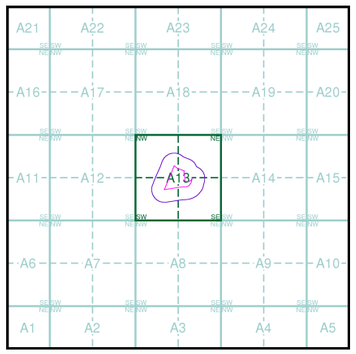
Map Name(s) and Date(s)

SS79SE
1964
1:10,560

SS78NE
1965
1:10,560

Historical Map - Slice A



N

Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
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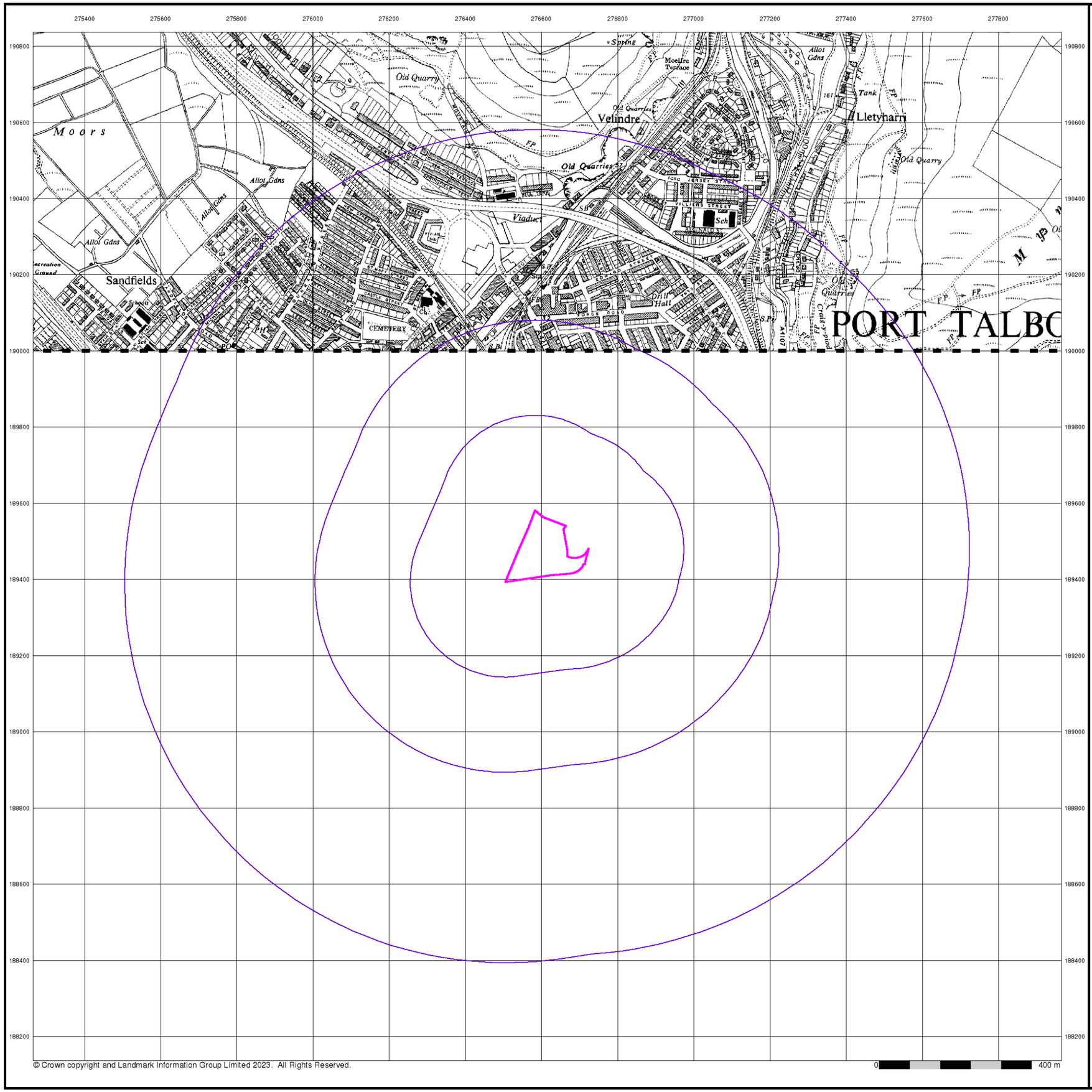
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Hydrock

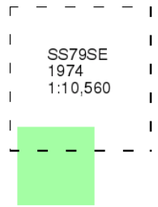
Ordnance Survey Plan

Published 1974

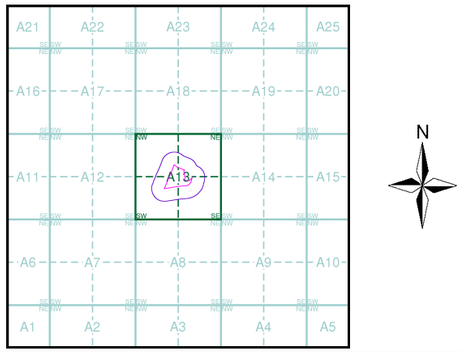
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

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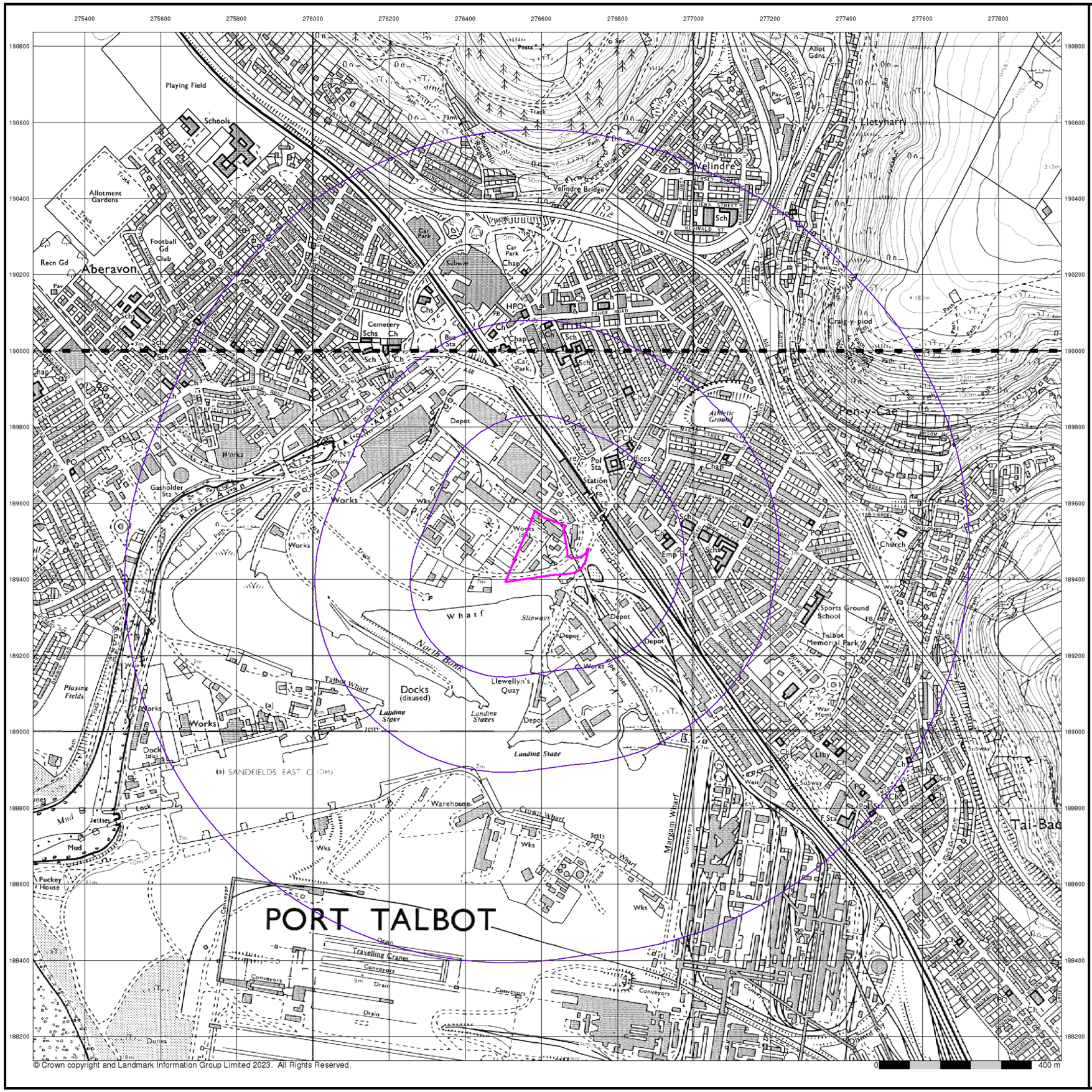

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Hydrock

Ordnance Survey Plan

Published 1980 - 1982

Source map scale - 1:10,000

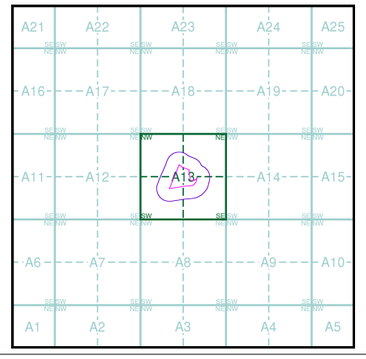
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SS79SE
1980
1:10,000

SS78NE
1982
1:10,000

Historical Map - Slice A



N

Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

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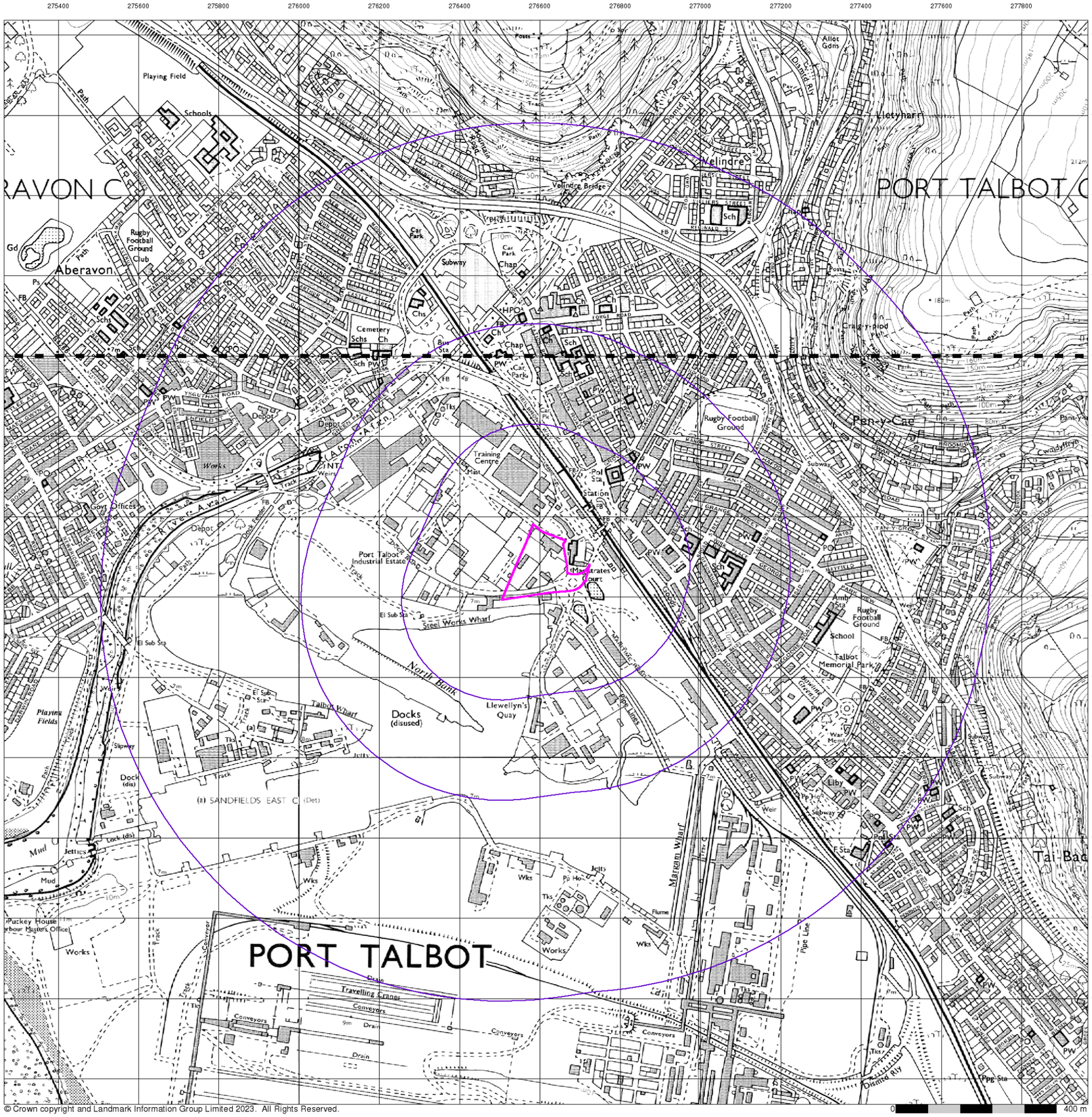
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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0 400 m

Hydrock

Ordnance Survey Plan

Published 1993 - 1996

Source map scale - 1:10,000

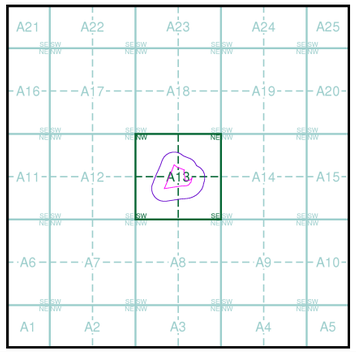
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SS79SE
1996
1:10,000

SS78NE
1993
1:10,000

Historical Map - Slice A



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

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Hydrock

10k Raster Mapping

Published 1999

Source map scale - 1:10,000

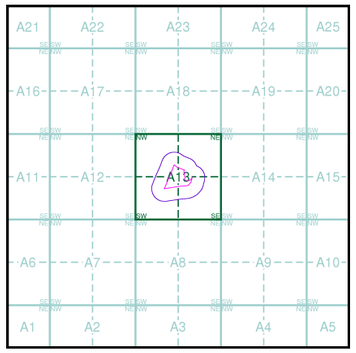
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SS79SE 1999 1:10,000

SS78NE 1999 1:10,000

Historical Map - Slice A



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Hydrock

10k Raster Mapping

Published 2006

Source map scale - 1:10,000

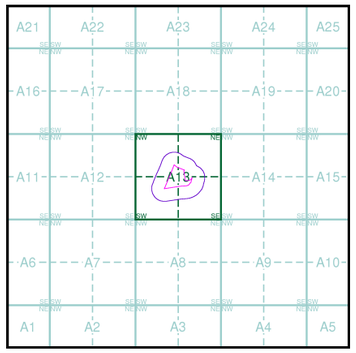
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SS79SE
2006
1:10,000

SS78NE
2006
1:10,000

Historical Map - Slice A



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

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Landmark INFORMATION GROUP

Tel: 0844 844 9952
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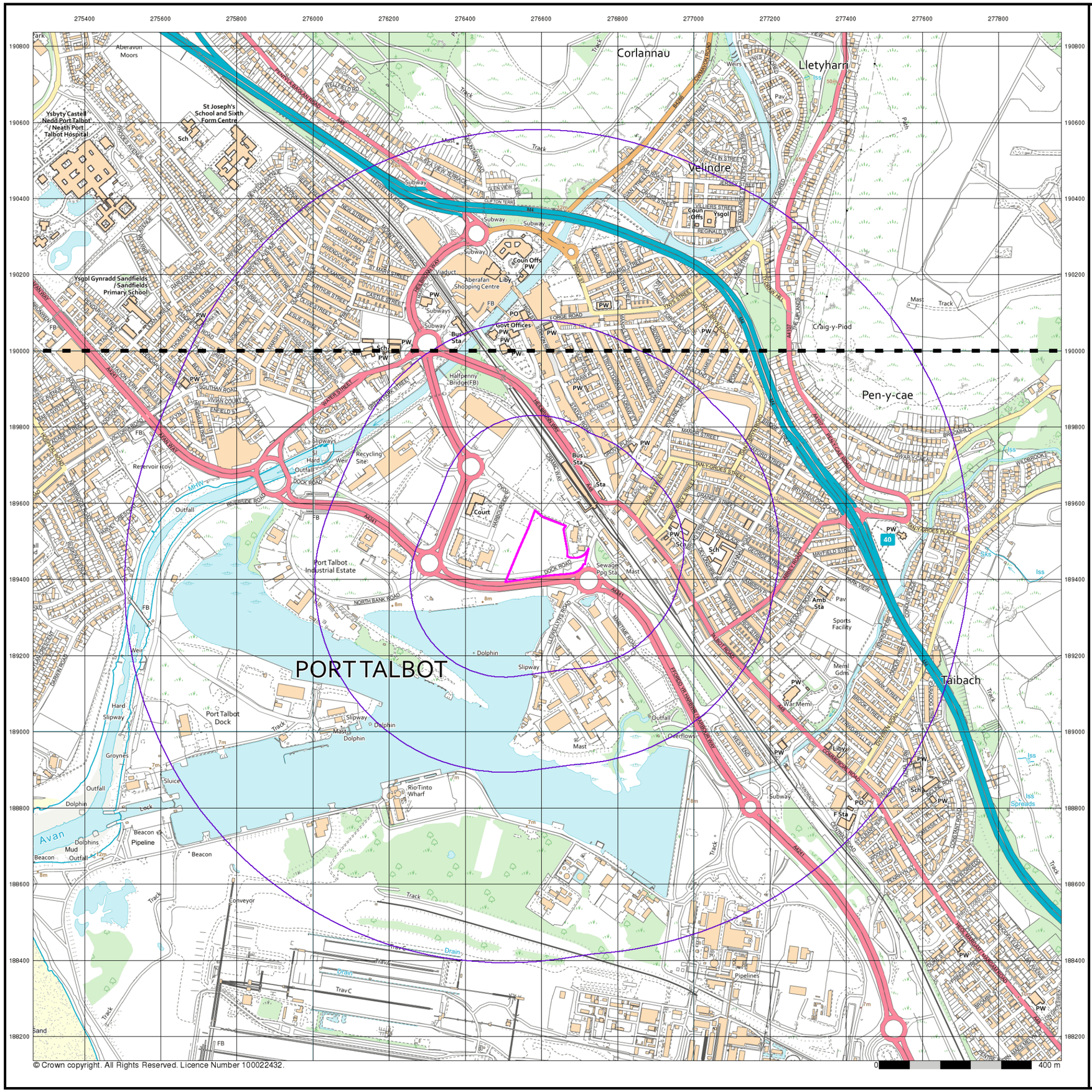
Web: www.envirocheck.co.uk


PORT TALBOT
Corlannau
Lletyharri
Velindre
Pen-y-cae
Taibach
Craig-y-Piod
Aberavon Moors
Ysbyty Castell Nedd Port Talbot / Neath Port Talbot Hospital
St Joseph's School and Sixth Form Centre
Ysgol Gynradd Sandfields / Sandfields Primary School
Aberafan Shopping Centre
Port Talbot Industrial Estate
Port Talbot Dock
Rio Tinto Wharf
Sewage Ppg Sta
Recycling Site
Sports Facility
War Meml
Avan
Mud
Pipeline
Conveyor
Drain
TravC
Groynes
Slipway
Outfall
Dolphin
Beacon
Sluice
Lock
Court
Coun Offs
Govt Offices
Halfpenny Bridge(FB)
Bus Sta
Sta
Ysgol
Libry
Sch
PW
PO
Subway
Viaduct
Track
Path
Mast
Weir
Pav
Amb Sta
F Sta
Meml Gdns
Overflows
Pipelines
Spreads
Iss
Sand
FB
A4107
A4241
A48(M)
A4107
A4107
A48
A48
A48

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Quarry
Gravel Pit
Sand Pit
Clay Pit
Shingle
Refuse Heap
Sloping Masonry
Flat Rock
Marsh
Reeds
Osiers
Rough Pasture
Furze
Wood
Mixed Wood
Brushwood
Orchard
Fir
Ford
Stepping Stones
Ferry
Waterfall
Lock

Trig. Station
507 Altitude at Trig. Station
B.M.325·9 Bench Mark
342 Surface Level
Arrow denotes flow of water
Antiquities (site of)

Cutting
Embankment
Railway crossing Road
Level Crossing
Road crossing Railway
Railway crossing River or Canal
Road over single stream
Road over River or Canal

County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit
Active Quarry, Chalk Pit or Clay Pit
Rock
Boulders
Cliff
Slopes
Top
Roofed Building
Glazed Roof Building
Sloping Masonry
Archway
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Bench Mark
Antiquity (site of)
Cave Entrance
Triangulation Station
Electricity Pylon
Electricity Transmission Line

County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

Cliff
Slopes
Top
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Positioned Boulder
Scree
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Triangulation Station
Antiquity (site of)
Electricity Transmission Line
Electricity Pylon
BM 231.60m Bench Mark
Buildings with Building Seed
Roofed Building
Glazed Roof Building

Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

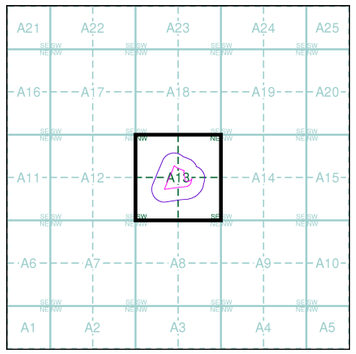
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Hydrock

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1876	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1917	4
Glamorganshire	1:2,500	1939	5
Ordnance Survey Plan	1:1,250	1952	6
Ordnance Survey Plan	1:2,500	1953	7
Ordnance Survey Plan	1:1,250	1958 - 1962	8
Ordnance Survey Plan	1:1,250	1964 - 1968	9
Ordnance Survey Plan	1:1,250	1967 - 1974	10
Ordnance Survey Plan	1:2,500	1969	11
Ordnance Survey Plan	1:1,250	1971	12
Additional SIMs	1:1,250	1978 - 1991	13
Additional SIMs	1:1,250	1988 - 1991	14
Additional SIMs	1:1,250	1991	15
Large-Scale National Grid Data	1:1,250	1993	16
Large-Scale National Grid Data	1:1,250	1995	17
Large-Scale National Grid Data	1:1,250	1996	18
Historical Aerial Photography	1:2,500	2001	19

Historical Map - Segment A13



N

Order Details

Order Number: 317152831_1_1
Customer Ref: 26279
National Grid Reference: 276610, 189470
Slice: A
Site Area (Ha): 2.07
Search Buffer (m): 100

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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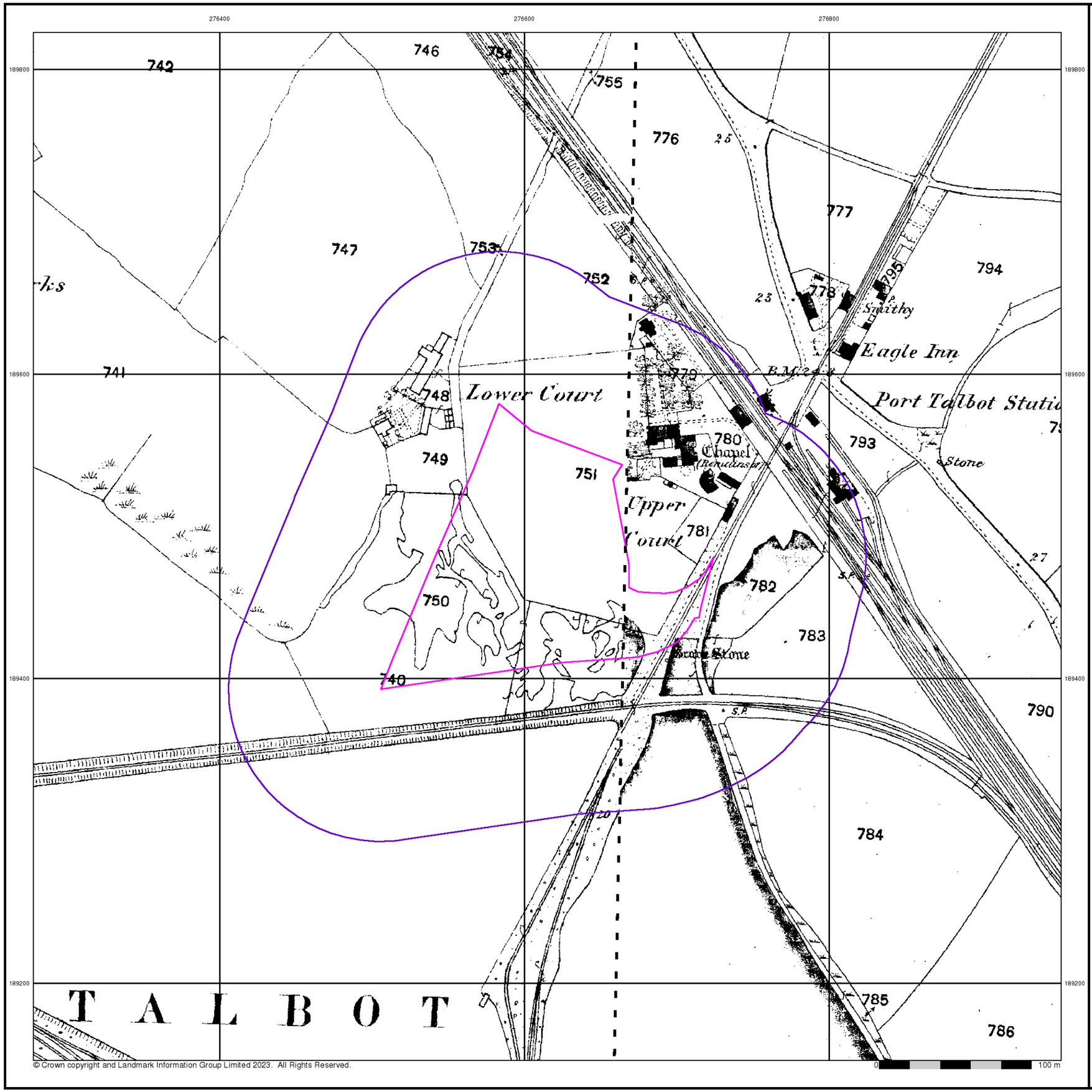


Hydrock

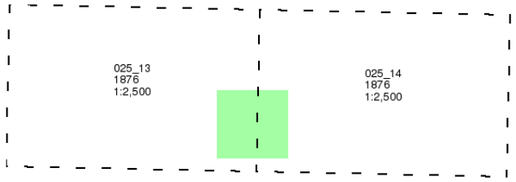
Glamorganshire

Published 1876

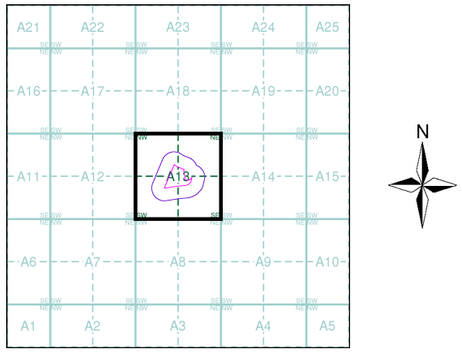
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	100

Site Details

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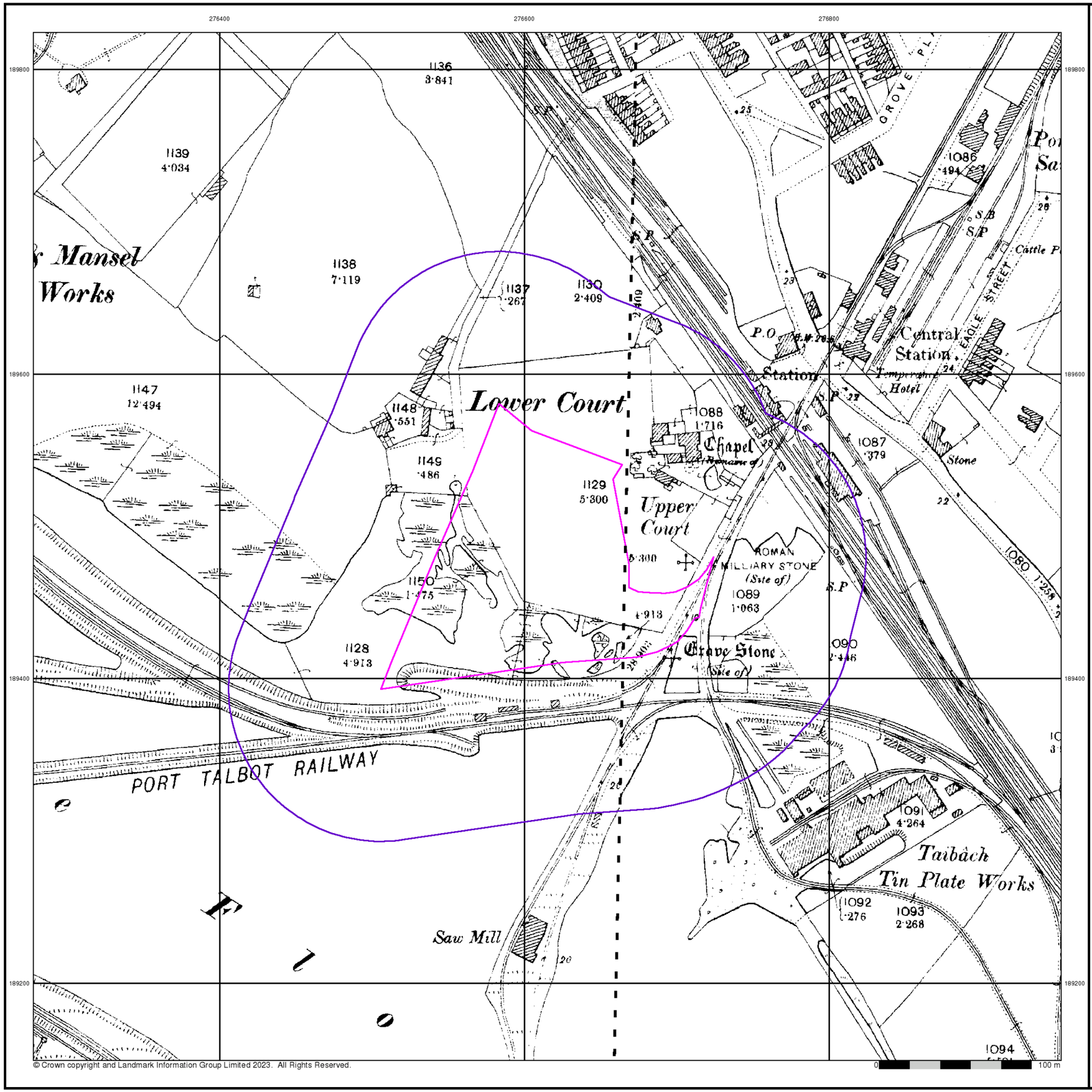

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Hydrock

Glamorganshire

Published 1899

Source map scale - 1:2,500

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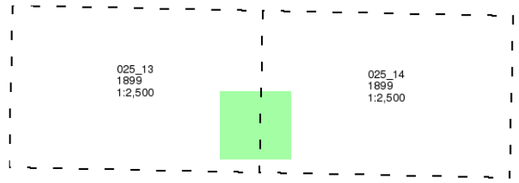
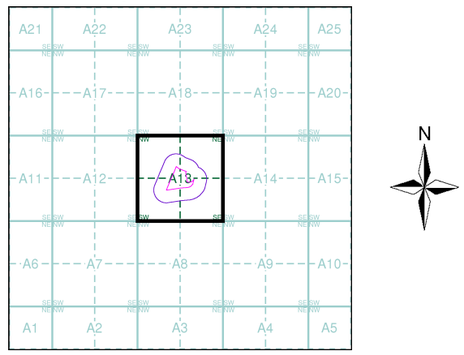
Map Name(s) and Date(s)



Historical Map - Segment A13



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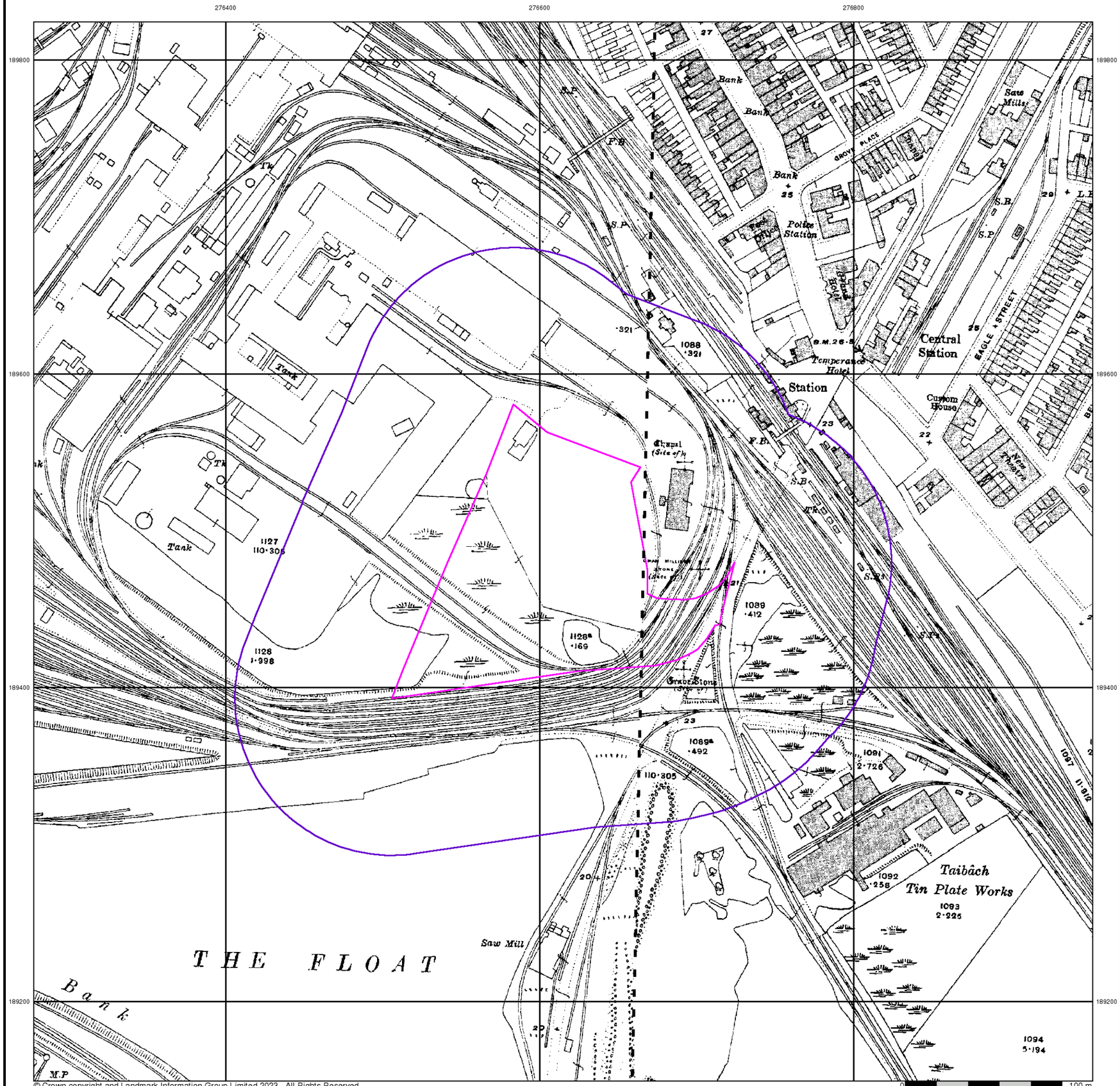

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Hydrock

Glamorganshire

Published 1917

Source map scale - 1:2,500

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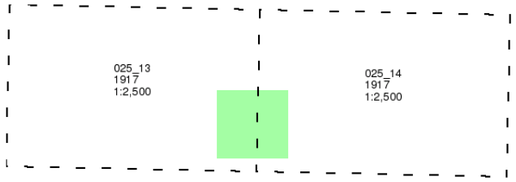
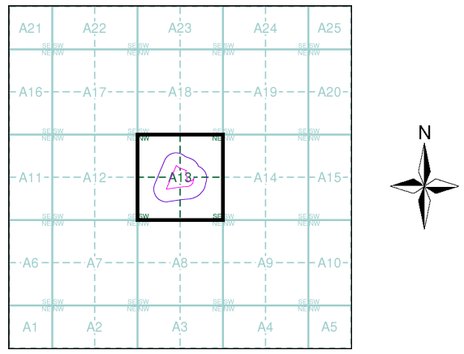
Map Name(s) and Date(s)



Historical Map - Segment A13



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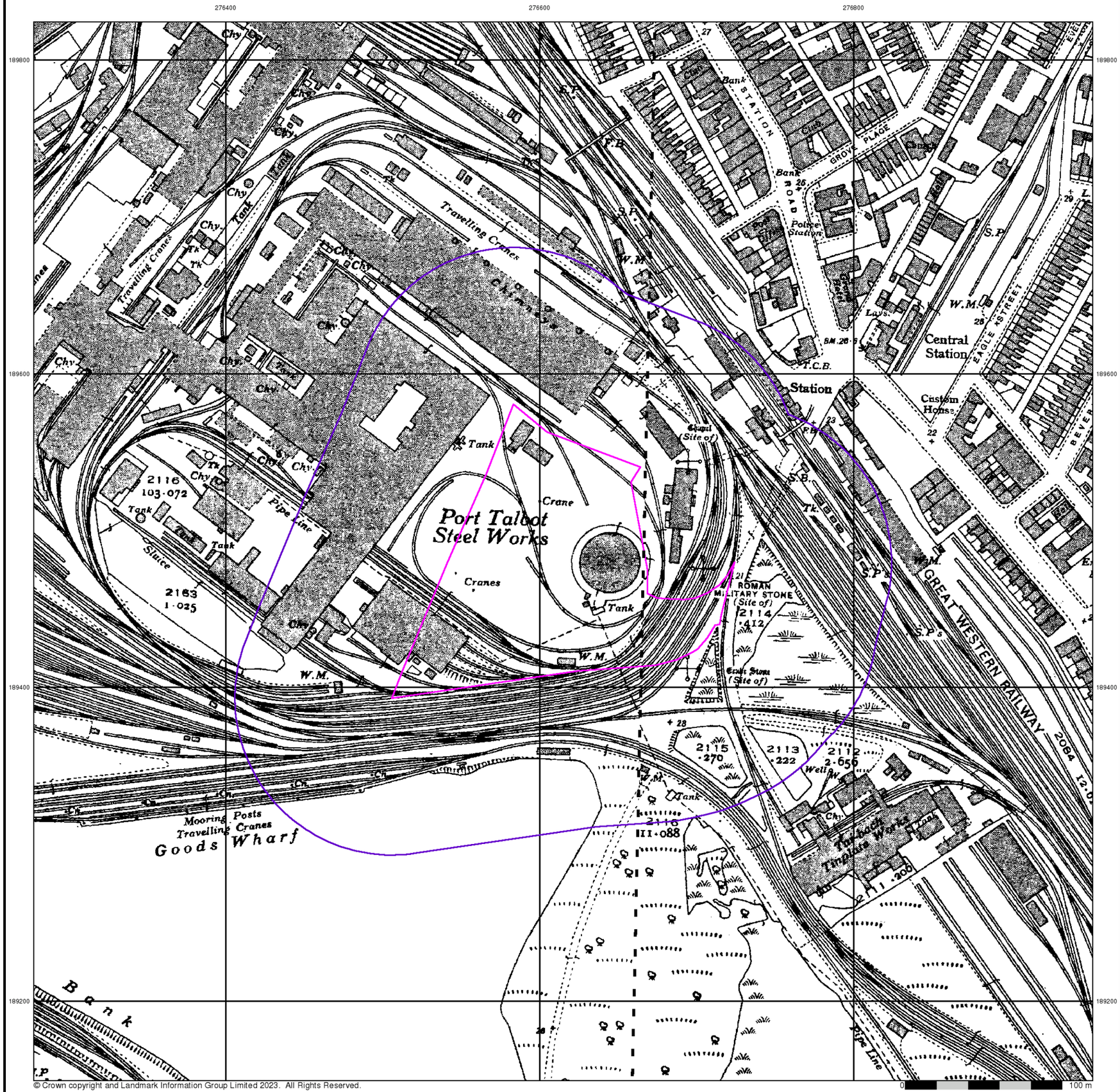

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Glamorganshire

Published 1939

Source map scale - 1:2,500

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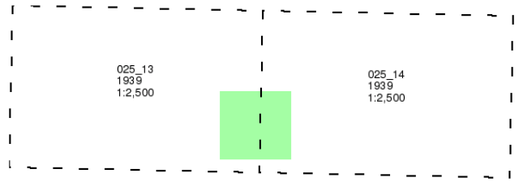
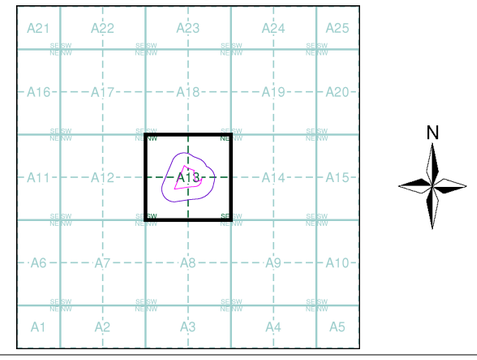
Map Name(s) and Date(s)



Historical Map - Segment A13



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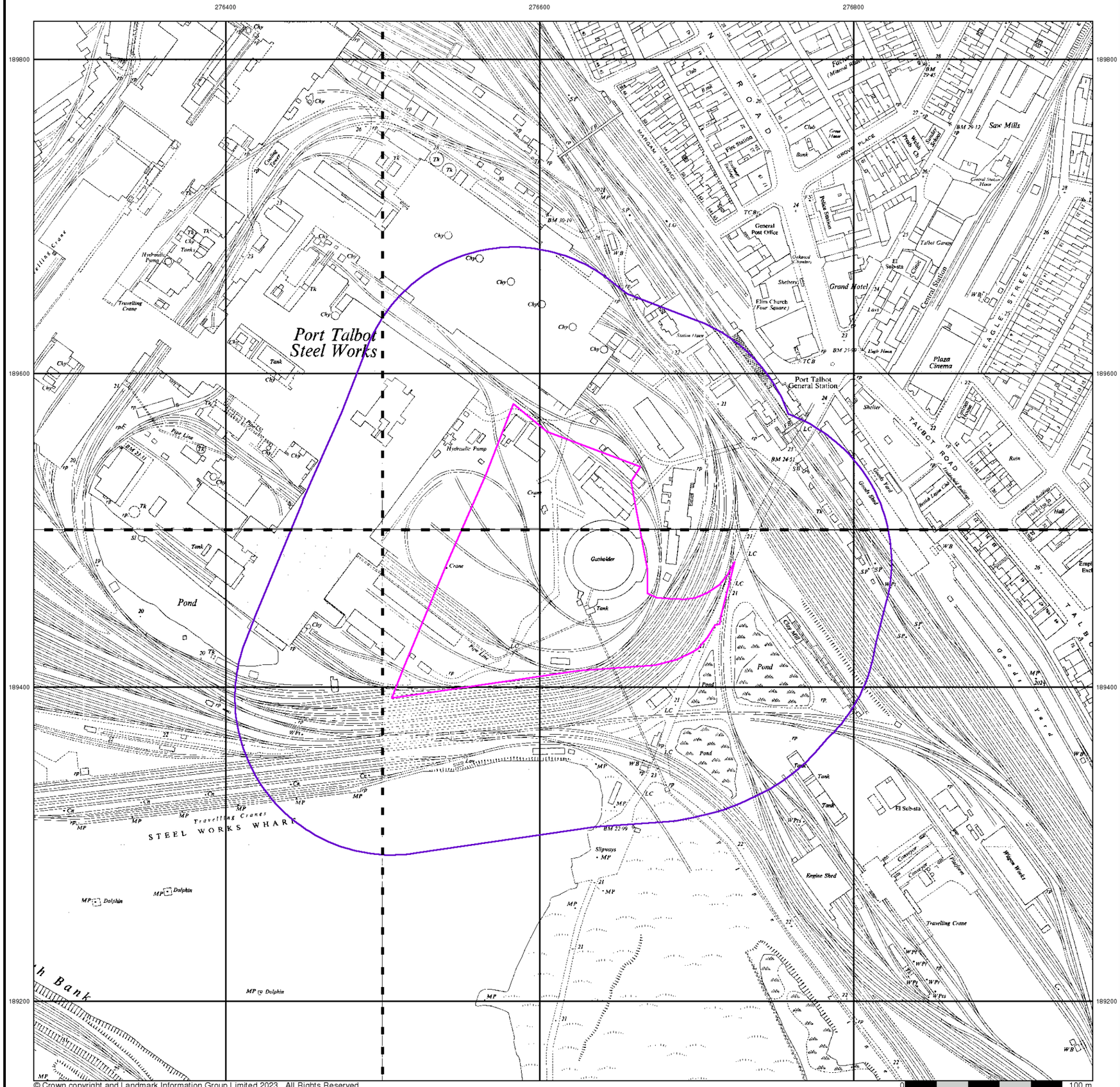

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Ordnance Survey Plan

Published 1952

Source map scale - 1:1,250

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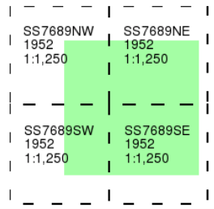
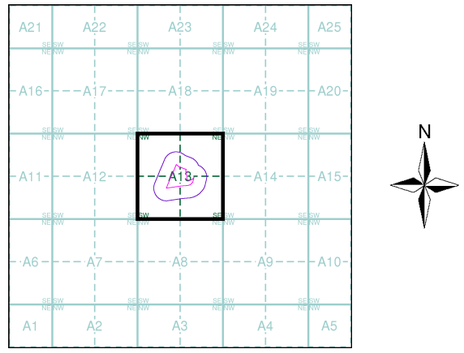
Map Name(s) and Date(s)



Historical Map - Segment A13



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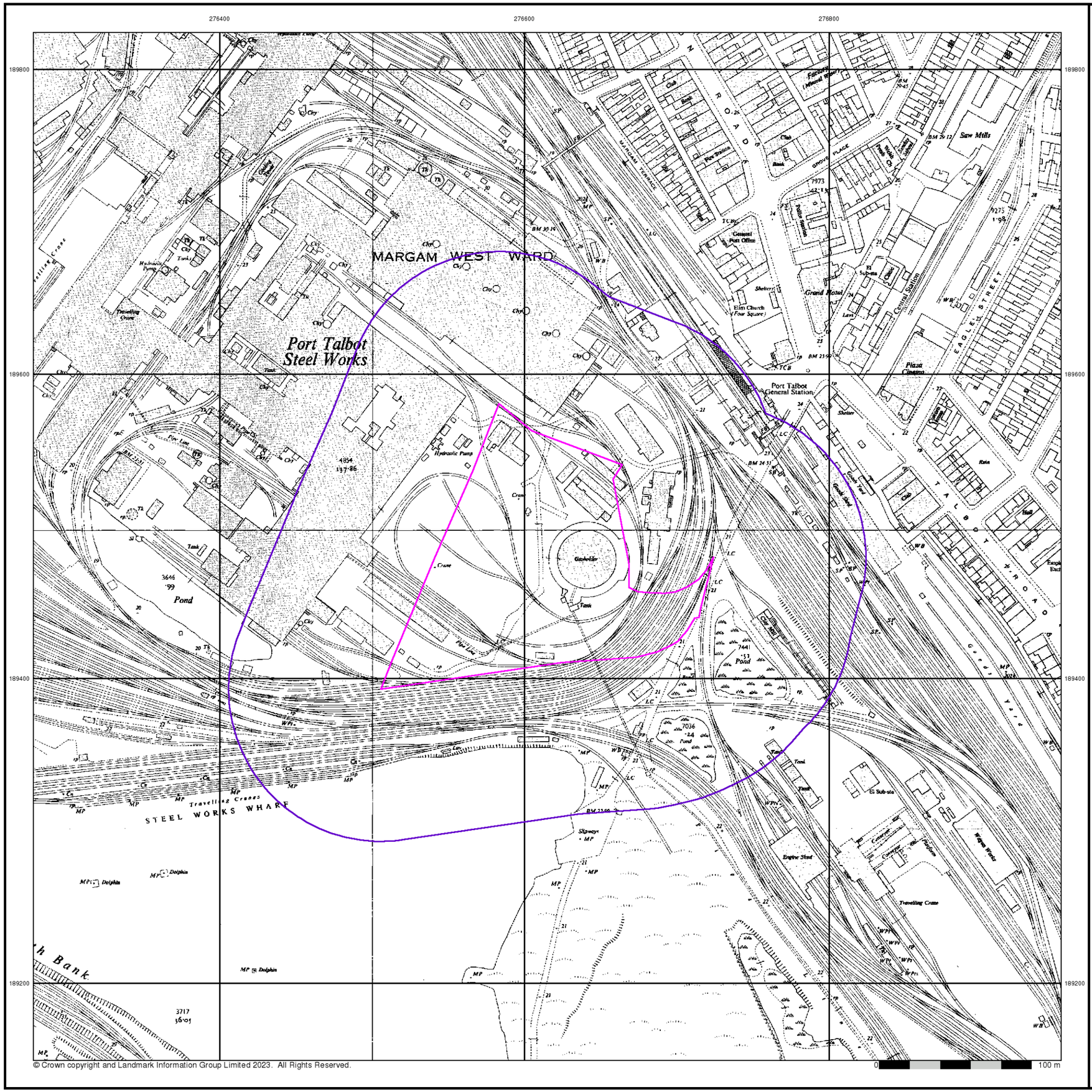

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Ordnance Survey Plan

Published 1953

Source map scale - 1:2,500

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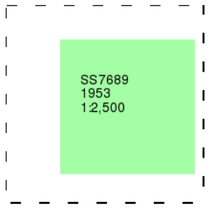
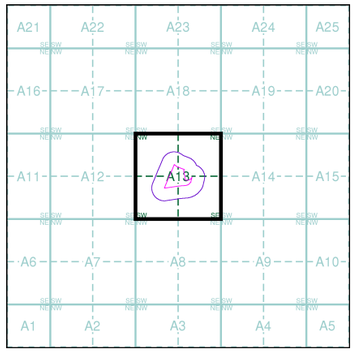


Historical Map - Segment A13



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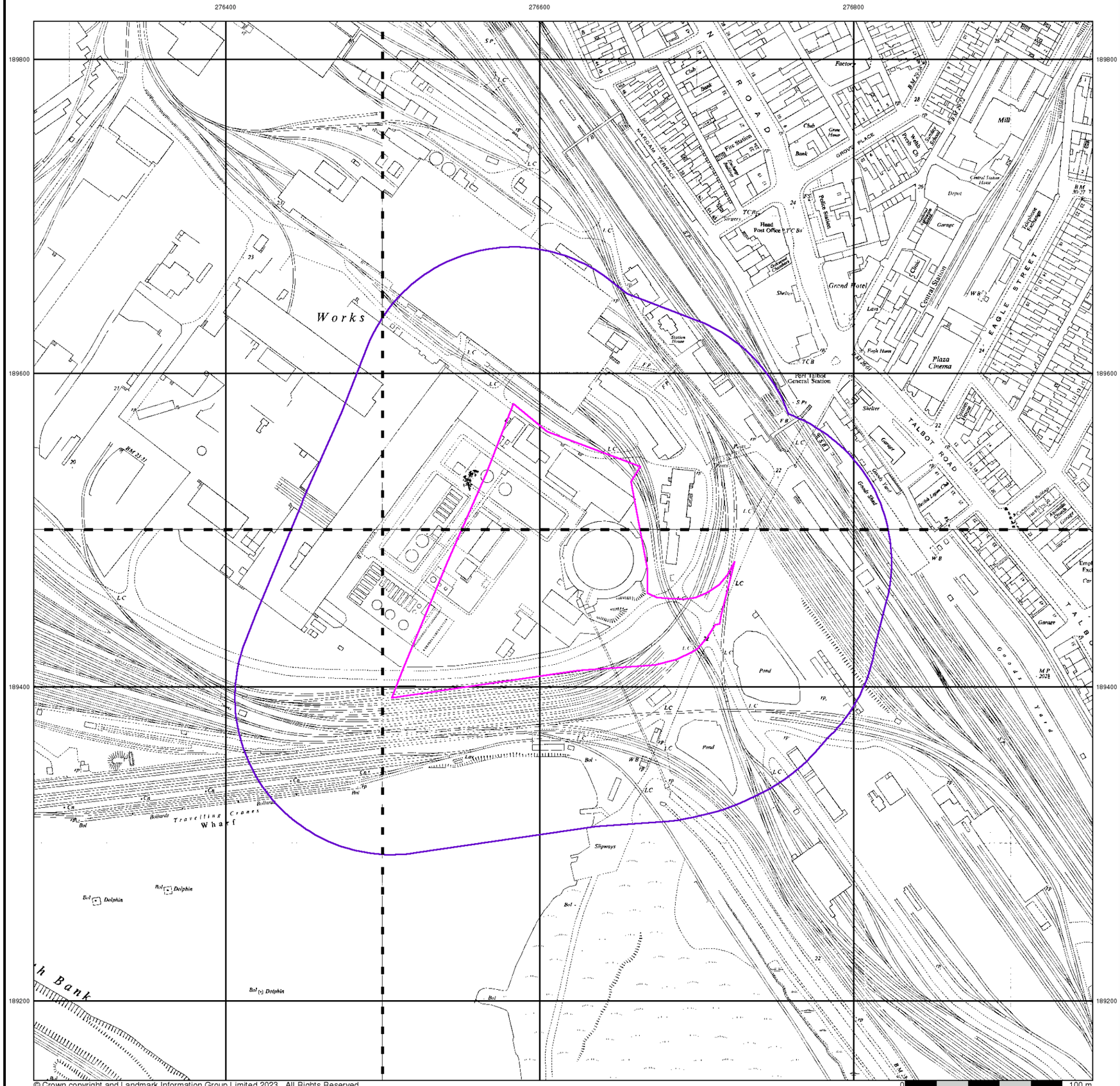

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Hydrock

Ordnance Survey Plan

Published 1958 - 1962

Source map scale - 1:1,250

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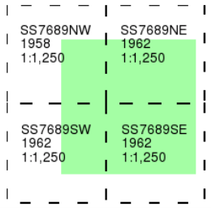
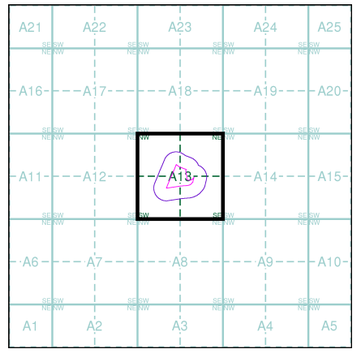


Historical Map - Segment A13



Order Details

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Slice:	A
Site Area (Ha):	2.07
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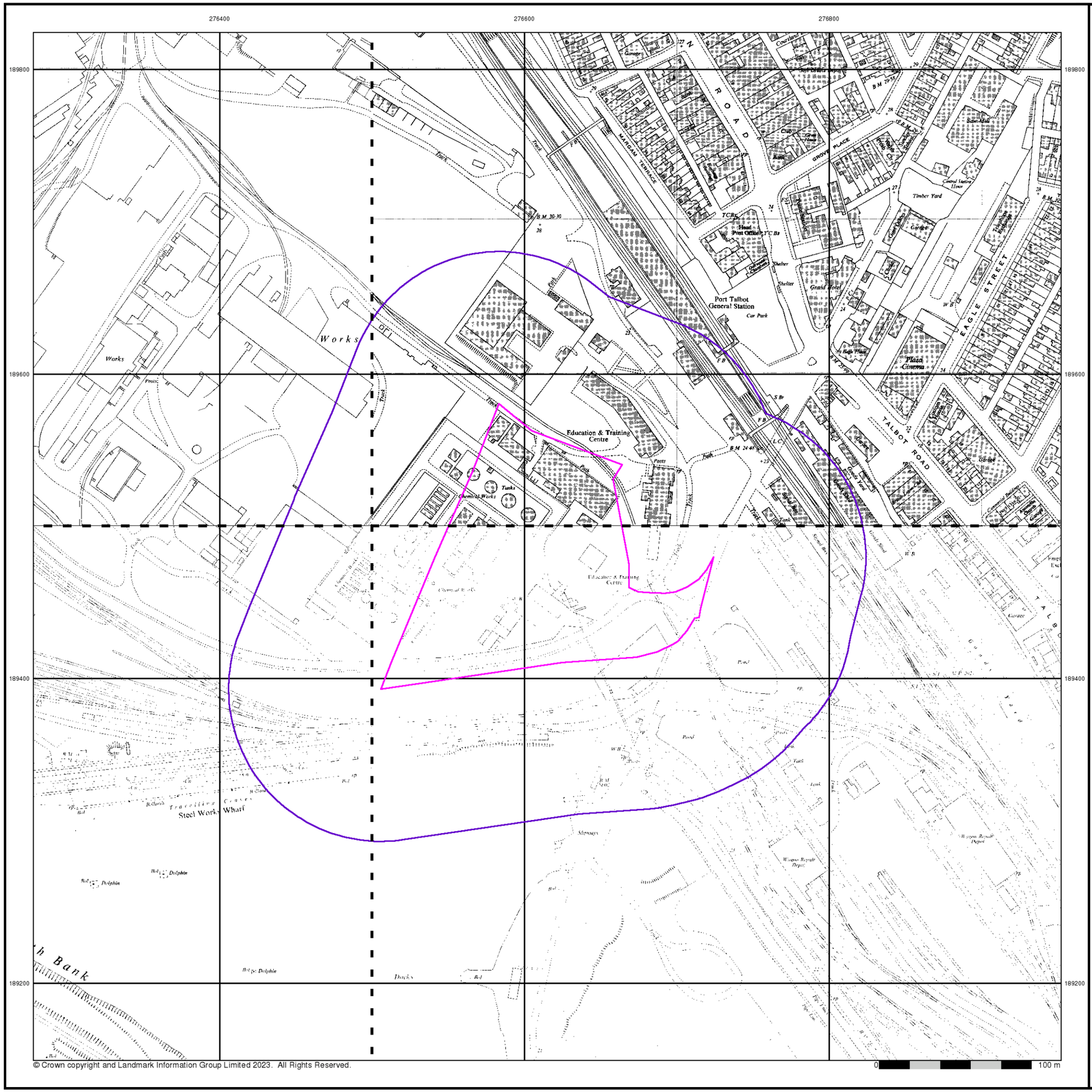

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Ordnance Survey Plan

Published 1964 - 1968

Source map scale - 1:1,250

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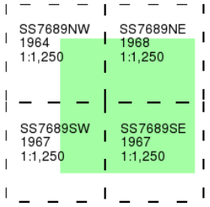
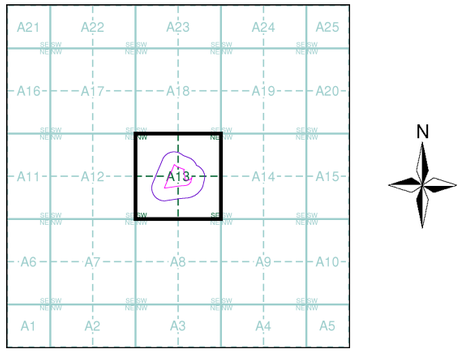
Map Name(s) and Date(s)



Historical Map - Segment A13



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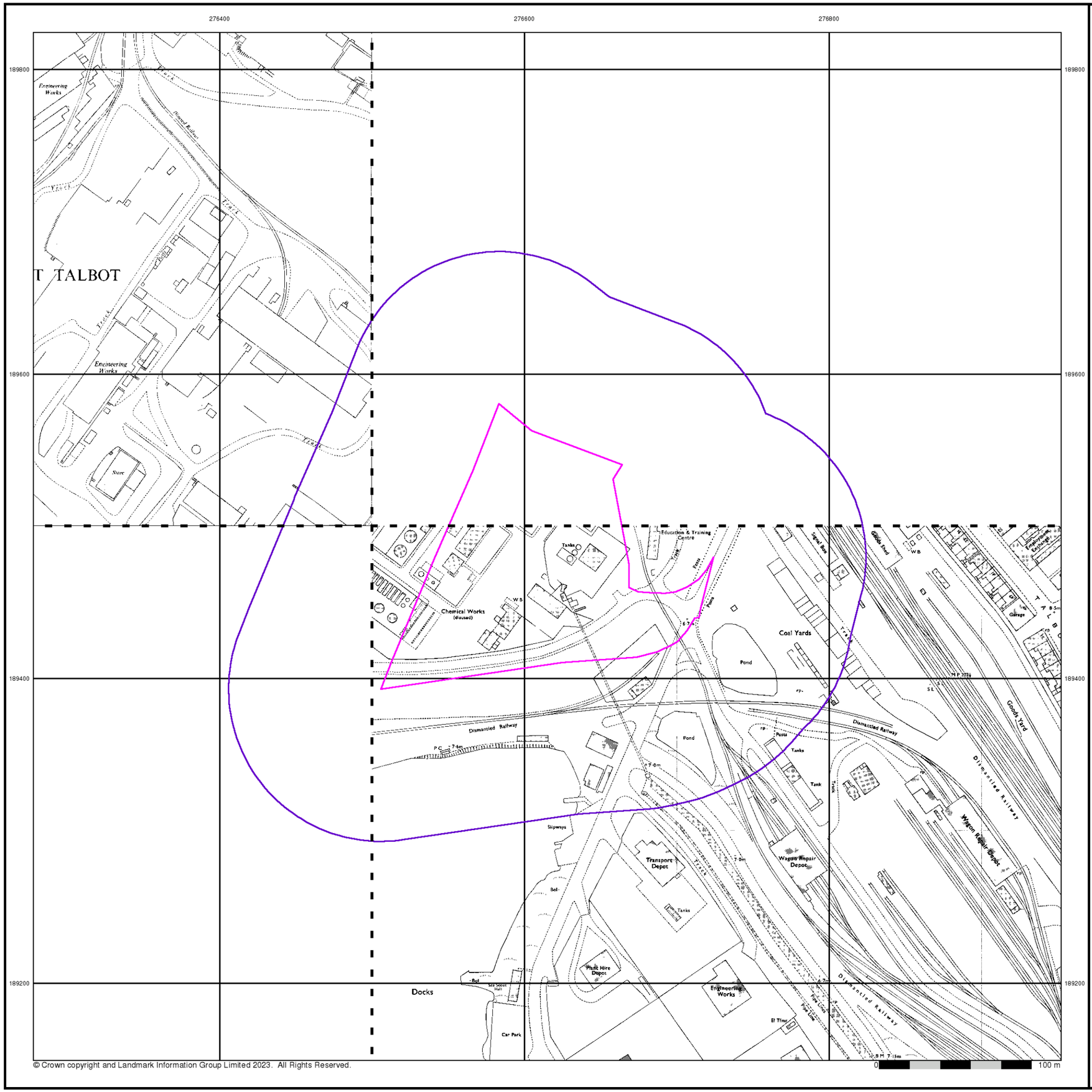

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Ordnance Survey Plan

Published 1967 - 1974

Source map scale - 1:1,250

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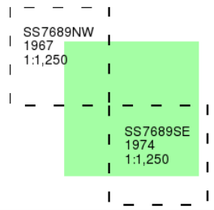
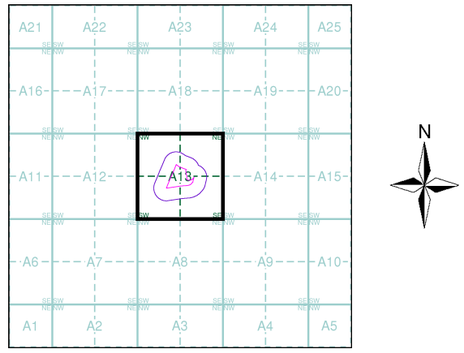


Historical Map - Segment A13



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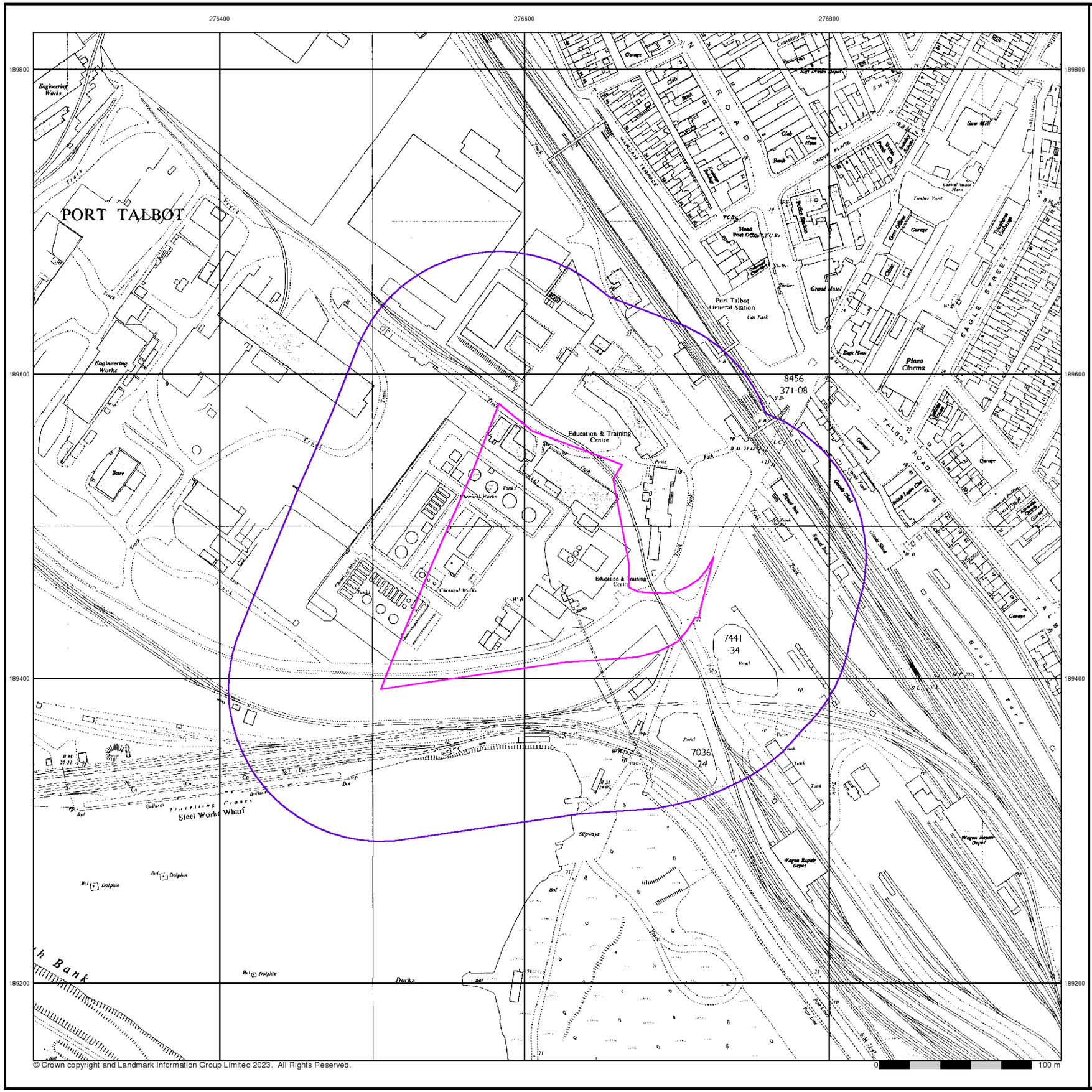

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Ordnance Survey Plan

Published 1969

Source map scale - 1:2,500

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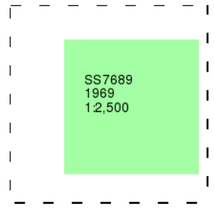
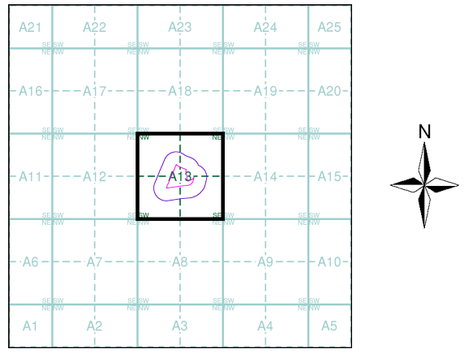


Historical Map - Segment A13



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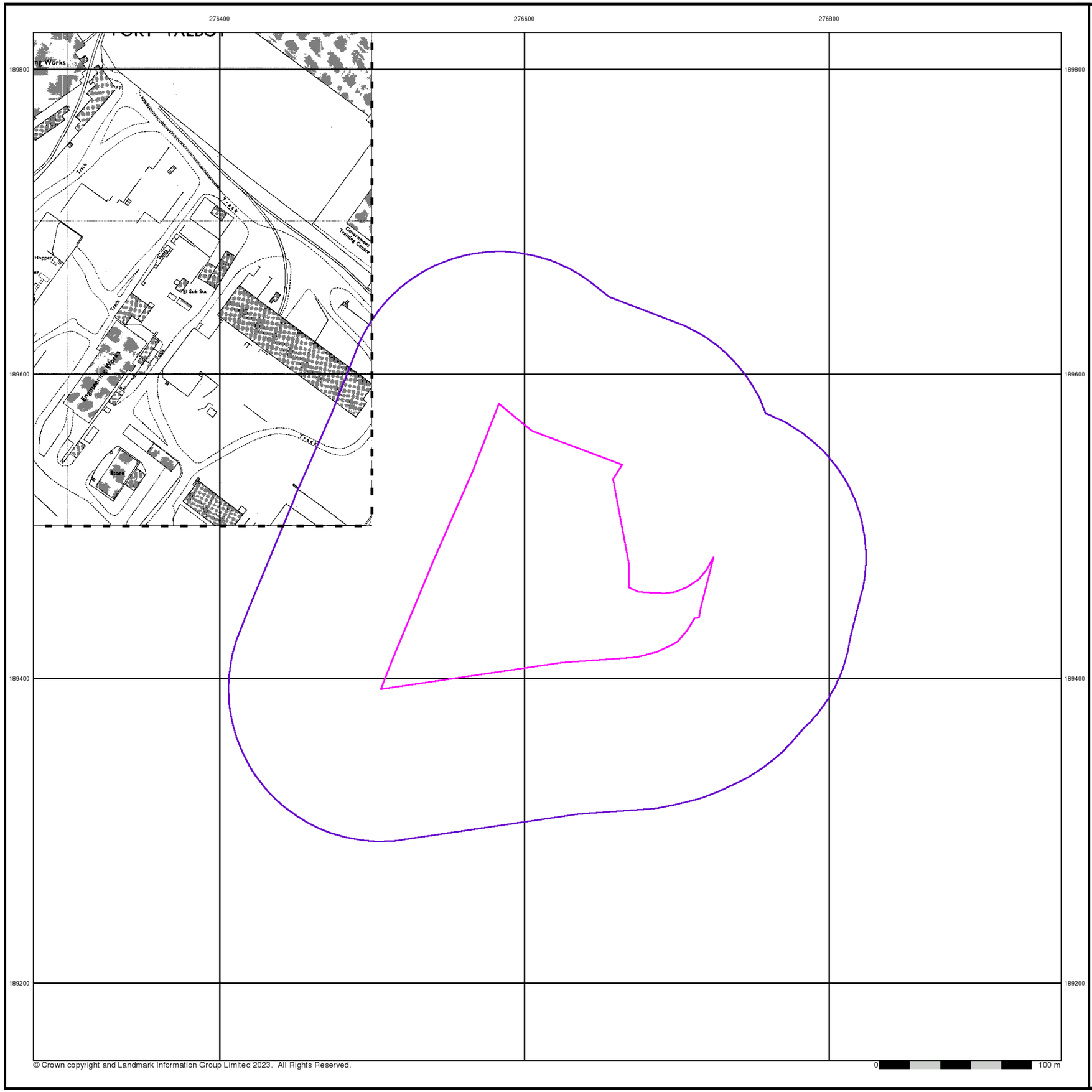

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Ordnance Survey Plan

Published 1971

Source map scale - 1:1,250

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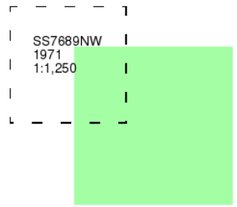
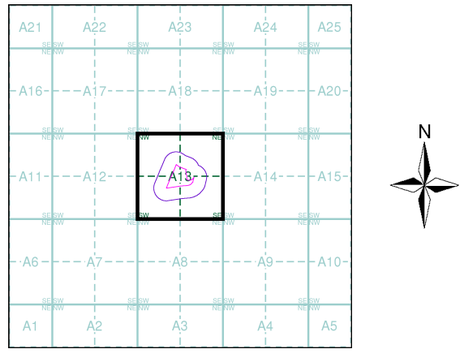


Historical Map - Segment A13



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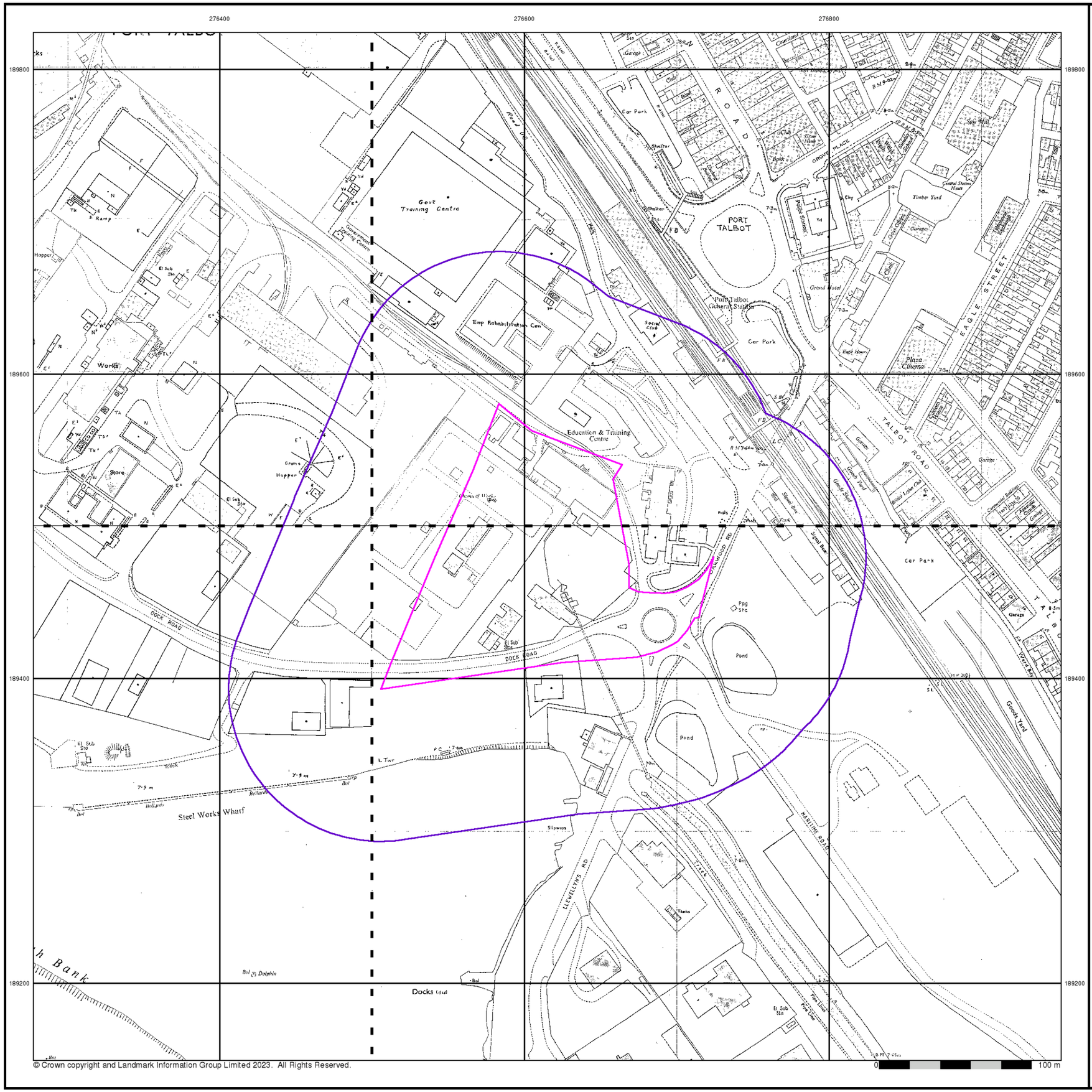

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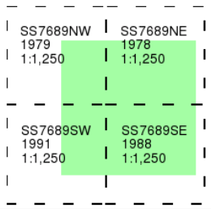
Additional SIMs

Published 1978 - 1991

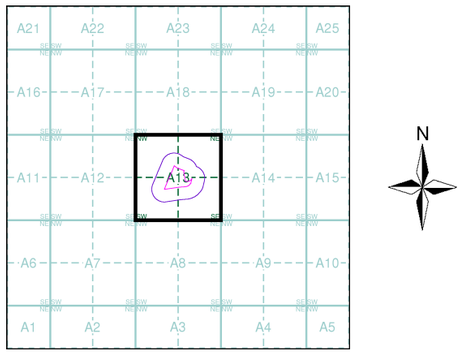
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



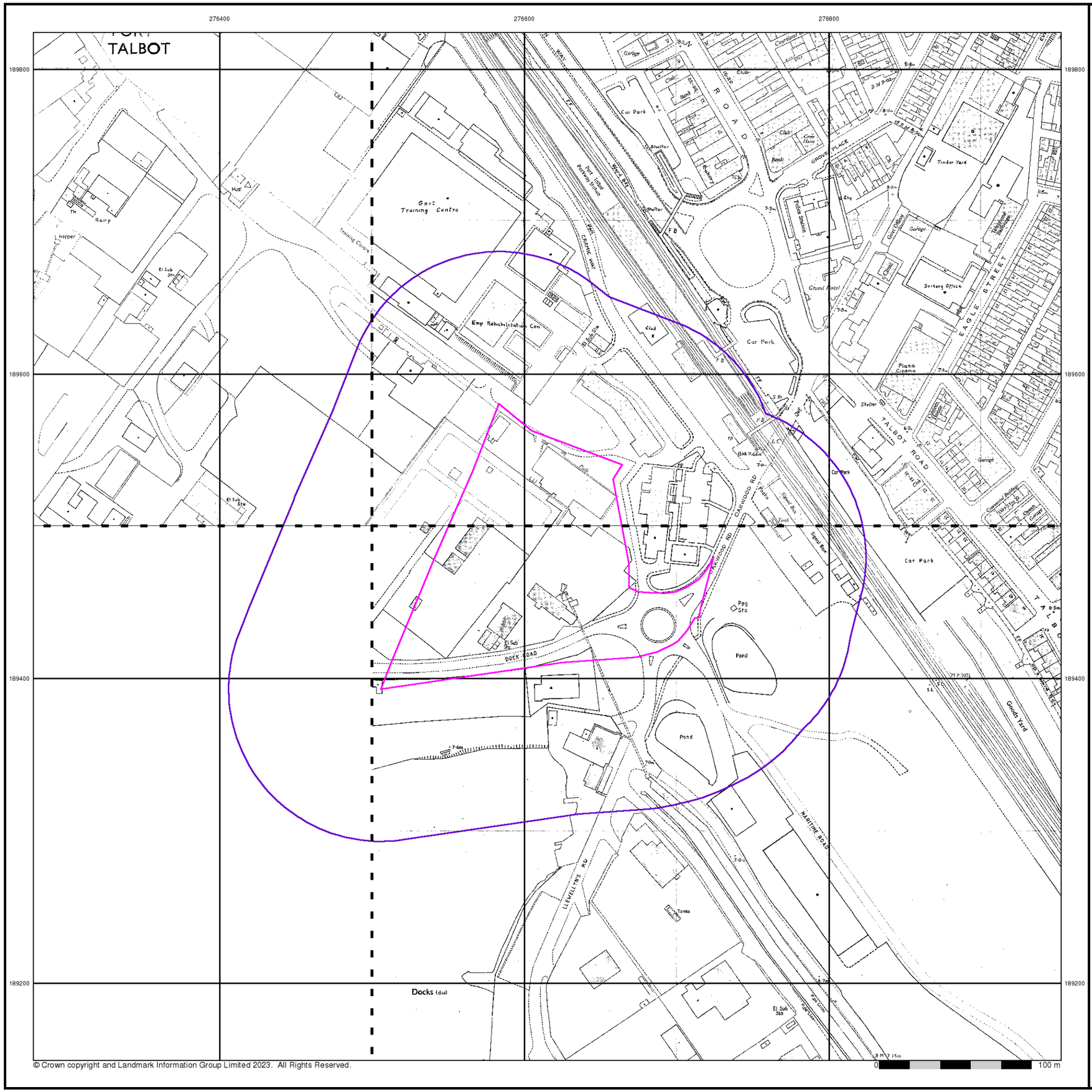
Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	100

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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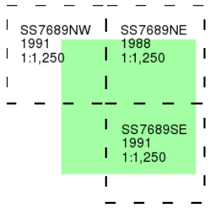
Additional SIMs

Published 1988 - 1991

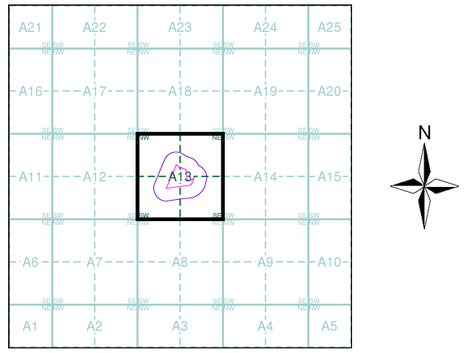
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	100

Site Details

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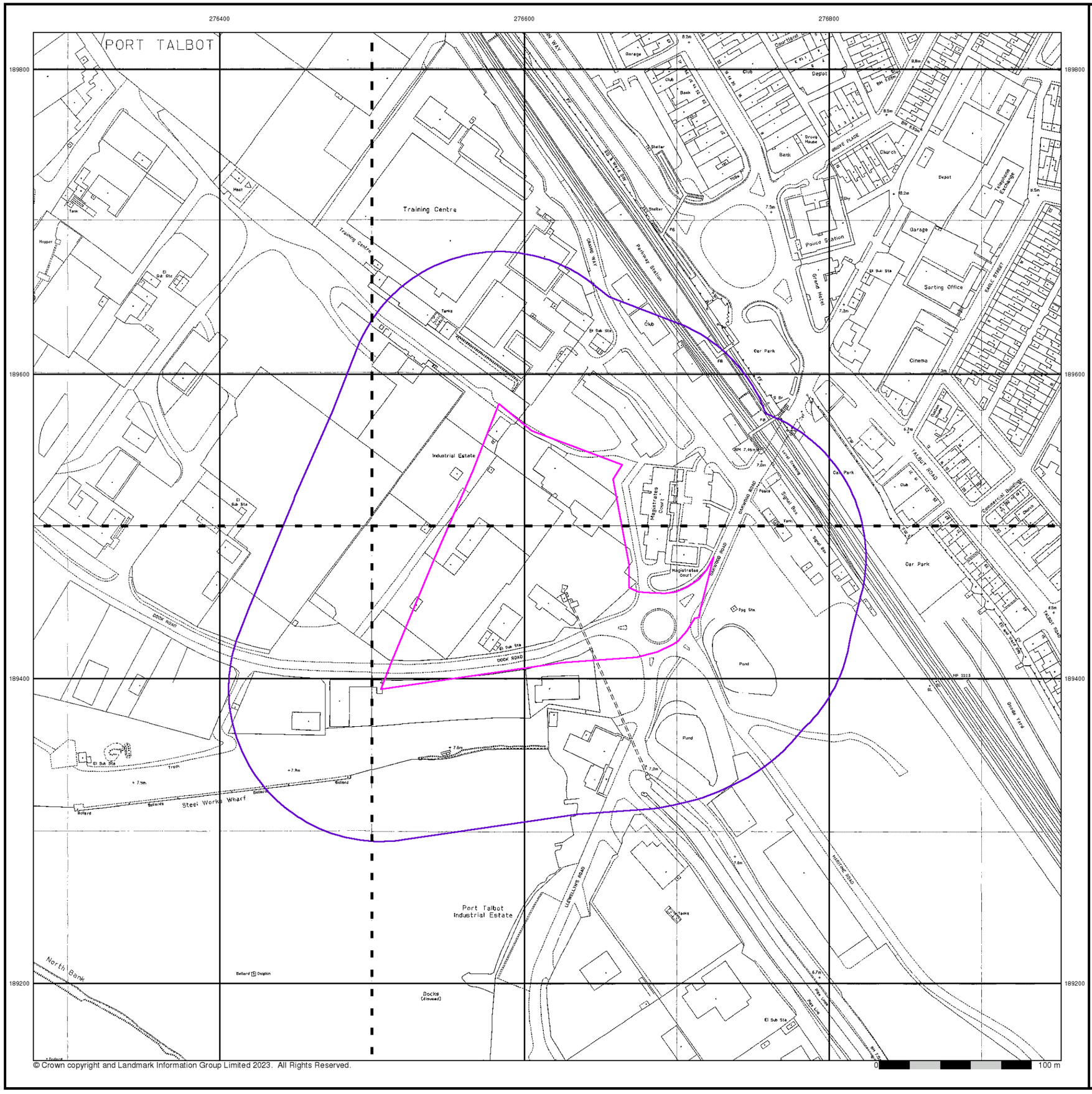
276400
276600
276800
189800
189600
189400
189200
Training Centre
Car Park
Grand Hotel
Sorting Office
Depot
Cinema
Club
Bank
Shelter
Garage
Public Station
El Sub Sta
Tks
Telephone Exchange
Cemetery Railway
Church
ROAD
GROVE PLACE
EAGLE STREET
TALBOT ROAD
OAKWOOD RD
CENTRE WAY
Port Talbot Parkway Station
E.C.L. Wire Bdy
Signal Box
Fdn
Pond
Fence
Fence
Fence



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Large-Scale National Grid Data

Published 1993

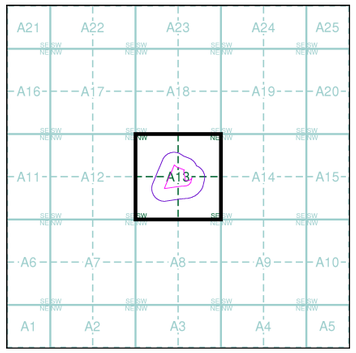
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SS7689NW 1993 1:1,250	SS7689NE 1993 1:1,250
SS7689SW 1993 1:1,250	SS7689SE 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
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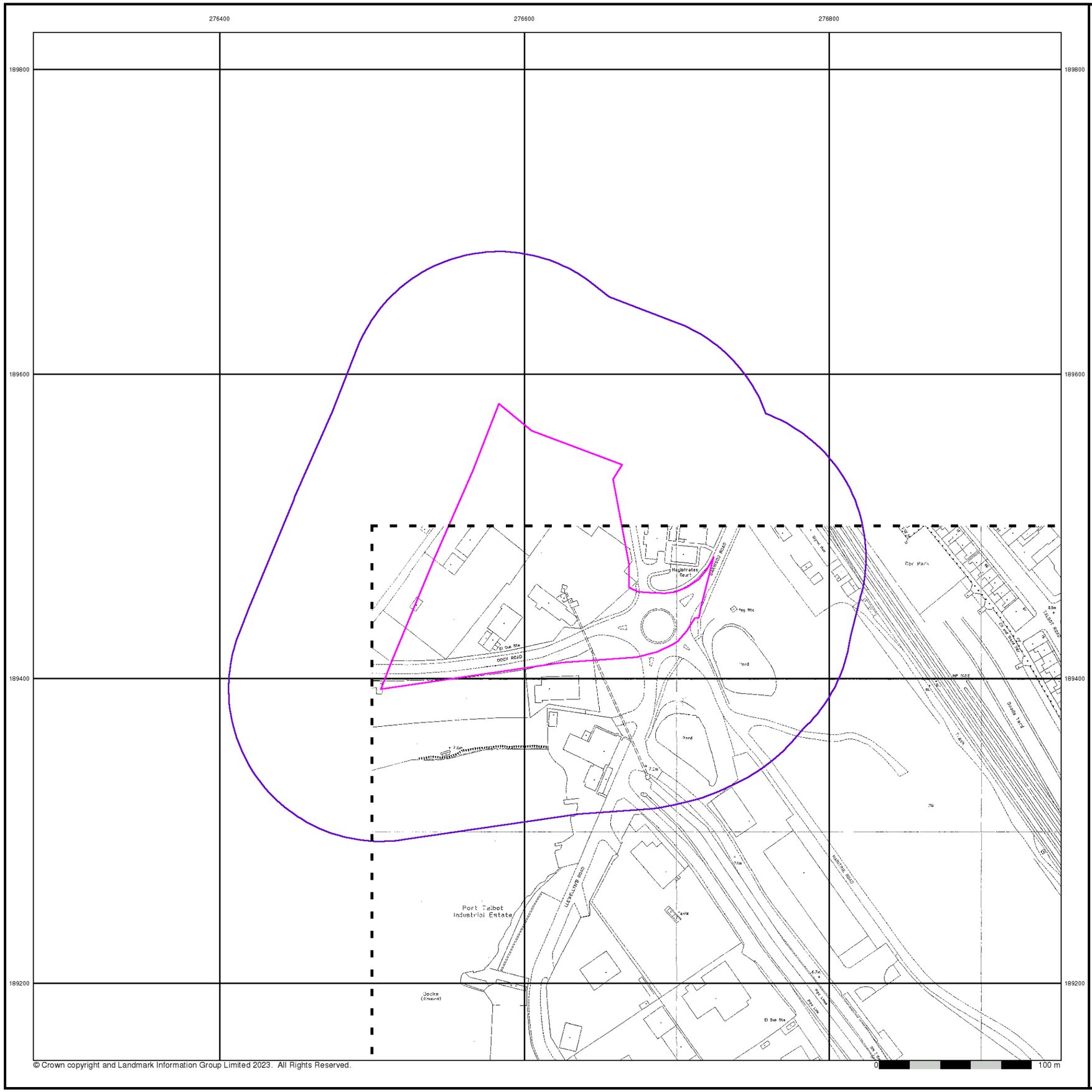

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Large-Scale National Grid Data

Published 1995

Source map scale - 1:1,250

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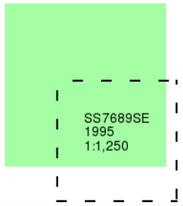
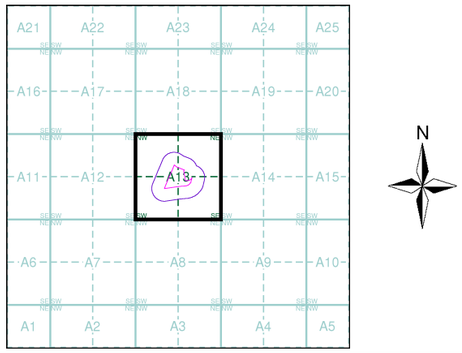
Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	100

Site Details

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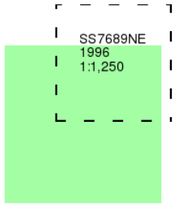
Large-Scale National Grid Data

Published 1996

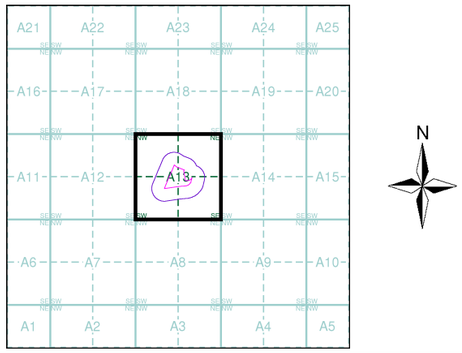
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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Slice:	A
Site Area (Ha):	2.07
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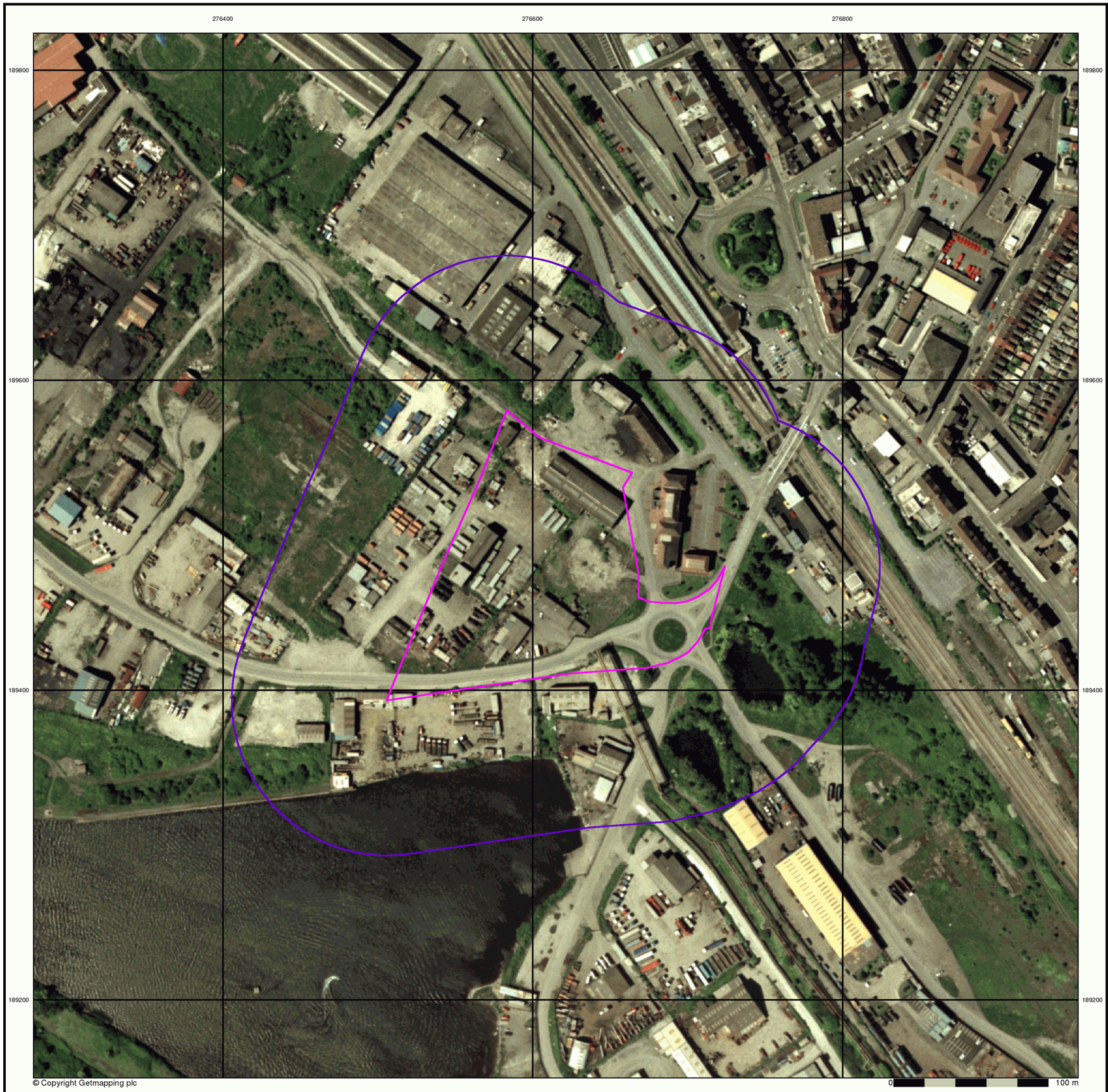

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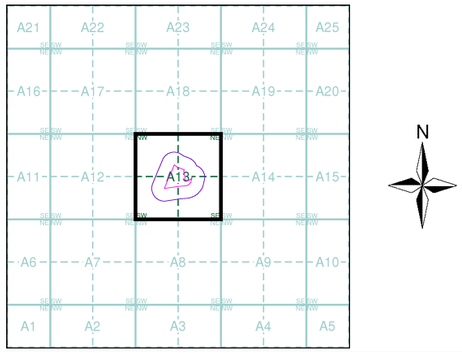
Historical Aerial Photography

Published 2001

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	100

Site Details

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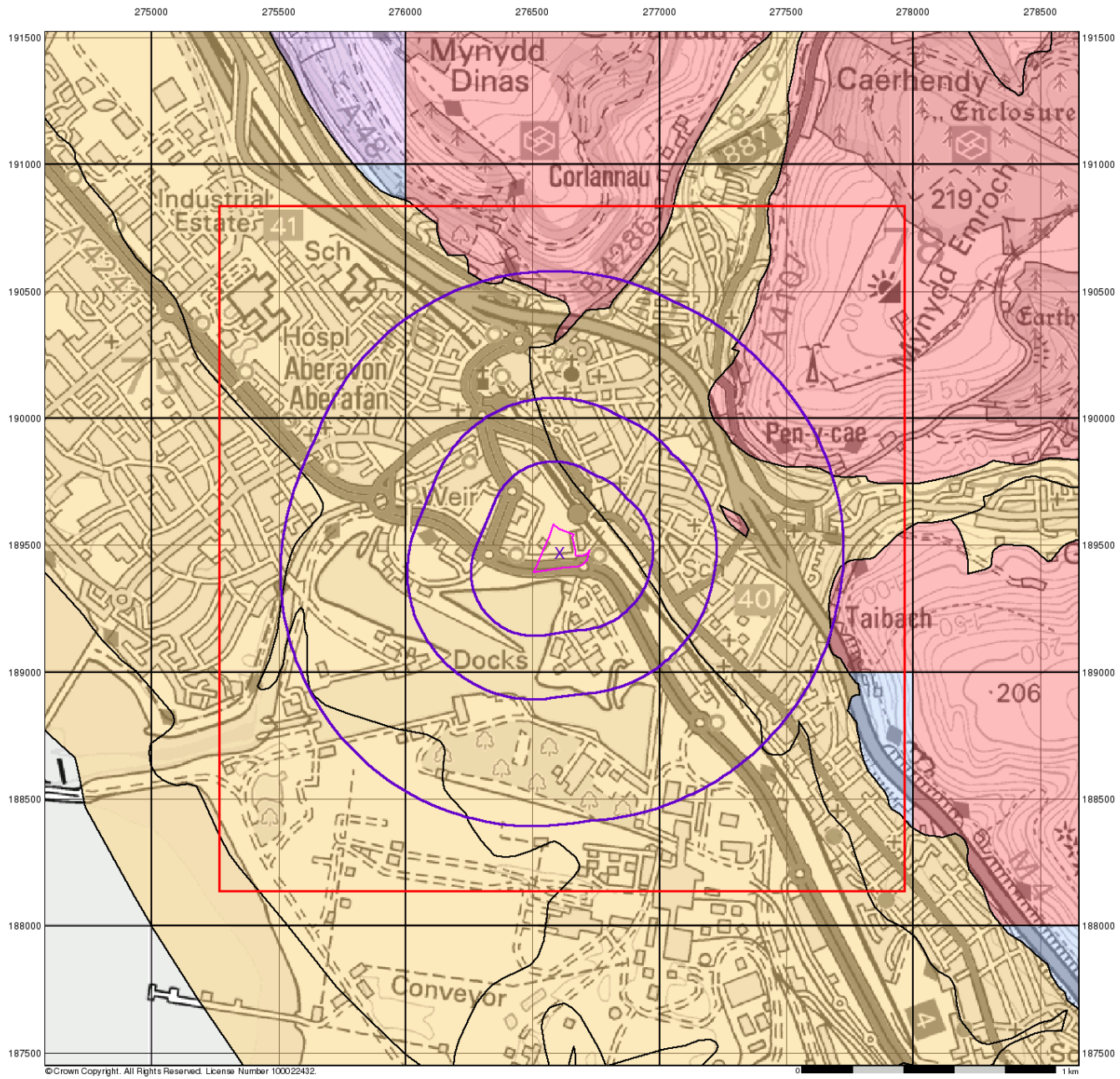
Appendix D Desk study research information

Envirocheck



Hydrock

Groundwater Vulnerability

General

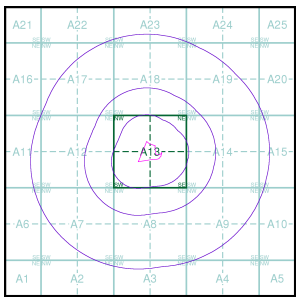
Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer
Soluble Rock

Site Sensitivity Context Map - Slice A



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Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

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Hydrock

Bedrock Aquifer Designation

General

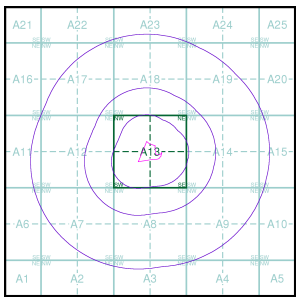
Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



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Order Details

Order Number:	317152831_1_1
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National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

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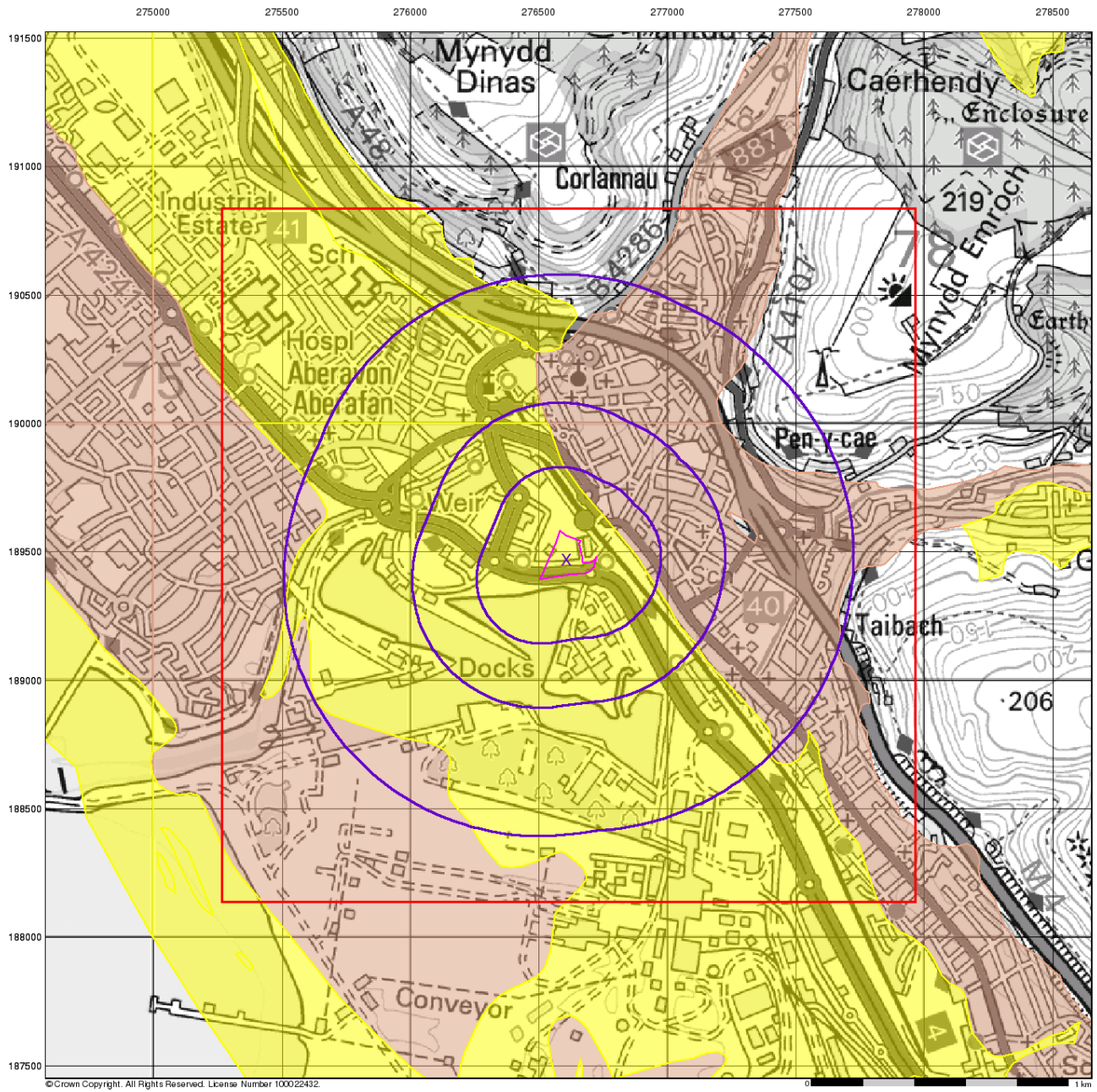


Hydrock

Superficial Aquifer Designation

General

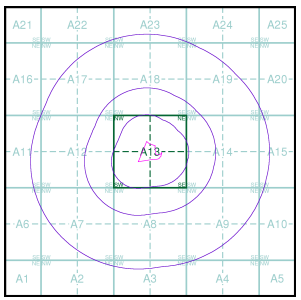
Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



N

Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
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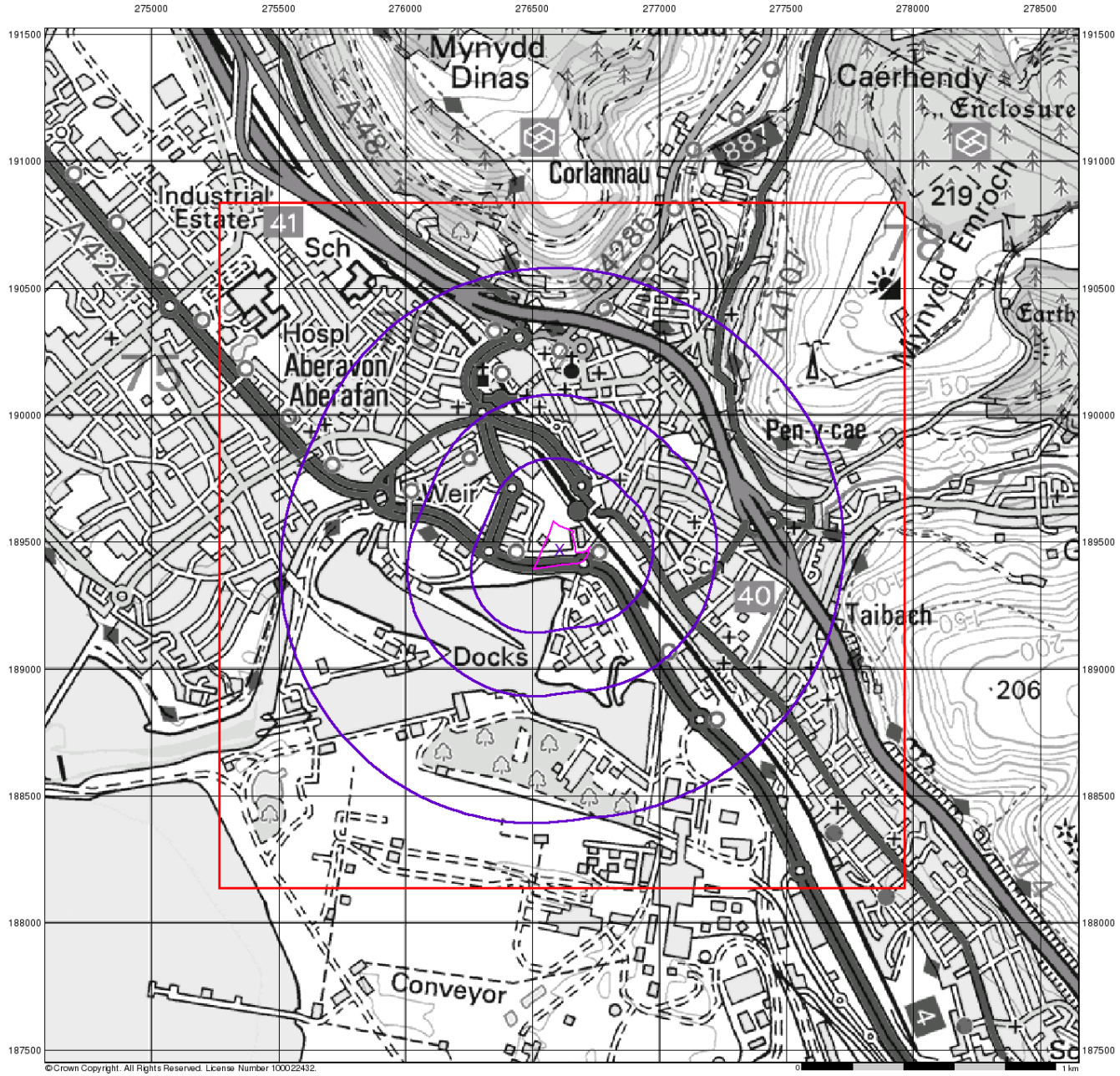

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Hydrock

Source Protection Zones

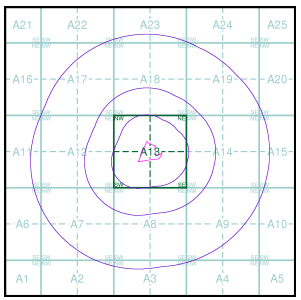
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Agency and Hydrological

Inner zone (Zone 1)
Inner zone - subsurface activity only (Zone 1c)
Outer zone (Zone 2)
Outer zone - subsurface activity only (Zone 2c)
Total catchment (Zone 3)
Total catchment - subsurface activity only (Zone 3c)
Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



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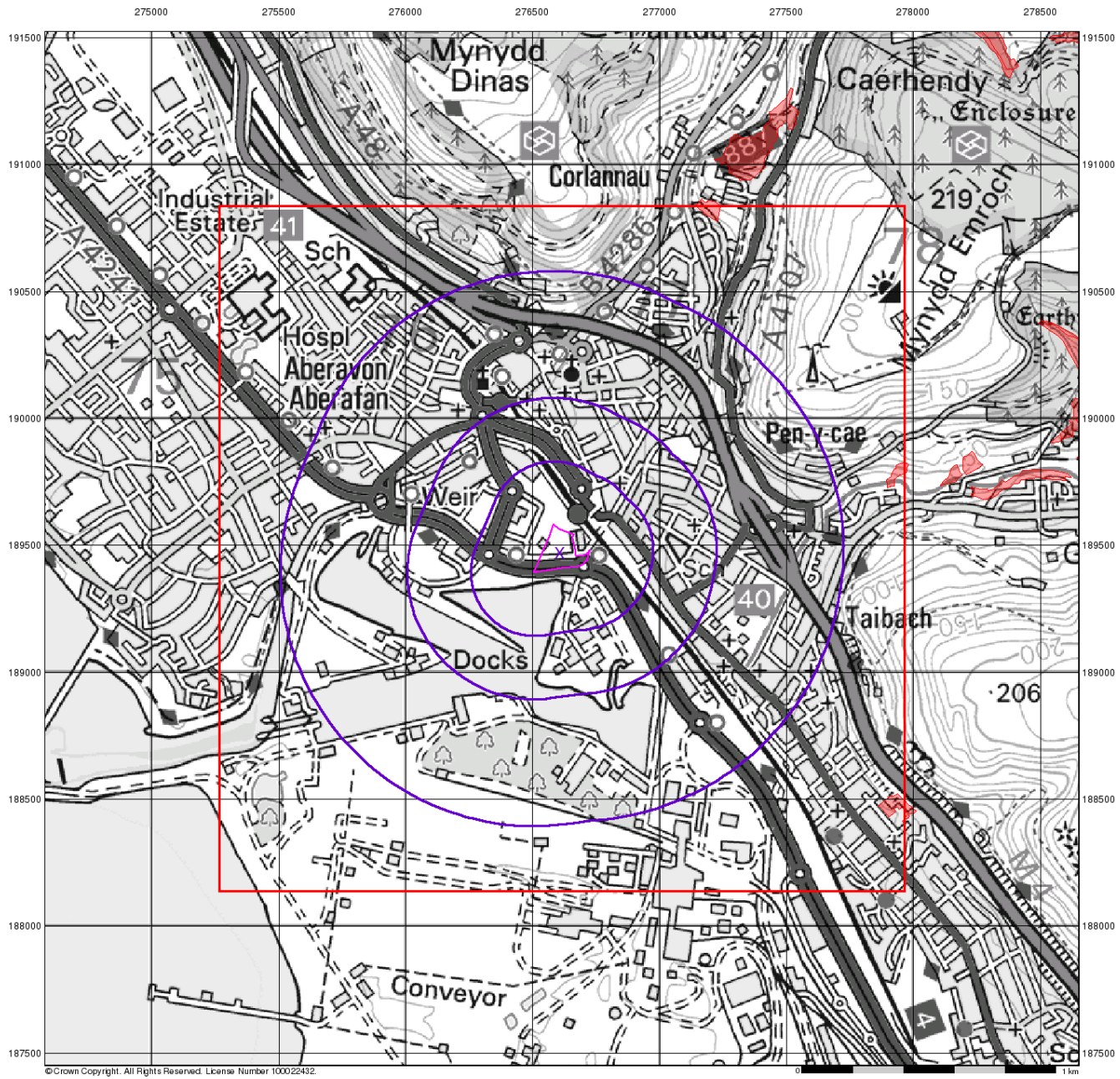

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Hydrock

Sensitive Land Uses

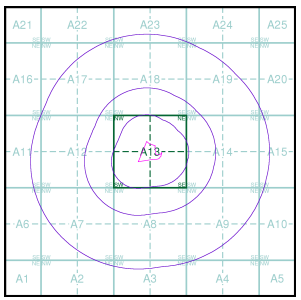
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



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Order Details

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National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
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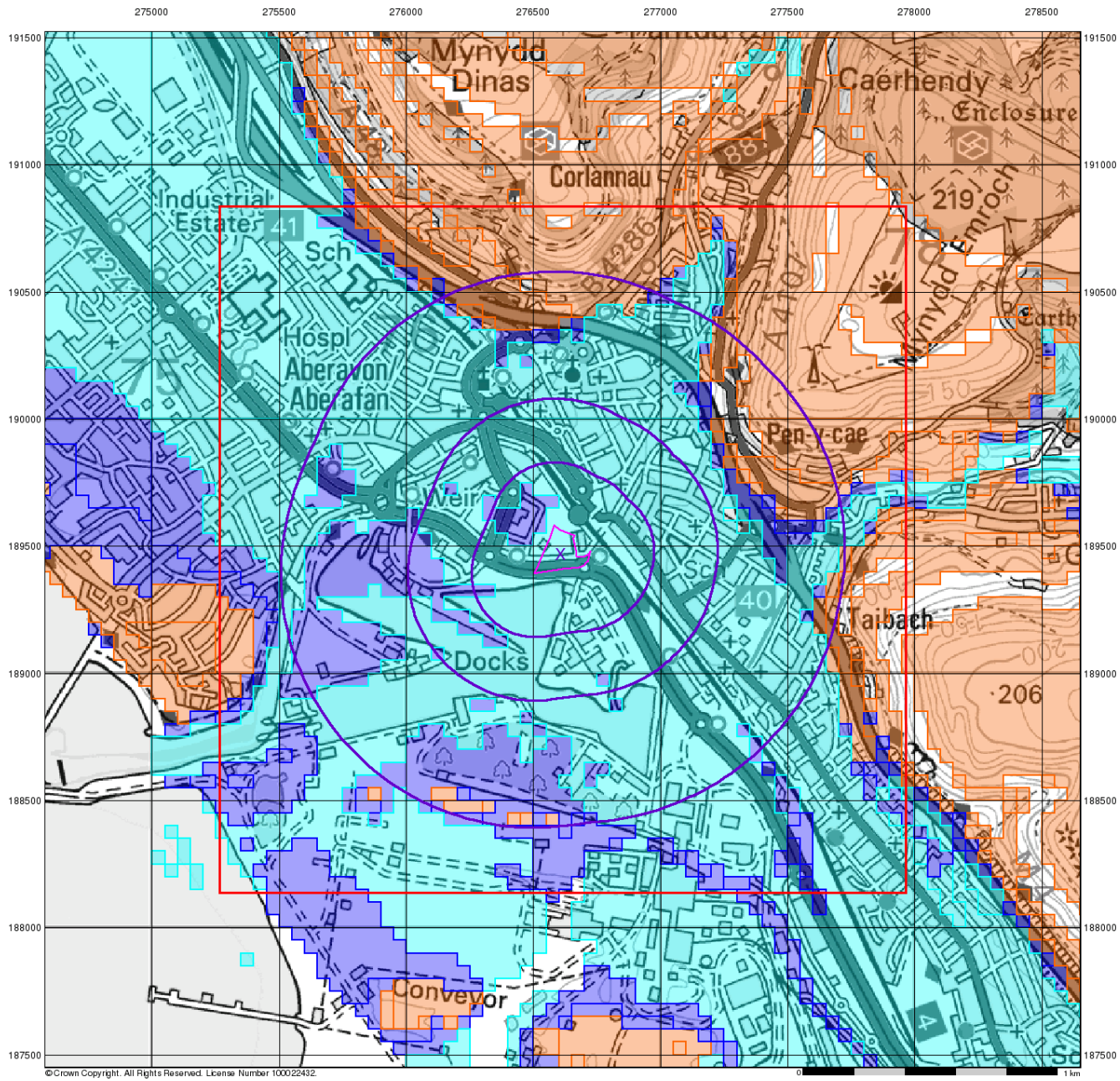


Hydrock

BGS Flood GFS Data

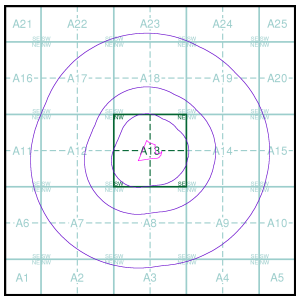
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice

Agency and Hydrological (Flood)

Limited Potential for Groundwater Flooding to Occur
Potential for Groundwater Flooding of Property Situated Below Ground Level
Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



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Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
317152831_1_1

Customer Reference:
26279

National Grid Reference:
276610, 189470

Slice:
A

Site Area (Ha):
2.07

Search Buffer (m):
1000

Site Details:

Grand Hotel, Station Road
PORT TALBOT
SA13 1DE

Client Details:

Mr R Swayne
Hydrock Consultants
Over Court Barns
Over Lane
Almondsbury
Bristol
BS32 4DF

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	54
Hazardous Substances	61
Geological	62
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Sensitive Land Use	-
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Data Suppliers	103
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		6	6	75
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 23		5		1
Integrated Pollution Prevention And Control	pg 24		1		1
Local Authority Integrated Pollution Prevention And Control	pg 24				1
Local Authority Pollution Prevention and Controls	pg 24		2	1	5
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 25		Yes		
Pollution Incidents to Controlled Waters	pg 25		7		20
Prosecutions Relating to Authorised Processes	pg 30		1	1	
Registered Radioactive Substances					
River Quality	pg 30			1	4
River Quality Biology Sampling Points	pg 31				1
River Quality Chemistry Sampling Points	pg 32				4
Substantiated Pollution Incident Register	pg 35		1	2	2
Water Abstractions	pg 36				27
Water Industry Act Referrals	pg 42				1
Groundwater Vulnerability Map	pg 43	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 43	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 43	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 43	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 43	Yes	Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 48			10	43

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 54			13	1
Local Authority Landfill Coverage	pg 57	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 57				2
Potentially Infilled Land (Water)	pg 57	1	2	2	29
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 59			3	
Registered Waste Treatment or Disposal Sites	pg 60			1	
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 61				1
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 61				1
Planning Hazardous Substance Consents	pg 61				1
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 62	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 62	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 65				9
BGS Urban Soil Chemistry	pg 67				Yes
BGS Urban Soil Chemistry Averages	pg 67		Yes		
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 67	Yes	n/a	n/a	n/a
Mining Instability	pg 67	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 67		Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 68		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 68	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 68		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 68	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 69	2	38	59	68
Fuel Station Entries	pg 83		1		4
Points of Interest - Commercial Services	pg 84		12	19	14
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 87		10	11	30
Points of Interest - Public Infrastructure	pg 92		8	6	29
Points of Interest - Recreational and Environmental	pg 95				10
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	0	1	276608 189471
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	20	1	276550 189550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	162	1	276350 189350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	401	1	276200 189700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SW (N)	420	1	276608 190000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	422	1	276750 189000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	461	1	276150 189100
1	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055729 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	8	2	276500 189400
2	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055706 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	106	2	276600 189300
2	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055721 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 5th October 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	106	2	276600 189300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055707 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 16th December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	205	2	276600 189200
3	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055722 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 10th September 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	205	2	276600 189200
3	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055723 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 29th September 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A13SW (S)	205	2	276600 189200
4	**Discharge Consents** Operator: Short Bros (Plant) Ltd, Property Type: General Construction Work Location: Llewellyn Quay P Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0028901 Permit Version: 1 Effective Date: 2nd October 1986 Issued Date: 2nd October 1986 Revocation Date: 21st April 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Soakaway **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	251	2	276830 189210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Mechema Chemicals Ltd Property Type: Basic Industry, Chemicals Inorganic Location: Port Talbot Talbot Wharf Chemical W, Talbot Wharf Chemical Works W.Gl, W.Glam Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0096301 Permit Version: 1 Effective Date: 17th August 1988 Issued Date: 17th August 1988 Revocation Date: 27th June 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8NE (S)	316	2	276700 189100
6	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: Unknown Reference: Bp0055701 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 17th September 1987 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	394	2	276500 189000
7	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055727 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	424	2	276200 189100
8	**Discharge Consents** Operator: Associated British Ports Property Type: Support Services - Sea Transport Location: Tarmac Topmix Site Authority: Natural Resources Wales Catchment Area: River Afan Reference: BP0055730 Permit Version: 2 Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: 14th July 2008 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: River Ffrwdwyllt (Tidal) **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	469	2	276900 189000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: Associated British Ports Property Type: Support Services - Sea Transport Location: Tarmac Topmix Site Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055730 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 20th January 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Ffrwdwyllt (Tidal) **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	469	2	276900 189000
9	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055715 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	505	2	276400 188900
10	**Discharge Consents** Operator: Associated British Ports Property Type: Support Services - Sea Transport Location: Port Talbot Docks - Security B Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055705 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 16th December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A12NE (W)	547	2	276000 189600
11	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Lock Levelling Water Taken From R F, Water Taken From R Ffrwdwyllt Fo, For Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055733 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 10th May 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Ffrwdwyllt **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	560	2	276900 188900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Abbey Bsc Works Authority: Natural Resources Wales Catchment Area: Not Given Reference: BO5081401 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 31st March 2004 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Betsi Lagoon **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12NE (W)	585	2	276000 189700
13	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: BP0055712 Permit Version: 2 Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Controlled Sea Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
13	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0055712 Permit Version: Not Supplied Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Controlled Sea Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055712 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 20th January 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055714 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055725 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055726 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055731 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: Associated British Ports Property Type: Metal Treatment, Bolts, Nuts Etc. Location: Metal Mend Ltd Port Talbot Docks, Porta Talbot Docks, Neath Port Talbot, Wales Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055732 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	594	2	276500 188800
14	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: John Nicholas Timber Site Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: BP0055713 Permit Version: 2 Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	603	2	276400 188800
14	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: John Nicholas Timber Site Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0055713 Permit Version: Not Supplied Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	603	2	276400 188800
14	**Discharge Consents** Operator: Associated British Ports Property Type: Support Services - Sea Transport Location: John Nicholas Timber Site Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055713 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 20th January 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	603	2	276400 188800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: Talbot Wharf, The Docks, Port Talbot, Neath Port Talbot, Sa13 1re Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bm0033601 Permit Version: 2 Effective Date: 26th November 2012 Issued Date: 26th November 2012 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Into Land Receiving Water: Groundwater Via Infiltration System **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	614	2	275990 189060
15	**Discharge Consents** Operator: Associated British Ports Property Type: Not Supplied Location: Talbot Wharf, The Docks, Port Talbot, Neath Port Talbot, Sa13 1re Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bm0033601 Permit Version: Not Supplied Effective Date: 26th November 2012 Issued Date: 26th November 2012 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Into Land Receiving Water: Groundwater Via Infiltration System **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	614	2	275990 189060
15	**Discharge Consents** Operator: Associated British Ports Property Type: Support Services - Sea Transport Location: Talbot Wharf, The Docks, Port Talbot, Neath Port Talbot, Sa13 1re Authority: Natural Resources Wales Catchment Area: Not Given Reference: BM0033601 Permit Version: 1 Effective Date: 17th November 1983 Issued Date: 17th November 1983 Revocation Date: 25th November 2012 Discharge Type: Unspecified Discharge Environment: Land/Soakaway Receiving Water: To Underground Strata **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	614	2	275990 189060
16	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks - Overflow F Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055728 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	624	2	276000 189800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 126, Moors St Culvert, 20m Upstream Of Bridge, Afan Way, Port Talbot, Sa12 6nr Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0240201 Permit Version: Not Supplied Effective Date: 16th December 2021 Issued Date: 16th December 2021 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	649	2	275937 189716
17	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso No 126 Moors St Culvert Afan, Moors Street Culvert, Neath Port Talbot Cbc Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: Bp0240201 Permit Version: 2 Effective Date: 12th March 2003 Issued Date: 11th March 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: The Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	649	2	275937 189716
17	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso No 126 Moors St Culvert Afan, Moors Street Culvert, Neath Port Talbot Cbc Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: Bp0240201 Permit Version: 2 Effective Date: 12th March 2003 Issued Date: 11th March 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: The Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	649	2	275937 189716
18	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: Pt Talbot Wks Blast F'Ces Gas Wash, Blast F'Ces Gas Wash Water-Aba Authority: Natural Resources Wales Catchment Area: River Afan Reference: Ba2020101 Permit Version: 1 Effective Date: 28th August 1965 Issued Date: 28th August 1965 Revocation Date: 22nd January 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Ffrwdwyllt **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	652	2	277100 188910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Moors Culvert 30 Metres U/S Road Br, 30 Metres U/S Road Bridge Abera, Aberavon Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0240201 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: 11th March 2003 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	666	2	275950 189790
20	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Phoenix Wharf Surface Water Port, Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0043001 Permit Version: 2 Effective Date: 7th July 1987 Issued Date: 7th July 1987 Revocation Date: 31st October 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Phoenix Wharf Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	700	2	276600 188700
20	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Phoenix Wharf Surface Water Port, Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0043001 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 6th July 1987 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Phoenix Wharf Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SW (S)	700	2	276600 188700
21	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Afan Wwtw Phoenix Wharf Harbour Rd, Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp028760101 Permit Version: 1 Effective Date: 1st December 2000 Issued Date: 1st December 2000 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Unspecified - Water Company Discharge Environment: Controlled Sea Receiving Water: Swansea Bay **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually positioned within the geographical locality	A8SE (S)	704	2	276690 188709

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: Oil Tank Farm Bsc Por Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059205 Permit Version: 1 Effective Date: 16th September 1987 Issued Date: 16th September 1987 Revocation Date: 30th June 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	715	2	276700 188700
22	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Isaacs Plce Sjc Port T Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bb4025506 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	712	2	275850 189670
23	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: No 3 Blast Furnace Port Talbot Work, Port Talbot Works Port Talbot Authority: Natural Resources Wales Catchment Area: Not Given Reference: Ba2020002 Permit Version: 1 Effective Date: 1st January 1950 Issued Date: 16th June 1994 Revocation Date: 20th September 1995 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: The Culverted River Ffrwdwyllt **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	718	2	277130 188850
23	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: No 3 Blast Furnace Port Talbot Work, Port Talbot Works Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: Ba2020001 Permit Version: 1 Effective Date: 28th August 1963 Issued Date: 28th August 1963 Revocation Date: 9th June 1994 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Ffrwdwyllt **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	718	2	277130 188850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055716 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	719	2	276100 188800
25	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Water St.Cjc Port Talb Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: BB4025505 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed **Status: Surrendered** Positional Accuracy: Located by supplier to within 100m	A12NW (W)	789	2	275760 189650
25	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Water St.Cjc Port Talb Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: Bb4025505 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tawe **Status: Surrendered** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	789	2	275760 189650
25	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Henshaw St.Sjc. Port T Authority: Natural Resources Wales Catchment Area: River Afan Reference: BB4025504 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: 31st March 2004 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12NW (W)	808	2	275740 189650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo.North St.Footbridge Pt.Tal Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bw0203101 Permit Version: 1 Effective Date: 27th October 1952 Issued Date: 27th October 1952 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Ffrwdwyllt **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	814	2	277510 189270
27	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Glandyrrryn Close Cso Port Talbot, Opp 28, Conduit Place (Across Heol Carodog), Taibach, Port Talbot, Sa13 2tt Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0359301 Permit Version: Not Supplied Effective Date: 17th December 2019 Issued Date: 17th December 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Ffrwd Wyllt **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	820	2	277533 189351
27	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Glandyrrryn Close Cso Port Talbot, Glandyffryn Close Cso, Neath Port Talbot, Wales, Sa13 2ub Authority: Natural Resources Wales Catchment Area: FFRWD WYLLT - HEADWATERS TO TIDAL LIMIT Reference: Bp0359301 Permit Version: 1 Effective Date: 28th February 2007 Issued Date: 28th February 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Ffrwd Wyllt **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	820	2	277533 189351
27	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Glandyrrryn Close Cso Port Talbot, Glandyffryn Close Cso, Neath Port Talbot, Wales, Sa13 2ub Authority: Natural Resources Wales Catchment Area: FFRWD WYLLT - HEADWATERS TO TIDAL LIMIT Reference: Bp0359301 Permit Version: 1 Effective Date: 28th February 2007 Issued Date: 28th February 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Ffrwd Wyllt **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	820	2	277533 189351

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055709 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	824	2	276800 188600
28	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055710 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	824	2	276800 188600
28	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055711 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	824	2	276800 188600
28	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055724 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	824	2	276800 188600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059206 Permit Version: 2 Effective Date: 5th March 1993 Issued Date: 5th December 1992 Revocation Date: 9th February 1999 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Dock **Status: Revoked and replaced by IPC Authorisation** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	845	2	276900 188600
29	**Discharge Consents** Operator: Britsh Steel Plc Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059206 Permit Version: 2 Effective Date: 5th March 1993 Issued Date: 5th December 1992 Revocation Date: 9th February 1999 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Dock **Status: Revoked and replaced by IPC Authorisation** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	845	2	276900 188600
29	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059204 Permit Version: 2 Effective Date: 5th March 1993 Issued Date: 5th December 1992 Revocation Date: 20th September 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Dock **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	845	2	276900 188600
29	**Discharge Consents** Operator: Associated British Ports Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055708 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	845	2	276900 188600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059204 Permit Version: 1 Effective Date: 16th September 1987 Issued Date: 16th September 1987 Revocation Date: 4th March 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Dock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	845	2	276900 188600
30	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Afan St Cso, End Of Afan St, Port Talbot, Sa13 1ax Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0304101 Permit Version: Not Supplied Effective Date: 21st August 2019 Issued Date: 21st August 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	846	2	276810 190395
30	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 136 Afan Street Velindre Afan, Afan Street, Velindre Authority: Natural Resources Wales Catchment Area: AFAN - CONFLUENCE WITH PELENNA TO TIDAL LIMIT Reference: Bp0304101 Permit Version: 1 Effective Date: 29th January 2003 Issued Date: 29th January 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: The Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	846	2	276810 190395
30	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 136 Afan Street Velindre Afan, Afan Street, Velindre Authority: Natural Resources Wales Catchment Area: AFAN - CONFLUENCE WITH PELENNA TO TIDAL LIMIT Reference: Bp0304101 Permit Version: 1 Effective Date: 29th January 2003 Issued Date: 29th January 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: The Afon Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	846	2	276810 190395

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot Do, Port Talbot Docks Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: BP0055704 Permit Version: 2 Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	861	2	275800 188900
31	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot Do, Port Talbot Docks Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0055704 Permit Version: Not Supplied Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	861	2	275800 188900
31	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot Do, Port Talbot Docks Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055704 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 20th January 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	861	2	275800 188900
32	**Discharge Consents** Operator: British Steel Plc (Tinplate) Property Type: Iron & Steel Industries Location: No12ax Power Plt To D'K Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059207 Permit Version: 1 Effective Date: 16th September 1987 Issued Date: 16th September 1987 Revocation Date: 28th March 1994 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	876	2	277000 188600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso At O/S 54 Ynys Street, Velindre, Port Talbot, Sa13 1yw Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0322001 Permit Version: Not Supplied Effective Date: 7th October 2019 Issued Date: 7th October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	880	2	277128 190288
33	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: O/S 54 Ynys Street, Port Talbot, Neath Port Talbot, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: AFAN - CONFLUENCE WITH PELENNA TO TIDAL LIMIT Reference: Bp0322001 Permit Version: 1 Effective Date: 31st March 2009 Issued Date: 7th March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	881	2	277121 190293
33	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: O/S 54 Ynys Street, Port Talbot, Neath Port Talbot, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: AFAN - CONFLUENCE WITH PELENNA TO TIDAL LIMIT Reference: Bp0322001 Permit Version: 1 Effective Date: 31st March 2009 Issued Date: 7th March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	881	2	277121 190293
34	**Discharge Consents** Operator: Britsh Steel Plc Property Type: Iron & Steel Industries Location: Power Plants 12 & 12a (Cooling Wate, (Cooling Water) Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0059206 Permit Version: 1 Effective Date: 16th September 1987 Issued Date: 16th September 1987 Revocation Date: 4th March 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Dock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	880	2	277600 189400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Cso 104, Newbridge Road Pumping Station, Off Victoria Road, Aberavon, Port Talbot, Sa12 6dg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4025501 Permit Version: Not Supplied Effective Date: 11th August 2022 Issued Date: 11th August 2022 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Saline Estuary Receiving Water: River Afan **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	898	2	275632 189598
35	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 104 Newbridge Road Pumping Stat, Newbridge Road Pumping Station, Port Talbot, Neath Port Talbot Cbc Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4025501 Permit Version: 2 Effective Date: 1st April 2004 Issued Date: 31st March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tawe **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	898	2	275632 189598
35	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso 104 Newbridge Road Pumping Stat, Newbridge Road Pumping Station, Port Talbot, Neath Port Talbot Cbc Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4025501 Permit Version: 2 Effective Date: 1st April 2004 Issued Date: 31st March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tawe **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	898	2	275632 189598
36	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Taibach Tan Y Groes Road Bridgend Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0240101 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: 31st March 2003 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Ffwdwyllt **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A15NW (E)	908	2	277630 189540

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Discharge Consents** Operator: Westbury Homes (Wales) Ltd Property Type: Domestic Property (Multiple) Location: Port Talbot Residentiol Development, Newbridge Road Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0105101 Permit Version: 2 Effective Date: 3rd November 1988 Issued Date: 3rd November 1988 Revocation Date: 29th September 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A11NE (W)	912	2	275600 189500
37	**Discharge Consents** Operator: Westbury Homes (Wales) Ltd Property Type: Domestic Property (Multiple) Location: Port Talbot Residentiol Development, Newbridge Road Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0105101 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 2nd November 1988 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A11NE (W)	912	2	275600 189500
37	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gasworks Sewer Junction Chamber Po, Chamber Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: BB4025503 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed **Status: Surrendered** Positional Accuracy: Located by supplier to within 100m	A11NE (W)	920	2	275600 189550
37	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Gasworks Sewer Junction Chamber Po, Chamber Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4025503 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tawe **Status: Surrendered** Positional Accuracy: Located by supplier to within 10m	A11NE (W)	920	2	275600 189550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot, Port Talbot Docks, Neath Port Talbot, Sa13 1ra Authority: Natural Resources Wales Catchment Area: AFAN ESTUARY INCL DOCKS Reference: BP0055703 Permit Version: 2 Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A7SW (SW)	922	2	275800 188800
38	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot, Port Talbot Docks, Neath Port Talbot, Sa13 1ra Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0055703 Permit Version: Not Supplied Effective Date: 21st January 1993 Issued Date: 21st October 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Port Talbot Docks **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A7SW (SW)	922	2	275800 188800
38	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot, Port Talbot Docks, Neath Port Talbot, Sa13 1ra Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055703 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 20th January 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A7SW (SW)	922	2	275800 188800
38	**Discharge Consents** Operator: Associated British Ports Property Type: Recreational & Cultural Location: Sea Cadets Club Site Port Talbot, Port Talbot Docks, Neath Port Talbot, Sa13 1ra Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055717 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A7SW (SW)	922	2	275800 188800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**Discharge Consents** Operator: Associated British Ports Property Type: Basic Industry, Chemicals Inorganic Location: Abp Sewer Ref No R2 Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055718 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 17th August 1987 Revocation Date: 31st October 1991 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A11SE (W)	927	2	275600 189200
39	**Discharge Consents** Operator: Mechema Chemicals Ltd Property Type: Undefined Or Other Location: Port Talbot Talbot Wharf Chemical W, Talbot Wharf Chemical Works West, West Glam Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bm0044501 Permit Version: 1 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 30th June 1992 Discharge Type: Sewerage System Discharge Discharge Environment: Not Supplied Receiving Water: River Afan **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A11SE (W)	966	2	275560 189200
40	**Discharge Consents** Operator: Associated British Ports Property Type: Undefined Or Other Location: Port Talbot Docks - Dry Dock Authority: Natural Resources Wales Catchment Area: River Afan Reference: Bp0055734 Permit Version: 1 Effective Date: 18th September 1987 Issued Date: 18th September 1987 Revocation Date: 18th November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Port Talbot Docks **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A6NE (W)	952	2	275600 189100
41	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: S'Dfields Sewer J'Ction Chambe Port, Port Talbot Authority: Natural Resources Wales Catchment Area: River Afan Reference: BB4025502 Permit Version: 1 Effective Date: 19th July 1978 Issued Date: 19th July 1978 Revocation Date: 31st March 2004 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A11SE (W)	1000	2	275510 189310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Integrated Pollution Controls** Name: Multiserv (Asr) Ltd Location: British Steel Strip Products, Port Talbot Works, PORT TALBOT, West Glamorgan, SA13 1RE Authority: Environment Agency, Welsh Region Permit Reference: BE7699 Dated: 21st December 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (B) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13SW (W)	126	3	276398 189462
43	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: CAMBRIAN STONE LTD, PO Box 12, PORT TALBOT, West Glamorgan, SA12 6RL Authority: Environment Agency, Welsh Region Permit Reference: BE2069 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (C) Iron and Steel processes within the Metal Industry **Status: Revoked - Now IPPC** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	233	3	276864 189667
43	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: CAMBRIAN STONE LTD, PO Box 12, PORT TALBOT, West Glamorgan, SA12 6RL Authority: Environment Agency, Welsh Region Permit Reference: BA1346 Dated: 27th February 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (C) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	233	3	276864 189667
43	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: CAMBRIAN STONE LTD, PO Box 12, PORT TALBOT, West Glamorgan, SA12 6RL Authority: Environment Agency, Welsh Region Permit Reference: AW8084 Dated: 22nd January 1997 Process Type: IPC major (substantial) variation Description: 2.1 A (C) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	233	3	276864 189667
43	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: CAMBRIAN STONE LTD, PO Box 12, PORT TALBOT, West Glamorgan, SA12 6RL Authority: Environment Agency, Welsh Region Permit Reference: AQ9936 Dated: 24th July 1995 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 2.1 A (C) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	233	3	276864 189667
44	**Integrated Pollution Controls** Name: Bitmac Ltd Location: Phoenix Wharf, Port Talbot Dock, South Side, PORT TALBOT, West Glamorgan, SA13 1RA Authority: Environment Agency, Welsh Region Permit Reference: BH2952 Dated: 29th October 1999 Process Type: IPC new application Description: 1.2 A (B) Carbonisation and associated processes within the Fuel & Power Industry **Status: Application has met the requirements for authorisation (but not yet authorised)** Positional Accuracy: Manually positioned within the geographical locality	A8SE (S)	714	3	276675 188697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	**Integrated Pollution Prevention And Control** Name: Cambrian Stone Limited Location: Port Talbot Steel Works, Port Talbot, West Glamorgan, SA12 6RL Authority: Natural Resources Wales Permit Reference: Bx0873ik Original Permit Ref: Bl5636if Effective Date: 7th December 2003 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Automatically positioned to the address Activity Code: 3.5 B (A) Activity Description: Other Mineral Activities; Any Processing With Release Of Particulates Into Air (Unless A(1) Or A(2)), (Except Stone Ecutting) Primary Activity: Y	A13NE (NE)	233	2	276864 189667
46	**Integrated Pollution Prevention And Control** Name: Port Talbot Power Limited Location: Port Talbot Ccgt Power Station, Phoenix Wharf, The Docks, Port Talbot, West Glamorgan, SA13 1RA Authority: Environment Agency, Welsh Region Permit Reference: AP3435UJ Original Permit Ref: Ap3435uj Effective Date: Not Supplied **Status: Valid** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 1.1 A(1) (A) Activity Description: Combustion; Any Fuel Greater Or Equal To 50Mw Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N	A8SE (S)	789	3	276670 188620
47	**Local Authority Integrated Pollution Prevention And Control** Name: Civil & Marine Slag Cement Ltd Location: Rio Tinto Wharf, Port Talbot Docks, Port Talbot, Sa13 1ra Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/102 Dated: Not Supplied Process Type: Mineral Industries Description: SG6 **Status: Permit Issued** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	611	4	276274 188828
48	**Local Authority Pollution Prevention and Controls** Name: Civil & Marine Slag Cement Ltd Location: Rio Tinto Wharf, Docks Road, The Docks, PORT TALBOT, West Glamorgan, SA13 1RA Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/86 Dated: 29th June 1999 Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	28	4	276479 189385
49	**Local Authority Pollution Prevention and Controls** Name: Blakemore Retail Ltd Location: Talbot Road, PORT TALBOT, West Glamorgan, SA13 1HN Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/71 Dated: 26th February 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A13NE (E)	122	4	276821 189553
50	**Local Authority Pollution Prevention and Controls** Name: Rhino Engineering Ltd Location: Cramic House, Cramic Way, Port Talbot, Sa13 1ru Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/116 Dated: 24th May 2006 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	307	4	276436 189849

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	**Local Authority Pollution Prevention and Controls** Name: John Nicholas & Sons Ltd Location: Docks Road, PORT TALBOT, West Glamorgan, SA13 1RS Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	603	4	275907 189465
51	**Local Authority Pollution Prevention and Controls** Name: RMC Readymix Wales & Midlands Location: Docks Road, PORT TALBOT, West Glamorgan, SA13 1RS Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: e3/1/7 Dated: 19th May 1994 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorisation has varied** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	608	4	275902 189465
52	**Local Authority Pollution Prevention and Controls** Name: Civil & Marine Ltd Location: Rio Tinto Wharf, Port Talbot Docks, PORT TALBOT, SA13 1RA Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/102 Dated: 3rd July 2003 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Transferred to LAIPPC** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	611	4	276274 188828
53	**Local Authority Pollution Prevention and Controls** Name: Afan Way Services Limited Location: Afan Way, PORT TALBOT, West Glamorgan, SA12 6NR Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/83 Dated: 8th April 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	670	4	275963 189833
54	**Local Authority Pollution Prevention and Controls** Name: Tesco Stores Limited Location: Aberafan Centre, Prior Street, PORT TALBOT, West Glamorgan, SA13 1PB Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/66 Dated: 8th April 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A18NE (N)	747	4	276703 190317
	Nearest Surface Water Feature	A13SW (S)	49	-	276605 189354
55	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Llewelyn Quay, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Inadequate Design/Capacity Incident Date: 7th May 1991 Incident Reference: 4265 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	22	3	276700 189400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Maritime Ponds; Leakage Incident Date: 29th October 1997 Incident Reference: 34375 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (E)	32	3	276700 189500
57	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crannick Way, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Creosote Note: River Afan; Run-Off Incident Date: 19th July 1997 Incident Reference: 33062 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Vandalism Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	75	3	276750 189550
58	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Neglect Incident Date: 22nd September 1994 Incident Reference: 21170 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	106	3	276600 189300
58	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Llewelyns Quay, 400M Slick Of Oil, Along Bank Of Dock Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Port Talbot Dock; Spillage Incident Date: 28th March 1998 Incident Reference: 35231 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Inadequate Design/Capacity Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	107	3	276605 189300
58	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Llewellyns Dock Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Port Talbot Dock; Spillage Incident Date: 28th March 1998 Incident Reference: 35231 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Inadequate Design/Capacity Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	111	3	276600 189295
58	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Llewellyns Quay Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Port Talbot Dock; Spillage Incident Date: 28th March 1998 Incident Reference: 35231 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Inadequate Design/Capacity Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	112	3	276605 189295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Weir Near, Dock Feeder Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 28th November 1991 Incident Reference: 1655 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	549	3	276050 189725
60	**Pollution Incidents to Controlled Waters** Property Type: Domestic/Residential Location: Adjacent Tiger, Tyres, Greenpark Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Deliberate Act Incident Date: 24th August 1995 Incident Reference: 25479 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	583	3	276000 189695
61	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Freshwater Docks, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Natural Causes Incident Date: 23rd September 1995 Incident Reference: 25959 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	628	3	276800 188800
62	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: By Civic Centre, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Industrial Solid Waste Note: Deliberate Incident Date: 21st May 1997 Incident Reference: 32458 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	647	3	276400 190200
63	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Estuary Between, The Two Weirs Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 7th March 1991 Incident Reference: 4029 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NW (NW)	716	3	275900 189800
64	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Roadbridge, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 31st October 1991 Incident Reference: 1614 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	725	3	276500 190300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 31st October 1995 Incident Reference: 26530 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	791	3	277100 190200
66	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Railway Line, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Deliberate Act Incident Date: 9th May 1996 Incident Reference: 28283 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	797	3	277300 188900
66	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Side Of Railway Line, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Deliberate Act Incident Date: 9th May 1996 Incident Reference: 28283 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	800	3	277300 188895
67	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Prior Road Near, Council Offices Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 31st January 1991 Incident Reference: 2656 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NW (N)	820	3	276600 190400
68	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Surface Runoff Location: Where Passes, Under M4 Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Not Supplied Incident Date: 13th November 1991 Incident Reference: 1636 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	828	3	276700 190400
69	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Fractured Sewer In, River Bed B. Gas Pipeline Work, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Afan; Direct Introduction Incident Date: 29th January 1998 Incident Reference: 34696 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	832	3	275700 189600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Natural Causes Incident Date: 20th March 1996 Incident Reference: 27790 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leachate Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	904	3	277600 189700
71	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Afan Sewage, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 27th April 1995 Incident Reference: 23819 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11NE (W)	919	3	275600 189545
72	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: River At End, Of Afan Street Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Blocked Sewer Incident Date: 6th January 1995 Incident Reference: 22433 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SE (N)	927	3	276700 190500
73	**Pollution Incidents to Controlled Waters** Property Type: Forestry Location: Baglan Mountain Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Deliberate Act Incident Date: 18th August 1995 Incident Reference: 25462 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SW (N)	938	3	276400 190500
74	**Pollution Incidents to Controlled Waters** Property Type: Building Sites Location: Old Gas Works, Site Victoria Road, Port Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Accidental Spillage/Leakage Incident Date: 14th March 1996 Incident Reference: 27548 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11NE (W)	957	3	275600 189700
75	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Road Bridge Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 7th August 1991 Incident Reference: 1347 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SW (N)	963	3	276300 190500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Wildmill Estate, PORT TALBOT Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Inadequate Design/Capacity Incident Date: 25th September 1995 Incident Reference: 26060 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A15NW (E)	984	3	277700 189600
77	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Cul De Sac Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 6th June 1991 Incident Reference: 938 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A15NW (E)	1000	3	277700 189695
78	**Prosecutions Relating to Authorised Processes** Location: Cramic Way, Port Talbot, Sa13 Prosecution Text: Burning waste on land without a WML - five months suspended sentence served Prosecution Act: Epa90 S33(1)(C) Hearing Date: 12th October 2004 Verdict: Guilty Fine: 0 Costs: 0 Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	83	3	276665 189628
79	**Prosecutions Relating to Authorised Processes** Location: Kenwoth Buildings, Llewellyns Quay, Port Talbot, West Glamorgan, Sa13 1rf Prosecution Text: Special Waste (Including Bonded Asbestos)Stored At A Site Without A Waste Management Licence Prosecution Act: Epa90 S33(1)(A) & S33(1)(B) Hearing Date: 31st March 2003 Verdict: Guilty Fine: 1500 Costs: 1572 Positional Accuracy: Manually positioned within the geographical locality	A8NE (S)	402	3	276704 189014
	River Quality Name: Afan GQA Grade: River Quality A Reach: Dock Intake Weir - M4 Motorway Estimated Distance (km): .7 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A17SE (NW)	399	3	276264 189826
	River Quality Name: Not Supplied GQA Grade: Unclassified Tidal River Reach: Not Supplied Estimated Distance (km): Not Supplied Flow Rate: Not Supplied Flow Type: Not Supplied Year: 1995	A12NE (W)	529	3	276034 189636
	River Quality Name: Not Supplied GQA Grade: Unclassified Tidal River Reach: Not Supplied Estimated Distance (km): Not Supplied Flow Rate: Not Supplied Flow Type: Not Supplied Year: 1995	A8SW (S)	638	3	276429 188755

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Afan GQA Grade: River Quality A Reach: M4 Motorway - Conf. Pelena Estimated Distance (km): 5.6 Flow Rate: Flow less than 5 cumecs Flow Type: River Year: 2000	A19SW (NE)	699	3	277046 190125
	River Quality Name: Ffrwdwyllt GQA Grade: River Quality A Reach: Docks Entr.P.Talbot-Conf.Nant Cwm Y Garn Estimated Distance (km): 2.4 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	A9SW (SE)	787	3	277007 188699
80	**River Quality Biology Sampling Points** Name: Afan Reach: Dock Intake Weir To M4 Motorway Estimated Distance: 0.70 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade B - Good Year: 1995 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2000 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2002 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2003 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2004 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2007 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2008 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2009 GQA Grade: River Quality Biology GQA Grade C - Fairly Good	A18NE (N)	828	3	276700 190400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**River Quality Chemistry Sampling Points** Name: Afan Reach: Dock Intake Weir To M4 Motorway Estimated Distance: 0.70 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A12NE (NW)	552	3	276047 189727

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**River Quality Chemistry Sampling Points** Name: Ffrwdwyllt Reach: Docks Enterance Port Talbot To Confluence Nant Cwm Y Garn Estimated Distance: 2.40 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A9NW (SE)	736	3	277244 188929

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**River Quality Chemistry Sampling Points** Name: Ffrwdwyllt Reach: Confluence Cwm Y Garn To Confluence Cwm Wernderi Estimated Distance: 1.40 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A9NW (SE)	736	3	277244 188929

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**River Quality Chemistry Sampling Points** Name: Ffrwdwyllt Reach: Confluence Cwm Wernderi To Varteg Road Bridge Estimated Distance: 3.20 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A9NW (SE)	736	3	277244 188929
83	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 12th October 2003 Incident Reference: 195725 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke Pollutant: Oils And Fuel: Gas And Fuel Oils Pollutant: Asbestos Waste	A13NW (N)	78	2	276597 189657
84	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 27th February 2014 Incident Reference: 1212608 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Specific Waste Materials: Tyres	A12NE (NW)	456	2	276156 189738

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 12th July 2016 Incident Reference: 1603860 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke	A17SE (NW)	484	2	276252 189933
86	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 29th March 2004 Incident Reference: 225980 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke	A12NW (W)	643	2	275885 189558
87	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 22nd August 2016 Incident Reference: 1606170 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Oils And Fuel: Gas And Fuel Oils	A8SE (S)	914	2	276751 188504
88	**Water Abstractions** Operator: Environment Agency Licence Number: Wa/058/0061/007 Permit Version: Not Supplied Location: Not Supplied Authority: Natural Resources Wales Abstraction: Impounding Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	557	2	276054 189756
89	**Water Abstractions** Operator: Costain Limited Licence Number: Wa/058/0061/004 Permit Version: 1 Location: Port Talbot Dock At Margam Moors Authority: Environment Agency, Welsh Region Abstraction: Construction: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Margam Moors - Port Talbot Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 5th August 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	559	3	276967 188933
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: 5 Location: Port Talbot Docks Port Talbot Authority: Natural Resources Wales Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Port Talbot Docks, Port Talbot Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st May 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	583	2	276230 188880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: 4 Location: Port Talbot Docks Port Talbot Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Port Talbot Docks, Port Talbot Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 21st May 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	583	3	276230 188880
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: 4 Location: Port Talbot Docks Port Talbot Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Port Talbot Docks, Port Talbot Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 21st May 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	583	3	276230 188880
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: Not Supplied Location: Abstraction From Port Tallbot Dock Authority: Natural Resources Wales Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	583	2	276230 188880
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: 3 Location: Civil & Marine Slag Cement Ltd Quay At Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Civil & Marine Slag Cement Ltd Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th September 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	596	3	276240 188860

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**Water Abstractions** Operator: Civil And Marine Ltd Licence Number: 21/58/61/0042 Permit Version: 2 Location: Civil & Marine Slag Cement Ltd Quay At Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Civil & Marine Slag Cement Ltd Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th October 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	596	3	276240 188860
90	**Water Abstractions** Operator: Civil & Marine Slag Cement Ltd Licence Number: 21/58/61/0042 Permit Version: 1 Location: Civil & Marine Slag Cement Ltd Quay At Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Civil & Marine Slag Cement Ltd Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	596	3	276240 188860
91	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0009 Permit Version: 100 Location: River Afan To Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Licenced from 01-Jan to 31-Dec Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (W)	597	3	275980 189685
91	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0009 Permit Version: 101 Location: River Afan To Port Talbot Docks Authority: Natural Resources Wales Abstraction: Metal: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (W)	599	2	275980 189690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0009 Permit Version: 101 Location: River Afan To Port Talbot Docks Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (W)	599	2	275980 189690
91	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0009 Permit Version: 100 Location: River Afan To Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Metal: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Afan To Port Talbot Docks Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (W)	599	3	275980 189690
91	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0009 Permit Version: Not Supplied Location: Land At British Steel, Port Talbot Authority: Natural Resources Wales Abstraction: Metal: Evaporative Cooling Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (W)	599	2	275980 189690
91	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0009 Permit Version: Not Supplied Location: Land At British Steel, Port Talbot Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (W)	599	2	275980 189690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0024 Permit Version: 101 Location: River Ffrwdwyllt Authority: Natural Resources Wales Abstraction: Metal: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	714	2	277150 188870
92	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0024 Permit Version: 101 Location: River Ffrwdwyllt Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	714	2	277150 188870
92	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0024 Permit Version: 100 Location: River Ffrwdwyllt Authority: Environment Agency, Welsh Region Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Ffrwdwyllt Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	714	3	277150 188870
92	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0024 Permit Version: Not Supplied Location: Land At British Steel, Port Talbot Authority: Natural Resources Wales Abstraction: Metal: Evaporative Cooling Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	714	2	277150 188870

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0024 Permit Version: Not Supplied Location: Land At British Steel, Port Talbot Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	714	2	277150 188870
92	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0024 Permit Version: 100 Location: River Ffrwdwyllt Authority: Environment Agency, Welsh Region Abstraction: Metal: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Licenced from 01-Jan to 31-Dec Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	718	3	277150 188865
93	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0012 Permit Version: 101 Location: Port Talbot Docks Authority: Natural Resources Wales Abstraction: Metal: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	853	2	276890 188590
93	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0012 Permit Version: 101 Location: Port Talbot Docks Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th November 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	853	2	276890 188590

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0012 Permit Version: 100 Location: Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Metal: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Port Talbot Docks Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A8SE (S)	853	3	276890 188590
93	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0012 Permit Version: Not Supplied Location: Land At British Steel Authority: Natural Resources Wales Abstraction: Metal: Non-Evaporative Cooling Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	853	2	276890 188590
93	**Water Abstractions** Operator: Tata Steel Uk Limited Licence Number: 21/58/61/0012 Permit Version: Not Supplied Location: Land At British Steel Authority: Natural Resources Wales Abstraction: Metal: Process Water Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	853	2	276890 188590
93	**Water Abstractions** Operator: Corus Uk Strip Products Licence Number: 21/58/61/0012 Permit Version: 100 Location: Port Talbot Docks Authority: Environment Agency, Welsh Region Abstraction: Metal: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Licenced from 01-Jan to 31-Dec Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	857	3	276890 188585
94	**Water Industry Act Referrals** Name: Dwr Cymru Cyfyngedig Location: Afan Wwtw, Phoenix Wharf, Harbour Road, Port Talbot, Sa13 1ra Authority: Natural Resources Wales Permit Reference: BP0284701 Dated: 26th March 2021 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application has been authorised and any conditions apply to the operator** Positional Accuracy: Manually positioned within the geographical locality	A8SE (S)	761	2	276703 188654

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Medium	A13SW (S)	0	2	276608 189471
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (S)	0	2	276608 189471
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SW (S)	0	2	276608 189471
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	0	2	276608 189471
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	47	2	276606 189357
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (N)	201	2	276674 189760
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	0	2	276608 189471
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	47	2	276534 189349
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	48	2	276574 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	48	2	276571 189354
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	49	2	276546 189349
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	49	2	276554 189351
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	49	2	276607 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	49	2	276515 189345
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	49	2	276523 189346

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	49	2	276536 189349
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	49	2	276581 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	50	2	276584 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	50	2	276590 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	50	2	276606 189357
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	50	2	276590 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	50	2	276595 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	51	2	276550 189349
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	52	2	276518 189343
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	54	2	276614 189355
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	55	2	276496 189339
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	57	2	276615 189352
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	58	2	276494 189337
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	59	2	276490 189337
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	59	2	276488 189337
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	61	2	276487 189336

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	69	2	276471 189333
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	70	2	276470 189333
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	82	2	276453 189330
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	84	2	276450 189331
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	88	2	276445 189330
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	88	2	276446 189330
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	92	2	276440 189329
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	92	2	276440 189330
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	97	2	276434 189329
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	100	2	276431 189328
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	106	2	276423 189328
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	108	2	276421 189327
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	113	2	276415 189327
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	118	2	276410 189325
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	130	2	276623 189279
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	133	2	276393 189323

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	136	2	276391 189322
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	137	2	276389 189322
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	141	2	276385 189322
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	141	2	276384 189323
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	146	2	276379 189322
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	150	2	276375 189320
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	154	2	276372 189319
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	155	2	276369 189321
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	158	2	276367 189319
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	158	2	276367 189319
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	159	2	276364 189321
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	162	2	276362 189319
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	165	2	276359 189320
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	172	2	276351 189318
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	183	2	276339 189317
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	187	2	276336 189315

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	188	2	276335 189316
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	191	2	276332 189317
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	193	2	276329 189316
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	201	2	276322 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	204	2	276319 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	205	2	276317 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	207	2	276315 189314
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	209	2	276313 189314
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	212	2	276310 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	214	2	276307 189315
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	216	2	276305 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	216	2	276305 189313
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	230	2	276290 189315
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	230	2	276290 189315
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A12SE (SW)	245	2	276274 189315
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A12SE (SW)	246	2	276274 189315
	Areas Benefiting from Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
95	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 956.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 2	A7NE (SW)	395	5	276263 189083
96	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 352.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A8NE (SE)	403	5	276831 189040
97	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 566.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A8NW (SW)	417	5	276394 188992
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 313.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A8NE (SE)	429	5	276884 189037
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 339.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (NW)	432	5	276283 189891
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (NW)	438	5	276339 189944
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (NW)	438	5	276338 189943
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A18SW (NW)	456	5	276389 189993

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 156.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (NW)	456	5	276389 189993
104	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 669.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A8NW (SW)	466	5	276280 188986
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (N)	535	5	276495 190107
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8NW (SW)	537	5	276323 188889
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 217.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18SW (N)	538	5	276498 190111
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A12NE (NW)	542	5	276065 189742
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A12NE (NW)	542	5	276064 189739
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A12NE (NW)	542	5	276065 189742
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 158.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 2	A12NE (W)	548	5	276037 189694

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 2	A12NE (W)	549	5	276036 189695
113	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 33.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A12NE (NW)	550	5	276054 189738
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A12NE (NW)	552	5	276039 189709
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8NW (SW)	554	5	276292 188882
116	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 14.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A12NE (W)	561	5	276027 189703
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8NW (SW)	563	5	276278 188879
118	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 697.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A12NE (W)	574	5	276017 189714
119	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 21.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A12NE (W)	574	5	276017 189714
120	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 16.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A12NE (NW)	578	5	276027 189746

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12NE (NW)	580	5	276030 189758
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12NE (NW)	581	5	276029 189758
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A12NE (NW)	582	5	276028 189756
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A7NE (SW)	586	5	276243 188870
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A7NE (SW)	595	5	276230 188867
126	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 164.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A8SE (S)	646	5	276786 188778
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18NE (N)	697	5	276639 190274
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A9NW (SE)	697	5	277137 188882
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 99.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A9NW (SE)	698	5	277138 188882

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 519.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A18NE (N)	710	5	276648 190287
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A9NW (SE)	735	5	277229 188916
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 693.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Arnallt Brook Catchment Name: Afan Primacy: 1	A9NW (SE)	735	5	277229 188916
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A9NW (SE)	737	5	277246 188930
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 301.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A9NW (SE)	740	5	277258 188939
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A14SE (E)	769	5	277435 189172
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 411.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A14SE (E)	769	5	277435 189173
137	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14SE (E)	795	5	277491 189272
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A19NW (NE)	817	5	277062 190254

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 109.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A19NW (NE)	825	5	277058 190264
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 297.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ffrwd Wyllt Catchment Name: Afan Primacy: 1	A14NE (E)	895	5	277617 189532
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 157.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A14NE (E)	895	5	277617 189532
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A19NW (NE)	908	5	277156 190303
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 796.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A19NW (NE)	921	5	277150 190323
144	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 126.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 2	A11SE (W)	966	5	275545 189302
145	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 125.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Afan Catchment Name: Afan Primacy: 1	A11SE (W)	966	5	275545 189302
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Afan Primacy: 1	A11SE (W)	970	5	275560 189182
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 402.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Kenfig Primacy: 1	A3NW (S)	992	5	276387 188409

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	**Licensed Waste Management Facilities (Locations)** Licence Number: PP3298FX Location: Old Byass Works, The Docks, Port Talbot, Neath Port Talbot, SA13 1RS Operator Name: Cuddy Recycling Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal recycling site **Licence Status: Expired** Issued: 1st September 2016 Last Modified: Not Supplied Expires: 1st May 2020 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	396	2	276289 189844
148	**Licensed Waste Management Facilities (Locations)** Licence Number: 34040 Location: Old Byass Works, The Docks, Port Talbot, SA13 1RS Operator Name: C. P. Harvey (Scrap) Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal recycling site **Licence Status: Modified** Issued: 30th January 1994 Last Modified: 26th June 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	396	2	276289 189844
149	**Licensed Waste Management Facilities (Locations)** Licence Number: AB3895CN Location: Byass Works, The Docks, Port Talbot, Neath Port Talbot, SA13 1RS Operator Name: A W D Group Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Effective** Issued: 26th January 2023 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	403	2	276190 189681
149	**Licensed Waste Management Facilities (Locations)** Licence Number: AB3895CN Location: Byass Works, The Docks, Port Talbot, Neath Port Talbot, SA13 1RS Operator Name: A W D Group Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: HCI Waste TS + treatment **Licence Status: Effective** Issued: 24th September 2021 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	403	2	276190 189681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	**Licensed Waste Management Facilities (Locations)** Licence Number: LB3933DA Location: Port Talbot Recovery Centre, Former Byass Works, Docks Road, Port Talbot, N P T, Neath Port Talbot, SA13 1RS Operator Name: Egan Metal Recycling Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Expired** Issued: 25th August 2006 Last Modified: Not Supplied Expires: 14th November 2015 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	406	2	276183 189674
149	**Licensed Waste Management Facilities (Locations)** Licence Number: 34283 Location: Former Byass Works, Docks Road, Port Talbot, SA13 1RS Operator Name: Egan Metal Recycling Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Modified** Issued: 25th August 2006 Last Modified: 4th April 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	406	2	276183 189674
150	**Licensed Waste Management Facilities (Locations)** Licence Number: 102486 Location: Llewellyn's Road, Llewellyn's Quay, Port Talbot, SA13 1RA Operator Name: Construction Recyclate Management Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: HCI Waste TS + treatment + asbestos **Licence Status: Issued** Issued: 7th June 2011 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (S)	414	2	276680 189000
150	**Licensed Waste Management Facilities (Locations)** Licence Number: UP3296EX Location: Llewellyn's Quay Recycling Centre, Port Talbot, Glamorgan, Neath Port Talbot, SA13 1RA Operator Name: Construction Recyclate Management Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: HCI Waste TS + treatment + asbestos **Licence Status: Expired** Issued: 7th June 2011 Last Modified: Not Supplied Expires: 27th April 2021 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (S)	414	2	276680 189000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
151	**Licensed Waste Management Facilities (Locations)** Licence Number: JP3598FX Location: Port Talbot, N P T, SA13 1RF Operator Name: Avalon Insulation Services Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Effective** Issued: 25th July 2006 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (S)	438	2	276746 188983
151	**Licensed Waste Management Facilities (Locations)** Licence Number: JP3598FX Location: Asbestos Store, Port Talbot, N P T, Neath Port Talbot, SA13 1RF Operator Name: Avalon Insulation Services Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Special Waste Transfer Stations **Licence Status: Effective** Issued: 25th July 2006 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (S)	438	2	276746 188983
152	**Licensed Waste Management Facilities (Locations)** Licence Number: 34154 Location: Old Byass Works, Docks Road, Port Talbot, N P T, SA13 1ER Operator Name: Jem Recycling Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Expired** Issued: 1st April 1998 Last Modified: Not Supplied Expires: 1st April 2000 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	493	2	276100 189700
152	**Licensed Waste Management Facilities (Locations)** Licence Number: 34142 Location: Old Byass Works, Docks Road, Port Talbot, N P T, SA13 1ER Operator Name: Jem Recycling Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Expired** Issued: 24th December 1996 Last Modified: Not Supplied Expires: 1st April 2000 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	493	2	276100 189700
152	**Licensed Waste Management Facilities (Locations)** Licence Number: 34168 Location: Old Byass Works, Docks Road, Port Talbot, N P T, SA13 1ER Operator Name: Jem Recycling Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Expired** Issued: 30th March 1994 Last Modified: Not Supplied Expires: 1st April 2000 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	493	2	276100 189700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	**Licensed Waste Management Facilities (Locations)** Licence Number: BB3195CB Location: Riverside Road, Port Talbot Docks, Port Talbot, Neath Port Talbot, SA13 1RE Operator Name: Associated British Ports Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Effective** Issued: 4th March 2019 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	686	2	275855 189179
	Local Authority Landfill Coverage Name: Neath Port Talbot County Borough Council - Has supplied landfill data		0	4	276608 189471
154	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NW (E)	570	-	277276 189620
155	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NE (E)	625	-	277331 189625
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A13SW (S)	0	-	276608 189471
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A13SE (E)	19	-	276735 189451
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13SE (SE)	55	-	276696 189364
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12SE (W)	466	-	276050 189295
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A12NE (NW)	500	-	276110 189742
161	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A8NW (S)	516	-	276373 188895
162	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9NW (SE)	567	-	276958 188920
163	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NE (NW)	584	-	276009 189720
164	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8SW (S)	600	-	276502 188789
165	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A12NE (NW)	676	-	275944 189800
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9SW (SE)	685	-	276953 188786
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A8SW (S)	705	-	276345 188707
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12NW (W)	720	-	275838 189661

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NW (W)	750	-	275791 189620
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A9SW (SE)	765	-	277031 188735
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	821	-	276147 190275
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8SE (S)	833	-	276927 188620
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A9SW (SE)	835	-	277131 188709
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	841	-	276168 190311
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A17SW (NW)	848	-	275903 190086
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12NW (W)	853	-	275666 189541
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1952	A12NW (W)	874	-	275665 189628
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A9SW (SE)	877	-	276992 188595
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	894	-	276020 190275
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	897	-	276018 190276
181	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	908	-	276037 190305
182	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A8SW (S)	909	-	276411 188489
183	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	912	-	276024 190301
184	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A17NE (NW)	937	-	276045 190346
185	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A17NW (NW)	970	-	275893 190260
186	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A17NW (NW)	971	-	275869 190238
187	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11SE (W)	974	-	275532 189349
188	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A17NW (NW)	983	-	275922 190308
189	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A11SE (W)	988	-	275538 189193

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
190	**Registered Waste Transfer Sites** Licence Holder: Jem Recycling Ltd Licence Reference: SWW 158L Site Location: Byass Works, Docks Road, PORT TALBOT, West Glamorgan, SA13 1ER Operator Location: As Site Address Authority: Environment Agency Wales, South West Area Site Category: Transfer Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 24th December 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Building Materials, Cellulose, Cement Bonded Asbestos, Clinker & Ash, Demolition Wastes, Food Waste, Fragmentiser Waste, Glass, Gypsum Based Filter Cake, Man-Made Insulation Mat'Ls, Max.Waste Permitted By Licence, Natural & Man-Made Fibres, Packaging Mat'Ls, Paper/Paper Prods/Cardboard, Plant & Tree Cuttings, Plasterboard, Plastic, Scrap Metal, Shot Blasting Grit, Soil, Tyres, Wood/Wood Prods Prohibited Waste: Clinical Wastes, Fibrous Forms Of Asbestos, Flue Ash, Liquid Wastes, Packaging Containing Special Waste, Pcbs/Pcts, Percussive/Explosive/Similar Waste, Sewage Screenings/Grit From S.T.Wks, Sludge Wastes, Special Wastes (As In '96 Regs) N.O.S, Sub'S Control. Radioactive Subs Act'60, Waste In Sealed Drums, Waste N.O.S.	A12NE (NW)	401	3	276200 189700
191	**Registered Waste Transfer Sites** Licence Holder: C P Harvey (Recycling) Ltd Licence Reference: . Site Location: Old Byass Works, Cramic Way, PORT TALBOT, West Glamorgan, SA13 1RS Operator Location: Alexandra House, 1 Alexandra Road, SWANSEA, West Glamorgan, SA1 5ED Authority: Environment Agency Wales, South West Area Site Category: Scrapyard - with Transfer Station Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: Some restriction on source of waste Licence Status: Site Closed Dated: 23rd December 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Electrical Scrap Max.Stor, Ferrous Metal Scrap Max.Stor, Fuel Oil Max.Stor, Max.Waste From Fees/Charges, Mineral Oils Max.Stor, Non-Ferrous Metal Scrap Max.Stor Prohibited Waste: Spec.Waste (Epa'90:S62/1996 Regs)N.O.S	A12NE (NW)	416	3	276230 189800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
192	**Registered Waste Transfer Sites** Licence Holder: Port Talbot Mini Skips Licence Reference: . Site Location: rear of Byass Works, North Bank Road, The Docks, PORT TALBOT, West Glamorgan, SA13 1ER Operator Location: As Site Address Authority: Environment Agency Wales, South West Area Site Category: Transfer Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 30th March 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Construction Waste Max.Stor Glass Max.Stor Household Waste - General Plastic Max.Stor Wood Max.Stor	A12NE (NW)	493	3	276100 189700
193	**Registered Waste Treatment or Disposal Sites** Licence Holder: Jem Recycling Ltd Licence Reference: SWW 171L Site Location: The Old Byass Works, Docks Road, PORT TALBOT, West Glamorgan, SA13 1ER Operator Location: As Site Address Authority: Environment Agency Wales, South West Area Site Category: Transfer - with Baling(compaction) Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st April 1998 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Building Materials Cardboard/Paper/Paper Products Clay, Sand, Top/Subsoil Ferrous Metal Food Waste Hardcore, Brickwork, Concrete, Glass, Stone Max.Waste By Agreement With Env.Agency Non-Ferrous Metal Plastic Plastic Film Tarmacadam Wood/Wood Products Prohibited Waste: Difficult Wastes (As In Wmp.26) Drummed Waste Liquid Wastes Sludge Wastes Spec.Waste (Epa'90:S62/1996 Regs) Waste N.O.S.	A13NW (NW)	308	3	276300 189700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
194	**Control of Major Accident Hazards Sites (COMAH)** Name: Transco Plc Location: Aberavon Gas Works, Victoria Road, PORT TALBOT, West Glamorgan, SA13 1PN Reference: Not Supplied Type: Lower Tier **Status: Record Ceased To Be Supplied Under COMAH Regulations** Positional Accuracy: Manually positioned to the address or location	A12NW (W)	895	6	275655 189670
195	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: Transco Location: Aberavon Gas Works, Victoria Road, PORT TALBOT, West Glamorgan, SA13 1PN **Status: Not Active** Positional Accuracy: Unknown	A12NW (W)	888	6	275660 189662
196	**Planning Hazardous Substance Consents** Name: British Gas Plc Location: Wales, Aberavon Gas Works, Victoria Road, PORT TALBOT, West Glamorgan, SA12 6DB Authority: Neath Port Talbot County Borough Council, Planning Department Application Ref: P2013/0135 Hazardous Substance: Unknown at time of report Maximum Quantity: 61.8 Application date: 27th November 1992 **Decision: Application revoked or cancelledCancelled** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	900	7	275650 189670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: South Wales Upper Coal Measures Formation	A13SW (S)	0	1	276608 189471
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (S)	0	1	276608 189471
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	122	1	276775 189610
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SW (E)	276	1	277000 189471
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NW (E)	545	1	277239 189656
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9NW (SE)	671	1	277221 189000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	700	1	276527 190278

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SW (NE)	704	1	277215 189989
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	715	1	276585 190295
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (SW)	716	1	276116 188792
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (SW)	762	1	276133 188729
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: 1.8 - 2.2 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (E)	776	1	277500 189471
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (SW)	803	1	276000 188769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	840	1	277497 189807
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (N)	845	1	276644 190423
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (W)	868	1	275675 189643
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (N)	874	1	276898 190395
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	885	1	277605 189558
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: 1.8 - 2.2 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	912	1	277621 189318

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (W)	920	1	275598 189245
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (W)	954	1	275567 189227
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: 1.8 - 2.2 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15SW (E)	965	1	277674 189314
197	**BGS Recorded Mineral Sites** Site Name: Gwar-Y-Caeau Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156667 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Llynfi Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NW (E)	573	1	277281 189613
198	**BGS Recorded Mineral Sites** Site Name: Port Talbot Steel Slag Aggregates Location: Port Talbot Steelworks, Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 27196 Type: Steel Works **Status: Active** Operator: Tarmac (A Crh Company) Operator Location: Not Supplied Periodic Type: Not Available Geology: Ground Granulated Blast Furnace Slag - Addition, Cementitious Commodity: Blast Furnace Slag Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	618	1	276290 188815
199	**BGS Recorded Mineral Sites** Site Name: Pen-Y-Cae Quarries Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 245982 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	853	1	277385 190019

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
200	**BGS Recorded Mineral Sites** Site Name: Pen-Y-Cae Quarries Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156659 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	859	1	277435 189961
201	**BGS Recorded Mineral Sites** Site Name: Velindre Quarries Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 245983 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	862	1	276695 190435
202	**BGS Recorded Mineral Sites** Site Name: Pen-Y-Cae Quarries Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156660 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	903	1	277366 190115
203	**BGS Recorded Mineral Sites** Site Name: Mount Pleasant Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156655 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Llynfi Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NW (N)	920	1	276529 190498
204	**BGS Recorded Mineral Sites** Site Name: Pen-Y-Cae Quarries Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156658 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19NE (NE)	947	1	277326 190217
205	**BGS Recorded Mineral Sites** Site Name: Mount Pleasant Location: Port Talbot, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 156656 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rhondda Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A23SE (N)	958	1	276803 190512

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 276740, 190270 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 36.70 mg/kg Cadmium Measured Concentration: 0.90 mg/kg Chromium Measured Concentration: 72.10 mg/kg Lead Measured Concentration: 210.60 mg/kg Nickel Measured Concentration: 62.10 mg/kg	A18NE (N)	708	1	276740 190270
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 276210, 190260 Soil Sample Type: Topsoil Sample Area: Swansea Arsenic Measured Concentration: 42.80 mg/kg Cadmium Measured Concentration: 2.30 mg/kg Chromium Measured Concentration: 99.60 mg/kg Lead Measured Concentration: 630.30 mg/kg Nickel Measured Concentration: 112.60 mg/kg	A17NE (NW)	776	1	276210 190260
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Swansea Count Id: 368 Arsenic Minimum Concentration: 8.00 mg/kg Arsenic Average Concentration: 79.00 mg/kg Arsenic Maximum Concentration: 2161.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 2.90 mg/kg Cadmium Maximum Concentration: 61.90 mg/kg Chromium Minimum Concentration: 13.00 mg/kg Chromium Average Concentration: 72.00 mg/kg Chromium Maximum Concentration: 562.00 mg/kg Lead Minimum Concentration: 23.00 mg/kg Lead Average Concentration: 413.00 mg/kg Lead Maximum Concentration: 10000.00 mg/kg Nickel Minimum Concentration: 8.00 mg/kg Nickel Average Concentration: 52.00 mg/kg Nickel Maximum Concentration: 384.00 mg/kg	A13NW (N)	120	1	276608 189700
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SW (S)	0	8	276608 189471
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (S)	0	-	276608 189471
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	40	1	276603 189361
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	87	1	276764 189576
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	202	1	276625 189778
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	87	1	276764 189576
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	123	1	276760 189626
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	202	1	276625 189778
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	40	1	276603 189361
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	123	1	276760 189626
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	276608 189471

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	**Contemporary Trade Directory Entries** Name: Davies Crane Hire Ltd Location: Unit 30, Docks Road, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Crane Hire, Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	0	-	276564 189491
207	**Contemporary Trade Directory Entries** Name: Suite Centres Direct Location: The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (E)	0	-	276634 189480
208	**Contemporary Trade Directory Entries** Name: Lounge Products Location: Unit 11-12 The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Upholstery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	9	-	276572 189394
209	**Contemporary Trade Directory Entries** Name: Civil & Marine Slag Cement Ltd Location: Docks Road, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Cement Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	29	-	276479 189385
209	**Contemporary Trade Directory Entries** Name: Autolec Diesel Services (Wales) Ltd Location: Docks Road, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Fuel Injection Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	29	-	276479 189385
209	**Contemporary Trade Directory Entries** Name: A & S Commercial Repairs Location: Docks Road, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	29	-	276479 189385
209	**Contemporary Trade Directory Entries** Name: Gregory Auto Repairs Location: Somerset La, Port Talbot, West Glamorgan, SA13 1TY Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (W)	58	-	276454 189420
210	**Contemporary Trade Directory Entries** Name: T W I Technology Centre Wales Location: Harbourside Business Park, Harbourside Road, Port Talbot, West Glamorgan, SA13 1SB Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	73	-	276453 189456
211	**Contemporary Trade Directory Entries** Name: M P G Tyres & Exhausts Ltd Location: Unit 16, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Tyre Repairs & Retreading **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (N)	103	-	276668 189648
211	**Contemporary Trade Directory Entries** Name: Michael J Farmer Location: Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	103	-	276668 189648
211	**Contemporary Trade Directory Entries** Name: Mpg Tyre & Exhausts Location: Unit 16, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	103	-	276668 189648

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
211	**Contemporary Trade Directory Entries** Name: G E S Location: Court Workshop,Off Cramick Way, Port Talbot, West Glamorgan, SA13 2RR Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	105	-	276648 189662
211	**Contemporary Trade Directory Entries** Name: M P G Tyre & Exhausts Location: Port Talbot Railway Station, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	148	-	276663 189704
212	**Contemporary Trade Directory Entries** Name: Astra Park Service Centre Location: Unit 5, Astra Business Park, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	111	-	276552 189687
213	**Contemporary Trade Directory Entries** Name: Texaco Location: Port Talbot Service Station, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	122	-	276821 189553
213	**Contemporary Trade Directory Entries** Name: Texaco Location: Port Talbot Service Station, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	122	-	276821 189553
213	**Contemporary Trade Directory Entries** Name: Port Talbot Service Station Location: Port Talbot Service Station, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	122	-	276821 189553
214	**Contemporary Trade Directory Entries** Name: Thomas Silvey Ltd Location: The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Oil Fuel Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (W)	126	-	276397 189461
215	**Contemporary Trade Directory Entries** Name: G T E Motorhouse Ltd Location: Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	127	-	276638 189694
215	**Contemporary Trade Directory Entries** Name: C & C Auto Spares Location: Unit 10 Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (N)	158	-	276612 189735
216	**Contemporary Trade Directory Entries** Name: W Doyle Transport Location: Llewellyns Quay, Port Talbot, SA13 1RF Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	138	-	276689 189278
217	**Contemporary Trade Directory Entries** Name: Moderncare Location: 2, Talbot Road, Port Talbot, West Glamorgan, SA13 1DH Classification: Carpet & Fabric Proofing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	164	-	276817 189614

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
218	**Contemporary Trade Directory Entries** Name: Design Printers Location: 1, Royal Buildings, 16, Talbot Road, Port Talbot, West Glamorgan, SA13 1DN Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	168	-	276879 189544
218	**Contemporary Trade Directory Entries** Name: Mgm Gates Location: Commercial Buildings,Talbot Rd, Port Talbot, West Glamorgan, SA13 1DR Classification: Wrought Ironwork **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	186	-	276908 189504
218	**Contemporary Trade Directory Entries** Name: D W Jones Ltd Location: Empire Building, Beverley Street, Port Talbot, West Glamorgan, SA13 1DY Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	189	-	276898 189552
218	**Contemporary Trade Directory Entries** Name: Sp Power Washers Location: Empire Building, Beverley Street, Port Talbot, SA13 1DY Classification: Car Washing & Polishing Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	189	-	276898 189552
218	**Contemporary Trade Directory Entries** Name: Stitching With Elegance Location: Commercial Buildings, Beverley Street, Port Talbot, West Glamorgan, SA13 1DY Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	194	-	276914 189514
219	**Contemporary Trade Directory Entries** Name: Fairwood Holdings Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	173	-	276784 189273
219	**Contemporary Trade Directory Entries** Name: B H L Rolls Manufacturing Ltd Location: Llewellyns Quay, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	173	-	276784 189273
219	**Contemporary Trade Directory Entries** Name: Rhino Doors Location: Maritime Road, Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Door Manufacturers - Industrial **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	212	-	276806 189241
220	**Contemporary Trade Directory Entries** Name: Lounge Products Location: Unit 1a, Towngate Business Centre, Cramic Way, Port Talbot, West Glamorgan, SA13 1RY Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (N)	190	-	276545 189766
221	**Contemporary Trade Directory Entries** Name: Folland Joinery Location: 49, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	203	-	276923 189444
221	**Contemporary Trade Directory Entries** Name: West Wales Home Care Location: 49, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	203	-	276923 189444

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
221	**Contemporary Trade Directory Entries** Name: Oakwood Energy Ltd Location: 49, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Fuel Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	203	-	276923 189444
221	**Contemporary Trade Directory Entries** Name: Pirson Montage Location: 49, Talbot Road, Port Talbot, West Glamorgan, SA13 1HN Classification: Refractory Materials & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	203	-	276923 189444
222	**Contemporary Trade Directory Entries** Name: Loxam Access Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	205	-	276654 189207
223	**Contemporary Trade Directory Entries** Name: Coates Rentair Location: Coates Rentair, Dock Road, Port Talbot, SA13 1RA Classification: Air Compressors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	233	-	276279 189446
224	**Contemporary Trade Directory Entries** Name: 1st Class Furniture Location: Astra Business Park, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	247	-	276484 189806
225	**Contemporary Trade Directory Entries** Name: Astra Park Service Centre Ltd Location: Oakwood Lane, PORT TALBOT, West Glamorgan, SA13 1DF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	247	-	276863 189687
226	**Contemporary Trade Directory Entries** Name: Cockburn South West Ltd Location: Kenworth Buildings,Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	250	-	276824 189208
227	**Contemporary Trade Directory Entries** Name: Town Tyre Services Location: Station Road, Port Talbot, West Glamorgan, SA13 1NW Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (N)	251	-	276674 189814
228	**Contemporary Trade Directory Entries** Name: Panel Match Location: 14, Station Road, Port Talbot, West Glamorgan, SA13 1JB Classification: Mobile Phone Accessories and Car Kits **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	252	-	276749 189777
228	**Contemporary Trade Directory Entries** Name: Employment Solutions.Com Location: 24, Station Road, Port Talbot, West Glamorgan, SA13 1JB Classification: Reclaiming - Waste Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	276	-	276730 189813
228	**Contemporary Trade Directory Entries** Name: Coloursmart Location: 20, Station Road, Port Talbot, West Glamorgan, SA13 1JB Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	276	-	276749 189803

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
228	**Contemporary Trade Directory Entries** Name: Coloursmart Location: 18, Station Road, Port Talbot, West Glamorgan, SA13 1JB Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	276	-	276749 189803
229	**Contemporary Trade Directory Entries** Name: R & R (Wales) Ltd Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	280	-	276691 189135
229	**Contemporary Trade Directory Entries** Name: Planguard Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	280	-	276691 189135
229	**Contemporary Trade Directory Entries** Name: Independent Cleaning Services (South Wales) Ltd Location: Llewellyns Quay, The Docks, Port Talbot, West Glamorgan, SA13 1SD Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	292	-	276668 189122
229	**Contemporary Trade Directory Entries** Name: J E S Port Talbot Ltd Location: Phoenix Wharf,Docks Road, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Machine Shops **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NE (S)	292	-	276668 189122
229	**Contemporary Trade Directory Entries** Name: Independent Cleaning Services (South Wales) Ltd Location: Llewellyns Quay, The Docks, Port Talbot, West Glamorgan, SA13 1SD Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	292	-	276668 189122
229	**Contemporary Trade Directory Entries** Name: Speedy Asset Services Location: Unit 1, Llewellyns Quay, Port Talbot, SA13 1RF Classification: Lifting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	293	-	276667 189121
229	**Contemporary Trade Directory Entries** Name: Spraytech Location: UNIT 5, LLEWELLYNS QUAY, LLEWELLYNS ROAD, PORT TALBOT, SA13 1RF Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	309	-	276672 189105
230	**Contemporary Trade Directory Entries** Name: Astra Service Centre Location: Oakwood Street, Port Talbot, West Glamorgan, SA13 1NF Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	284	-	276863 189742
231	**Contemporary Trade Directory Entries** Name: Paul'S Tyres Location: 1 Courtland Building,Courtland Place, Port Talbot, West Glamorgan, SA13 1JJ Classification: Tyre Dealers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	291	-	276783 189805
232	**Contemporary Trade Directory Entries** Name: Fairwood Engineering Ltd Location: LLEWELLYNS QUAY, LLEWELLYNS ROAD, PORT TALBOT, SA13 1RF Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	291	-	276781 189143

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
233	**Contemporary Trade Directory Entries** Name: K & J Pipeline Supplies Ltd Location: UNIT 7, LLEWELLYNS QUAY, PORT TALBOT, SA13 1RF Classification: Engineering Materials **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	295	-	276726 189125
233	**Contemporary Trade Directory Entries** Name: Talbot Hydraulics Location: Unit 7, Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	304	-	276731 189116
233	**Contemporary Trade Directory Entries** Name: Quay Corporate Ltd Location: Unit 3, Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	304	-	276731 189116
233	**Contemporary Trade Directory Entries** Name: Turner Fluidpower Location: Unit 3, Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	304	-	276731 189116
233	**Contemporary Trade Directory Entries** Name: Corporate Manufacturing Wales Ltd Location: Unit 3, Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	304	-	276731 189116
234	**Contemporary Trade Directory Entries** Name: Evd Commercials Ltd Location: Cramic Way, Port Talbot, West Glamorgan, SA13 1JU Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	306	-	276437 189849
234	**Contemporary Trade Directory Entries** Name: L B S Builders Merchants Location: 5 Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	306	-	276437 189849
234	**Contemporary Trade Directory Entries** Name: It Asset Matters 2 U Location: Unit 2e, Cramic Way, Port Talbot, West Glamorgan, SA13 1RU Classification: Computer Recycling & Disposal **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	306	-	276437 189849
235	**Contemporary Trade Directory Entries** Name: Drake Services Location: 13, Devonshire Place, Port Talbot, West Glamorgan, SA13 1SG Classification: Rubbish Clearance **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	316	-	277033 189416
236	**Contemporary Trade Directory Entries** Name: Evolve Electrical Engineering Location: 21, BROAD STREET, PORT TALBOT, SA13 1EW Classification: Electrical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	327	-	277043 189549
237	**Contemporary Trade Directory Entries** Name: A L A Rail Ltd Location: Byass Works, The Docks, PORT TALBOT, West Glamorgan, SA13 1RS Classification: Railway Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	335	-	276250 189648
238	**Contemporary Trade Directory Entries** Name: Wales Valley Music Location: 77 Station Rd, Port Talbot, West Glamorgan, SA13 1NW Classification: Musical Instrument - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	336	-	276638 189911

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	**Contemporary Trade Directory Entries** Name: C P Harvey (Recycling) Ltd Location: Old Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	337	-	276291 189747
240	**Contemporary Trade Directory Entries** Name: Runtech Hauliers Location: LLEWELLYNS QUAY, LLEWELLYNS ROAD, PORT TALBOT, SA13 1RF Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	363	-	276691 189052
241	**Contemporary Trade Directory Entries** Name: Raymond Joseph Engineers Ltd Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	366	-	276287 189795
241	**Contemporary Trade Directory Entries** Name: Jem Recycling Ltd Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	366	-	276287 189795
241	**Contemporary Trade Directory Entries** Name: Innotech (Wales) Ltd Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	366	-	276287 189795
241	**Contemporary Trade Directory Entries** Name: The Recycling Co Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Reclaiming - Waste Products **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	366	-	276287 189795
241	**Contemporary Trade Directory Entries** Name: The Recycling Co Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	367	-	276286 189794
241	**Contemporary Trade Directory Entries** Name: M P L S Engineering Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	385	-	276294 189834
242	**Contemporary Trade Directory Entries** Name: M C Windows Location: Cramic Way, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: PVC-U Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	378	-	276378 189897
243	**Contemporary Trade Directory Entries** Name: Spraytech Location: Runtech, Llewellyns Quay, Llewellyns Road, Port Talbot, SA13 1RF Classification: Paint Spraying Equipment & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	387	-	276643 189023
244	**Contemporary Trade Directory Entries** Name: Valley Waste & Recycling Ltd Location: The Recycling Company UK Ltd., Byass Works, Dock Road, Port Talbot, SA13 1RS Classification: Recycling Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	398	-	276197 189686

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
244	**Contemporary Trade Directory Entries** Name: A W D Group Location: Byass Works,Dock Road, The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Recycling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	420	-	276178 189697
245	**Contemporary Trade Directory Entries** Name: Mitsui Babcock Energy Ltd Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	403	-	276755 189020
245	**Contemporary Trade Directory Entries** Name: J M Fabweld Ltd Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	403	-	276755 189020
245	**Contemporary Trade Directory Entries** Name: Pump Supplies Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Pumps - Sales, Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	403	-	276755 189020
245	**Contemporary Trade Directory Entries** Name: Pamarch (1997) Ltd Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Coating Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	403	-	276755 189020
245	**Contemporary Trade Directory Entries** Name: Pump Supplies Location: Llewellyns Quay, Port Talbot, West Glamorgan, SA13 1RF Classification: Pumps - Sales, Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	403	-	276755 189020
246	**Contemporary Trade Directory Entries** Name: Your Own Cash Machine Ltd Location: 103, Station Road, Port Talbot, West Glamorgan, SA13 1NR Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	408	-	276590 189988
246	**Contemporary Trade Directory Entries** Name: Supasnaps Location: 113, Station Road, Port Talbot, West Glamorgan, SA13 1NR Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	441	-	276586 190021
247	**Contemporary Trade Directory Entries** Name: Whirlpool Launderette Ltd Location: 96, Talbot Road, Port Talbot, West Glamorgan, SA13 1LB Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	421	-	277085 189240
247	**Contemporary Trade Directory Entries** Name: Whirlpool Launderette Ltd Location: 96, Talbot Road, Port Talbot, West Glamorgan, SA13 1LB Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	421	-	277085 189240
247	**Contemporary Trade Directory Entries** Name: Margam Windows & Doors Ltd Location: Cwrt-Ucha Terr, Port Talbot, West Glamorgan, SA13 1LD Classification: PVC-U Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	448	-	277086 189190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
248	**Contemporary Trade Directory Entries** Name: Phil Reed Cleaning Location: 14, Gower Street, Port Talbot, West Glamorgan, SA13 1SL Classification: Carpet, Curtain & Upholstery Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	427	-	277124 189322
249	**Contemporary Trade Directory Entries** Name: A T Auto Location: Cwrt-Ucha Terr, Port Talbot, West Glamorgan, SA13 1LD Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	454	-	277090 189185
249	**Contemporary Trade Directory Entries** Name: L & J Car Repairs Location: Cwrt-Ucha Ter, Port Talbot, West Glamorgan, SA13 1LD Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	458	-	277092 189181
249	**Contemporary Trade Directory Entries** Name: M R M Automotive Location: Cwrt-Ucha Terrace, Port Talbot, SA13 1LD Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	470	-	277082 189147
249	**Contemporary Trade Directory Entries** Name: Motor Mender Location: 9, Cwrt-Ucha Terrace, Port Talbot, West Glamorgan, SA13 1LD Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	481	-	277109 189165
250	**Contemporary Trade Directory Entries** Name: John Young & Co (Engineers) Ltd Location: Green Park Industrial Estate, Port Talbot, West Glamorgan, SA12 6NT Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	466	-	276291 189942
250	**Contemporary Trade Directory Entries** Name: Talbot Printing Co Ltd Location: Green Park Industrial Estate, Port Talbot, West Glamorgan, SA12 6NT Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	466	-	276291 189942
250	**Contemporary Trade Directory Entries** Name: Unigate Dairies Ltd Location: Green Park Indust Est, Port Talbot, West Glamorgan, SA12 6NT Classification: Dairies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	466	-	276290 189942
251	**Contemporary Trade Directory Entries** Name: Afan Atom Electronic Repair Centre Location: 127a, Station Road, Port Talbot, West Glamorgan, SA13 1NR Classification: Electronic Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	480	-	276568 190060
251	**Contemporary Trade Directory Entries** Name: Computopia Location: RiversideUnit 36, Port Talbot, West Glamorgan, SA13 1EJ Classification: Computer Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	506	-	276508 190080
251	**Contemporary Trade Directory Entries** Name: Olympia Dry Cleaners Location: 5, Riverside, Port Talbot, West Glamorgan, SA13 1EJ Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	509	-	276530 190086
252	**Contemporary Trade Directory Entries** Name: M R M Automotive Ltd Location: Cwrt-Ucha Terrace, Port Talbot, West Glamorgan, SA13 1LD Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	485	-	277088 189132

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
253	**Contemporary Trade Directory Entries** Name: Dee-Creased Ironing Location: 11, Rice Street, Port Talbot, SA13 1SN Classification: Ironing & Home Laundry Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	502	-	277181 189255
254	**Contemporary Trade Directory Entries** Name: Spraycare Body Repairs Location: 22, Forge Road, Port Talbot, West Glamorgan, SA13 1NU Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	512	-	276697 190080
254	**Contemporary Trade Directory Entries** Name: Anglia Location: 27a, Forge Road, Port Talbot, West Glamorgan, SA13 1US Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	551	-	276716 190115
254	**Contemporary Trade Directory Entries** Name: Anglia Window Blinds Location: 27a, Forge Road, Port Talbot, SA13 1US Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	551	-	276716 190115
255	**Contemporary Trade Directory Entries** Name: Orange West Scaffolding Location: Green Pk Ind Est, Port Talbot, West Glamorgan, SA12 6NU Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	521	-	276154 189874
256	**Contemporary Trade Directory Entries** Name: Margam Engineering & Welding Co Ltd Location: North Bank, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	275978 189343
256	**Contemporary Trade Directory Entries** Name: Talbot Block Ltd Location: North Bank, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	275978 189343
256	**Contemporary Trade Directory Entries** Name: Initial G W S Ltd Location: North Bank, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	275978 189343
256	**Contemporary Trade Directory Entries** Name: G W S Ltd Location: North Bank, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	275978 189343
256	**Contemporary Trade Directory Entries** Name: D W E Hydraulics Location: North Bank, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	275978 189343
257	**Contemporary Trade Directory Entries** Name: Valley Industrial Services Ltd Location: The Docks, Port Talbot, West Glamorgan, SA13 1RS Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	533	-	276040 189662
258	**Contemporary Trade Directory Entries** Name: Valley Reclamation Ltd Location: Green Park Industrial Estate, Port Talbot, West Glamorgan, SA12 6NU Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A17SE (NW)	551	-	276096 189837

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
258	**Contemporary Trade Directory Entries** Name: Builders Supplies Port Talbot Ltd Location: Green Park Industrial Estate, Port Talbot, West Glamorgan, SA12 6NU Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17SE (NW)	583	-	276076 189866
259	**Contemporary Trade Directory Entries** Name: Blind Soft Location: Forge Rd, Port Talbot, West Glamorgan, SA13 1US Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SE (N)	558	-	276786 190100
260	**Contemporary Trade Directory Entries** Name: Celtic Specialist Treatments Ltd Location: The Docks, Port Talbot, West Glamorgan, SA13 1RH Classification: Metal Finishing Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	560	-	276062 189052
260	**Contemporary Trade Directory Entries** Name: A & S Commercial Vehicle Repairs Location: A and S Commercial Repairs Ltd, Road From Riverside Road to Harbour House, Port Talbot, SA13 1RA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	562	-	276057 189055
261	**Contemporary Trade Directory Entries** Name: West Glamorgan Auto Electrical Location: Water St, Port Talbot, West Glamorgan, SA12 6LF Classification: Plant & Machinery Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	563	-	276154 189944
262	**Contemporary Trade Directory Entries** Name: Bollom Ltd Location: 23, Aberafan Centre, Port Talbot, West Glamorgan, SA13 1PB Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	578	-	276407 190131
262	**Contemporary Trade Directory Entries** Name: Brighthouse Location: 21-22, Aberafan Centre, Port Talbot, SA13 1PB Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	583	-	276409 190136
263	**Contemporary Trade Directory Entries** Name: Homestyle By Fads Location: Aberafan Centre, Port Talbot, West Glamorgan, SA13 1PB Classification: Wallpapers & Wall Coverings **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	581	-	276484 190152
264	**Contemporary Trade Directory Entries** Name: D W E Hydraulic Location: North Bank Road, The Docks, Port Talbot, West Glamorgan, SA13 1RE Classification: Plant & Machinery Repairs **Status: Active** Positional Accuracy: Manually positioned to the address or location	A12SW (W)	591	-	275915 189406
265	**Contemporary Trade Directory Entries** Name: Sinclair Volkswagen Port Talbot Location: DAN-Y-BRYN ROAD, PORT TALBOT, SA13 1AL Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	599	-	277153 189897
265	**Contemporary Trade Directory Entries** Name: Sinclair Garages Ltd Location: Dan-y-Bryn Road, Port Talbot, West Glamorgan, SA13 1AL Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	608	-	277149 189914

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
266	**Contemporary Trade Directory Entries** Name: Harwoods Location: Water Street, Port Talbot, SA12 6LF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	614	-	276115 189977
266	**Contemporary Trade Directory Entries** Name: B Harwood & Son Ltd Location: Water Street, Port Talbot, West Glamorgan, SA12 6LF Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	623	-	276094 189964
267	**Contemporary Trade Directory Entries** Name: Steel Solutions Wales Location: 7, Mayfield Street, Port Talbot, West Glamorgan, SA13 1EY Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	616	-	277340 189480
268	**Contemporary Trade Directory Entries** Name: Clear Force Location: 12, Pont Street, Port Talbot, SA13 1AN Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	625	-	277113 189975
269	**Contemporary Trade Directory Entries** Name: Klick Location: 8, Aberafan Centre, Port Talbot, West Glamorgan, SA13 1PB Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	645	-	276402 190199
269	**Contemporary Trade Directory Entries** Name: Bollom Ltd Location: Aberafan Centre, Port Talbot, West Glamorgan, SA13 1PB Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	660	-	276380 190208
270	**Contemporary Trade Directory Entries** Name: Ats Euromaster Ltd Location: Afan Way, PORT TALBOT, West Glamorgan, SA12 6NR Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	649	-	275949 189744
271	**Contemporary Trade Directory Entries** Name: Compressed Air Services Ltd Location: Docks Road, The Docks, Port Talbot, SA13 1RA Classification: Air Compressors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	657	-	276223 188801
271	**Contemporary Trade Directory Entries** Name: Brynbach Coal Location: Docks Road, The Docks, Port Talbot, SA13 1RA Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	657	-	276223 188801
272	**Contemporary Trade Directory Entries** Name: Skelton Thomas Engineering Ltd Location: Water Street, Port Talbot, West Glamorgan, SA12 6LL Classification: Valve Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	685	-	275942 189820
273	**Contemporary Trade Directory Entries** Name: D M D Location: Phoenix Wharf, The Docks, Port Talbot, SA13 1RA Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	685	-	276343 188728
273	**Contemporary Trade Directory Entries** Name: Galliver Engineering Ltd Location: Phoenix Wharf, The Docks, Port Talbot, SA13 1RA Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	685	-	276343 188728

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
274	**Contemporary Trade Directory Entries** Name: Slade Colour Location: Tudor St, Port Talbot, West Glamorgan, SA13 1YF Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NE (N)	707	-	276808 190250
275	**Contemporary Trade Directory Entries** Name: Cvc Recovery & Quality Used Parts Location: 15, St. Mary Street, Port Talbot, West Glamorgan, SA12 6DU Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	717	-	276210 190192
276	**Contemporary Trade Directory Entries** Name: Olympus Catering Ltd Location: Isaacs Place, Port Talbot, West Glamorgan, SA12 6NP Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12NW (NW)	734	-	275876 189791
276	**Contemporary Trade Directory Entries** Name: Proclean Location: Isaacs Pl, Port Talbot, West Glamorgan, SA12 6NP Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SW (NW)	774	-	275849 189828
277	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Prior Street, Port Talbot, SA13 1YA Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	739	-	276698 190310
278	**Contemporary Trade Directory Entries** Name: Afan Way Services Location: Water St, Port Talbot, West Glamorgan, SA12 6LL Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SW (NW)	746	-	275904 189888
278	**Contemporary Trade Directory Entries** Name: Little Feather Duster Location: 178, Water Street, Port Talbot, SA12 6LL Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	750	-	275906 189902
278	**Contemporary Trade Directory Entries** Name: Talbot Blind Co Location: 184, Water Street, Port Talbot, West Glamorgan, SA12 6LL Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	771	-	275886 189909
279	**Contemporary Trade Directory Entries** Name: The Range Co Location: Unit 4, Isaacs Place, Port Talbot, SA12 6NP Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	763	-	275810 189707
279	**Contemporary Trade Directory Entries** Name: Gogo'S Motors Location: UNIT 3, ISAACS PLACE, PORT TALBOT, SA12 6NP Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NW (W)	769	-	275803 189705
280	**Contemporary Trade Directory Entries** Name: Oates Engineering Services Location: Unit 1, Isaacs Place, Port Talbot, West Glamorgan, SA12 6NP Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	784	-	275785 189703
280	**Contemporary Trade Directory Entries** Name: R P Tyres & Exhaust Centre Location: Unit 4, Henshaw Street, Port Talbot, SA12 6NH Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	818	-	275751 189707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
280	**Contemporary Trade Directory Entries** Name: Celtic Leather & Fabric Location: Unit 1, Henshaw Street, Port Talbot, SA12 6NH Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	819	-	275759 189729
280	**Contemporary Trade Directory Entries** Name: Site Heat Treatment Services Ltd Location: Unit 2, Henshaw Street, Port Talbot, West Glamorgan, SA12 6NH Classification: Heat Treatment - Metals **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NW (W)	819	-	275759 189729
281	**Contemporary Trade Directory Entries** Name: Ready Steel Reinforcements Location: Talbot Wharf, The Docks, Port Talbot, West Glamorgan, SA13 1RH Classification: Concrete Reinforcements **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NW (SW)	790	-	275830 188984
282	**Contemporary Trade Directory Entries** Name: J E S Group Ltd Location: Phoenix Wharf, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SE (S)	805	-	276773 188616
283	**Contemporary Trade Directory Entries** Name: Celtic Engineering Services Ltd Location: Phoenix Wharf, The Docks, Port Talbot, West Glamorgan, SA13 1RA Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	825	-	276629 188578
284	**Contemporary Trade Directory Entries** Name: Ron Evans Pies Location: 17, Commercial Road, PORT TALBOT, West Glamorgan, SA13 1LN Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	854	-	277394 188923
284	**Contemporary Trade Directory Entries** Name: A B C Tyre Service Location: 21, Commercial Road, Port Talbot, SA13 1LN Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	870	-	277405 188911
285	**Contemporary Trade Directory Entries** Name: Afan Valley Cars Location: Cwmavon Road, Port Talbot, SA12 8RF Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	897	-	276790 190453
285	**Contemporary Trade Directory Entries** Name: Afan Valley Motors Location: Cwmavon Road, PORT TALBOT, West Glamorgan, SA12 8RF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	897	-	276790 190453
286	**Contemporary Trade Directory Entries** Name: Body Repair Centre Location: Henshaw St, Port Talbot, West Glamorgan, SA12 6NH Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	906	-	275702 189820
286	**Contemporary Trade Directory Entries** Name: Morris Windows Location: Factory,Henshaw St, Port Talbot, West Glamorgan, SA12 6NH Classification: PVC-U Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	907	-	275702 189822
287	**Contemporary Trade Directory Entries** Name: Premier Sports & Leisure Apparel Ltd Location: Unit 3a Henshaw St, Port Talbot, West Glamorgan, SA12 6NH Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SW (W)	915	-	275698 189834

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
287	**Contemporary Trade Directory Entries** Name: Dragon Heat Transfer Ltd Location: Unit 3,Henshaw St, Port Talbot, West Glamorgan, SA12 6NH Classification: Car Radiator Servicing & Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SW (W)	921	-	275696 189846
287	**Contemporary Trade Directory Entries** Name: Port Talbot Exhaust & Service Centre Location: 5, Henshaw Street, Port Talbot, West Glamorgan, SA12 6NH Classification: Exhaust & Shock Absorber Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (W)	923	-	275688 189831
287	**Contemporary Trade Directory Entries** Name: Universal Heat Transfer Ltd Location: 3, Henshaw Street, Port Talbot, West Glamorgan, SA12 6NH Classification: Heat Exchangers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (W)	926	-	275687 189837
287	**Contemporary Trade Directory Entries** Name: Celtic Leather & Fabric Upholstery Ltd Location: 1, Henshaw Street, Port Talbot, West Glamorgan, SA12 6NH Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (W)	930	-	275685 189843
287	**Contemporary Trade Directory Entries** Name: Boat Bits Location: 1, Glyn Street, Port Talbot, West Glamorgan, SA12 6NF Classification: Chandlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (W)	962	-	275654 189850
288	**Contemporary Trade Directory Entries** Name: Speedgold Ltd Location: Pierhead, The Docks, Port Talbot, West Glamorgan, SA13 1RH Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	928	-	275668 188996
289	**Contemporary Trade Directory Entries** Name: R Davies Ltd Location: 2, Sea View Terrace, Baglan, Port Talbot, SA12 8HW Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A23SW (N)	982	-	276291 190517
290	**Fuel Station Entries** Name: Port Talbot Service Station Location: Talbot Road , , Port Talbot, Neath Port Talbot, SA13 1HN Brand: Low Prices Always Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A13NE (E)	122	-	276821 189553
291	**Fuel Station Entries** Name: Sinclair Garage Location: Bridge Terrace Dan Y Bryn Road , , Port Talbot, Neath Port Talbot, SA13 1AL Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	608	-	277149 189914
292	**Fuel Station Entries** Name: Afan Way Service Station Location: Afan Way , , Port Talbot, Neath Port Talbot, SA12 6NR Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	667	-	275967 189835
293	**Fuel Station Entries** Name: Performance Centre Location: Talbot Road , , Port Talbot, Neath Port Talbot, SA13 1HN Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A9NE (SE)	744	-	277320 189008

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
294	**Fuel Station Entries** Name: Tesco Port Talbot East Bank Location: Prior Street , , Port Talbot, Neath Port Talbot, SA13 1YA Brand: TESCO Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A18NE (N)	755	-	276708 190325
295	**Points of Interest - Commercial Services** Name: A & S Commercial Repairs Location: Docks Road, The Docks, Port Talbot, SA13 1RA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	29	9	276479 189385
296	**Points of Interest - Commercial Services** Name: Michael J Farmer Location: Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (N)	103	9	276668 189648
296	**Points of Interest - Commercial Services** Name: Mjf Location: Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (N)	103	9	276668 189648
296	**Points of Interest - Commercial Services** Name: Mpg Tyre & Exhausts Location: Unit 16, Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (N)	103	9	276668 189648
296	**Points of Interest - Commercial Services** Name: M P G Tyres & Exhausts Ltd Location: Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (N)	103	9	276668 189648
297	**Points of Interest - Commercial Services** Name: Astra Park Service Centre Location: Unit 5 Astra Business Park, Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (N)	111	9	276552 189687
297	**Points of Interest - Commercial Services** Name: Astra Park Service Centre Location: Unit 5 Astra Business Park, Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (N)	111	9	276552 189687
298	**Points of Interest - Commercial Services** Name: Port Talbot Service Station Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NE (E)	122	9	276821 189553
298	**Points of Interest - Commercial Services** Name: Car Wash Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NE (E)	122	9	276821 189553
299	**Points of Interest - Commercial Services** Name: W Doyle Transport Location: Llewellyns Quay, Port Talbot, SA13 1RF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SE (SE)	143	9	276693 189273
300	**Points of Interest - Commercial Services** Name: Kickstart Location: 51a Talbot Road, Port Talbot, SA13 1HU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	218	9	276934 189423

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
301	**Points of Interest - Commercial Services** Name: Astra Park Service Centre Ltd Location: Astra Service Centre, Oakwood Lane, Port Talbot, SA13 1DF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	246	9	276855 189695
302	**Points of Interest - Commercial Services** Name: It Asset Disposal Ltd Location: Unit 2e, Cramic Way, Port Talbot, SA13 1RU Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A18SW (NW)	306	9	276437 189849
302	**Points of Interest - Commercial Services** Name: M J F Car Body Repairs Location: Unit 1b, Cramic Way, Port Talbot, SA13 1RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SW (NW)	378	9	276378 189897
303	**Points of Interest - Commercial Services** Name: Spraytech Location: Unit 5 Llewellyns Quay, Llewellyns Road, Port Talbot, SA13 1RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (S)	309	9	276672 189105
303	**Points of Interest - Commercial Services** Name: Planguard Location: Llewellyns Quay, Port Talbot, SA13 1RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (S)	325	9	276727 189094
303	**Points of Interest - Commercial Services** Name: Runtech Hauliers Location: Unit 5 Llewellyns Quay, Llewellyns Road, Port Talbot, SA13 1RF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NE (S)	363	9	276690 189052
304	**Points of Interest - Commercial Services** Name: Runtech Hauliers Location: Llewellyns Quay, Port Talbot, SA13 1RF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NW (S)	321	9	276589 189082
305	**Points of Interest - Commercial Services** Name: The Recycling Co Location: Byass Works, The Docks, Port Talbot, SA13 1RS Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A13NW (NW)	366	9	276287 189795
305	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	412	9	276246 189816
305	**Points of Interest - Commercial Services** Name: Scrap Yard Location: SA13 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A12NE (NW)	414	9	276241 189813
306	**Points of Interest - Commercial Services** Name: Valley Waste & Recycling Ltd Location: Byass Works, Dock Road, Port Talbot, SA13 1RS Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	398	9	276197 189686
306	**Points of Interest - Commercial Services** Name: A W D Group Location: Byass Works, Dock Road, Port Talbot, SA13 1RS Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	420	9	276178 189696

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
306	**Points of Interest - Commercial Services** Name: Egan Metals Recycling Ltd Location: Byass Works, The Docks, Port Talbot, SA13 1RS Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	444	9	276141 189671
307	**Points of Interest - Commercial Services** Name: M R M Location: Cwrt-Ucha Terrace, Port Talbot, SA13 1LD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	431	9	277053 189175
307	**Points of Interest - Commercial Services** Name: M R M Automotive Location: Welsh Transport Museum, Port Talbot, SA13 1LD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	470	9	277082 189147
307	**Points of Interest - Commercial Services** Name: Motor Mender Location: 9 Cwrt-Ucha Terrace, Port Talbot, SA13 1LD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	481	9	277109 189165
307	**Points of Interest - Commercial Services** Name: Motor Mender Location: 9 Cwrt-Ucha Terrace, Port Talbot, SA13 1LD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	481	9	277109 189165
307	**Points of Interest - Commercial Services** Name: M R M Automotive Ltd Location: Cwrt-Ucha Terrace, Port Talbot, SA13 1LD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NW (SE)	485	9	277088 189132
308	**Points of Interest - Commercial Services** Name: Smart Revolution Location: 46 Tanygroes Street, Port Talbot, SA13 1EE Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A14NW (E)	458	9	277137 189677
309	**Points of Interest - Commercial Services** Name: Valley Waste Metal Services Location: Green Park Industrial Estate, Port Talbot, SA12 6NT Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A12NE (NW)	500	9	276145 189820
310	**Points of Interest - Commercial Services** Name: Spraycare Body Repairs Location: 22 Forge Road, Port Talbot, SA13 1NU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (N)	512	9	276697 190080
311	**Points of Interest - Commercial Services** Name: Trimtastick Location: Unit 8c Britton Ferry Industrial Estate, Britton Ferry, Pembroke, SA13 Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	603	9	277061 189994
311	**Points of Interest - Commercial Services** Name: Clear Force Location: 12 Pont Street, Port Talbot, SA13 1AN Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A19SW (NE)	625	9	277113 189975
312	**Points of Interest - Commercial Services** Name: Harwoods Location: Water Street, Port Talbot, SA12 6LF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	614	9	276115 189977

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
312	**Points of Interest - Commercial Services** Name: B Harwood & Son Ltd Location: 100 Water Street, Aberavon, SA12 6LF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	614	9	276115 189977
312	**Points of Interest - Commercial Services** Name: B Harwood & Son Location: Water Street, Port Talbot, SA12 6LF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	623	9	276094 189964
313	**Points of Interest - Commercial Services** Name: Tesco Port Talbot East Bank Location: Prior Street, Port Talbot, SA13 1YA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NE (N)	755	9	276708 190325
313	**Points of Interest - Commercial Services** Name: Car Wash Location: Prior Street, Port Talbot, West Glamorgan, SA13 1YA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18NE (N)	755	9	276708 190325
314	**Points of Interest - Commercial Services** Name: Gogo's Motors Location: Unit 3, Isaacs Place, Aberavon, SA12 6NP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12NW (W)	769	9	275803 189705
315	**Points of Interest - Commercial Services** Name: Scrap Yard Location: SA13 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	794	9	277127 190185
316	**Points of Interest - Commercial Services** Name: Taibach Autos Location: 21 Commercial Road, Port Talbot, SA13 1LN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A9NE (SE)	870	9	277405 188911
317	**Points of Interest - Commercial Services** Name: Car Care Location: 66 Cwmavon Road, Port Talbot, SA12 8RF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	904	9	276793 190459
318	**Points of Interest - Commercial Services** Name: R Davies Ltd Location: 2 Sea View Terrace, Baglan, SA12 8HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A23SW (N)	982	9	276291 190517
318	**Points of Interest - Commercial Services** Name: Green Flag Location: 2 Sea View Terrace, Port Talbot, SA12 8HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A23SW (N)	982	9	276291 190517
319	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: SA13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	11	9	276558 189546
320	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NE (E)	55	9	276773 189504

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
321	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	69	9	276550 189640
321	**Points of Interest - Manufacturing and Production** Name: Towngate Business Centre Location: SA13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	126	9	276545 189700
322	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	117	9	276390 189402
322	**Points of Interest - Manufacturing and Production** Name: Steel Works Wharf Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	132	9	276396 189321
323	**Points of Interest - Manufacturing and Production** Name: Business Park Location: SA13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NW (W)	139	9	276409 189523
324	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	170	9	276697 189246
324	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	171	9	276705 189247
324	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	173	9	276700 189244
325	**Points of Interest - Manufacturing and Production** Name: Port Talbot Industrial Estate Location: SA13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	300	9	276211 189445
326	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	307	9	276304 189706
327	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	357	9	276772 189883
327	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	357	9	276772 189883

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
328	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	393	9	276608 189012
329	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	395	9	276807 189042
330	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: SA13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	425	9	276135 189610
331	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	437	9	277057 189170
331	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	467	9	277076 189145
331	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	468	9	277076 189144
332	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	453	9	276312 189943
333	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	543	9	276038 189683
333	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12NE (W)	547	9	276032 189678
333	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12NE (W)	549	9	276030 189680
333	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12NE (W)	552	9	276028 189682
334	**Points of Interest - Manufacturing and Production** Name: Business Centre Location: SA12 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	607	9	276101 189949

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
335	**Points of Interest - Manufacturing and Production** Name: Roderick E W Sons Monumental Sclptrs Location: Brynheulog Street, Port Talbot, SA13 1AF Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A14NE (E)	635	9	277346 189604
336	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	666	9	276577 188732
337	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	750	9	275826 189713
337	**Points of Interest - Manufacturing and Production** Name: Works Location: SA12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	755	9	275820 189712
338	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	759	9	276663 188650
338	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8SE (S)	766	9	276659 188642
338	**Points of Interest - Manufacturing and Production** Name: Tanks Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	777	9	276664 188632
338	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8SE (S)	778	9	276651 188629
338	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8SE (S)	788	9	276667 188621
338	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	812	9	276639 188593
338	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	821	9	276642 188584
339	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	802	9	276986 188674

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
339	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	803	9	276987 188673
340	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	809	9	276021 188746
340	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	810	9	276021 188745
340	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	831	9	275986 188745
341	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	826	9	275778 189795
342	**Points of Interest - Manufacturing and Production** Name: Tank Location: SA13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	847	9	277206 188746
343	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	895	9	276892 188547
343	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	896	9	276892 188546
344	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	902	9	277154 188645
344	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	902	9	277154 188645
345	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	942	9	276159 188518
345	**Points of Interest - Manufacturing and Production** Name: Works Location: SA13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	943	9	276159 188517

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
346	**Points of Interest - Manufacturing and Production** Name: Power Station Location: SA12 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	991	9	275565 189704
347	**Points of Interest - Public Infrastructure** Name: Texaco Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (E)	121	9	276821 189552
347	**Points of Interest - Public Infrastructure** Name: Port Talbot Service Stations Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (E)	122	9	276821 189553
347	**Points of Interest - Public Infrastructure** Name: Port Talbot Sstn Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (E)	122	9	276821 189553
347	**Points of Interest - Public Infrastructure** Name: Port Talbot Service Station Location: Port Talbot Service Station, Talbot Road, Port Talbot, SA13 1HN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13NE (E)	122	9	276821 189553
348	**Points of Interest - Public Infrastructure** Name: Port Talbot Parkway Rail Station Location: Heilbronn Way, SA13 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13NE (N)	146	9	276662 189703
348	**Points of Interest - Public Infrastructure** Name: Port Talbot Parkway Station Location: Heilbronn Way, SA13 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A13NE (N)	146	9	276662 189703
348	**Points of Interest - Public Infrastructure** Name: Bus Station Location: SA13 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	163	9	276742 189683
349	**Points of Interest - Public Infrastructure** Name: Port Talbot Police Station Location: Station Road, Port Talbot, SA13 1JB Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A13NE (NE)	215	9	276809 189698
350	**Points of Interest - Public Infrastructure** Name: It Asset Disposal Ltd Location: Unit 2e, Cramic Way, Port Talbot, SA13 1RU Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A18SW (NW)	306	9	276437 189849
351	**Points of Interest - Public Infrastructure** Name: Drake Clearance Services Location: 13 Devonshire Place, Port Talbot, SA13 1SG Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A14SW (E)	316	9	277033 189416
352	**Points of Interest - Public Infrastructure** Name: The Recycling Co Location: Byass Works, The Docks, Port Talbot, West Glamorgan, SA13 1RS Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A13NW (NW)	367	9	276286 189794

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
353	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA13 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	419	9	276873 189042
353	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA13 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	422	9	276877 189041
354	**Points of Interest - Public Infrastructure** Name: Bus Station Location: SA13 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	497	9	276369 190028
354	**Points of Interest - Public Infrastructure** Name: Bus Station Location: SA13 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A18SW (N)	511	9	276395 190055
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	548	9	276058 189741
355	**Points of Interest - Public Infrastructure** Name: Weir Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	548	9	276049 189721
355	**Points of Interest - Public Infrastructure** Name: Weir Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	550	9	276047 189721
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	550	9	276056 189741
355	**Points of Interest - Public Infrastructure** Name: Weir Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	552	9	276058 189751
355	**Points of Interest - Public Infrastructure** Name: Weir Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	554	9	276055 189750
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	564	9	276023 189702
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	568	9	276021 189706

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
355	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	582	9	276005 189706
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	587	9	276017 189744
355	**Points of Interest - Public Infrastructure** Name: Sluice Location: SA12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	590	9	276013 189743
356	**Points of Interest - Public Infrastructure** Name: Graveyard Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	569	9	276182 189983
356	**Points of Interest - Public Infrastructure** Name: Graveyard Location: SA12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	569	9	276183 189984
356	**Points of Interest - Public Infrastructure** Name: Cemetery Location: SA12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	616	9	276198 190061
356	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	621	9	276191 190061
357	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Prior St, Port Talbot, West Glamorgan, SA13 1YA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (N)	581	9	276484 190152
358	**Points of Interest - Public Infrastructure** Name: Weir Location: SA13 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	697	9	277145 188888
359	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	704	9	275859 189671
360	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Station Location: Prior Street, Port Talbot, SA13 1YA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	753	9	276705 190323
360	**Points of Interest - Public Infrastructure** Name: Tesco Port Talbot East Bank Location: Prior Street, Port Talbot, SA13 1YA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NE (N)	755	9	276708 190325

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
361	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA13 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	796	9	275752 189647
361	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA13 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	800	9	275747 189646
362	**Points of Interest - Public Infrastructure** Name: Weir Location: SA13 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	822	9	277539 189379
362	**Points of Interest - Public Infrastructure** Name: Weir Location: SA13 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	824	9	277541 189380
363	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	890	9	275639 189593
363	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	894	9	275635 189593
363	**Points of Interest - Public Infrastructure** Name: Outfall Location: SA12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	912	9	275607 189547
364	**Points of Interest - Public Infrastructure** Name: Port Talbot Fire Station Location: Rear of Commercial Road, Port Talbot, SA13 1LG Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A9SE (SE)	970	9	277403 188757
365	**Points of Interest - Recreational and Environmental** Name: Playground Location: Park Street, SA13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14SE (E)	714	9	277381 189186
365	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	719	9	277391 189198
366	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	834	9	276490 190409
366	**Points of Interest - Recreational and Environmental** Name: Playground Location: Glen View Terrace, SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18NW (N)	836	9	276504 190412

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
367	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	899	9	276905 190419
367	**Points of Interest - Recreational and Environmental** Name: Playground Location: Cross Street, SA13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	900	9	276905 190420
368	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	924	9	276005 190300
368	**Points of Interest - Recreational and Environmental** Name: Play Area Location: SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	946	9	275990 190316
368	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	980	9	275968 190343
368	**Points of Interest - Recreational and Environmental** Name: Playground Location: Hopkin Street, SA12 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A17NE (NW)	992	9	275959 190351

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Bridgend County Borough Council - Environmental Health Department	January 2020	Annual Rolling Update
Natural Resources Wales	June 2020	Annually
Neath Port Talbot County Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
City and County of Swansea - Environmental Health Department	September 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	August 2023	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Welsh Region	January 2009	
Integrated Pollution Prevention And Control		
Natural Resources Wales	August 2023	Quarterly
Environment Agency - Welsh Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Swansea Bay Port Health Authority	April 2014	Variable
City and County of Swansea - Environmental Health Department	December 2020	Variable
Bridgend County Borough Council - Environmental Health Department	July 2015	Variable
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Variable
Local Authority Pollution Prevention and Controls		
Swansea Bay Port Health Authority	April 2014	Annually
Bridgend County Borough Council - Environmental Health Department	July 2015	Not Applicable
City and County of Swansea - Environmental Health Department	June 2014	Annual Rolling Update
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Swansea Bay Port Health Authority	April 2014	Variable
Bridgend County Borough Council - Environmental Health Department	July 2015	Variable
City and County of Swansea - Environmental Health Department	June 2014	Variable
Neath Port Talbot County Borough Council - Environmental Health Department	March 2015	Variable
Nearest Surface Water Feature		
Ordnance Survey	July 2023	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	July 2015	
Natural Resources Wales	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	
Natural Resources Wales	March 2013	
Registered Radioactive Substances		
Natural Resources Wales	January 2015	
Environment Agency - Welsh Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register		
Natural Resources Wales	August 2023	Quarterly
Environment Agency Wales - South West Area	January 2021	Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions		
Environment Agency - Welsh Region	April 2023	Quarterly
Natural Resources Wales	June 2023	Quarterly
Water Industry Act Referrals		
Environment Agency - Welsh Region	October 2017	
Natural Resources Wales	October 2022	
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Source Protection Zones		
Natural Resources Wales	July 2022	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences		
Natural Resources Wales	September 2020	
Flooding from Rivers or Sea without Defences		
Natural Resources Wales	September 2020	
Areas Benefiting from Flood Defences		
Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas		
Natural Resources Wales	August 2019	Quarterly
Flood Defences		
Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines		
Ordnance Survey	July 2023	Quarterly
Surface Water 1 in 30 year Flood Extent		
Natural Resources Wales	May 2018	Annually
Surface Water 1 in 100 year Flood Extent		
Natural Resources Wales	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent		
Natural Resources Wales	May 2018	Annually
Surface Water Suitability		
Natural Resources Wales	February 2016	Annually
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Natural Resources Wales	March 2023	As notified
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - South West Area	January 2023	Quarterly
Natural Resources Wales	October 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Natural Resources Wales	August 2023	Quarterly
Environment Agency Wales - South West Area	July 2021	Quarterly
Local Authority Landfill Coverage		
Bridgend County Borough Council	February 2003	Not Applicable
City and County of Swansea - Environmental Health Department	February 2003	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Bridgend County Borough Council	October 2018	
City and County of Swansea - Environmental Health Department	October 2018	
Neath Port Talbot County Borough Council - Environmental Health Department	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency Wales - South West Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - South West Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - South West Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	March 2023	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
City and County of Swansea - Planning Department	June 2023	Variable
Bridgend County Borough Council - Planning Department	March 2023	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
Bridgend County Borough Council - Planning Department	February 2016	Variable
City and County of Swansea - Planning Department	January 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	December 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	September 2022	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	September 2022	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	July 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	September 2023	Quarterly
Points of Interest - Education and Health PointX	September 2023	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2023	Quarterly
Points of Interest - Public Infrastructure PointX	September 2023	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2023	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	April 2023	Bi-Annually
Areas of Adopted Green Belt		
Bridgend County Borough Council	August 2023	Quarterly
City and County of Swansea	August 2023	Quarterly
Neath Port Talbot County Borough Council - Planning Services	August 2023	Quarterly
Areas of Unadopted Green Belt		
Bridgend County Borough Council	August 2023	Quarterly
City and County of Swansea	August 2023	Quarterly
Neath Port Talbot County Borough Council - Planning Services	August 2023	Quarterly
Areas of Outstanding Natural Beauty		
Natural Resources Wales	April 2023	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	May 2023	Not Applicable
Local Nature Reserves		
Bridgend County Borough Council	August 2023	Bi-Annually
City and County of Swansea	August 2023	Bi-Annually
Neath Port Talbot County Borough Council	August 2023	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	April 2023	Bi-Annually
National Nature Reserves		
Natural Resources Wales	February 2023	Bi-Annually
National Parks		
Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	April 2016	
Natural Resources Wales	March 2023	Bi-Annually
Ramsar Sites		
Natural Resources Wales	March 2023	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	March 2023	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	April 2023	Bi-Annually
Special Protection Areas		
Natural Resources Wales	April 2023	Bi-Annually

Data Suppliers

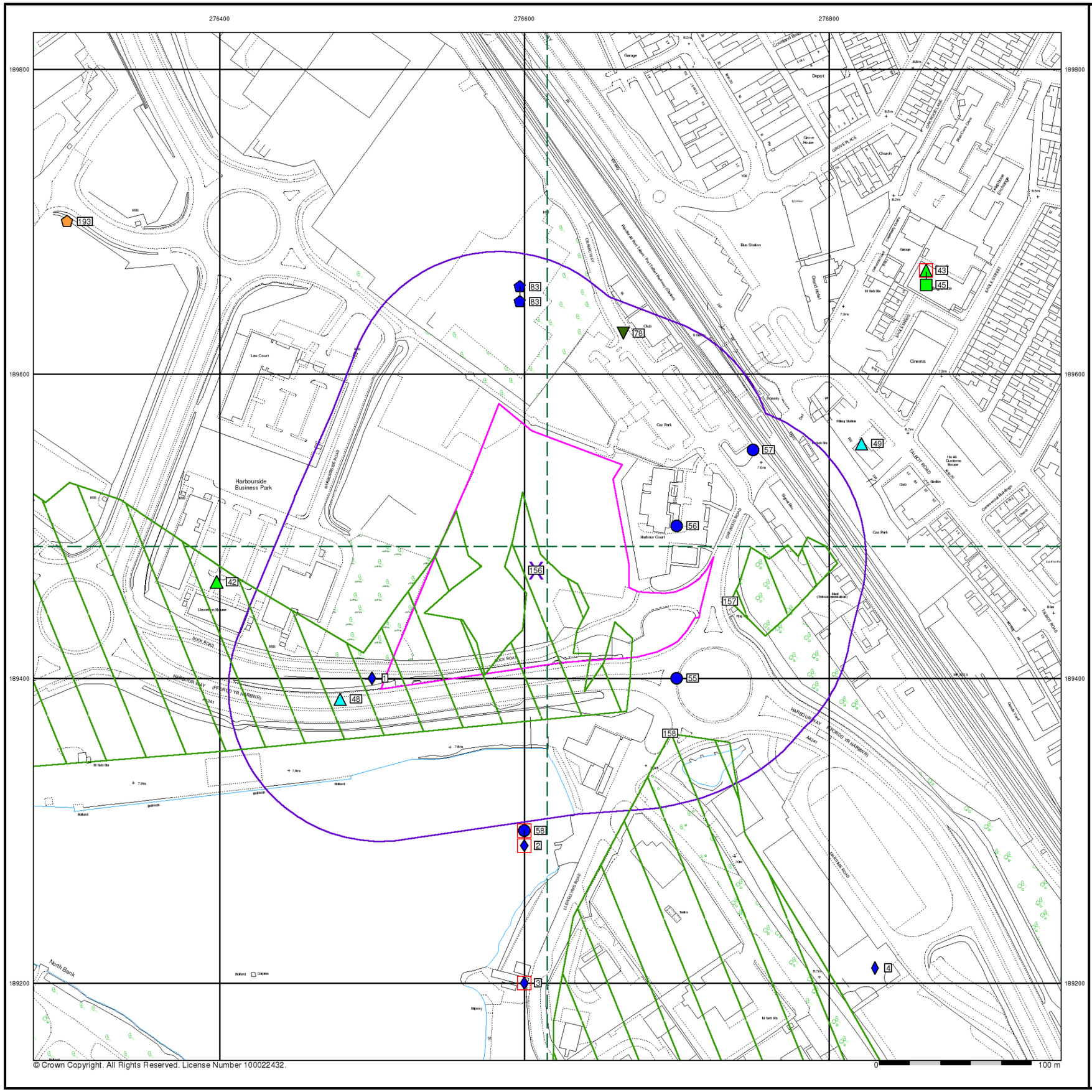
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	Stantec

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	**Neath Port Talbot County Borough Council - Environmental Health Department** Room 322, Neath Civic Centre, Neath, West Glamorgan, SA11 3QZ	Telephone: 01639 763333 Fax: 01693 763444 Website: www.neath-porttalbot.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
7	**Neath Port Talbot County Borough Council - Planning Department** Port Talbot Civic Centre, Port Talbot, SA13 1PJ	Telephone: 01639 763333 Fax: 01639 763444 Website: www.neath-porttalbot.gov.uk
8	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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Hydrock

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

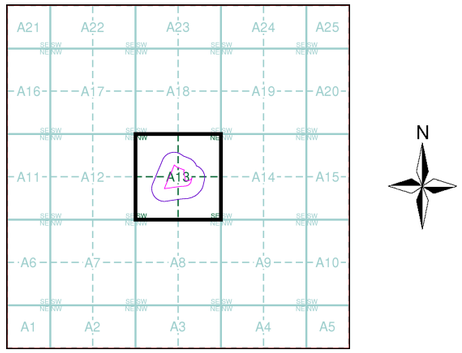
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

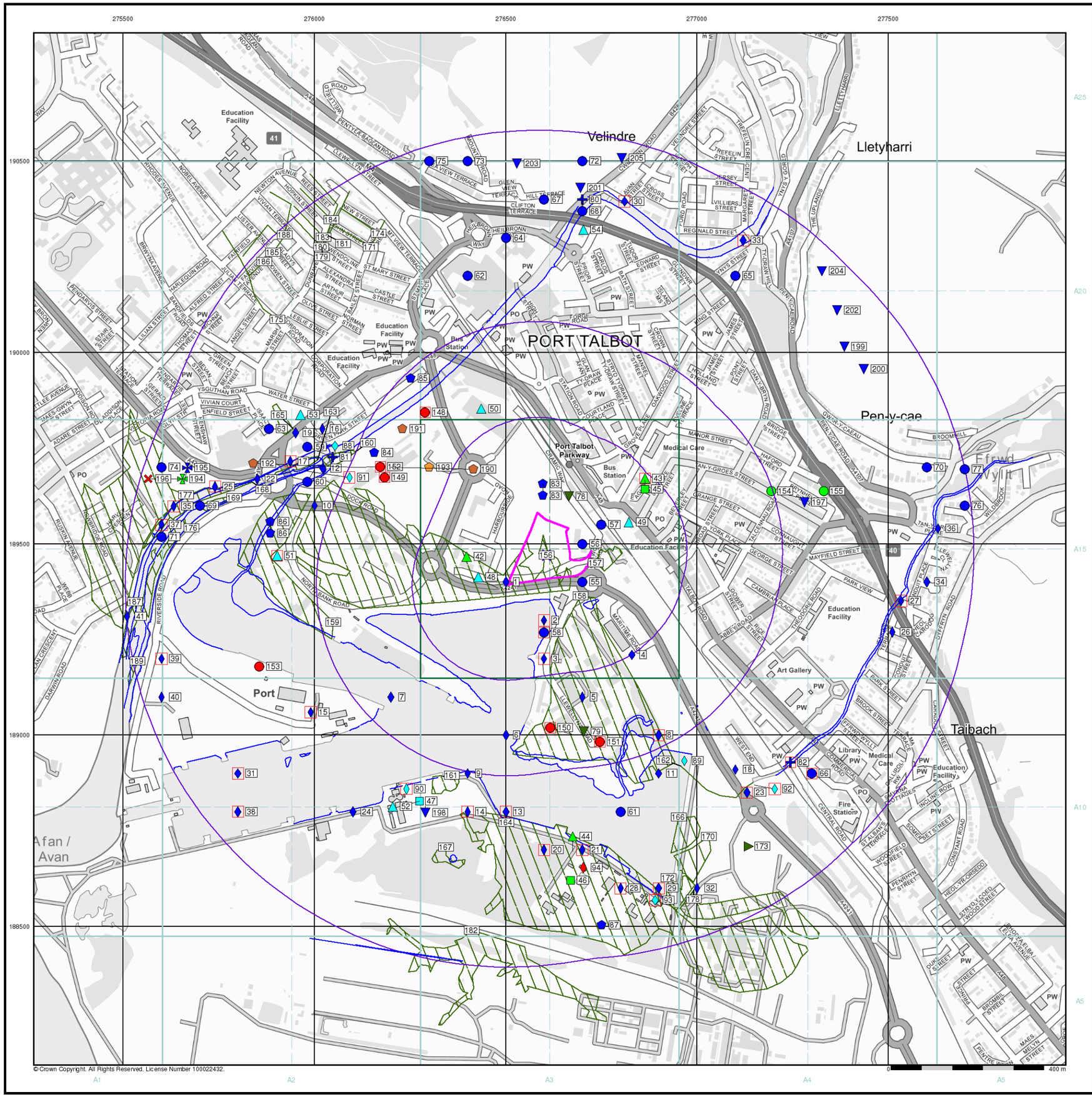
Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Plot Buffer (m):	100

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk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189000
188500
Velindre
Lletyharri
PORT TALBOT
Pen-y-cae
Taibach
Port
Afan / Avan
Education Facility
Bus Station
Port Talbot Parkway
Medical Care
Art Gallery
Library
Fire Station
A4107
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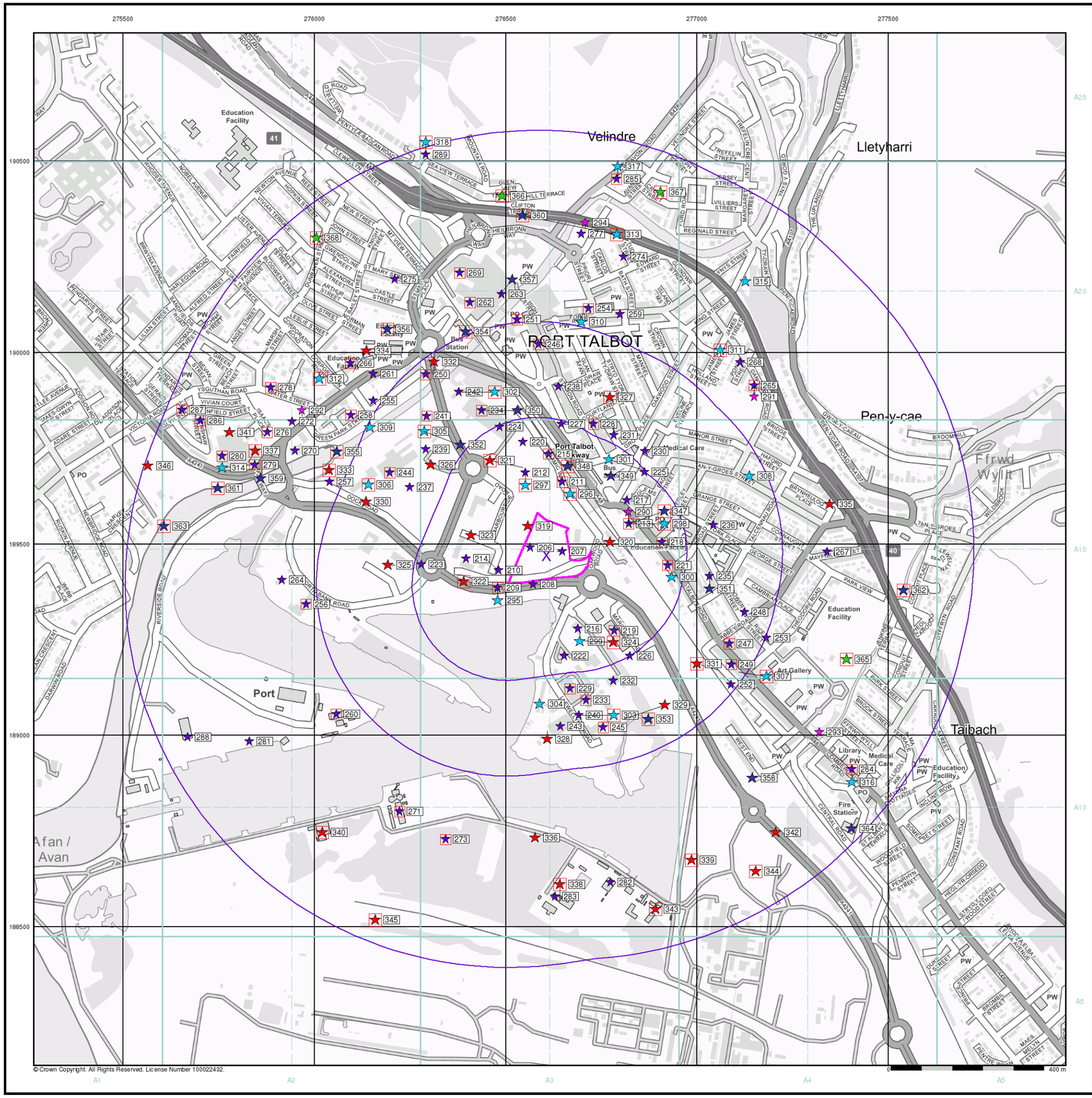
A4



Hydrock

Industrial Land Use Map

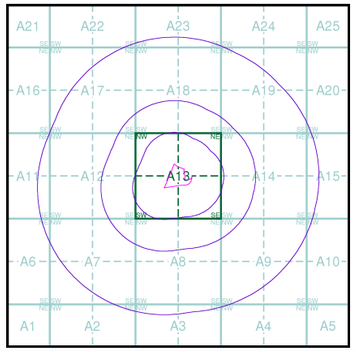
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



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Order Details

Order Number:	317152831_1_1
Customer Ref:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

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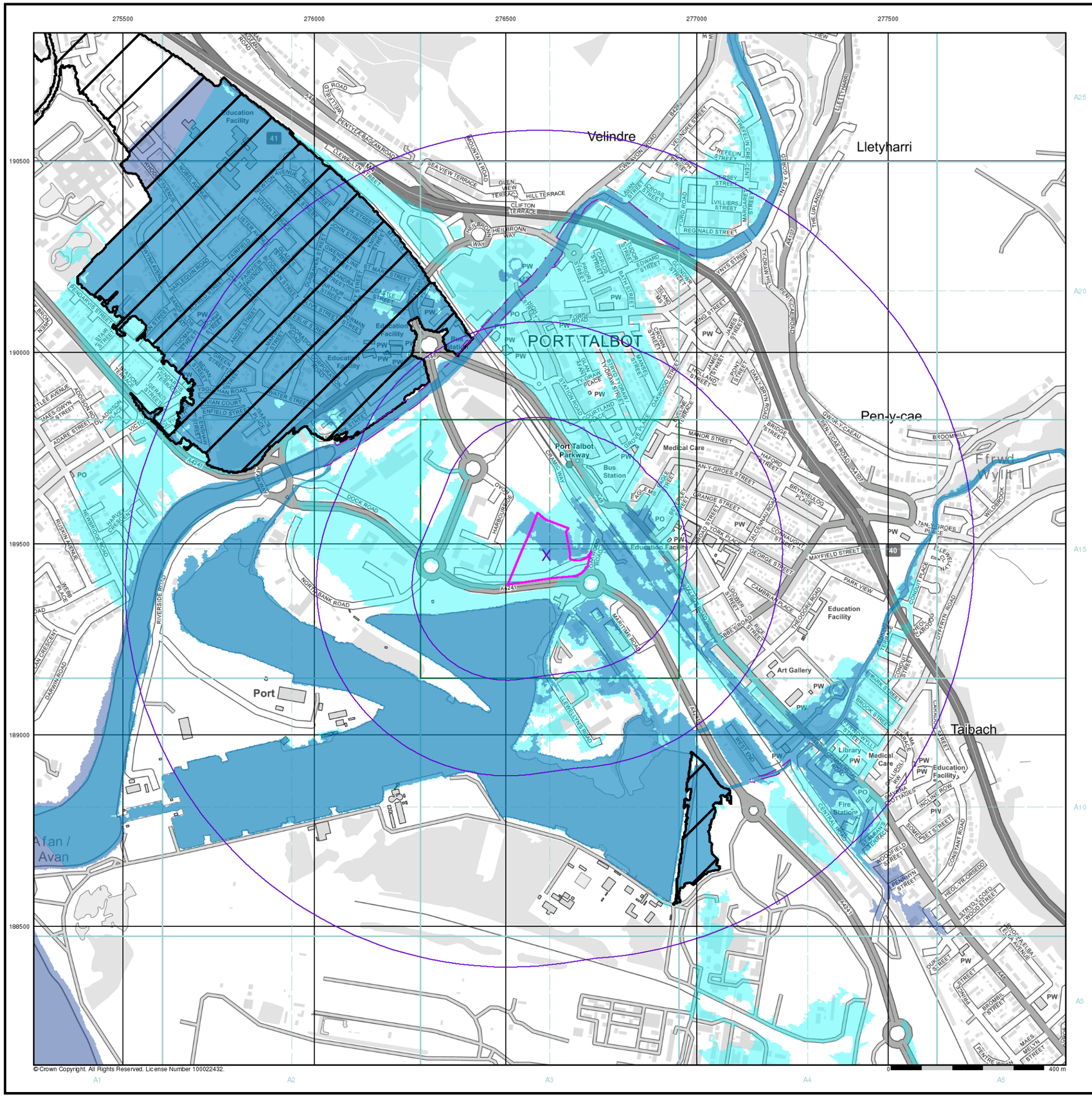

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Hydrock

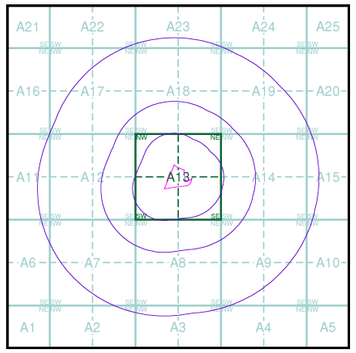
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



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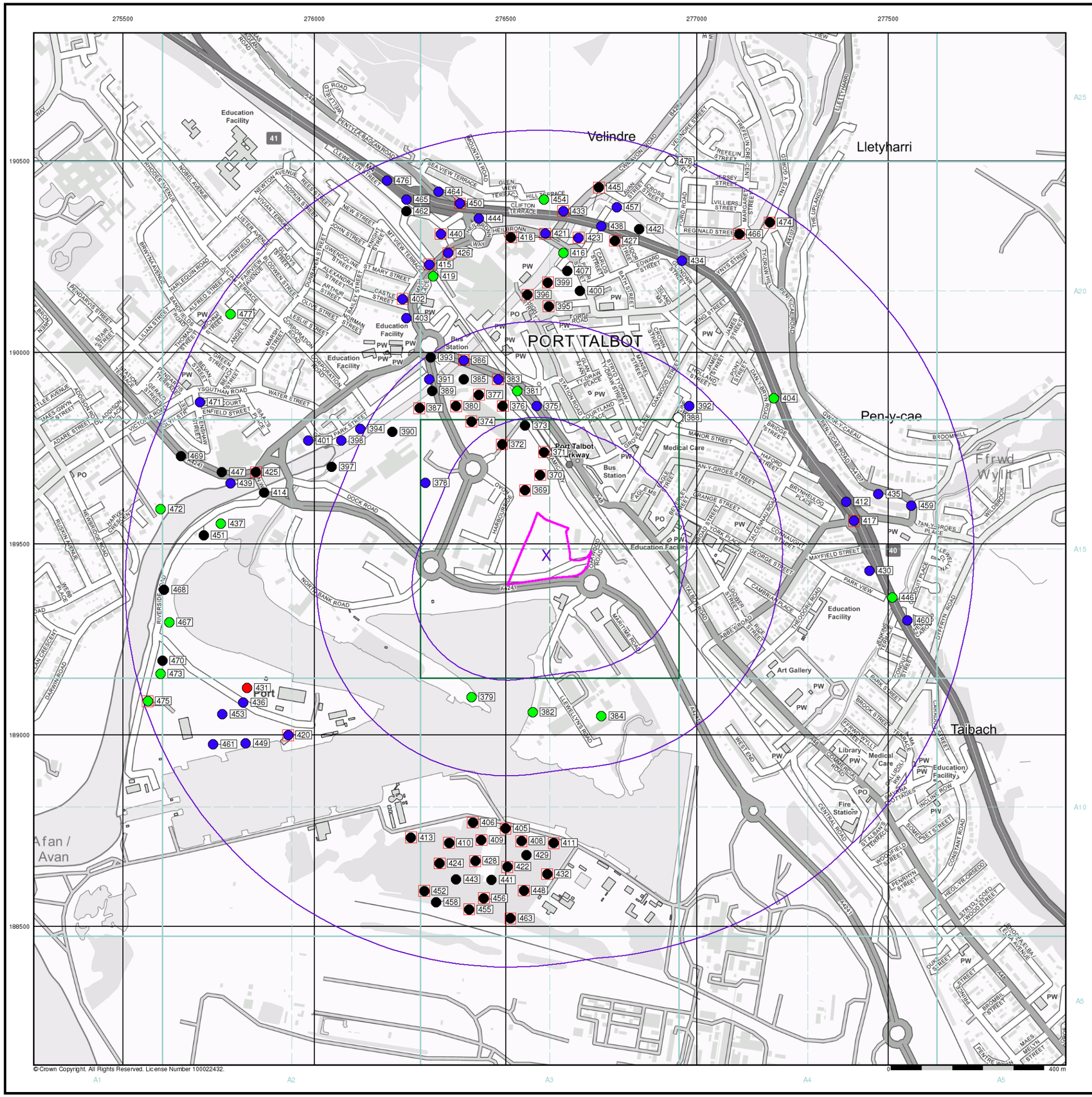


Hydrock

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

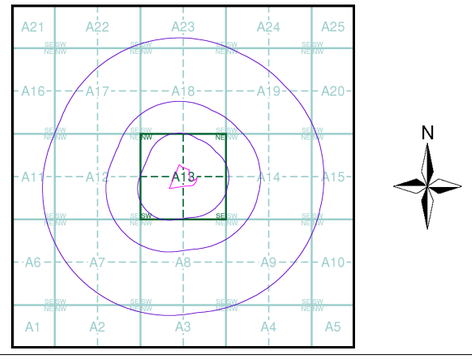
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



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Hydrock

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

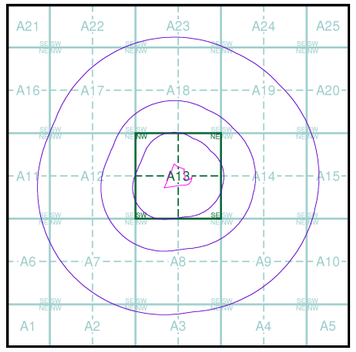
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



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Order Details

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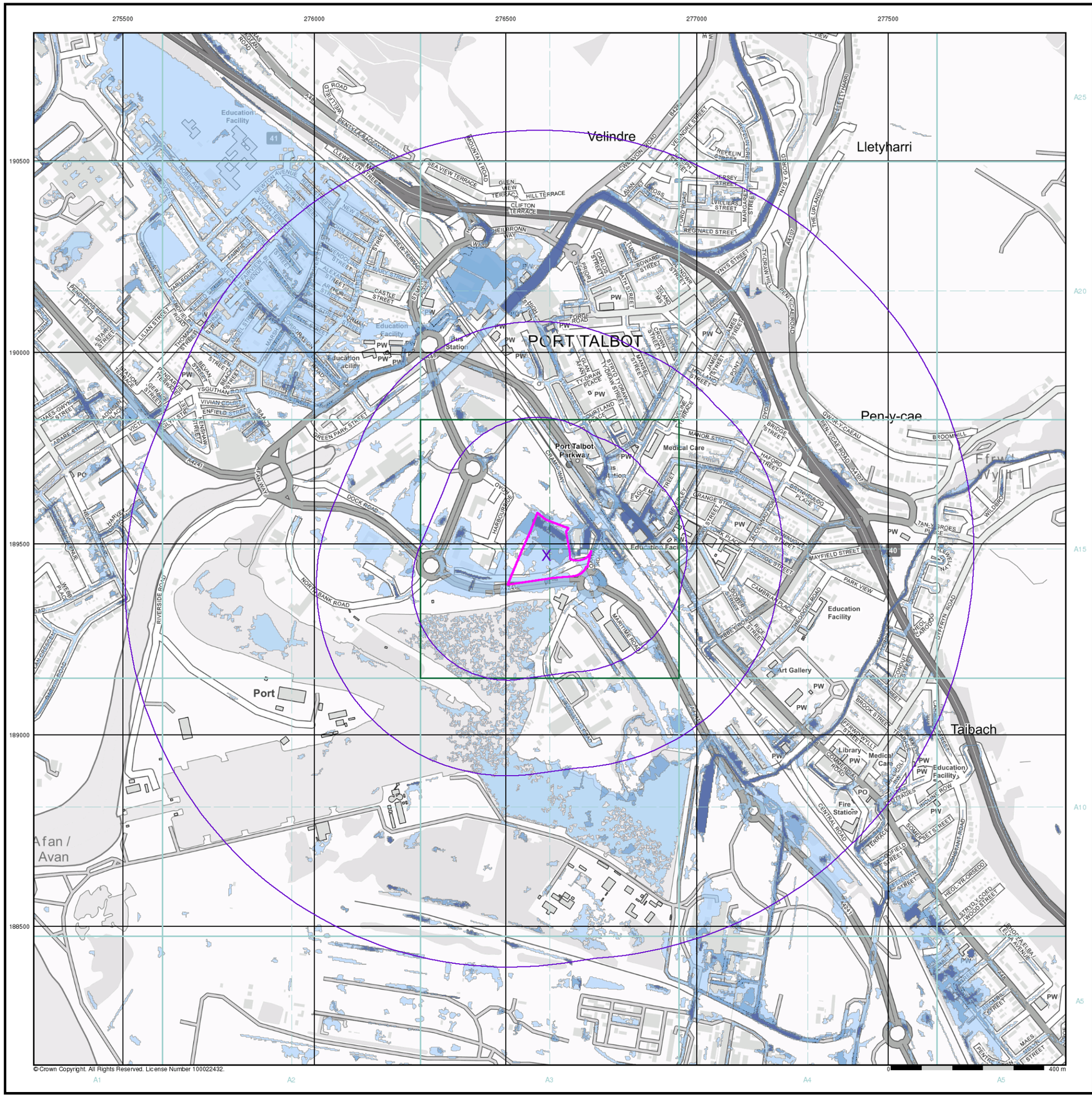
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE



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Hydrock

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

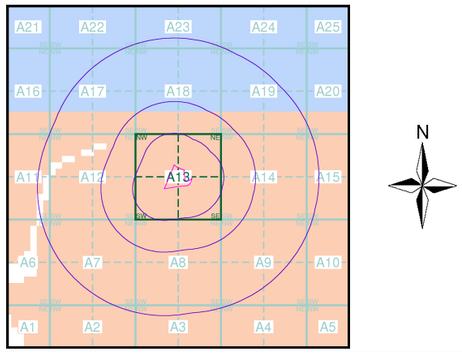
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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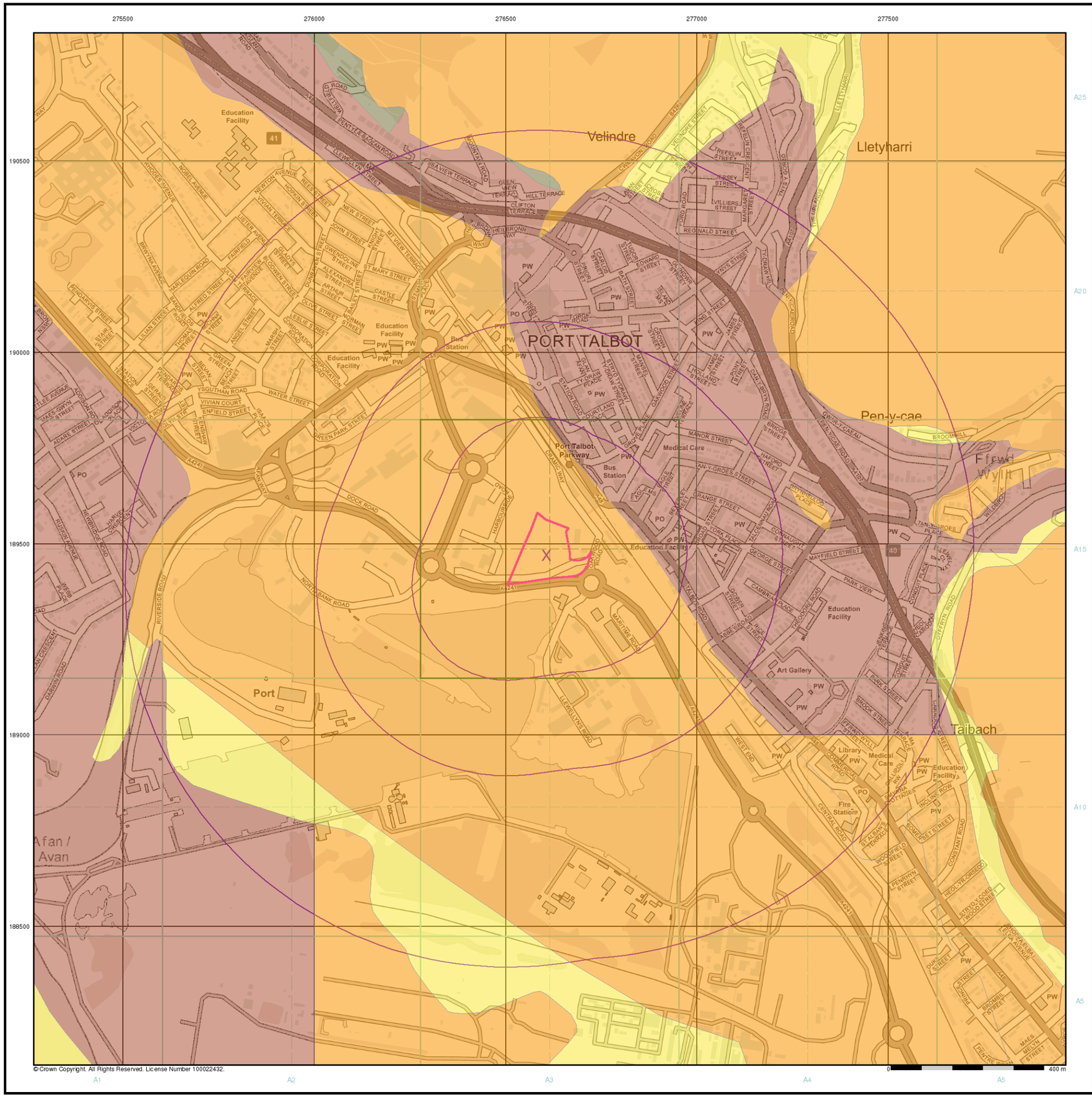
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PORT TALBOT
Pen-y-cae
Taibach
Port
Afan / Avan
Education Facility
Bus Station
Port Talbot Parkway
Medical Care
Art Gallery
Library
Fire Station
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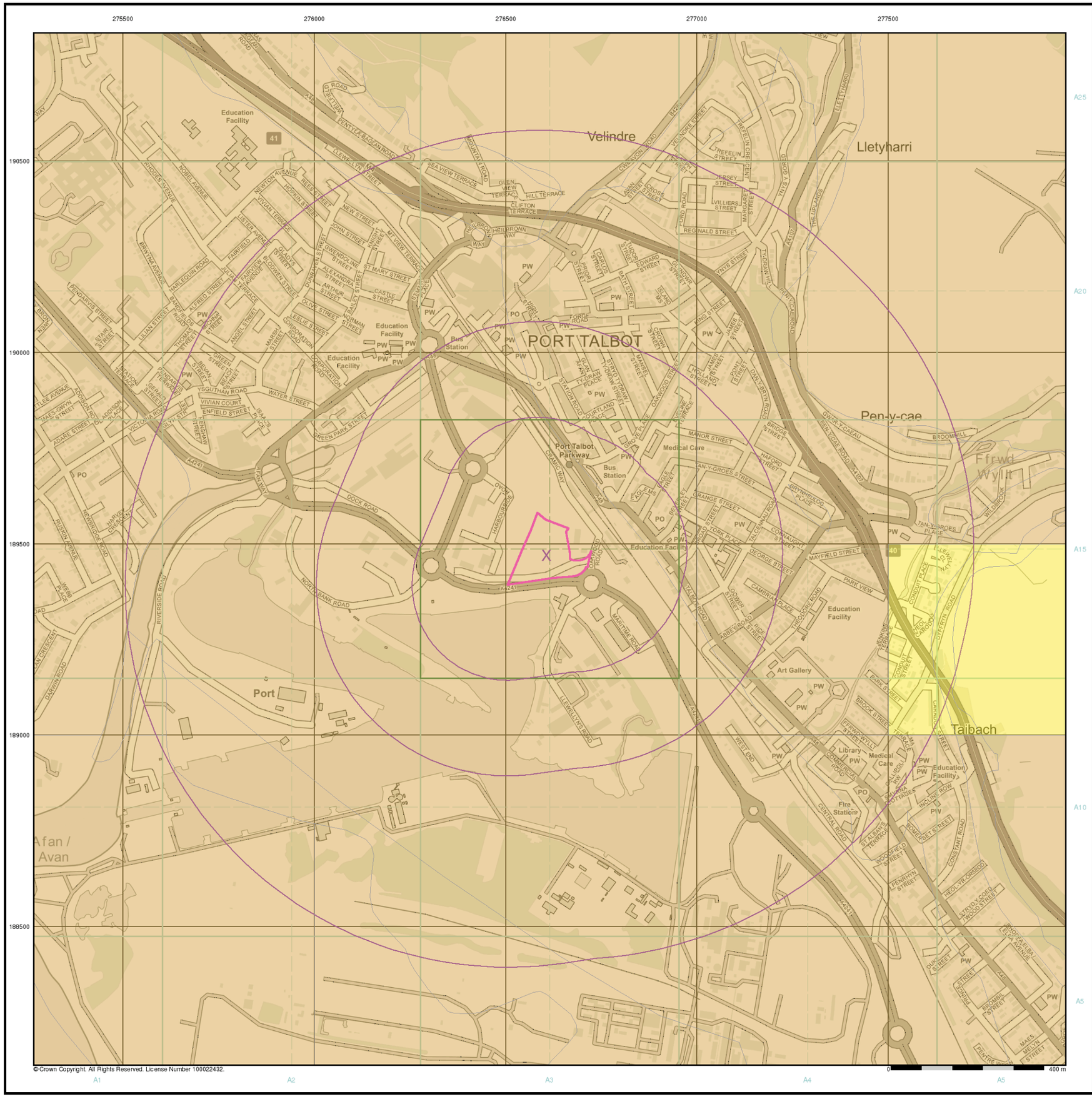


Hydrock

General

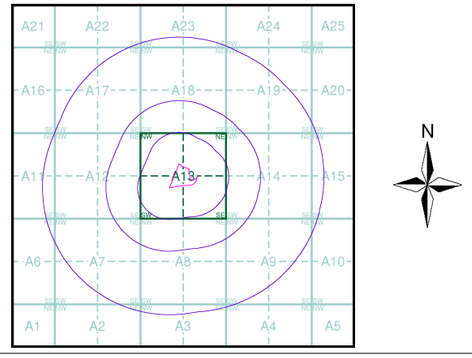
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



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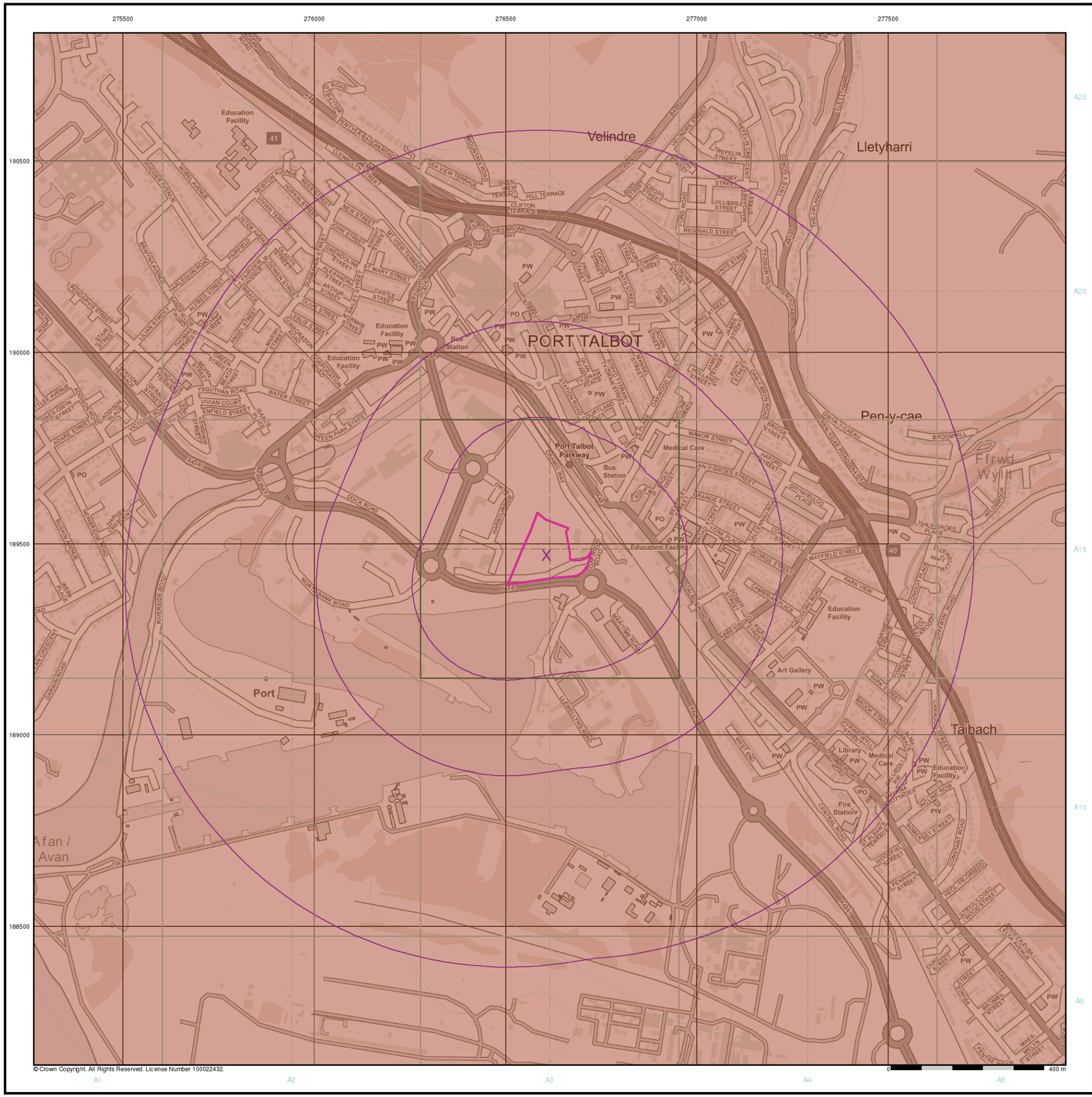


Hydrock

General

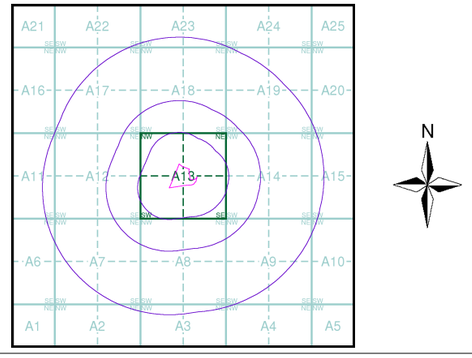
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



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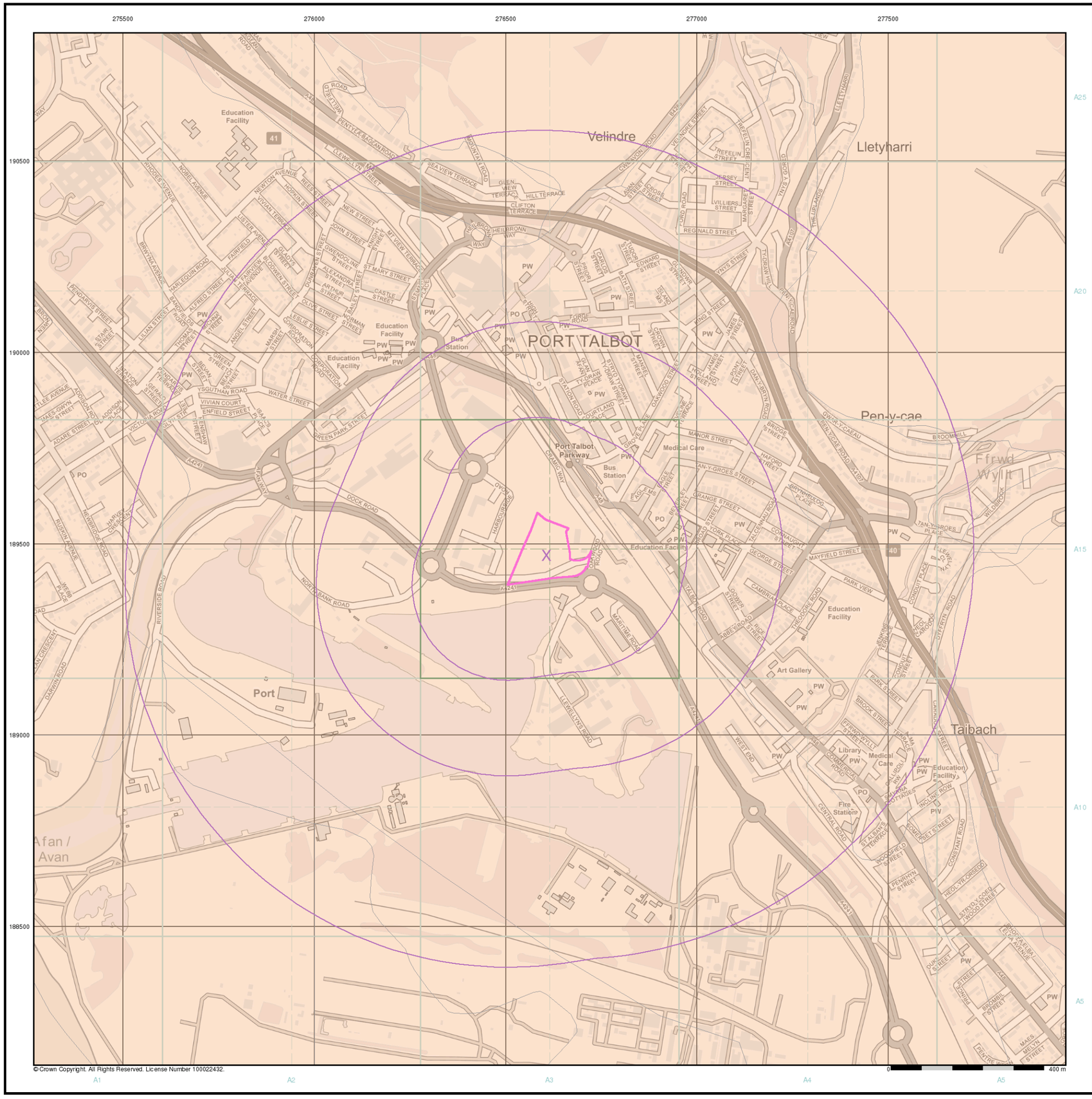


Hydrock

General

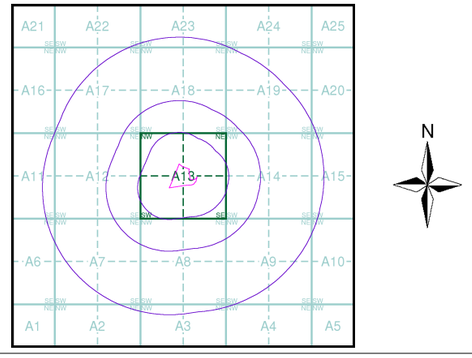
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



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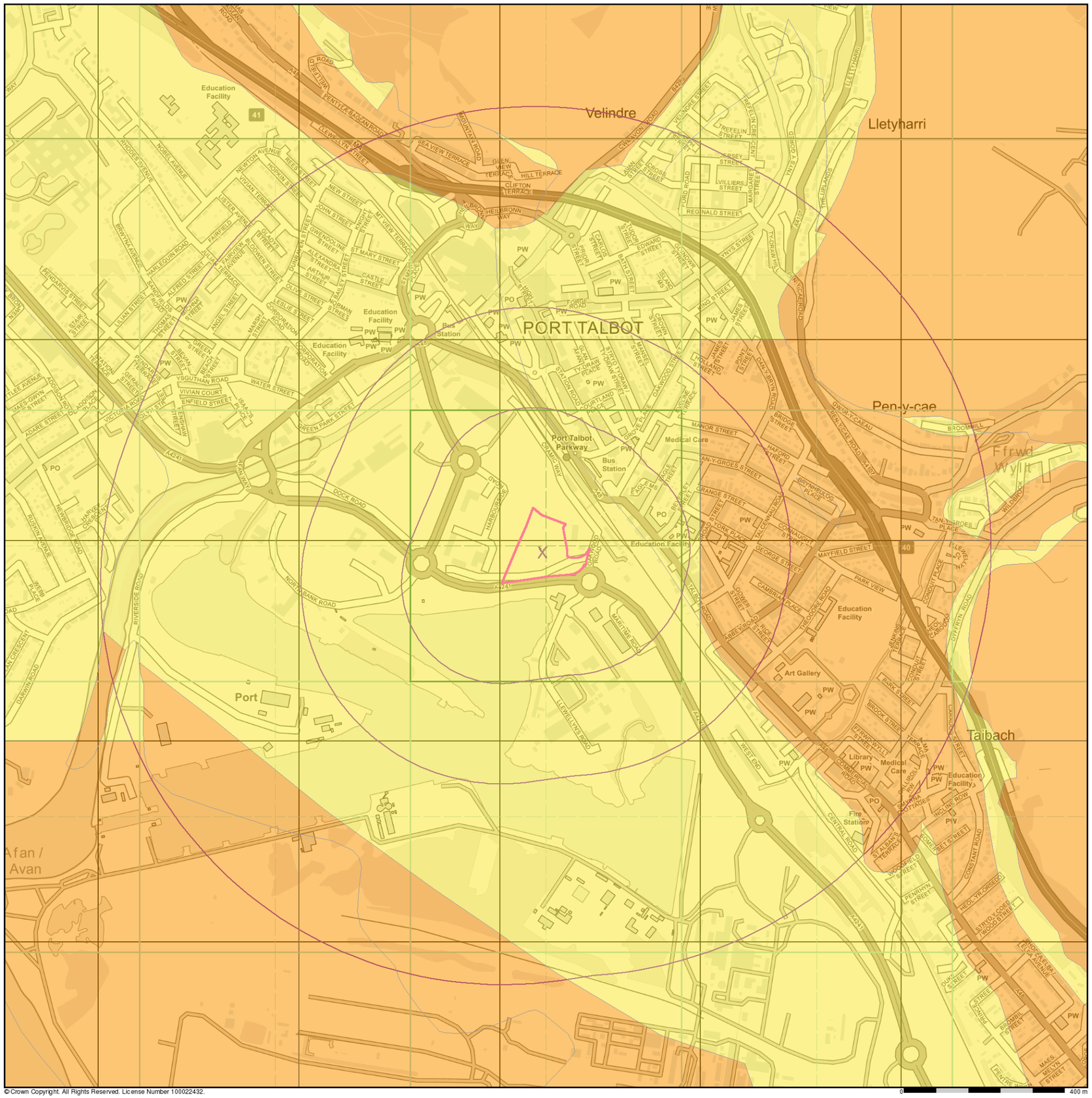
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Ffrwd Wylit
Taibach
Port
Afan / Avan
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Bus Station
Port Talbot Parkway
Medical Care
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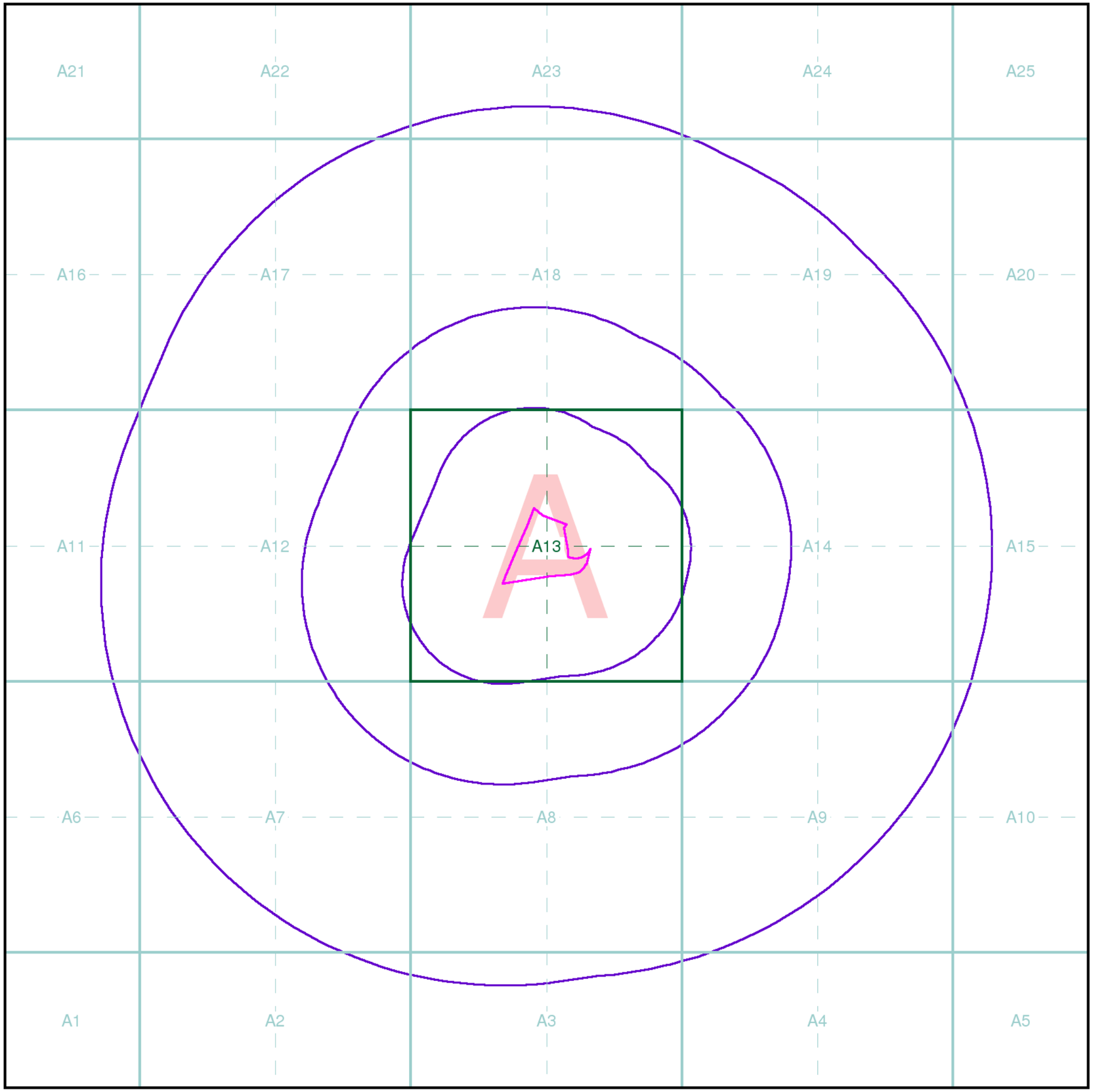

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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details
Mr R Swayne, Hydrock Consultants, Over Court Barns, Over Lane, Almondsbury, Bristol, BS32 4DF

Order Details
Order Number: 317152831_1_1
Customer Ref: 26279
National Grid Reference: 276610, 189470
Site Area (Ha): 2.07
Search Buffer (m): 1000

Site Details
Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

BGS archive records

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LSGR	Landscaped Ground (Undivided)	Artificially Modified Ground	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SUPNM	Superficial Theme Not Mapped [For Digital Map Use Only]	Unknown/Unclassified Entry	Not Supplied - Not Supplied
	TFD	Tidal Flat Deposits	Clay, Silt and Sand	Not Supplied - Holocene
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	ALV	Alluvium	Sand and Gravel	Not Supplied - Holocene
	GFICD	Glaciofluvial Ice Contact Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	ALF	Alluvial Fan Deposits	Sand and Gravel	Not Supplied - Quaternary
	BSA	Blown Sand	Sand	Not Supplied - Quaternary
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	MBD	Marine Beach Deposits	Sand	Not Supplied - Quaternary
	STOB	Storm Beach Deposits	Gravel	Not Supplied - Quaternary
	MBD	Marine Beach Deposits	Sand and Gravel	Not Supplied - Quaternary
	RSBD	Raised Storm Beach Deposits	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	BD	Brithdir Member	Sandstone	Not Supplied - Westphalian
	BD	Brithdir Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SWUCM	South Wales Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	LLFB	Llynfi Member	Sandstone	Not Supplied - Westphalian
	LLFB	Llynfi Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	RA	Rhondda Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	RA	Rhondda Member	Sandstone	Not Supplied - Westphalian
	SWUCM	South Wales Upper Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	SWMCM	South Wales Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
		Faults		
		Rock Segments		

Hydrock

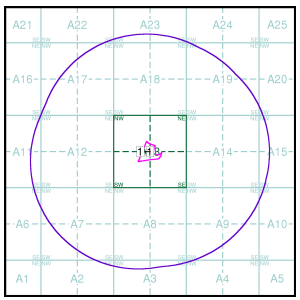
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**247**
Map Name:	**Swansea**
Map Date:	**2011**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A



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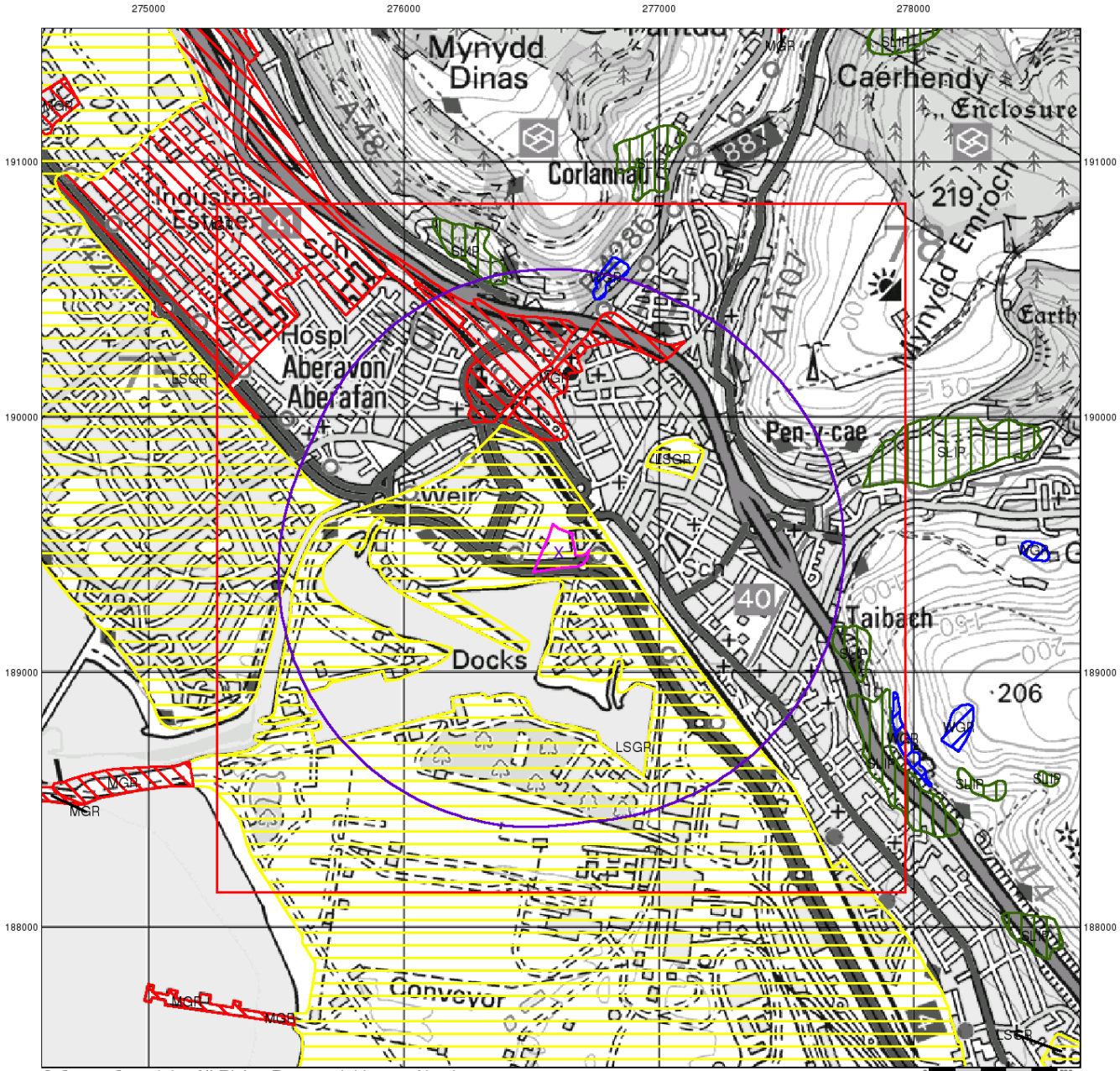
Site Details:

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE



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Hydrock

Artificial Ground and Landslip

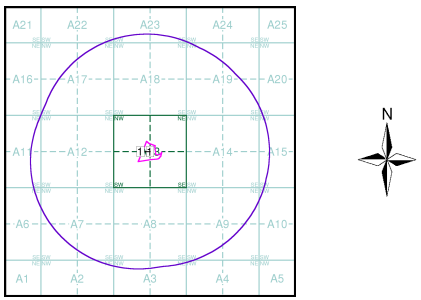
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



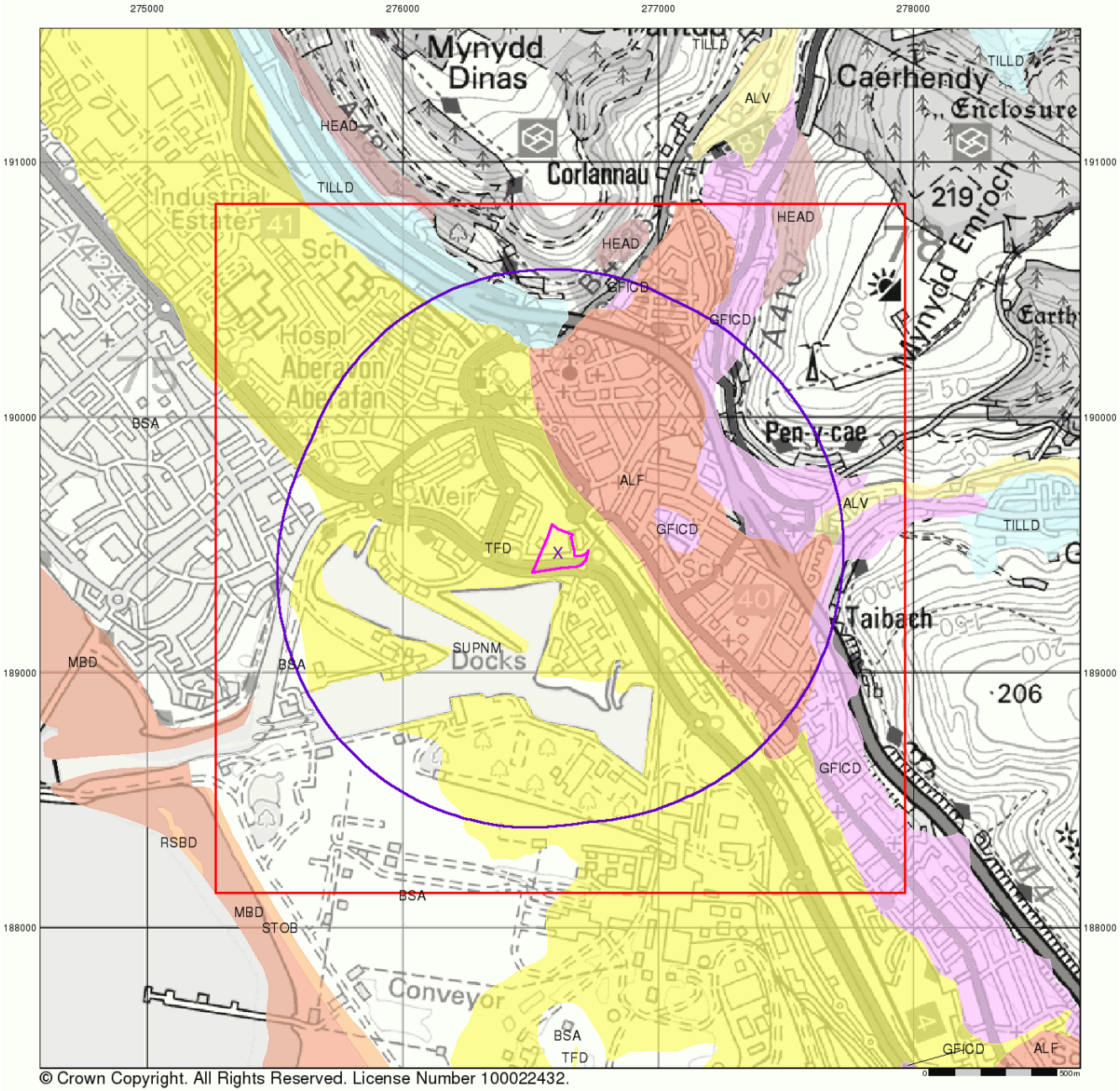
Order Details:

Order Number:	317152831_1_1
Customer Reference:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details:

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Hydrock

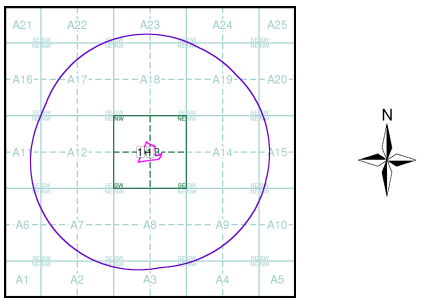
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



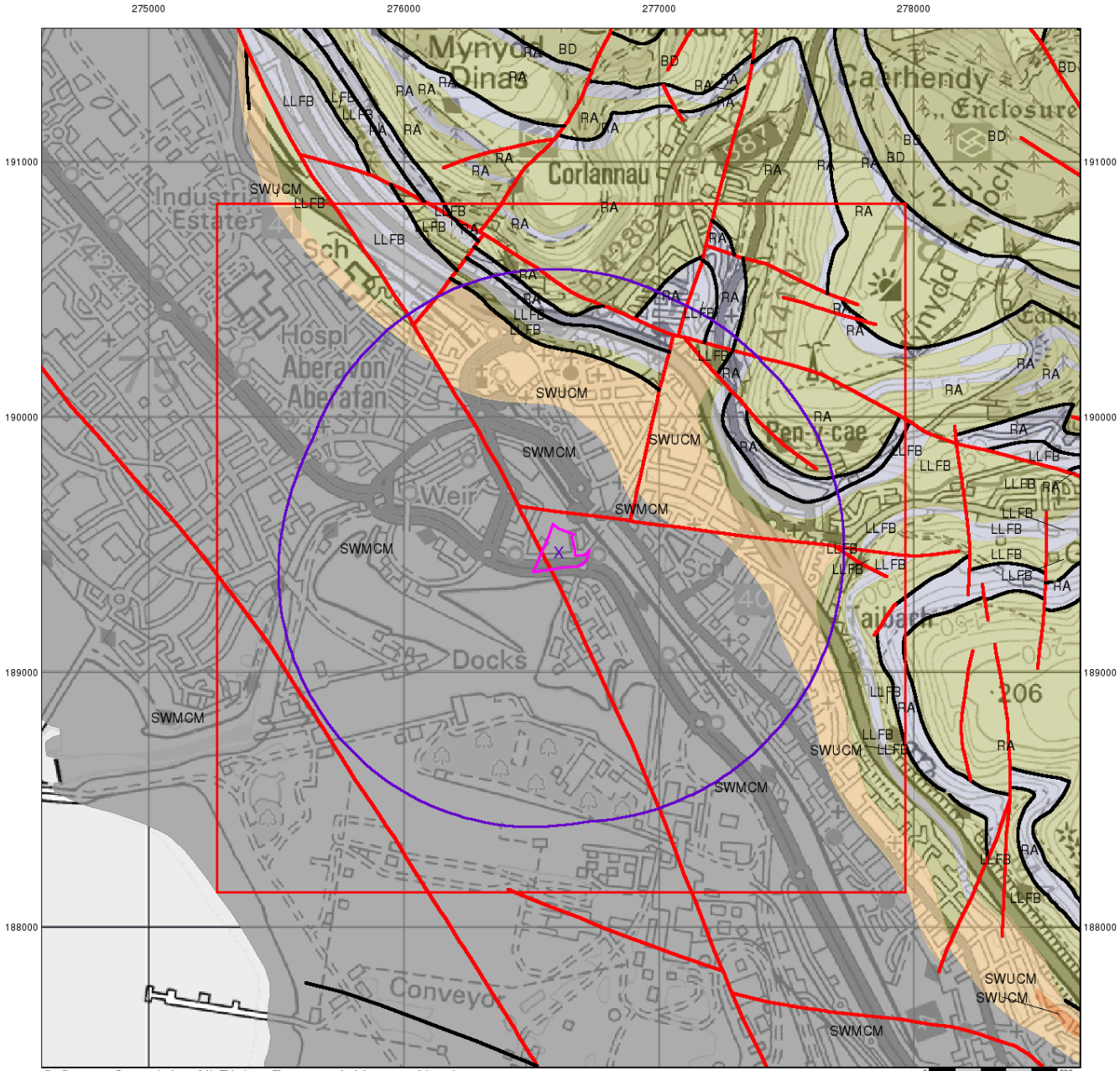
Order Details:

Order Number:	317152831_1_1
Customer Reference:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details:

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Hydrock

Bedrock and Faults

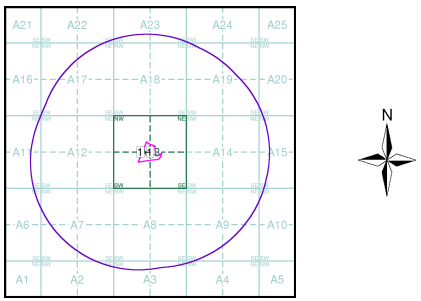
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



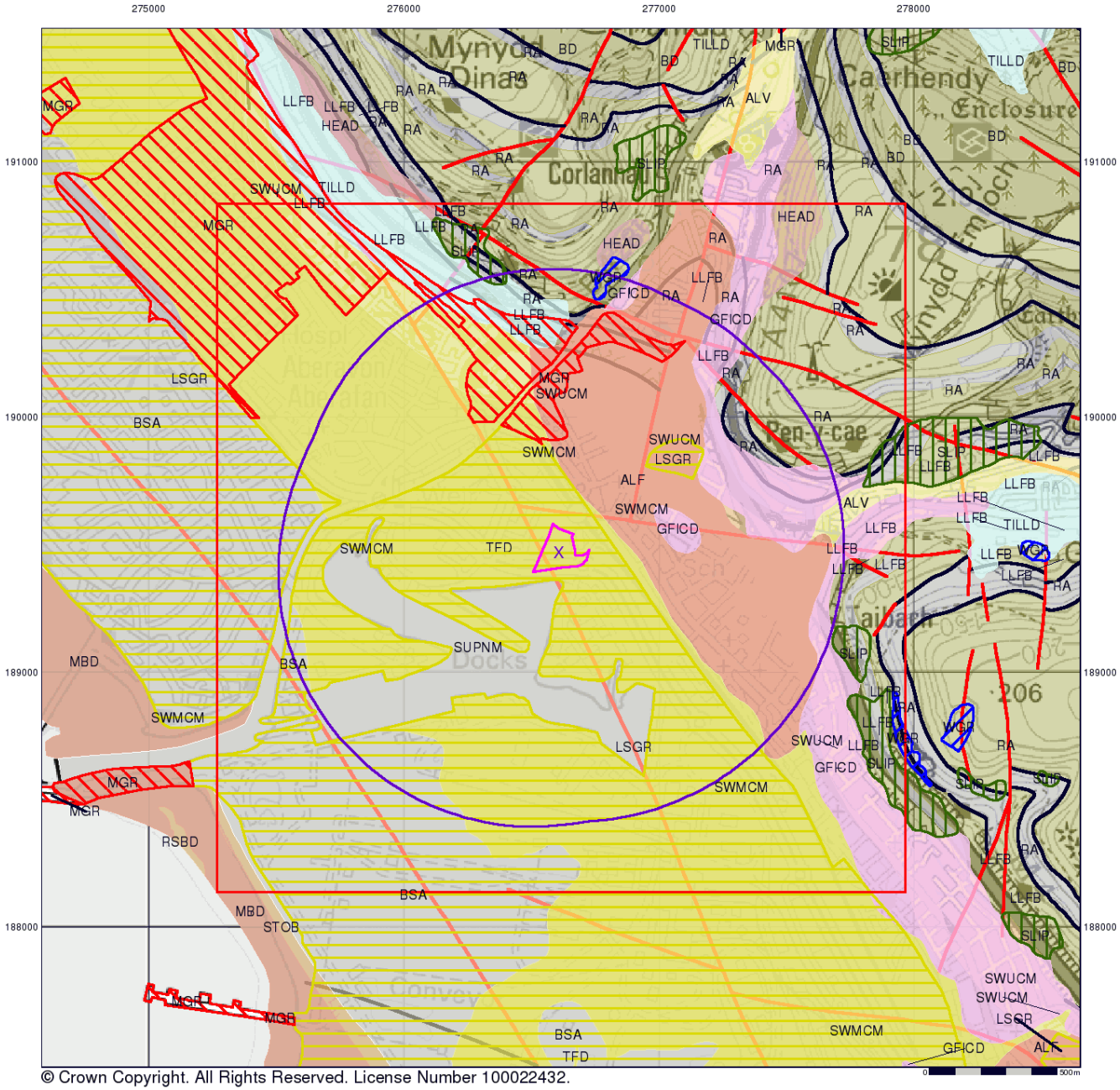
Order Details:

Order Number:	317152831_1_1
Customer Reference:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details:

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Hydrock

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

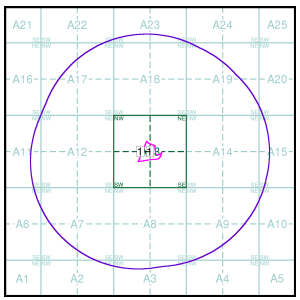
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



N

Order Details:

Order Number:	317152831_1_1
Customer Reference:	26279
National Grid Reference:	276610, 189470
Slice:	A
Site Area (Ha):	2.07
Search Buffer (m):	1000

Site Details:

Grand Hotel, Station Road, PORT TALBOT, SA13 1DE

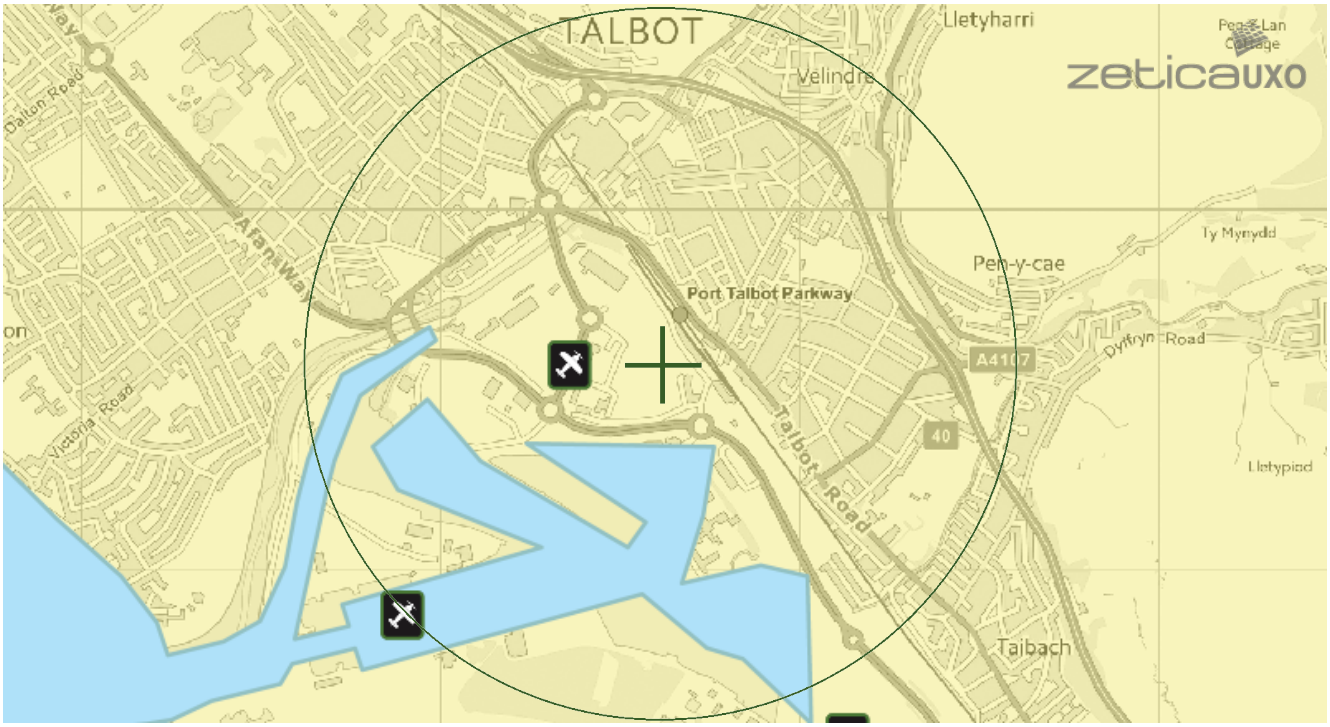
Zetica UXB risk maps

UNEXPLODED BOMB RISK MAP

zeticauxo

SITE LOCATION

Map Centre: 276623,189572



LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

miltary | **industry** | **UXO find**
transport | **dock** | **Luftwaffe targets**
utilities | **Bombing decoy** | **other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: **(https://zeticauxo.com/downloads-and-resources/risk-maps/)**

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Reports prepared by others

The Coal Authority

Consultants

Coal Mining Report

Grand Hotel, Station Road
Port Talbot
Neath Port Talbot
SA13 1DE

Date of enquiry:	**20 September 2023**
Date enquiry received:	**20 September 2023**
Issue date:	**20 September 2023**
Our reference:	**51003379055001**
Your reference:	**317152831_2**

Consultants

Coal Mining Report

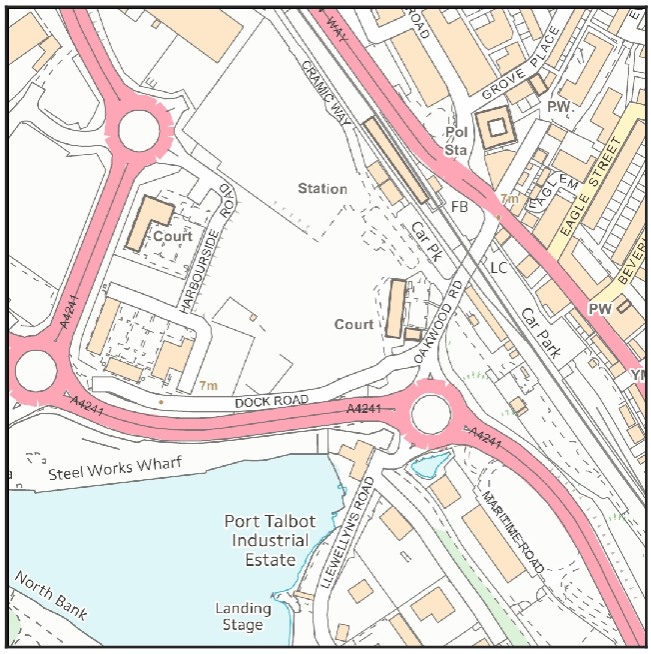
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

NLIS Hub

Enquiry address

Grand Hotel, Station Road
Port Talbot
Neath Port Talbot
SA13 1DE



Approximate position of property

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How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining
No past mining recorded.

Probable unrecorded shallow workings
None.

Spine roadways at shallow depth
No spine roadway recorded at shallow depth.

Mine entries
None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers
None available.

Outcrops
No outcrops recorded.

Geological faults, fissures and breaklines
Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines
None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips
None recorded within 500 metres of the enquiry boundary.

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Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

Section 46 notices
No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

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Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

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Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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Appendix E Exploratory hole location plan, exploratory hole logs and photographs

Exploratory hole location plan

KEY

Trial pit

Borehole

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. This drawing has been based on the following drawings and information:
3292-switch-U.DWG

REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE					
	MH	20/09/23	MH	20/09/23	AE	20/09/23

Hydrock
3rd Floor, Wharton Place,
13 Wharton Street,
Cardiff
CF10 1GS
t: 02920 023 665
e: cardiff@hydrock.com

CLIENT

MORGAN SINDALL

PROJECT

SWITCH, PORT TALBOT

TITLE

EXPLORATORY HOLE
LOCATION PLAN

HYDROCK PROJECT NO.	SCALE @ A3
C-26279-C	1:200

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)	REVISION
26279-HYD-XX-XX-DR-GE-1003	P1

Exploratory hole logs

Hydrock	Project: SWITCH	Trialpit No TP01 Page No. 1 of 1

Method: Trial Pit	Date(s): 26/09/2023	Logged By: MH	Checked By: MH
Client: Morgan Sindall	Co-ords: 276585.28, 189552.05	Stability: Stable.	Dimensions: 3.00m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.42m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 0.10	B ES			Brownish red slightly silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, and brick. Sand is fine to coarse. Cobble are subangular brick. (MADE GROUND)	0.20	(0.20)	7.22	
0.30 0.35 0.60 0.65	ES B B ES			Dark grey silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, slag and brick. Sand is fine to coarse. Cobble are subangular brick and slag. Rare wood fragments up to 10cm. (MADE GROUND) *... at 0.65m possible asbestos fabric.*	0.75	(0.55)	6.67	
1.20 1.70 2.30	ES ES ES			Dark grey to black silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, slag and brick. Sand is fine to coarse. Cobble are subangular brick and slag. Slight Hydrocarbon odour. (MADE GROUND)	2.40	(1.65)	5.02	
				Dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone up to 200 mm. (ALLUVIAL FAN DEPOSITS) *... at 2.40m groundwater inflow.*	2.50	(0.10)	4.92	
				Base of Excavation at 2.50m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine excavated to 2.50m bgl. 3. Groundwater strike at 2.40m bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP02 Page No. 1 of 1

Method: Trial Pit	Date(s): 26/09/2023	Logged By: MH	Checked By: MH
Client: Morgan Sindall	Co-ords: 276572.44, 189521.34	Stability: Unstable below 2.40m bgl	Dimensions: 3.20m × 0.70m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.43m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.15 0.20	ES B			Brownish grey slightly silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, and brick. Sand is fine to coarse. Cobble are subangular brick. (MADE GROUND)	0.30	(0.30)	7.13	
0.40 0.50 0.75 1.60 1.80	B ES B ES B			Dark grey silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, slag and brick. Sand is fine to coarse. Cobble are subangular brick and slag. Slight Hydrocarbon odour. (MADE GROUND)	2.80	(2.50)	4.63	
2.50	ES		▼	*... at 2.40m groundwater inflow.*				
2.90 2.90	D ES			Firm grey silty slightly sandy CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	3.00	(0.20)	4.43	
3.10	B			Dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone up to 200 mm. (ALLUVIAL FAN DEPOSITS)	3.30	(0.30)	4.13	
				Base of Excavation at 3.30m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine excavated to 3.30m bgl. 3. Groundwater strike at 2.40m bgl. 4. Trial pit walls unstable below 2.40m bgl. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP03 Page No. 1 of 1

Method: Trial Pit	Date(s): 26/09/2023	Logged By: MH	Checked By: MH
Client: Morgan Sindall	Co-ords: 276639.66, 189530.78	Stability: Stable.	Dimensions: 8.00m × 0.70m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.46m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.20	B			Brownish red slightly silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, and brick. Sand is fine to coarse. Cobble are subangular brick. (MADE GROUND)	0.30	(0.30)	7.16	
0.40 0.40	B ES			Firm reddish brown silty slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse concrete, sandstone and limestone. (MADE GROUND)	0.50	(0.20)	6.96	
				Medium strong light grey CONCRETE. Underlain by two layers of Terram. (MADE GROUND)	0.75	(0.25)	6.71	
0.80 0.85	ES B			Brownish grey slightly silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, and brick. Sand is fine to coarse. Cobble are subangular brick. (MADE GROUND)	1.00	(0.25)	6.46	
1.40 1.50	ES B			Dark grey silty sandy, subangular to angular fine to coarse GRAVEL, with low cobble content. Gravel comprised of limestone, sandstone, concrete, asphalt, slag and brick. Sand is fine to coarse. Cobble are subangular brick and slag. (MADE GROUND)		(1.50)		
				... at 2.20m groundwater inflow.				
2.40	ES				2.50		4.96	
2.55 2.60	ES B			Firm grey silty slightly sandy slightly gravelly CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	2.70	(0.20)	4.76	
				Dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone up to 200 mm. (ALLUVIAL FAN DEPOSITS)	2.80	(0.10)	4.66	
				Base of Excavation at 2.80m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine excavated to 2.80m bgl. 3. Groundwater strike at 2.20m bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP04 Page No. 1 of 1

Method: Trial Pit	Date(s): 27/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276625.31, 189497.56	Stability: Stable.	Dimensions: 3.00m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.41m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 - 0.40	B			Dark blackish brown sandy angular to subangular fine to coarse GRAVEL of concrete brick asphalt limestone and slag with a low cobble content. Sand is fine to coarse. Cobbles are subangular of concrete up 100mm. (MADE GROUND)				
0.20	ES							
0.30	D					(0.60)		
				... at 0.40m bgl: slow water seepage.				
0.50	ES			*... between 0.50m-0.60m bgl: clayey.*	0.60		6.81	
0.70 - 1.00	B			Dark brown and blackish brown sandy slightly clayey angular to subangular fine to coarse GRAVEL of limestone brick concrete granite and slag with rare glass and a medium cobble content.. Sand is fine to coarse. Cobbles are angular of brick and masonry wall up to 190mm. (MADE GROUND)				
0.70 - 1.00	B					(0.50)		
1.00	D				1			
1.00	ES				1.10		6.31	
1.20	D			Dark grey and brown sandy slightly clayey fine to coarse GRAVEL of slag and occasional cinders with a low cobbles content. Sand is fine to coarse. Cobbles are angular to subangular up to 190mm. (MADE GROUND)				
1.20	ES							
1.20 - 1.40	B					(0.50)		
1.20 - 1.40	B			*... from 1.40m bgl: brown.*				
					1.60		5.81	
				Dark blackish brown sandy subangular to subrounded fine to coarse GRAVEL of slag with rare shell fragments and a moderate hydrocarbon odour. Sand is fine to coarse. (MADE GROUND)				
1.80	ES					(0.50)		
2.00	D				2			
2.00	ES				2.10		5.31	
				Firm greyish brown slightly sandy slightly gravelly CLAY with a slight hydrocarbon odour. Sand is fine to coarse. Gravel is subrounded to rounded fine to coarse of sandstone. (TIDAL FLAT DEPOSITS)	2.20	(0.10)	5.21	
				Dark brownish grey slightly sandy rounded fine to coarse GRAVEL of sandstone with a low cobble content slight hydrocarbon odour and an oily sheen. Sand is fine to coarse. Cobbles are rounded of sandstone up to 200 mm. (ALLUVIAL FAN DEPOSITS)		(0.50)		
					2.70		4.71	
				Base of Excavation at 2.70m				
					3			
					4			
					5			

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 2.70m bgl. 3. Groundwater strike at 2.60m bgl rising to 2.40m bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP05 Page No. 1 of 1

Method: Trial Pit	Date(s): 27/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276594.68, 189467.97	Stability: Stable.	Dimensions: 3.20m × 0.70m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.49m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 - 0.40 0.10 - 0.40 0.20 0.30 0.60	B B ES D ES			MADE GROUND. Brown and greyish brown sandy angular to subangular fine to coarse GRAVEL of brick concrete limestone ceramic fragments slag and clinker with a low cobble content. Sand is fine to coarse. Cobbles are angular of limestone and concrete up to 120mm (MADE GROUND) *... from 0.0-0.10m bgl: brown.*	0.70	(0.70)	6.79	
0.80 - 1.00 1.00 1.00	B D ES			Dark blackish brown sandy slightly clayey subangular to subrounded fine to coarse GRAVEL of slag sandstone limestone and concrete (MADE GROUND)	1.95	(1.25)	5.54	
2.00 2.00 2.00 - 2.50	D ES B		▼	Black slightly sandy silty subangular to subrounded fine to coarse GRAVEL of slag with a low cobble content. Sand is fine to coarse. Cobbles are subrounded to rounded of slag up to 170mm. (MADE GROUND)	2.70	(0.75)	4.79	
2.80 2.80 2.80 - 2.90	D ES B			Greyish brown slightly gravelly silty fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of sandstone. (TIDAL FLAT DEPOSITS)	2.90	(0.20)	4.59	
				Base of Excavation at 2.90m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 2.90m bgl. 3. Groundwater strike at 2.20m bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP06 Page No. 1 of 1

Method: Trial Pit	Date(s): 27/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276554.62, 189475.78	Stability: Stable.	Dimensions: 3.00m × 0.70m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.48m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.00 - 0.30 0.20 0.30	B ES D			Greyish brown sandy angular to subangular fine to coarse GRAVEL of brick concrete slag clinker and ceramic fragments with a medium cobble content. Sand is fine to coarse. Cobbles are angular to subangular of brick and concrete. (MADE GROUND)	0.45	(0.45)	7.03	
0.50 0.50 0.50 - 0.70 0.50 - 0.70	D ES B B			Dark greyish brown sandy clayey angular to subangular fine to coarse GRAVEL of limestone concrete slag mudstone and brick. Sand is fine to coarse. (MADE GROUND)	0.75	(0.30)	6.73	
0.80 - 1.00 1.00 1.00	B D ES			Blackish brown sandy slightly clayey angular to subangular fine to coarse GRAVEL of slag and limestone with a strong hydrocarbon odour. Sand is fine to coarse. (MADE GROUND)	1.20	(0.45)	6.28	
1.30 - 1.60 1.50 1.50	B D ES			Yellowish brown becoming brown slightly gravelly fine to coarse SAND with a mild organic odour. Gravel is angular to subangular fine to coarse of sandstone. (MADE GROUND) *... at 1.20m bgl: steel obstruction in the norths end of the pit.*	2.20	(1.00)	5.28	
2.30 2.30 2.30 - 2.60	D ES B		▼	Blackish brown sandy slightly clayey angular to subrounded GRAVEL of slag sandstone and rare quartz with a strong hydrocarbon odour and oily sheen. Sand is fine to coarse. Cobbles are subrounded of slag. (MADE GROUND)	2.70	(0.50)	4.78	
2.80 2.80	D ES			Grey mottled orangish brown very clayey fine to coarse SAND. (TIDAL FLAT DEPOSITS)	3.00	(0.30)	4.48	
				Base of Excavation at 3.00m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 3.00m bgl. 3. Groundwater strike at 2.30 bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP07 Page No. 1 of 1

Method: Trial Pit	Date(s): 27/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276526.81, 189419.91	Stability: Stable.	Dimensions: 3.10m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.48m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 - 0.30 0.10 - 0.30 0.20 0.20	B B D ES			Brown very sandy angular to subangular fine to coarse GRAVEL of asphalt concrete quartz brick slag and breeze block. Sand is fine to coarse. (MADE GROUND)	0.40	(0.40)	7.08	
0.45 - 0.65 0.50 0.50	B D ES			Stiff reddish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse of mudstone. (MADE GROUND)	0.75	(0.35)	6.73	
0.90 - 1.20 1.00 1.00	B D ES			Dark brownish grey sandy angular to subangular fine to coarse GRAVEL of slag brick and concrete with a low cobble content. Sand is fine to coarse. Cobbles are angular of concrete. (MADE GROUND)	1.60	(0.85)	5.88	
1.90 - 2.20 2.00 2.00	B D ES			Dark brown very sandy slightly clayey angular to subangular fine to coarse GRAVEL of slag concrete and brick with a medium cobble content and rare boulders of slag up to 250mm. Sand is fine to coarse. Cobbles are subangular of slag. (MADE GROUND)	2.20	(0.60)	5.28	
2.20 - 2.50 2.30 2.30 - 2.50	B ES B		▼	Dark grey subangular fine to coarse GRAVEL and subrounded cobbles of slag. Sand is fine to coarse. (MADE GROUND)	2.50	(0.30)	4.98	
2.60	D			Soft to firm brown silty slightly sandy CLAY. (TIDAL FLAT DEPOSITS)	2.90	(0.40)	4.58	
3.00 3.00 3.00 - 3.30	D ES B			Dark grey sandy subrounded to rounded fine to coarse GRAVEL of sandstone with a strong hydrocarbon odour and bright oily sheen. Sand is fine to coarse. (ALLUVIAL FAN DEPOSITS) *... below 3.0m bgl: oily sheen on water surface.* Base of Excavation at 2.70m	3.30	(0.40)	4.18	

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 2.70m bgl. 3. Groundwater strike at 2.30 bgl. 4. Trial pit walls stable throughout excavation. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP08 Page No. 1 of 1	
Method: Trial Pit	Date(s): 29/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276622.34, 189458.28	Stability: Unstable below 2.30m.	Dimensions: 3.20m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.47m OD	Plant: JCB 3CX	

Samples / Tests: Depth (m)	Type	Results	Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
0.10 - 0.30 0.20 0.20	B D ES			Reddish brown sandy clayey angular to subangular fine to coarse GRAVEL of limestone. Sand is fine to coarse. (MADE GROUND)	0.38	(0.38)	7.09	
0.50 0.50 - 1.00 1.00 1.00	ES B D ES			Dark blackish brown very sandy angular to subangular fine to coarse GRAVEL of slag brick limestone and concrete with a low cobble content and a slight hydrocarbon odour. Sand is fine to coarse. Cobbles are subangular of slag. (MADE GROUND) *... at 1.00m bgl: seepage.*	2.30	(1.92)	5.17	
1.50 1.50 - 2.00 1.50 - 2.00 2.50 2.50 2.50 - 3.00	D B B D ES B			Greyish brown sandy slightly silty subrounded to rounded fine to coarse GRAVEL of sandstone with a low cobble content and a mild hydrocarbon odour. sand is fine to coarse. Cobbles are subrounded of sandstone. (ALLUVIAL FAN DEPOSITS)	3.00	(0.70)	4.47	
				Base of Excavation at 3.00m				

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 3.00m bgl. 3. Groundwater strike at 2.30 bgl. 4. Pit walls unstable below 2.30m bgl. 5. Trial pit collapsing to 2.70m bgl. 6.Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP09 Page No. 1 of 1

Method: Trial Pit	Date(s): 29/09/2023	Logged By: AT	Checked By: MH
Client: Morgan Sindall	Co-ords: 276588.36, 189346.77	Stability: Unstable below 2.60m bgl.	Dimensions: 3.00m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.45m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 - 0.40	B			Reddish brown becoming brownish grey sandy clayey angular to subangular fine to coarse GRAVEL of limestone brick concrete and slag with a low cobble content. Sand is fine to coarse. Cobbles are subangular of concrete. (MADE GROUND)		(0.60)		
0.20	ES							
0.50	D							
0.50	ES				0.60		6.85	
				Dark blackish grey very sandy slightly clayey subangular to subrounded fine to coarse GRAVEL of brick sandstone slag and quartz with a low cobble content. Sand is fine to coarse. Cobbles are angular to subangular of brick and slag. (MADE GROUND) *... at 0.60m bgl: rapid water ingress.*				
0.90 - 1.40	B							
0.90 - 1.40	B							
1.00	D				1			
1.00	ES							
						(2.10)		
1.90 - 2.40	B							
2.00	D				2			
				... at 2.60m bgl: oily sheen on ground water.	2.70		4.75	
2.80 - 3.00	B			Dark brownish grey sandy slightly clayey subangular to rounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone. (ALLUVIAL FAN DEPOSITS) *... from 2.70m bgl: cast pipe fragments and rare metal rod.*				
3.00	D				3	(0.60)		
3.00	ES							
					3.30		4.15	
				Base of Excavation at 3.30m				
					4			
					5			

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 3.30m bgl. 3. Groundwater strike at 2.60m bgl. 4. Pit walls unstable below 2.60m bgl. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Trialpit No TP10 Page No. 1 of 1

Method: Trial Pit	Date(s): 29/09/2023	Logged By: EW	Checked By: MH
Client: Morgan Sindall	Co-ords: 276561.54, 189425.15	Stability: Stable.	Dimensions: 3.00m × 0.60m / Scale: 1:25
Hydrock Project No: 26279	Ground Level: 7.46m OD	Plant: JCB 3CX	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 - 0.40	B			MADE GROUND dark greyish brown very sandy slightly silty angular to subrounded GRAVEL of brick slag concrete and sandstone with a low cobble content. Sand is fine to coarse. Cobbles are angular of brick and concrete. (MADE GROUND)		(0.46)		
0.20	D							
0.20	ES							
0.40 - 0.60	B				0.46		7.00	
0.50	D			*... at 0.44m bgl: slight seepage.* Dark blackish brown slightly sandy very gravelly CLAY with rare glass. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of brick concrete sandstone and slag. (MADE GROUND)		(0.14)		
0.50	ES				0.60		6.86	
0.70 - 1.00	B			Dark grey very sandy slightly silty subangular to subrounded fine to coarse GRAVEL of brick concrete slag ceramic fragments and sandstone with rare metal and wood a low cobble content and rare boulders. Sand is fine to coarse. Cobbles are angular of concrete. Boulders are subangular of brick. (MADE GROUND)				
0.70 - 1.00	B							
0.70 - 1.00	B							
0.85	D							
1.00	ES				1			
						(1.90)		
1.70 - 2.00	B			*... from 1.70m bgl: blackish brown and ashy.*				
					2			
2.10	D							
2.10	ES		▼					
					2.50		4.96	
2.60	ES			Firm greyish brown mottled yellowish brown slightly sandy CLAY with occasional rootlets. Sand is fine to medium. (ALLUVIAL FAN DEPOSITS)				
2.60 - 2.90	B					(0.60)		
					3			
					3.10		4.36	
				Base of Excavation at 3.10m				
					4			
					5			

General Remarks:
1. Location GPR cleared by Rock Surveying Ltd and CAT & Genny. 2. Machine dug to 3.10m bgl. 3. Groundwater strike at 2.20m bgl. 4. Pit walls unstable below 2.60m bgl. 5. Backfilled with arisings.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Borehole No BH01 Page No. 1 of 1	
Method: Cable Percussion	Date(s): 27/09/2023 - 28/09/2023	Logged By: EW	Drilled By: CJA
Client: Morgan Sindall	Co-ords: 276600.08, 189524.97	Checked By: MH	Flush:
Hydrock Project No: 26279	Ground Level: 7.38m OD		Scale: 1:50

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Depth (m)	Type	Results							
0.00 - 0.20	B			Dark brown slightly sandy slightly clayey angular to subangular fine to coarse GRAVEL of brick concrete slag and clinker. Sand is fine to coarse. (MADE GROUND)	0.50	(0.50)	6.88		W
0.20	ES								
0.50	ES			Dark greyish brown sandy slightly silty angular to subrounded fine to coarse GRAVEL of brick and sandstone. Sand is fine to coarse. (MADE GROUND)	1.00	(0.50)	6.38		
0.50 - 1.00	B								
1.00	SPT	N=46 (3,8,15,10,11,10)		Dark blackish brown sandy clayey angular to subrounded fine to coarse GRAVEL of sandstone and slag. (MADE GROUND)		(1.50)			
1.00 - 1.20	B								
1.10	ES								
1.20 - 1.70	B								
2.00	SPT	N=41 (5,3,3,12,10,16)		*... from 2.00m bgl: strong hydrocarbon odour.*	2.50		4.88		
2.00	ES								
2.00 - 2.50	B								
2.50 - 3.00	B			Dense greyish black sandy subrounded to rounded fine to coarse GRAVEL of sandstone. Sand is fine to coarse. (ALLUVIAL FAN DEPOSITS) *... at 2.50m bgl: mild hydrocarbon odour.*	3.00	(0.50)	4.38		
3.00	SPT	N=47 (6,8,11,10,12,14)		Dense blackish brown sandy subangular to subrounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone. (ALLUVIAL FAN DEPOSITS)					
3.00	ES								
3.00 - 3.50	B								
3.50 - 4.00	B								
4.00	SPT	50/231mm (8,12,14,14,18,4)							
4.00 - 4.50	B								
4.50 - 5.00	B			*... from 4.50m bgl: greyish brown and no hydrocarbon odour.*					
5.00	SPT	50/150mm (25,20,30)				(4.60)			
5.00 - 5.50	B								
5.50	ES								
5.50 - 6.30	B								
6.30	SPT	50/225mm (4,14,14,16,20)							
6.30 - 6.70	B								
7.00 - 7.60	B								
7.60	SPT	N=54 (5,6,8,12,16,18)		End of Borehole at 7.60m	7.60		-0.22		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando	27/09	0800	1.00	0.00	150			
Dando	27/09	1600	3.00	3.00	150	2.10		
Dando	28/09	0730	3.00	3.00	150	1.93		
Dando	28/09	1300	7.60	7.60	150	2.00		

Chiselling

From (m)	To (m)	Duration (HH:MM)
1.70	2.00	00:45
5.10	5.40	00:45

General Remarks:
1. Position GPR cleared by Rock Surveying Ltd and CAT & Genny prior to excavating. 2. Inspection pit hand dug to 1.20m bgl prior to drilling. 3. Groundwater strike at 2.50m bgl. 4. 50mm dual monitoring wells installed with response zones between 1.00m - 2.00m and 3.50m - 5.50m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: SWITCH	Borehole No BH02 Page No. 1 of 1	
Method: Cable Percussion	Date(s): 28/09/2023 - 29/09/2023	Logged By: EW	Drilled By: CJA
Client: Morgan Sindall	Co-ords: 276570.24, 189452.01	Checked By: MH	Flush:
Hydrock Project No: 26279	Ground Level: 7.41m OD		Scale: 1:50

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Depth (m)	Type	Results							
0.00 - 0.20	B			Light grey sandy slightly silty angular to subangular fine to coarse GRAVEL of concrete sandstone and slag with a low cobble content. Sand is fine to coarse. Cobbles are subangular to subrounded of concrete and slag. (MADE GROUND)					W
0.20	ES								
0.50	ES								
0.50 - 0.80	B								
0.80 - 1.20	B								
1.00	ES			*... from 1.0m bgl: blackish brown.*	1				
1.20	SPT	50/210mm (14,11,14,18,18)				(2.60)			
1.20 - 1.70	B								
1.70 - 2.00	B								
2.00	SPT	N=41 (4,7,9,10,10,12)		*... from 2.0m bgl: slightly clayey.*	2				
2.00 - 2.50	B								
2.60 - 3.20	B				2.60		4.81		
2.80	ES			Stiff dark greyish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of sandstone. (TIDAL FLAT DEPOSITS)					
3.00	SPT	N=36 (2,4,6,10,11,9)			3	(1.00)			
3.20 - 3.65	D								
3.60 - 4.00	B				3.60		3.81		
3.70	ES			Dense light brownish grey sandy silty subangular to subrounded fine to coarse GRAVEL of sandstone with a low cobble content. Sand is fine to coarse. Cobbles are rounded of sandstone up to 120mm. (ALLUVIAL FAN DEPOSITS)					
4.00	SPT	N=45 (2,6,9,10,12,14)			4				
4.00 - 4.50	B								
4.50 - 5.10	B								
5.00	SPT	50/123mm (6,14,25,25)			5				
5.10 - 5.50	B								
5.60 - 6.20	B								
					6	(4.90)			
6.20	SPT	50/150mm (10,15,22,28)							
6.20 - 6.70	B								
					7				
7.20 - 7.70	B								
7.70	SPT	50/190mm (10,15,19,18,13)							
7.70 - 8.30	B				8				
8.30	SPT	50/225mm (8,14,15,15,20)							
					8.50		-1.09		
				End of Borehole at 8.50m					
					9				
					10				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando	28/09	1600	2.00	2.00	150			
Dando	29/09	0730	2.00	2.00	150			
Dando	29/09	1630	8.30	8.30	150	2.30		

Chiselling

From (m)	To (m)	Duration (HH:MM)
5.40	5.60	00:30
6.50	6.70	00:30

General Remarks:
1. Position GPR cleared by Rock Surveying Ltd and CAT & Genny prior to excavating. 2. Inspection pit hand dug to 1.20m bgl prior to drilling. 3. Groundwater strike at 2.60m bgl. 4. 50mm dual monitoring wells installed with response zones between 1.00m - 2.00m and 3.60m - 6.00m bgl.

Logged in general accordance with BS5930:2015

Exploratory hole photographs

Appendix F Geotechnical test results and geotechnical plots

Geotechnical laboratory test results

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES
A PHENNA GROUP COMPANY

Contract Number: 68911

Client Ref: **26279**
Client PO: **PO29483**

Date Received: **05-10-2023**
Date Completed: **26-10-2023**
Report Date: **26-10-2023**

Client: **Hydrock Limited**
Hydrock
First Floor
5 Castlebridge
5-19 Cowbridge Road East
Cardiff
CF11 9AB
Tel: 02920 023665 Mob: 07392 081090

This report has been checked and approved by:

B. Evans

Brendan Evans
Office Administrator

Contract Title: **Switch**
For the attention of: **Matthew Holbourn**

Test Description	Qty
Samples Received - @ Non Accredited Test	51
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	2
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	2
PSD Wet Sieve method BS 1377:1990 - Part 2 : 9.2 - * UKAS	20
Determination of the Swelling Potential of Fill Material (Slag Expansion Test 7 day test) BR 481 - Part B - Appendix B	8
Disposal of samples for job	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:
Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)
Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)
Wayne Honey (Human Resources/ Health and Safety Manager)

GEO Site & Testing Services Ltd
Units 3-4, Heol Aur, Dafen, Llanelli, Carmarthenshire, Wales SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377:1990 - Part 2 : 4.3 & 5.3)	
Contract Number	68911	
Project Name	Switch	
Date Tested	11/10/2023	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
TP02	5	B	2.90	-		Brown/grey fine to medium gravelly silty CLAY
TP03	5	B	2.60	-		Brown/grey fine to medium gravelly silty CLAY
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

Operator
Aaron Hodge

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377:1990 - Part 2 : 4.3 & 5.3)	
Contract Number	68911	
Project Name	Switch	
Date Tested	11/10/2023	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
TP02	5	B	2.90	-		12	35	15	20	68	CL/I Low/Inter. Plasticity
TP03	5	B	2.60	-		12	34	14	20	71	CL Low Plasticity
				-							
				-							
				-							
				-							
				-							
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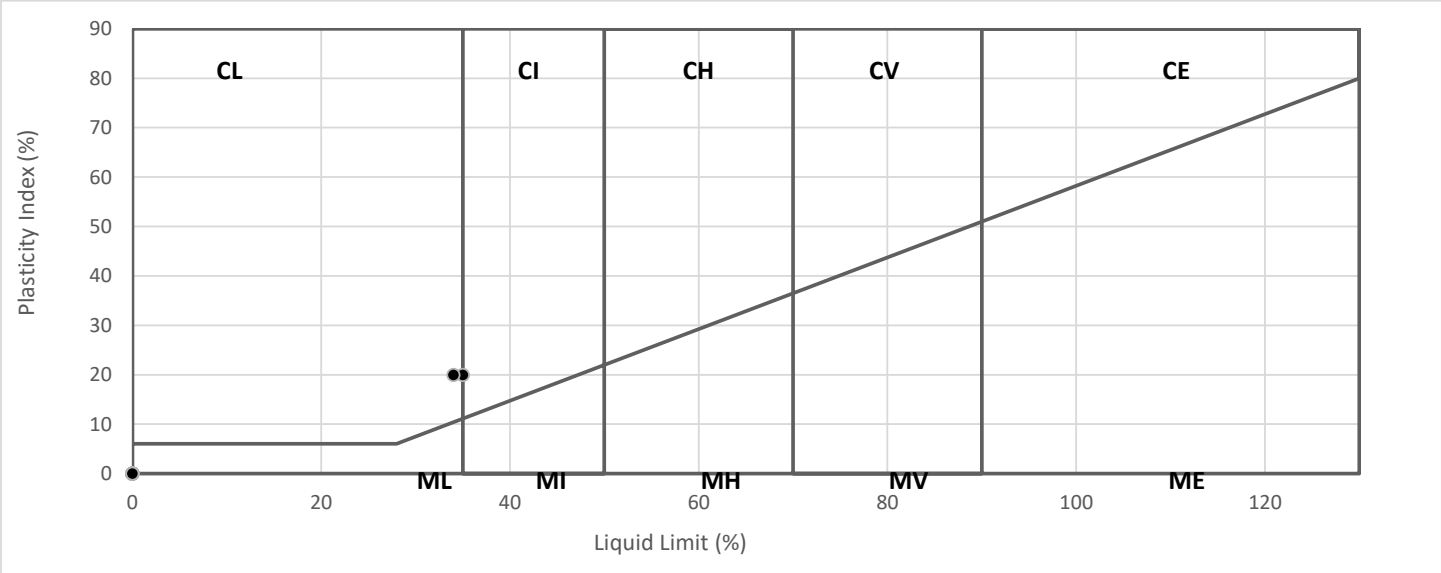
				-							
				-							
				-							
				-							
				-							

Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

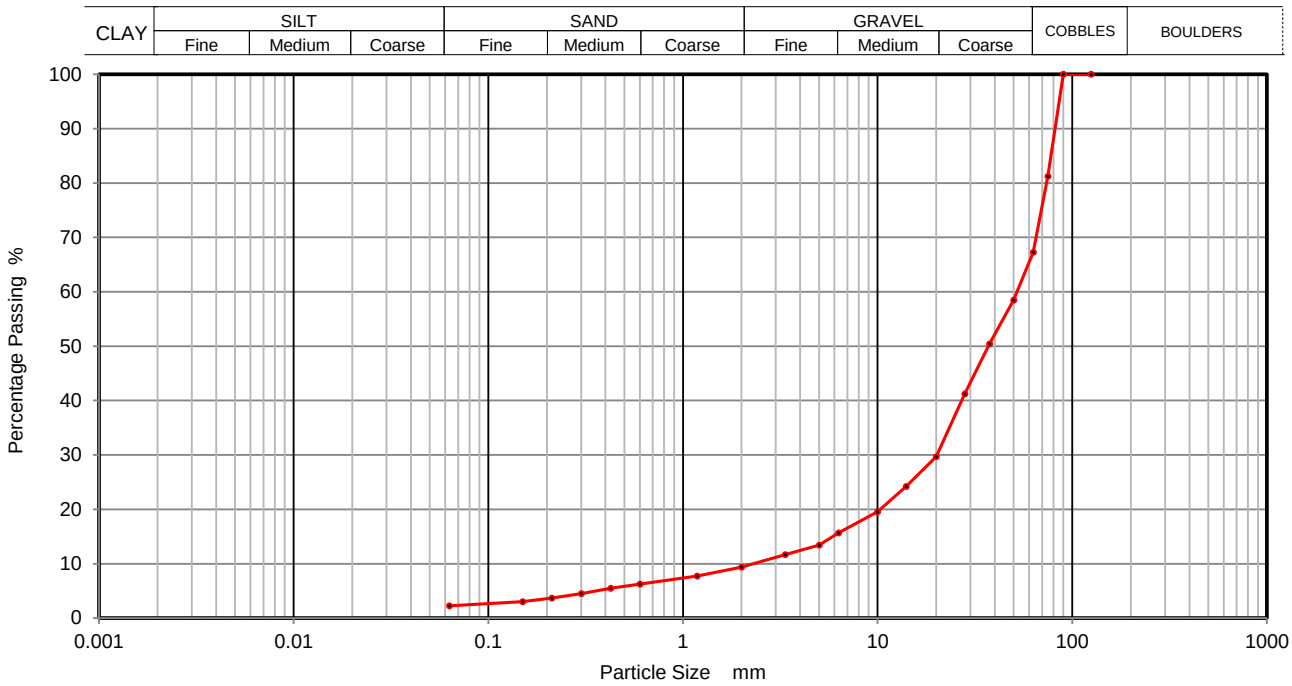
PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:2015+A1:2020



Operator
Aaron Hodge

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	BH01
Project Name	Switch	Sample No.	1
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	0.00
		Depth Base	0.20
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	81		
63	67		
50	58		
37.5	50		
28	41		
20	30		
14	24		
10	20		
6.3	16		
5	13		
3.35	12		
2	9		
1.18	8		
0.6	6		
0.425	5		
0.3	5		
0.212	4		
0.15	3		
0.063	2		

Sample Proportions	% dry mass
Cobbles	33
Gravel	58
Sand	7
Silt and Clay	2

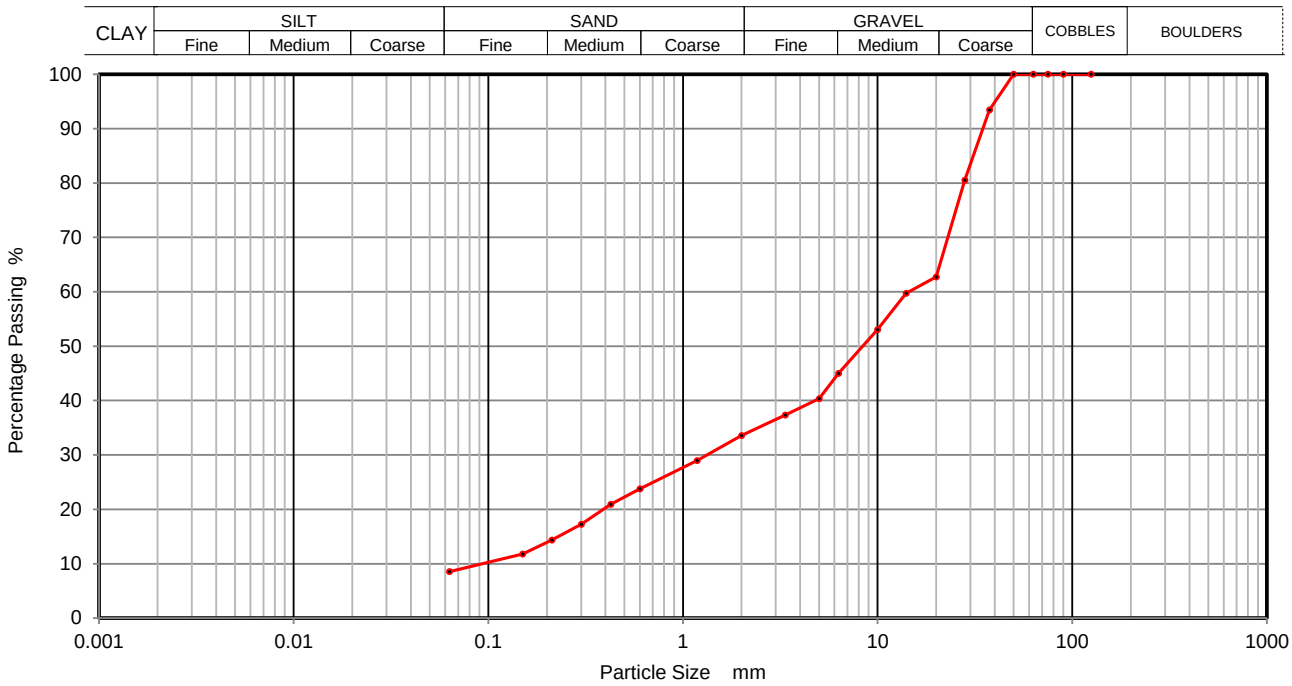
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	BH01
Project Name	Switch	Sample No.	2
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.50
		Depth Base	1.00
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	93		
28	81		
20	63		
14	60		
10	53		
6.3	45		
5	40		
3.35	37		
2	34		
1.18	29		
0.6	24		
0.425	21		
0.3	17		
0.212	14		
0.15	12		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	66
Sand	25
Silt and Clay	9

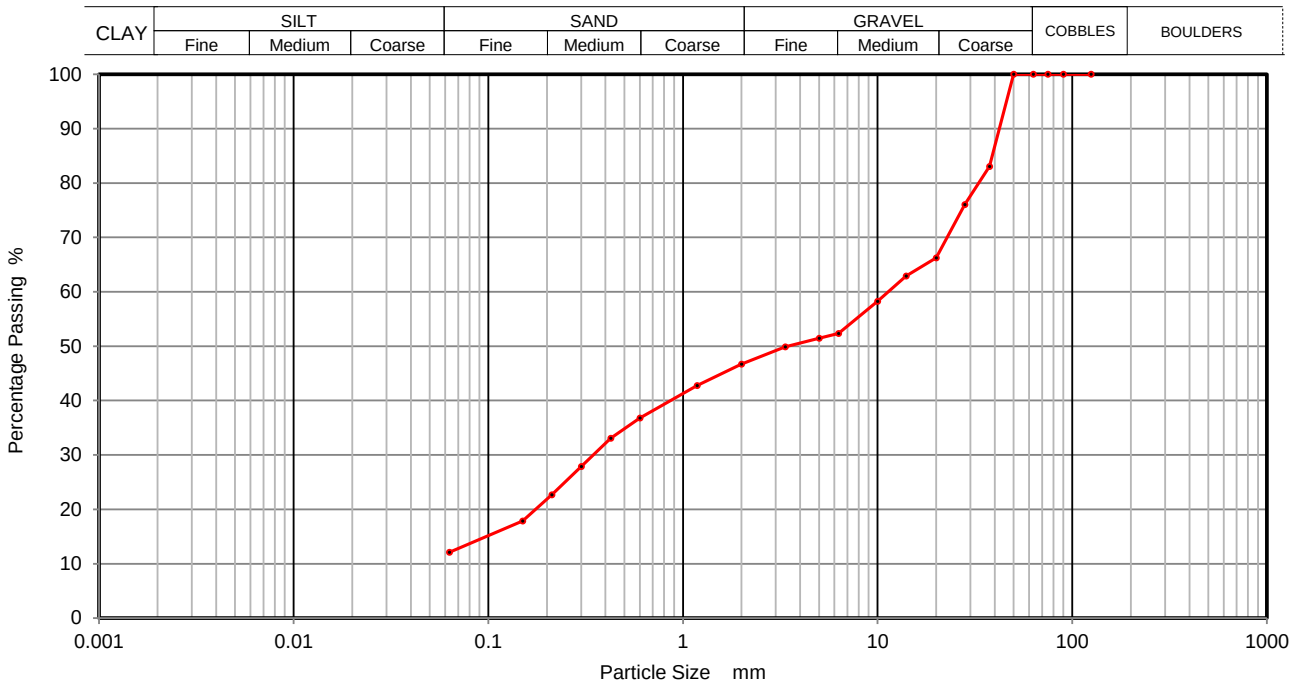
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	BH02
Project Name	Switch	Sample No.	1
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.00
		Depth Base	0.20
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	83		
28	76		
20	66		
14	63		
10	58		
6.3	52		
5	51		
3.35	50		
2	47		
1.18	43		
0.6	37		
0.425	33		
0.3	28		
0.212	23		
0.15	18		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	53
Sand	35
Silt and Clay	12

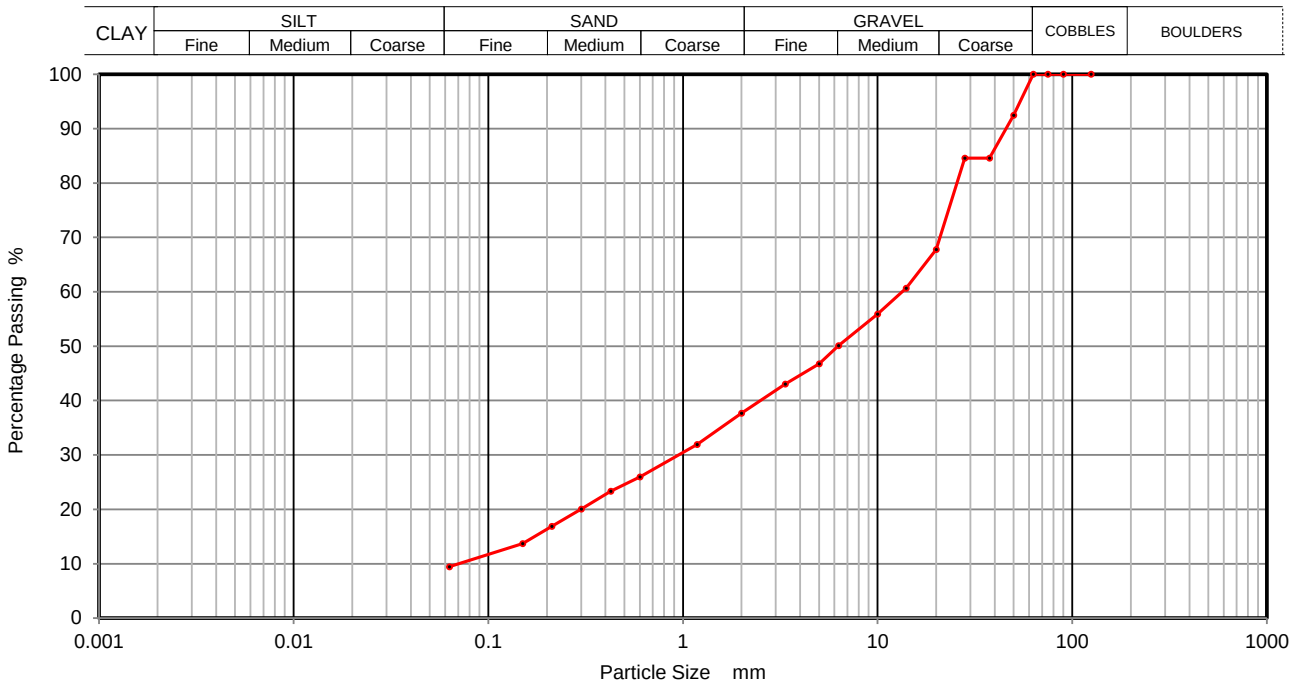
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	BH02
Project Name	Switch	Sample No.	2
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.50
		Depth Base	0.80
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	92		
37.5	85		
28	85		
20	68		
14	61		
10	56		
6.3	50		
5	47		
3.35	43		
2	38		
1.18	32		
0.6	26		
0.425	23		
0.3	20		
0.212	17		
0.15	14		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	62
Sand	29
Silt and Clay	9

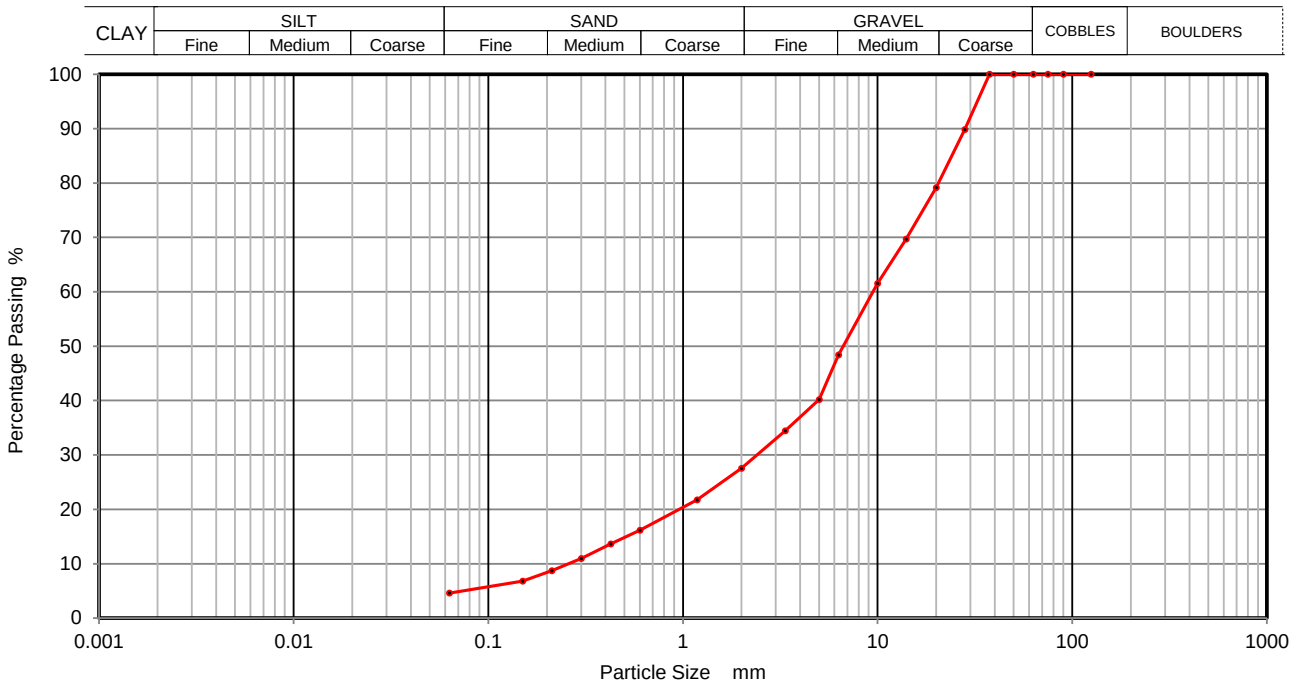
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP01
Project Name	Switch	Sample No.	3
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.60
		Depth Base	
Date Tested	19/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	90		
20	79		
14	70		
10	62		
6.3	48		
5	40		
3.35	34		
2	28		
1.18	22		
0.6	16		
0.425	14		
0.3	11		
0.212	9		
0.15	7		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	72
Sand	23
Silt and Clay	5

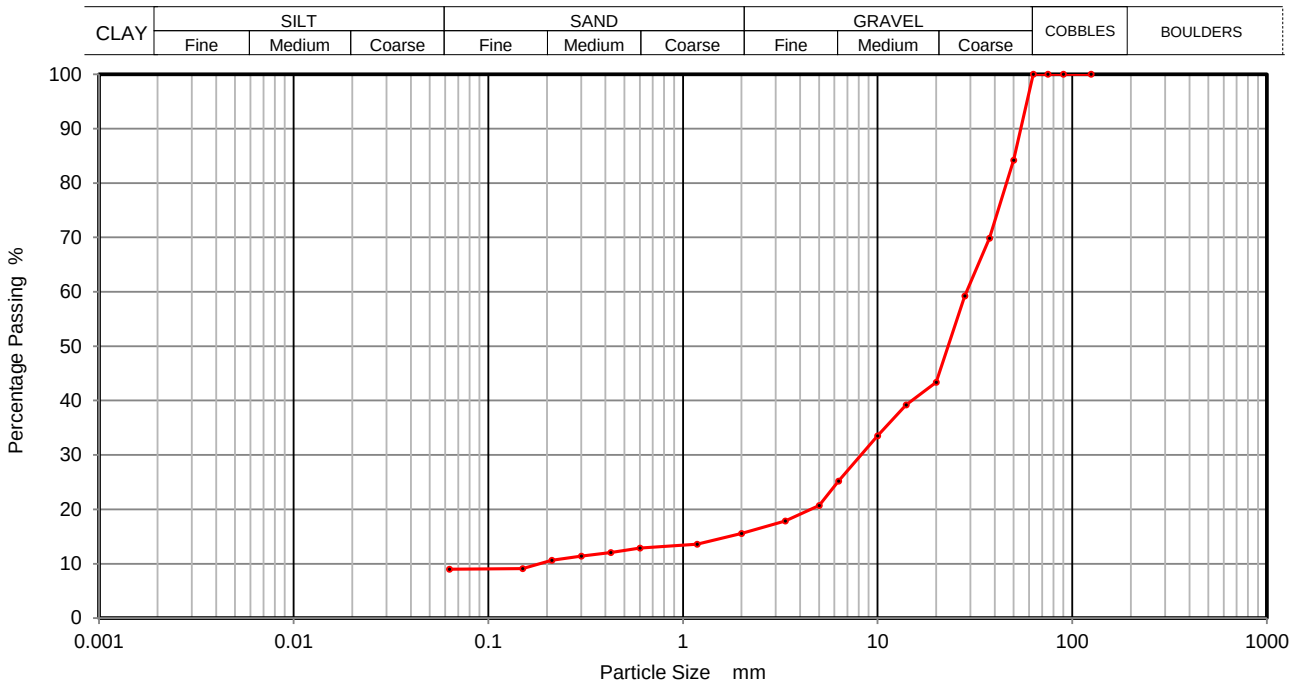
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP01
Project Name	Switch	Sample No.	1
Soil Description	Brown fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	0.10
		Depth Base	
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	84		
37.5	70		
28	59		
20	43		
14	39		
10	34		
6.3	25		
5	21		
3.35	18		
2	16		
1.18	14		
0.6	13		
0.425	12		
0.3	11		
0.212	11		
0.15	9		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	84
Sand	7
Silt and Clay	9

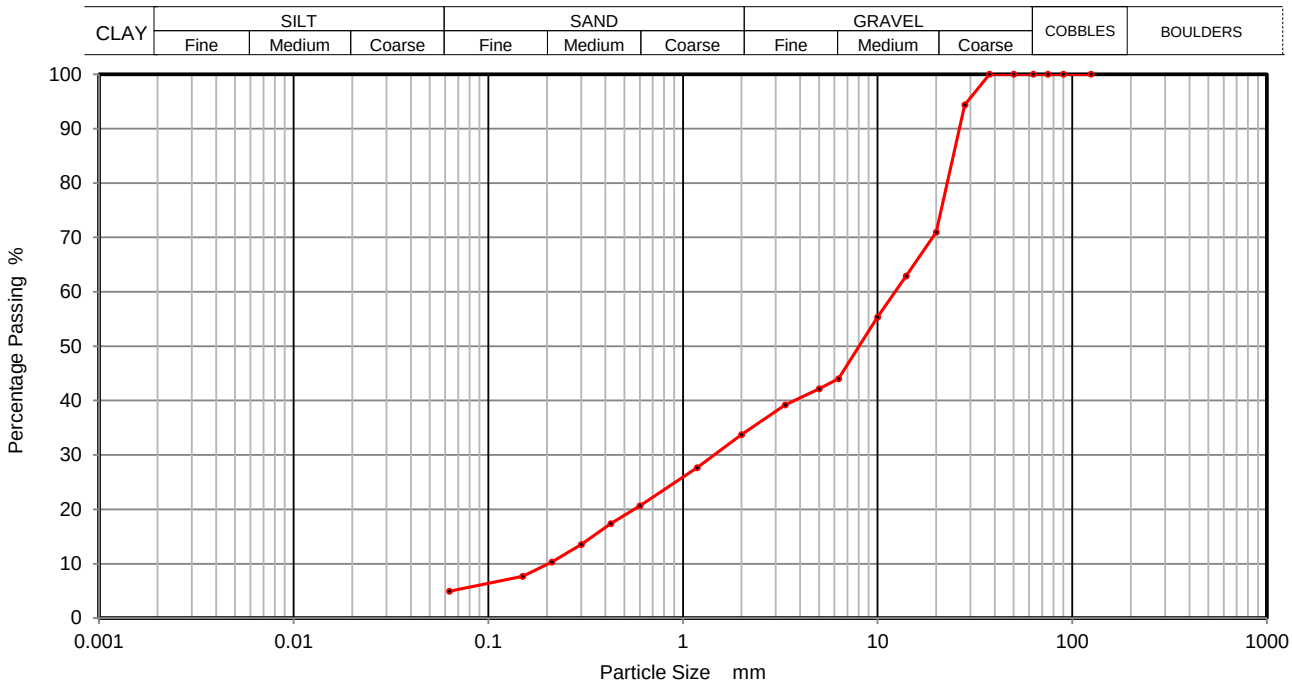
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP02
Project Name	Switch	Sample No.	1
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.20
		Depth Base	
Date Tested	19/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	94		
20	71		
14	63		
10	55		
6.3	44		
5	42		
3.35	39		
2	34		
1.18	28		
0.6	21		
0.425	17		
0.3	14		
0.212	10		
0.15	8		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	66
Sand	29
Silt and Clay	5

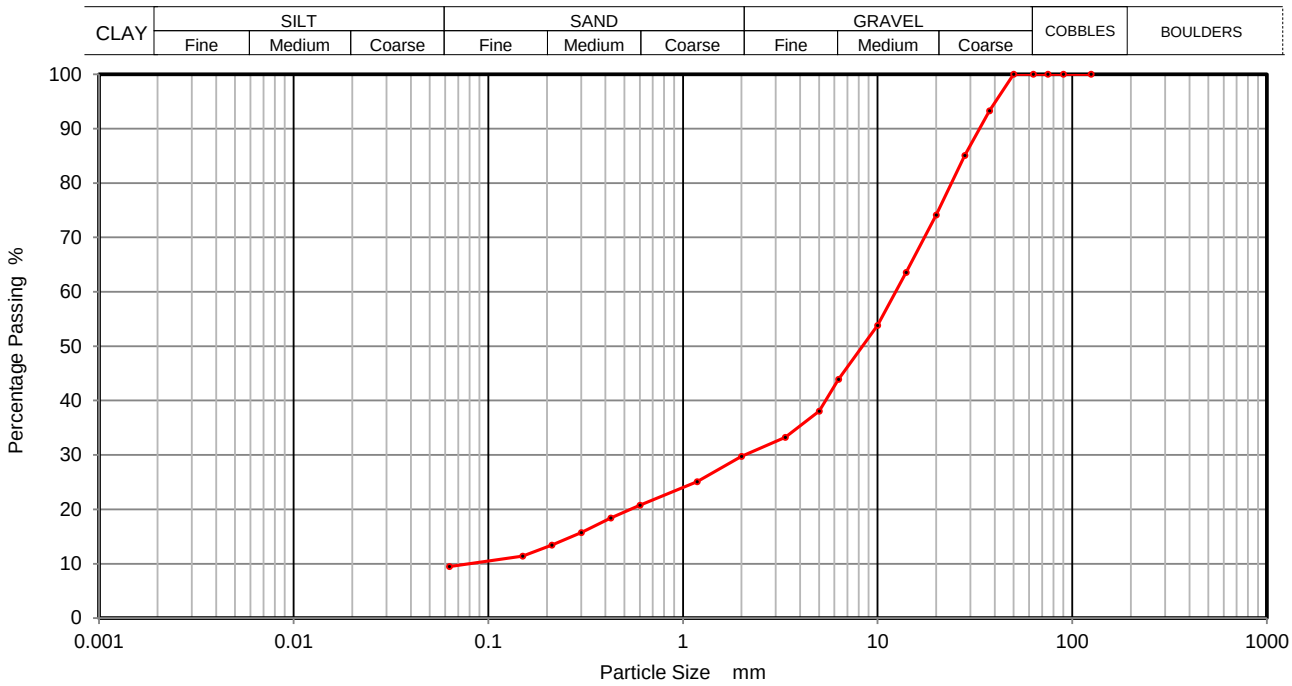
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP02
Project Name	Switch	Sample No.	3
Soil Description	Brown/grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.75
		Depth Base	
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	93		
28	85		
20	74		
14	64		
10	54		
6.3	44		
5	38		
3.35	33		
2	30		
1.18	25		
0.6	21		
0.425	18		
0.3	16		
0.212	13		
0.15	11		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	70
Sand	21
Silt and Clay	9

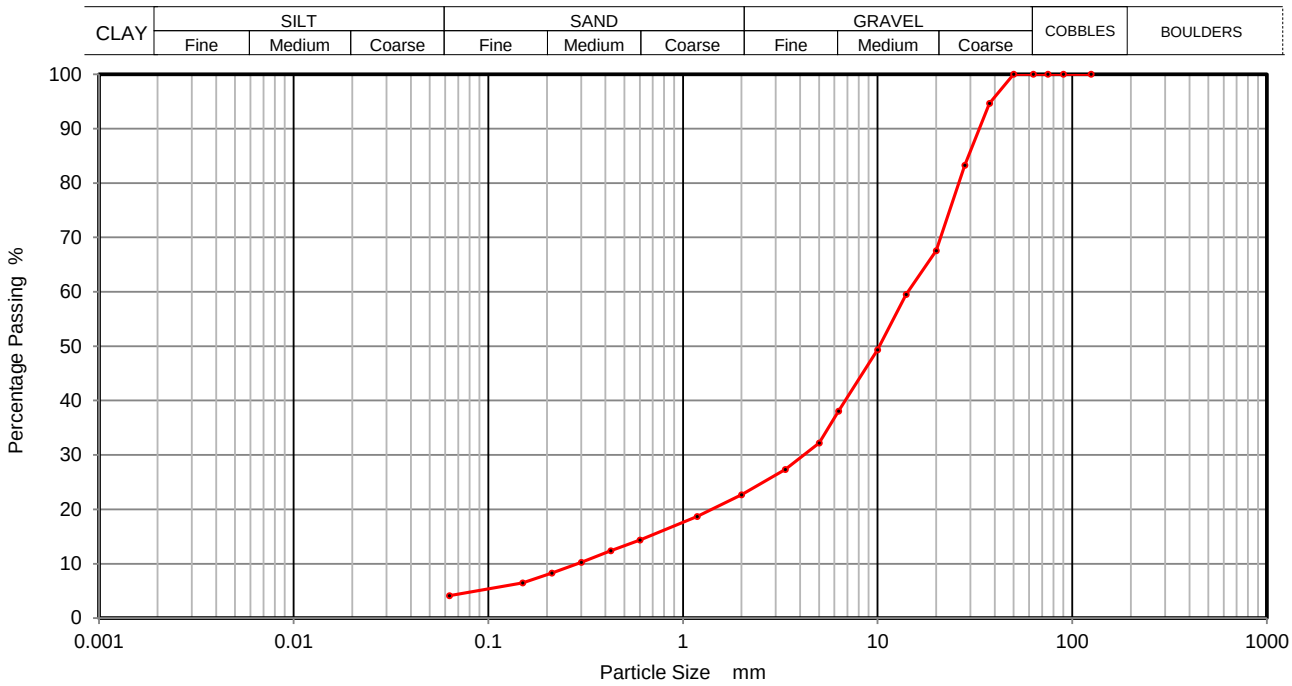
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP03
Project Name	Switch	Sample No.	2
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.40
		Depth Base	
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	95		
28	83		
20	68		
14	59		
10	49		
6.3	38		
5	32		
3.35	27		
2	23		
1.18	19		
0.6	14		
0.425	12		
0.3	10		
0.212	8		
0.15	6		
0.063	4		

Sample Proportions	% dry mass
Cobbles	0
Gravel	77
Sand	19
Silt and Clay	4

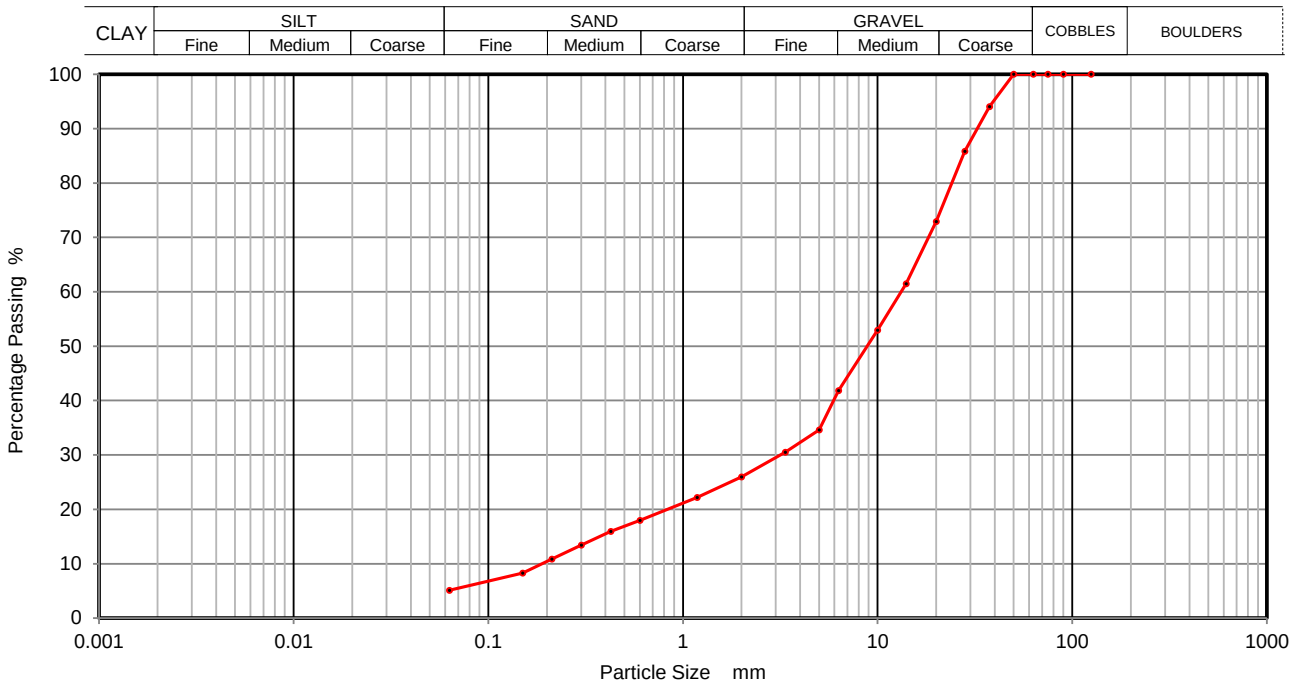
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP03
Project Name	Switch	Sample No.	3
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.85
		Depth Base	
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	94		
28	86		
20	73		
14	61		
10	53		
6.3	42		
5	35		
3.35	30		
2	26		
1.18	22		
0.6	18		
0.425	16		
0.3	13		
0.212	11		
0.15	8		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	74
Sand	21
Silt and Clay	5

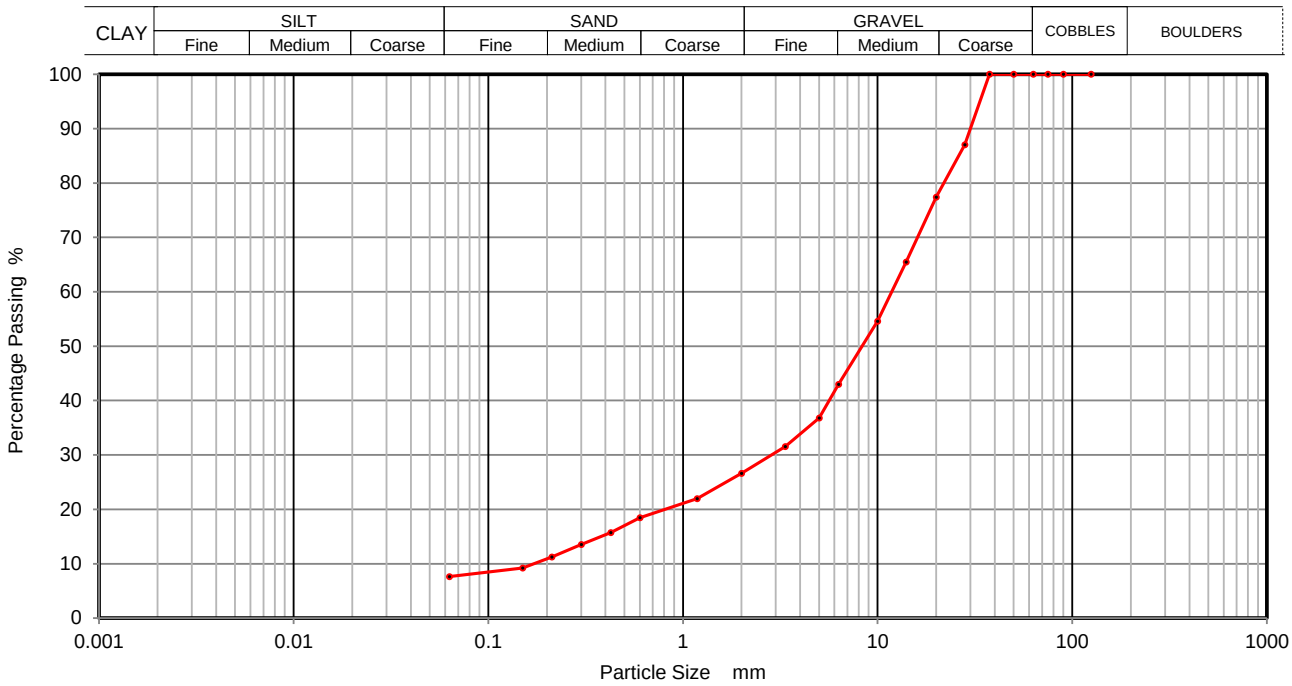
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP04
Project Name	Switch	Sample No.	4
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.70
		Depth Base	1.00
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	87		
20	77		
14	65		
10	55		
6.3	43		
5	37		
3.35	32		
2	27		
1.18	22		
0.6	18		
0.425	16		
0.3	14		
0.212	11		
0.15	9		
0.063	8		

Sample Proportions	% dry mass
Cobbles	0
Gravel	73
Sand	19
Silt and Clay	8

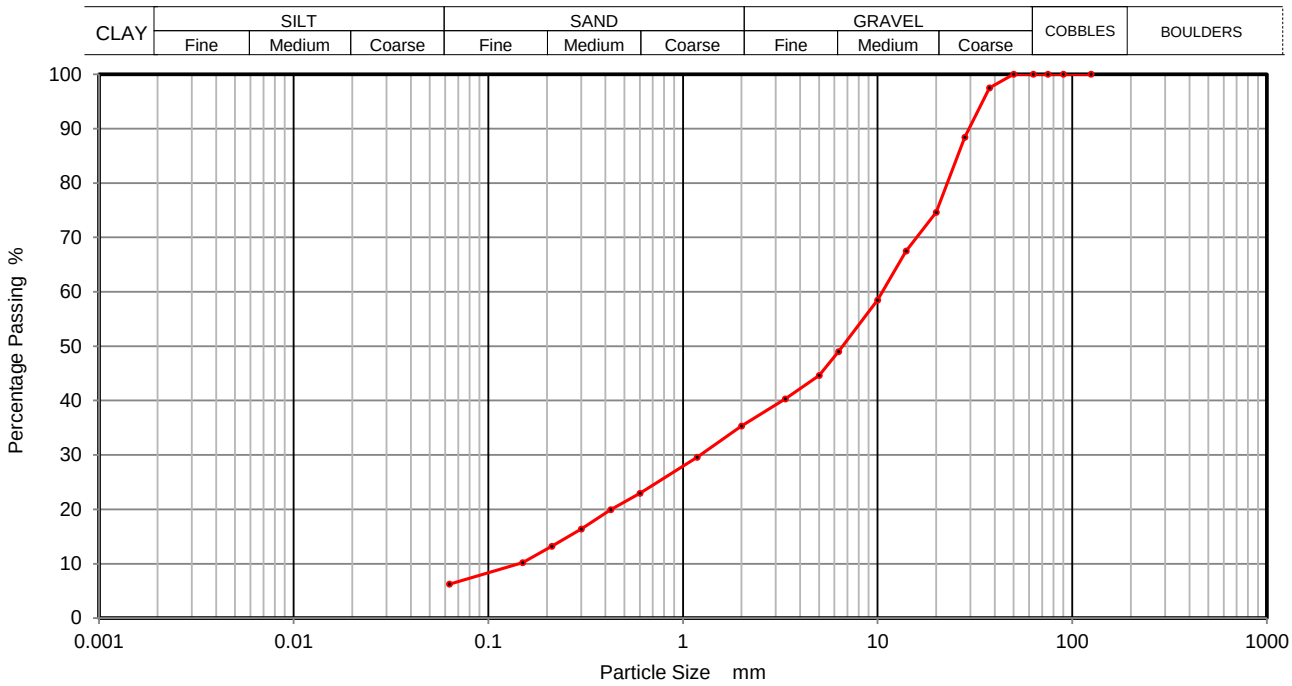
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP04
Project Name	Switch	Sample No.	2
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.20
		Depth Base	0.40
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	97		
28	88		
20	75		
14	68		
10	58		
6.3	49		
5	45		
3.35	40		
2	35		
1.18	30		
0.6	23		
0.425	20		
0.3	16		
0.212	13		
0.15	10		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	65
Sand	29
Silt and Clay	6

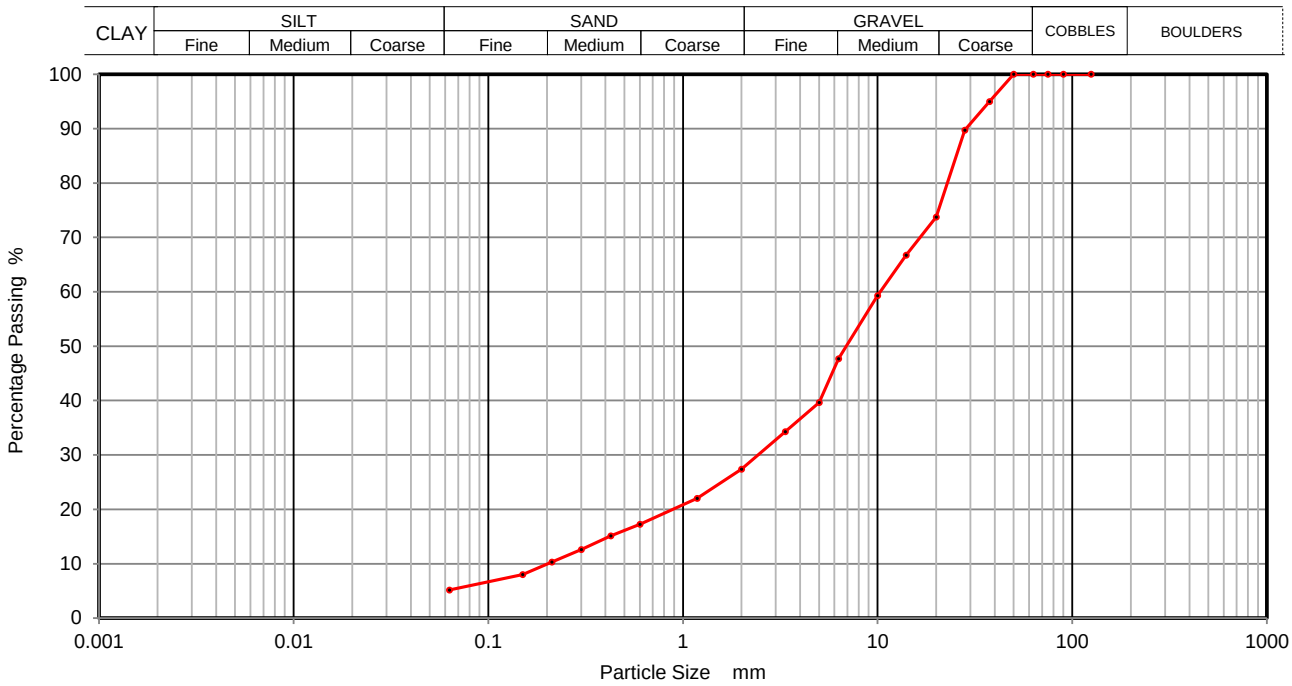
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP04
Project Name	Switch	Sample No.	7
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	1.20
		Depth Base	1.40
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	95		
28	90		
20	74		
14	67		
10	59		
6.3	48		
5	40		
3.35	34		
2	27		
1.18	22		
0.6	17		
0.425	15		
0.3	13		
0.212	10		
0.15	8		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	73
Sand	22
Silt and Clay	5

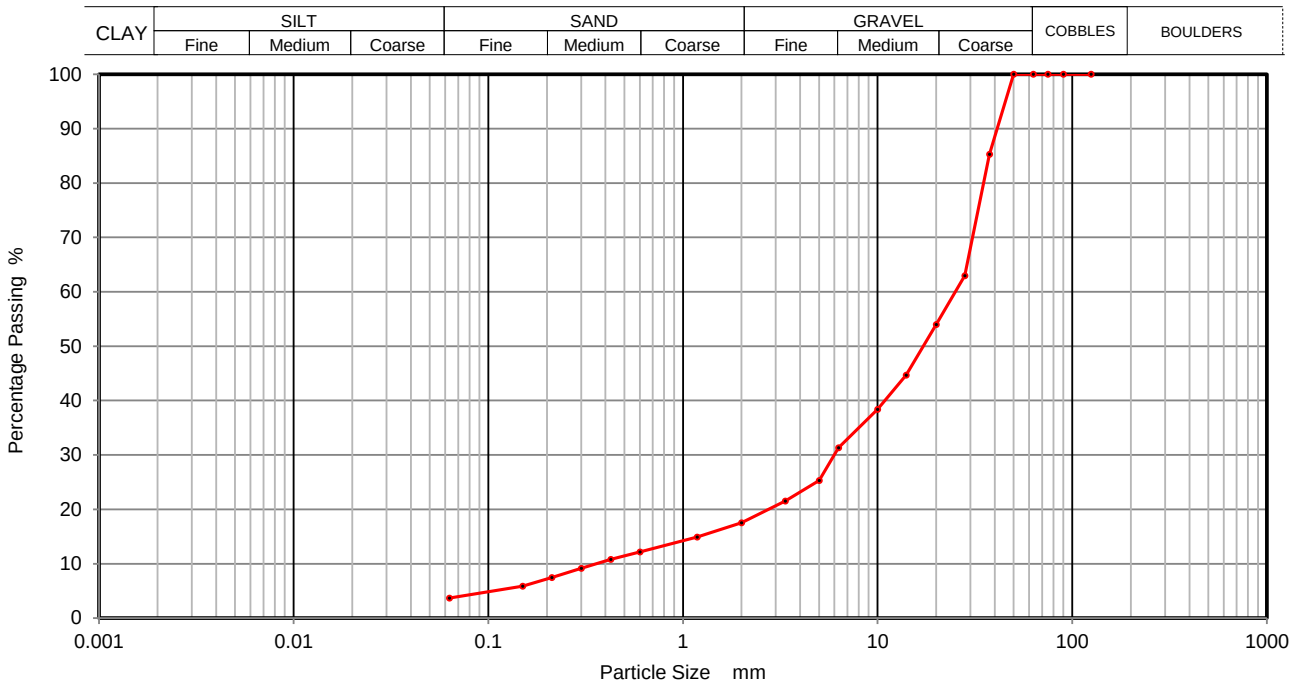
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve, Clause 9.2**	Contract Number	68911
		Borehole/Pit No.	TP05
Project Name	Switch	Sample No.	5
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.80
		Depth Base	1.00
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	85		
28	63		
20	54		
14	45		
10	38		
6.3	31		
5	25		
3.35	22		
2	18		
1.18	15		
0.6	12		
0.425	11		
0.3	9		
0.212	7		
0.15	6		
0.063	4		

Sample Proportions	% dry mass
Cobbles	0
Gravel	82
Sand	14
Silt and Clay	4

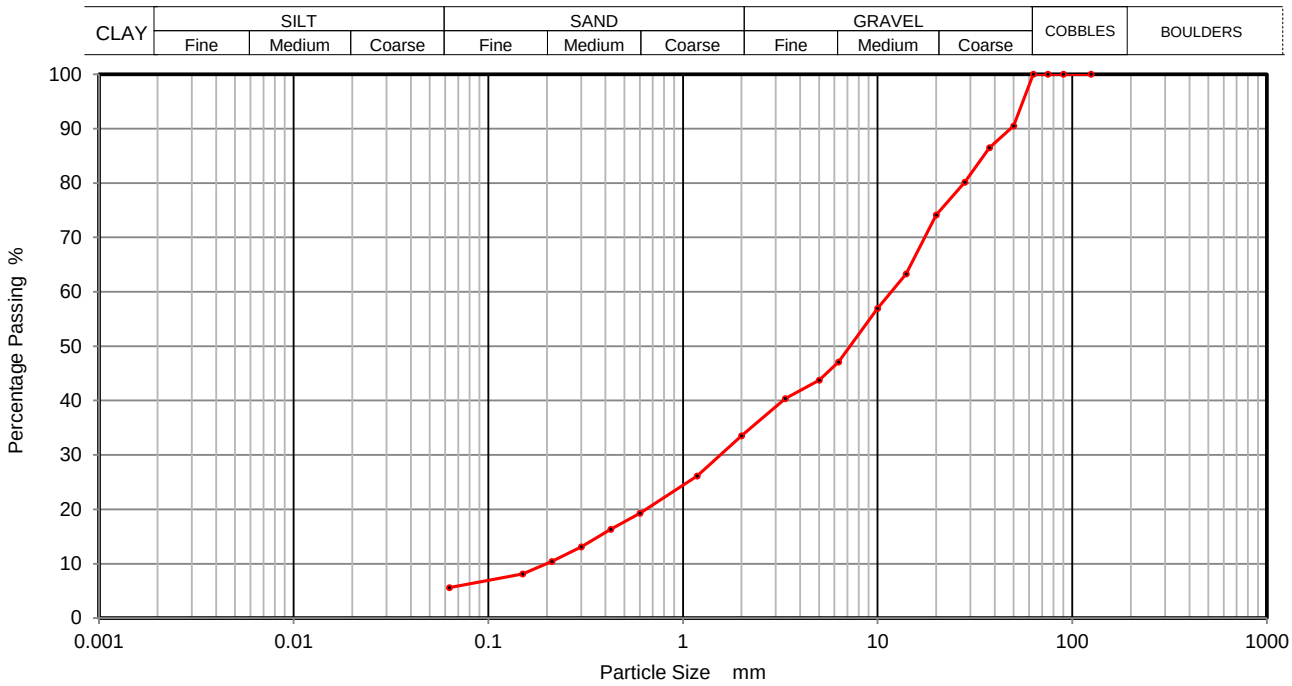
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP05
Project Name	Switch	Sample No.	2
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.10
		Depth Base	0.40
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	90		
37.5	87		
28	80		
20	74		
14	63		
10	57		
6.3	47		
5	44		
3.35	40		
2	34		
1.18	26		
0.6	19		
0.425	16		
0.3	13		
0.212	10		
0.15	8		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	66
Sand	28
Silt and Clay	6

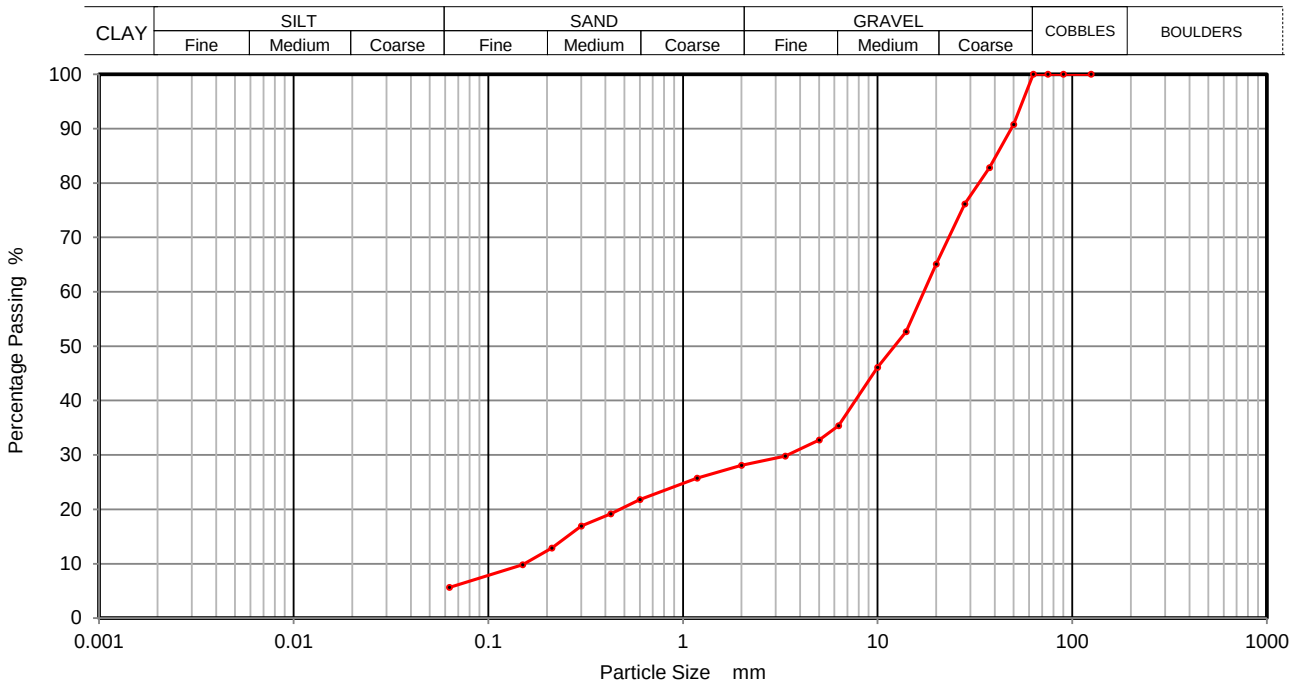
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP06
Project Name	Switch	Sample No.	3
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.50
		Depth Base	0.70
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	91		
37.5	83		
28	76		
20	65		
14	53		
10	46		
6.3	35		
5	33		
3.35	30		
2	28		
1.18	26		
0.6	22		
0.425	19		
0.3	17		
0.212	13		
0.15	10		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	72
Sand	22
Silt and Clay	6

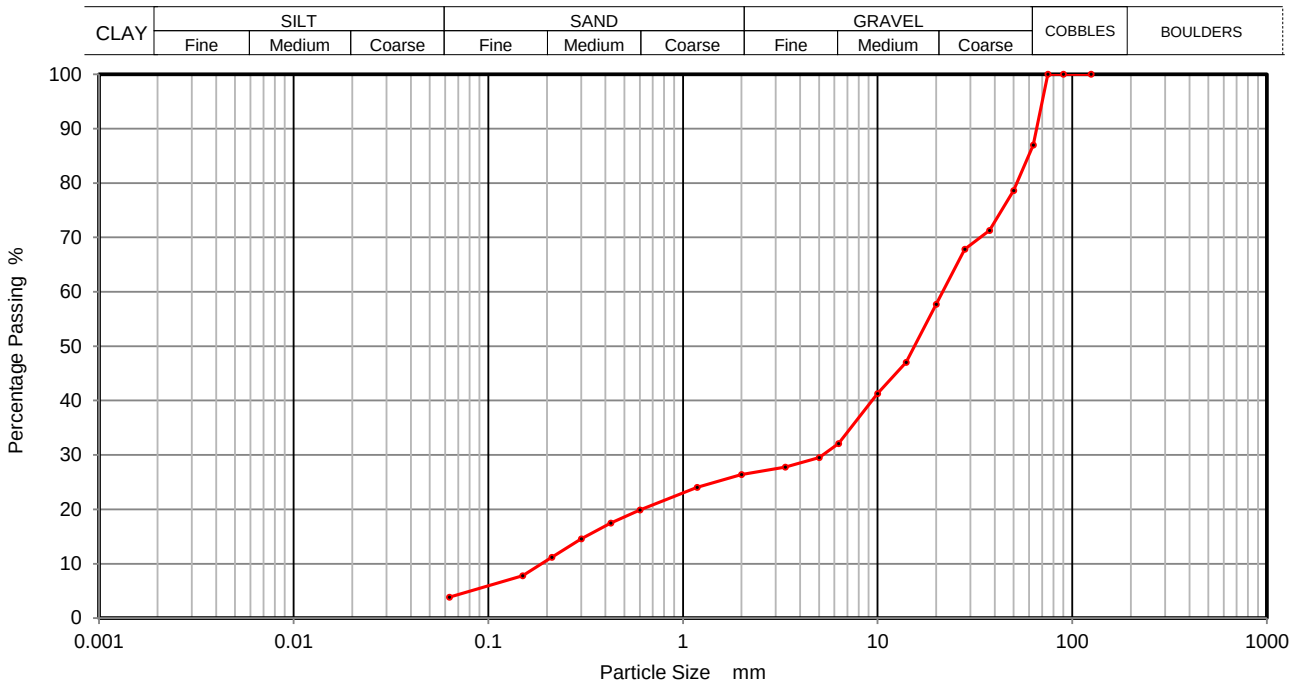
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP06
Project Name	Switch	Sample No.	7
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	0.80
		Depth Base	1.00
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	87		
50	79		
37.5	71		
28	68		
20	58		
14	47		
10	41		
6.3	32		
5	30		
3.35	28		
2	26		
1.18	24		
0.6	20		
0.425	17		
0.3	15		
0.212	11		
0.15	8		
0.063	4		

Sample Proportions	% dry mass
Cobbles	13
Gravel	61
Sand	22
Silt and Clay	4

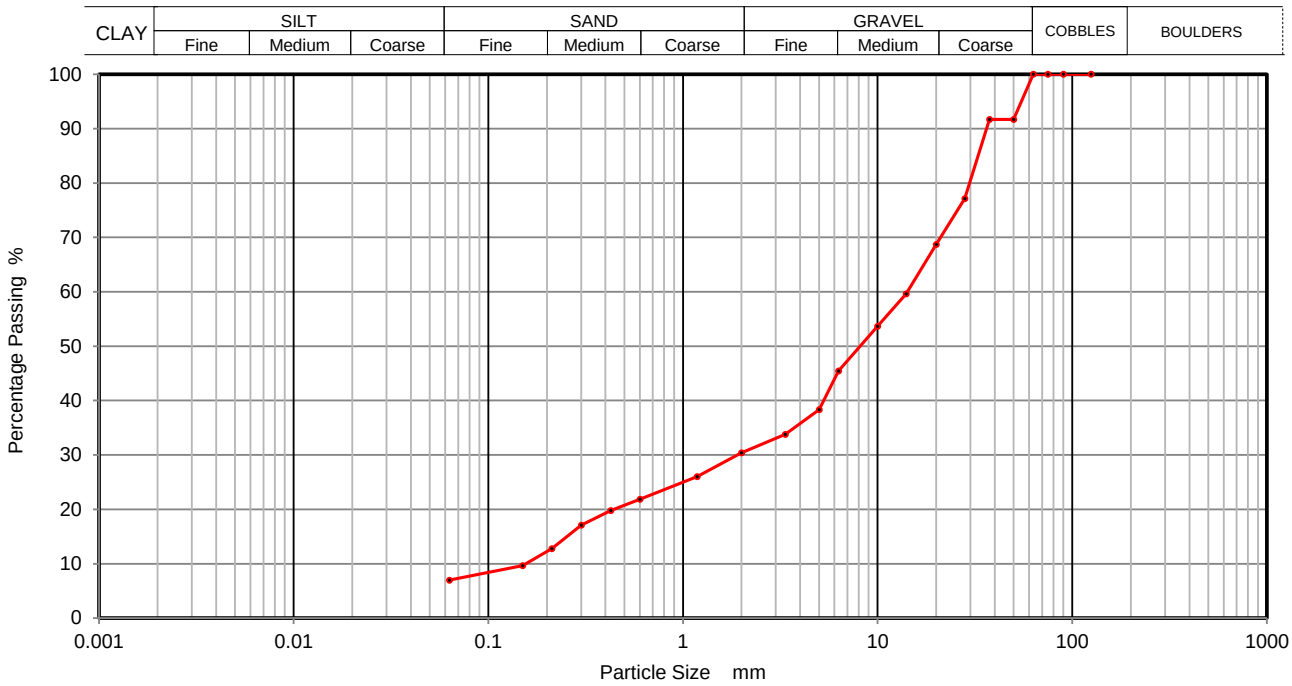
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP07
Project Name	Switch	Sample No.	2
Soil Description	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.10
		Depth Base	0.30
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	92		
37.5	92		
28	77		
20	69		
14	60		
10	54		
6.3	45		
5	38		
3.35	34		
2	30		
1.18	26		
0.6	22		
0.425	20		
0.3	17		
0.212	13		
0.15	10		
0.063	7		

Sample Proportions	% dry mass
Cobbles	0
Gravel	70
Sand	23
Silt and Clay	7

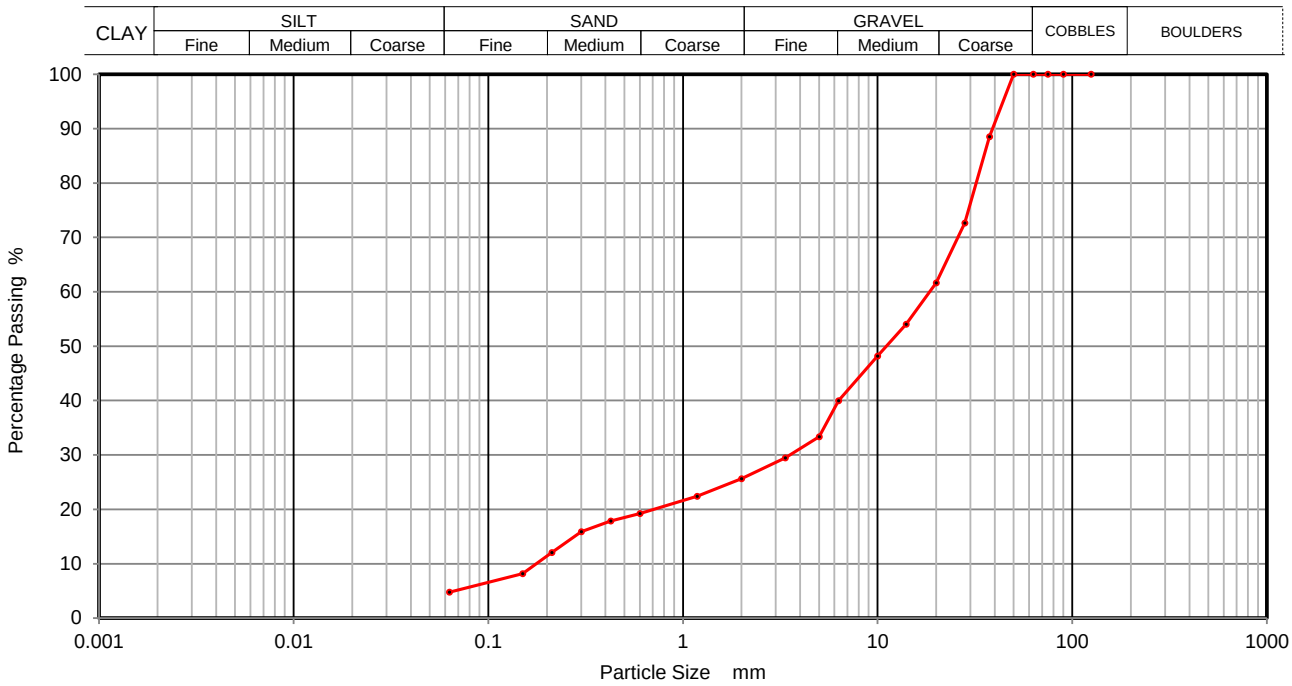
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP07
Project Name	Switch	Sample No.	7
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.90
		Depth Base	1.20
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	89		
28	73		
20	62		
14	54		
10	48		
6.3	40		
5	33		
3.35	29		
2	26		
1.18	22		
0.6	19		
0.425	18		
0.3	16		
0.212	12		
0.15	8		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	74
Sand	21
Silt and Clay	5

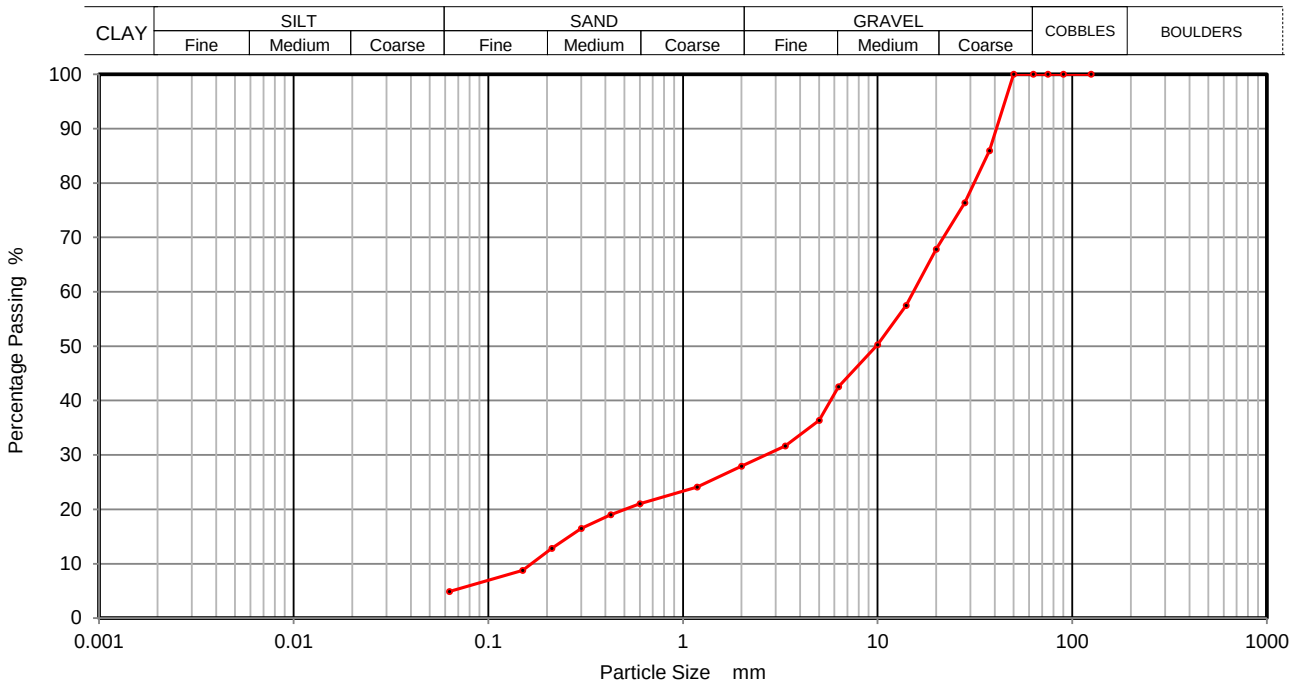
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operator
David Edwards

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	68911
		Borehole/Pit No.	TP09
Project Name	Switch	Sample No.	1
Soil Description	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.10
		Depth Base	0.40
Date Tested	16/10/2023	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	86		
28	76		
20	68		
14	57		
10	50		
6.3	43		
5	36		
3.35	32		
2	28		
1.18	24		
0.6	21		
0.425	19		
0.3	16		
0.212	13		
0.15	9		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	72
Sand	23
Silt and Clay	5

Remarks

Preparation and testing in accordance with BS1377 unless noted below

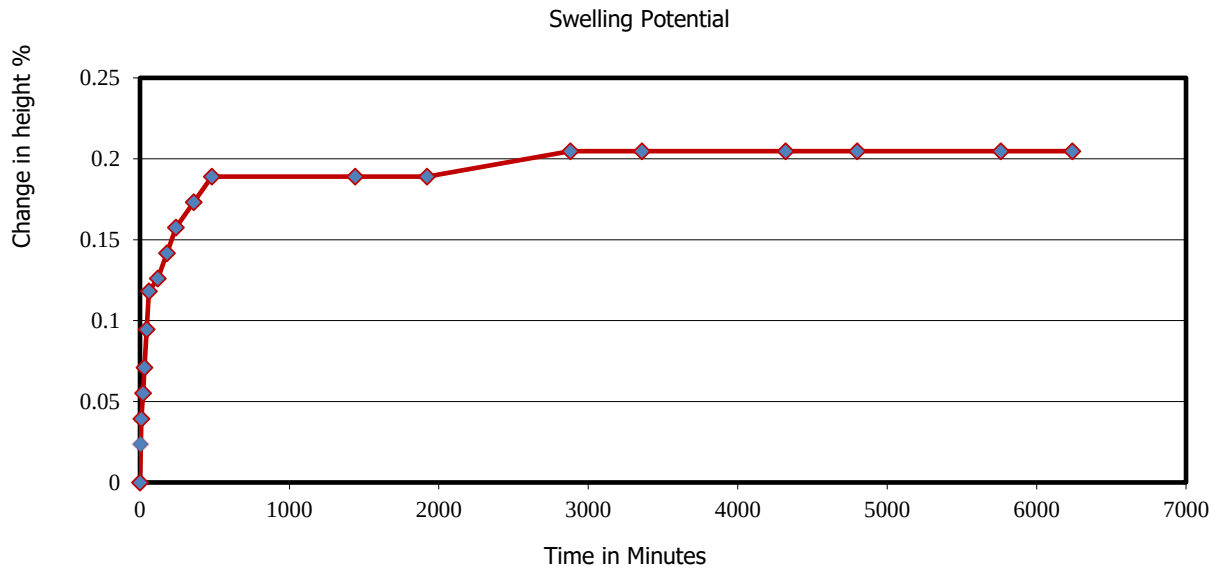
Operator
David Edwards

UKAS TESTING 2788

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP01
Sample Number:	3
Depth (m) :	0.60
Sample Type:	B
Operator:	DE
Description:	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.26
Moisture Content - %:	10.2	Moisture Content - %:	12
Bulk Density - Mg/m3:	2.13	Bulk Density - Mg/m3:	2.14
Dry Density - Mg/m3:	1.93	Dry Density - Mg/m3:	1.93
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.20

For and behalf of GEO Site & Testing Services Ltd

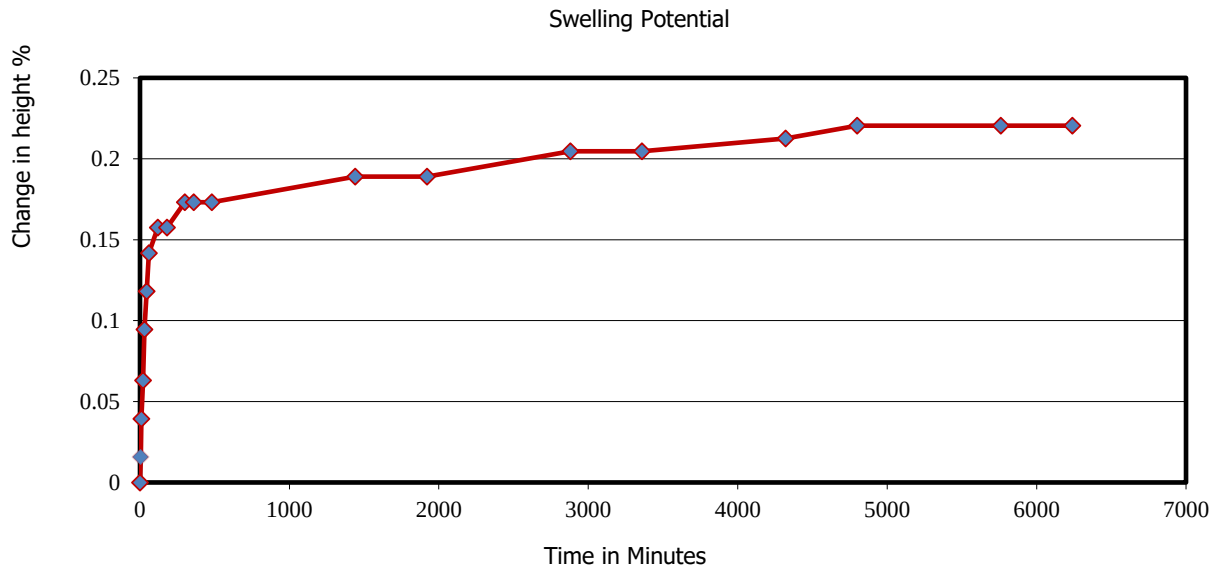
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP02
Sample Number:	3
Depth (m) :	0.75
Sample Type:	B
Operator:	DE
Description:	Brown/grey silty/clayey fine to coarse sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.28
Moisture Content - %:	12.1	Moisture Content - %:	13
Bulk Density - Mg/m3:	2.11	Bulk Density - Mg/m3:	2.11
Dry Density - Mg/m3:	1.88	Dry Density - Mg/m3:	1.88
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.22

For and behalf of GEO Site & Testing Services Ltd

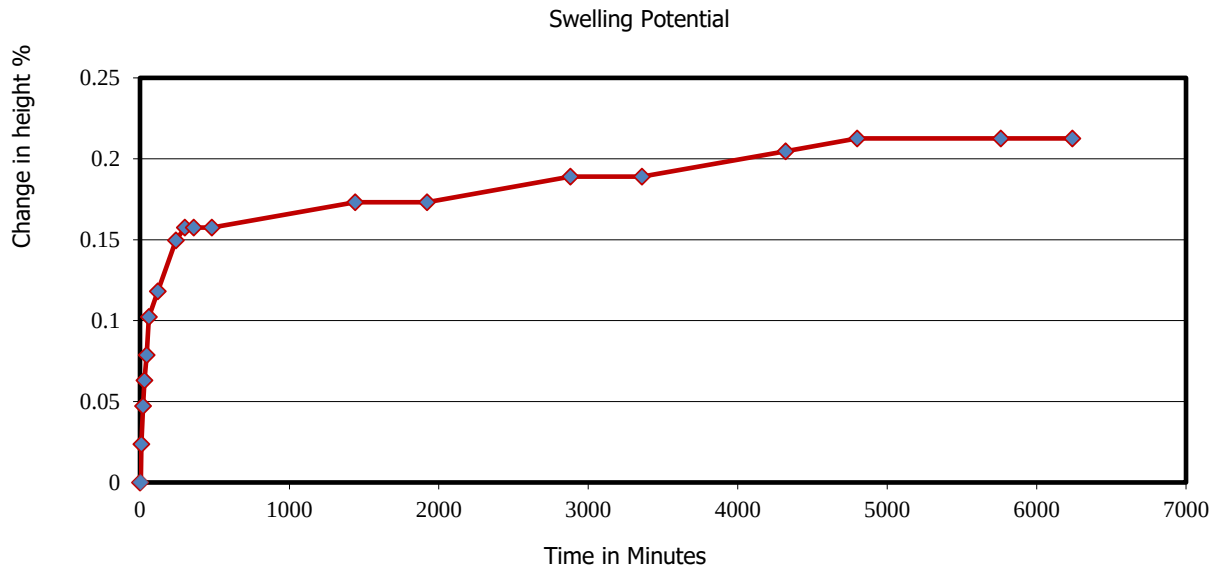
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP03
Sample Number:	3
Depth (m) :	0.85
Sample Type:	B
Operator:	DE
Description:	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.27
Moisture Content - %:	8.0	Moisture Content - %:	10
Bulk Density - Mg/m3:	2.18	Bulk Density - Mg/m3:	2.17
Dry Density - Mg/m3:	2.02	Dry Density - Mg/m3:	2.02
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.21

For and behalf of GEO Site & Testing Services Ltd

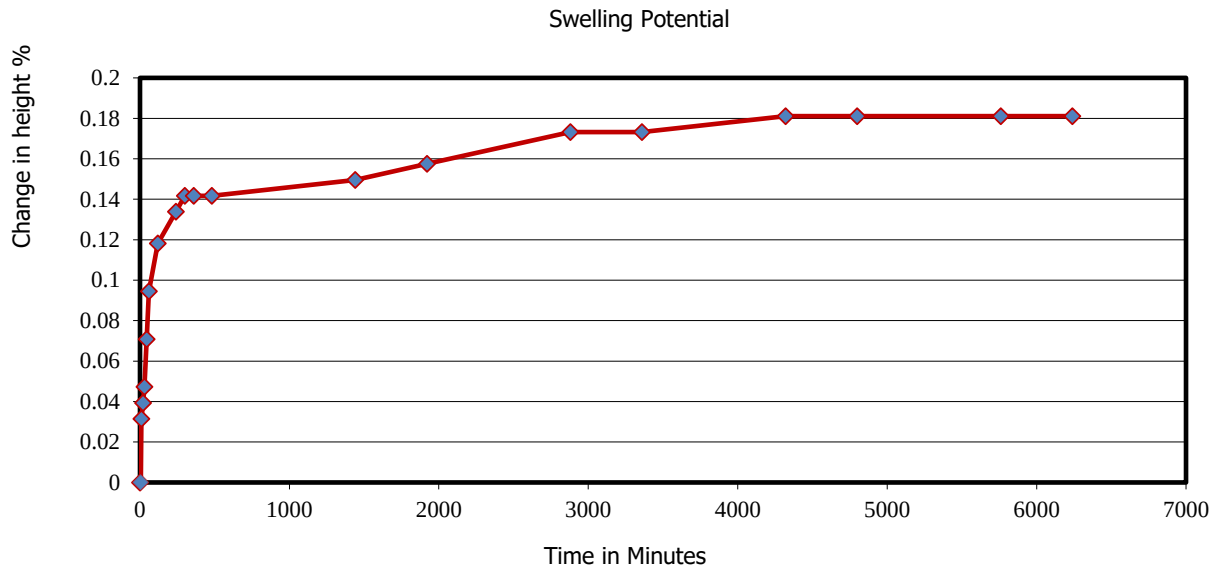
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP04
Sample Number:	5
Depth (m) :	0.70 - 1.0
Sample Type:	B
Operator:	DE
Description:	Made Ground

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.23
Moisture Content - %:	9.2	Moisture Content - %:	10
Bulk Density - Mg/m3:	2.17	Bulk Density - Mg/m3:	2.16
Dry Density - Mg/m3:	1.99	Dry Density - Mg/m3:	1.99
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.18

For and behalf of GEO Site & Testing Services Ltd

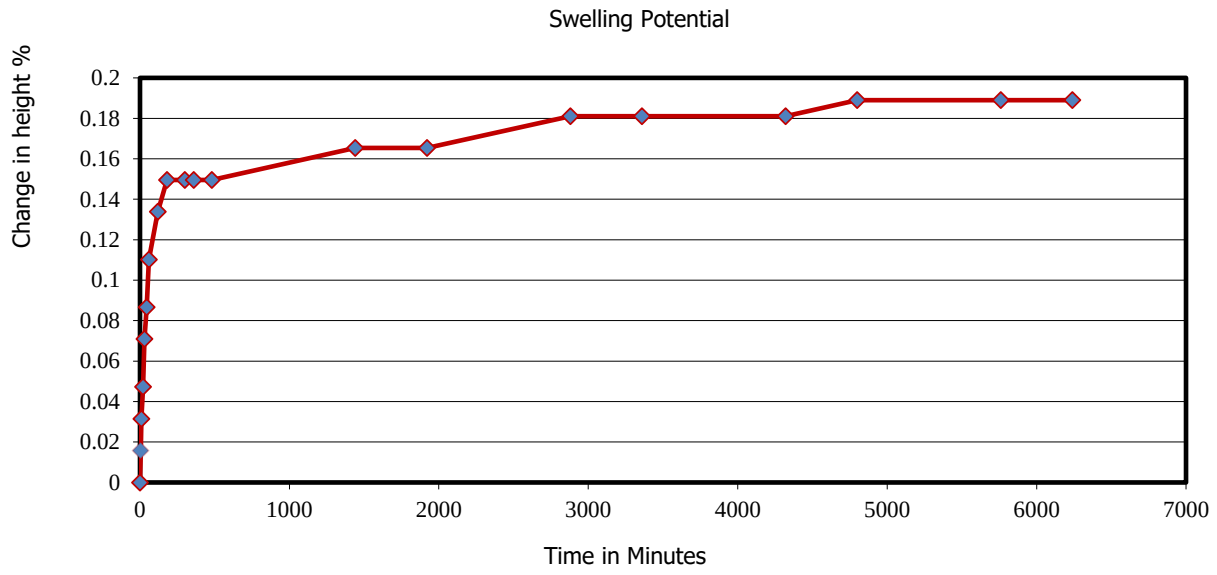
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP06
Sample Number:	3
Depth (m) :	0.50 - 0.70
Sample Type:	B
Operator:	DE
Description:	Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.24
Moisture Content - %:	9.2	Moisture Content - %:	11
Bulk Density - Mg/m3:	2.16	Bulk Density - Mg/m3:	2.16
Dry Density - Mg/m3:	1.98	Dry Density - Mg/m3:	1.98
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.19

For and behalf of GEO Site & Testing Services Ltd

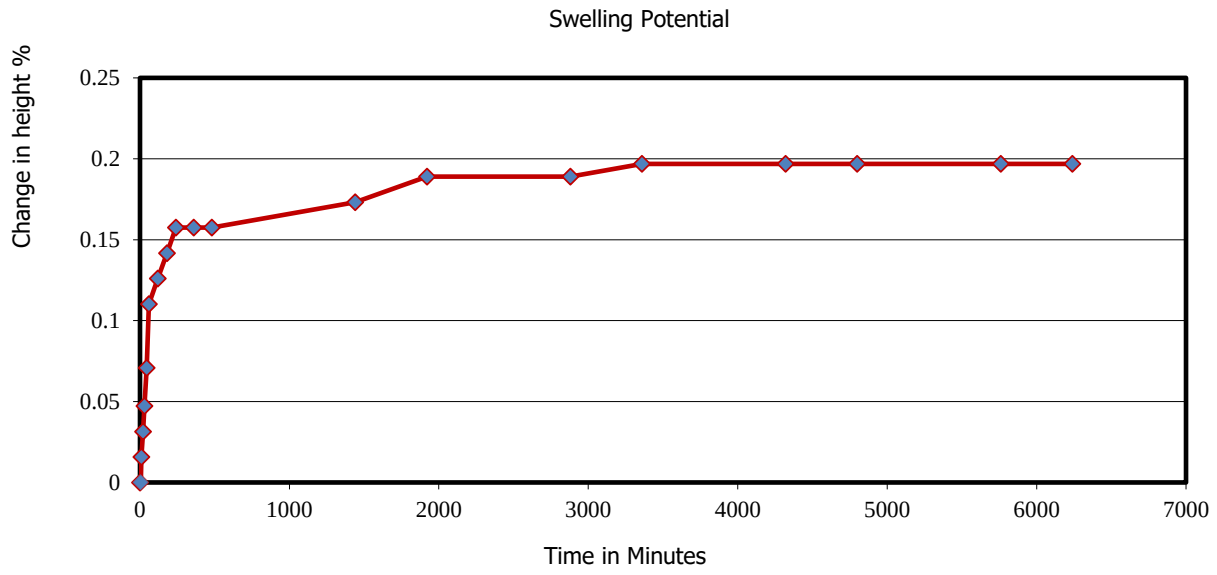
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP07
Sample Number:	8
Depth (m) :	0.90 - 1.20
Sample Type:	B
Operator:	DE
Description:	Brown slightly silty/clayey fine to coarse sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.25
Moisture Content - %:	11.2	Moisture Content - %:	13
Bulk Density - Mg/m3:	2.14	Bulk Density - Mg/m3:	2.13
Dry Density - Mg/m3:	1.92	Dry Density - Mg/m3:	1.92
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.20

For and behalf of GEO Site & Testing Services Ltd

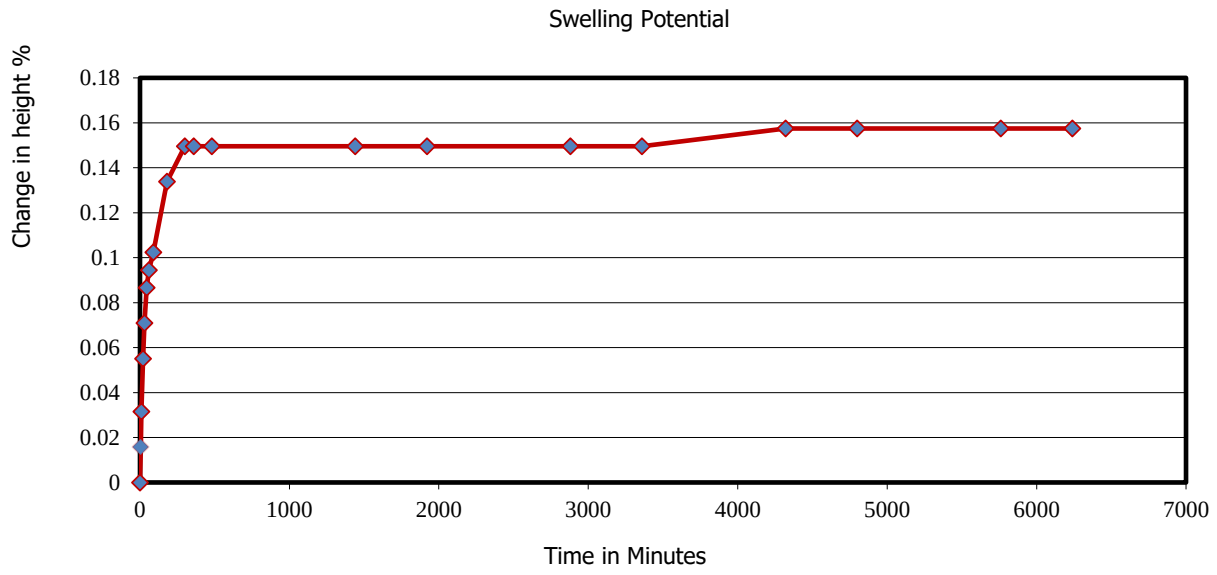
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP08
Sample Number:	6
Depth (m) :	1.50 - 2.0
Sample Type:	B
Operator:	DE
Description:	Made Ground

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.20
Moisture Content - %:	8.3	Moisture Content - %:	10
Bulk Density - Mg/m3:	2.14	Bulk Density - Mg/m3:	2.15
Dry Density - Mg/m3:	1.98	Dry Density - Mg/m3:	1.98
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.16

For and behalf of GEO Site & Testing Services Ltd

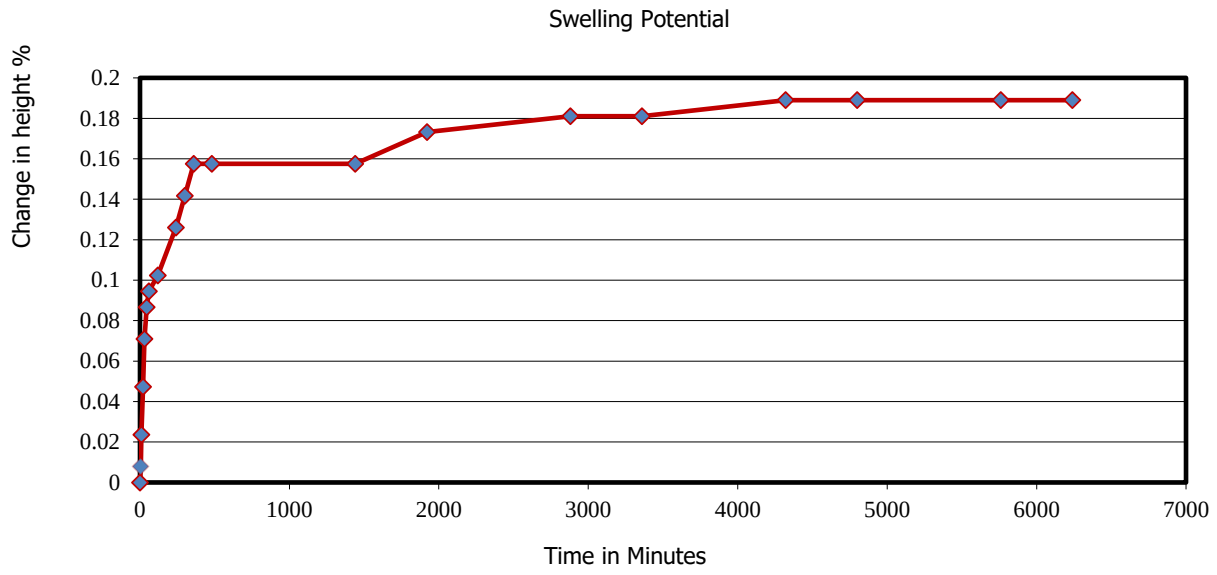
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Hydrock Limited
Client ref:	26279
Project Name:	Switch
Contract Number:	68911
Date Test Started:	16/10/23
BH/TP:	TP10
Sample Number:	7
Depth (m) :	0.70 - 1.0
Sample Type:	B
Operator:	DE
Description:	Made Ground

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.24
Moisture Content - %:	8.0	Moisture Content - %:	9
Bulk Density - Mg/m3:	2.16	Bulk Density - Mg/m3:	2.16
Dry Density - Mg/m3:	2.00	Dry Density - Mg/m3:	2.00
Test Temperature C°:	90		



Swelling after 96 Hours -%
0.19

For and behalf of GEO Site & Testing Services Ltd

Remarks:

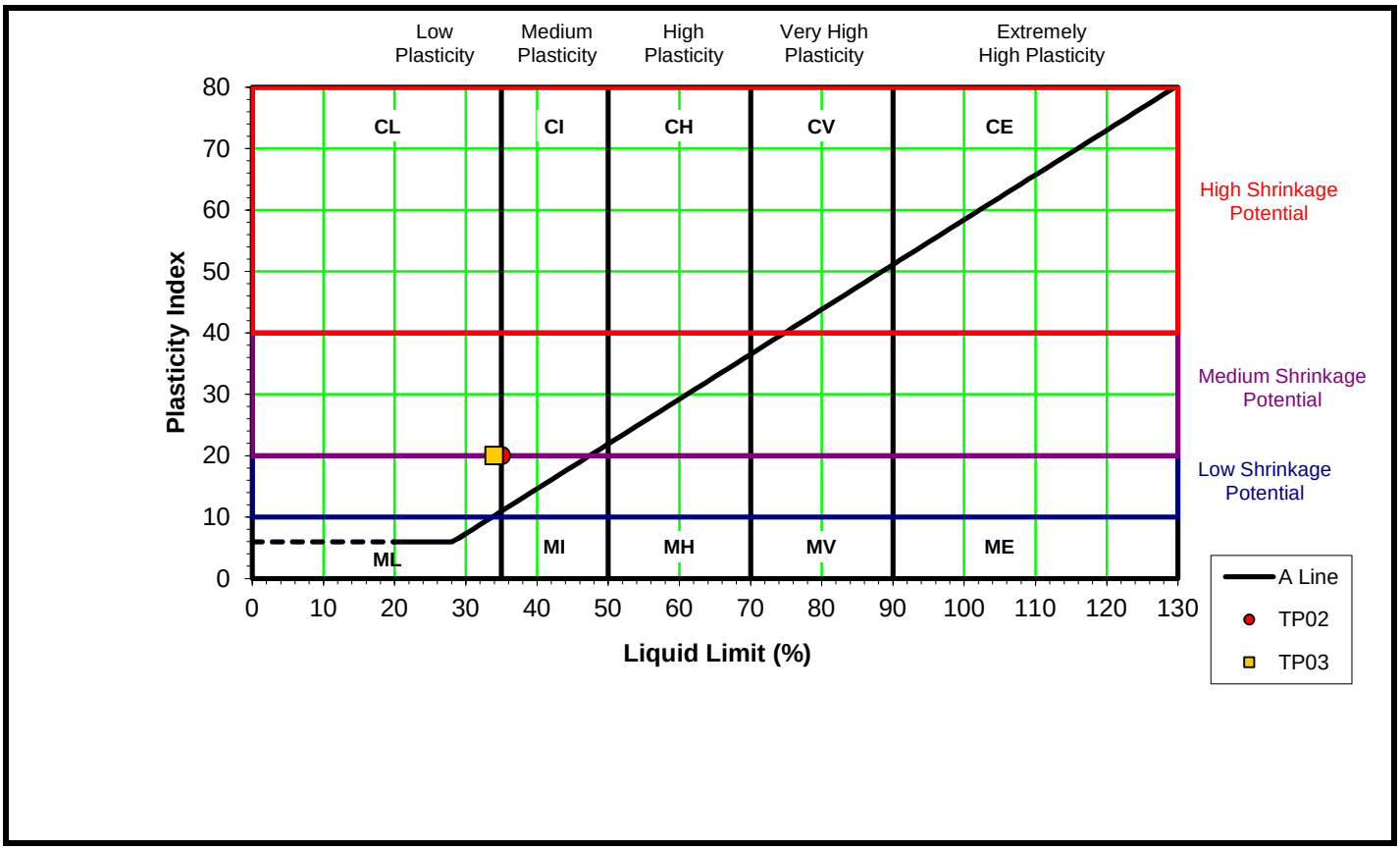
GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Geotechnical plots

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Method 4.4 & 5: One Point Method

Client:	Hydrock Consultants	Certificate Number:	68911
Client Address:	3rd Floor, Wharton Place, 13 Wharton Street, Cardiff	Client Reference:	26279
		Job Number:	C 26279
Postcode:	CF10 1GS	Date Received:	05.10.23
Contact:	Matthew Holbourn	Date Tested:	11.10.23
Site Name:	SWITCH	Certificate of Sampling:	
Site Address:	Port Talbot	Sampling Certificate No.:	



Hydrock

Client Morgan Sindall	**Location or material to which this assessment applies** Made Ground
Project SWITCH, Port Talbot	
Job number C26279	

Concrete in aggressive ground

After BRE Special Digest 1, 2005

Soil data

	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	27	27	0
No. tests in 20% data set	5	5	
No. tests with suspected pyrite		1	
Maximum value	430.6823	2.7	
Mean of highest two values	365	2	
Mean of highest 20%	300	1	
Characteristic Value	**300**	**0.9**	
			Mg not required
	[no pyrite]	**[pyrite suspected]**	
DS Class	**DS-1**	**DS-3**	

If pyrite suspected, DS Class limited to **DS-3**

Is pyrite assumed to be present? **No** **Adopted DS Class =** **DS-1**

Water data

	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value **(Maximum Level)**	13.4273	0 **Mg not required**
DS Class	**DS-1**	

pH data

	Soil	Water
Number of tests	27	3
No. tests in 20% data set	5	1
Lowest pH	7.3	7.0
Mean of lowest 20%	7.6	7.0
Characteristic value	**7.6**	**7.0**
Design value	**7.0**	

Number of soil pH results less than 5.5 0

DS Class design value

Based on higher of soil and water data **DS-1**

ACEC Class design value

Brownfield

Mobile groundwater **AC-1**

Appendix G Site monitoring data and ground gas risk assessment

Site monitoring data

GAS AND GROUNDWATER MONITORING RESULTS

Project: Switch, Port Talbot
Client: Hydrock
Time of start of visit: 11:30
Time of end of visit: 13:30

Job no: 2072250

Barometric pressure start of visit (mb): 999
Barometric pressure end of visit (mb): 999

Date: 20.10.23
Visit no.: 2
Serial no. of analyser: G508232

Barometric pressure in preceding 24hrs (mb): 997

Weather conditions: Raining
Ground conditions: Wet

Remarks: Steady state value are taken when there is no change for 1 minute. All measurements taken from the current ground level.

Monitoring Point		Methane (% vol) CH_4	Carbon Dioxide (% vol) CO_2	Hydrogen Sulphide (ppm) H_2S	Oxygen (% vol) O_2	Carbon Monoxide (ppm) CO	PID (ppm)	Free Phase Product (mm)	Gas flow average (l/hr)	Borehole Pressure (Pa)	Water Depth (mbgl)	Remarks	Base Depths (mbgl)
Ambient:		0.0	0.0	0	20.9	0	0.0						
BH01A	Peak	0.0	0.2	0	20.0	11	1.5	NONE	0.70	999.00	2.10		5.48
	Steady	0.0	0.2	0	20.0	11							
BH01B	Peak	4.4	0.0	0	0.5	0	1.3	NONE	0.60	999.00	1.76		1.77
	Steady	4.4	0.0	0	0.3	0							
BH02A	Peak	0.2	0.2	0	18.2	2	2.2	NONE	0.40	999.00	2.07		8.14
	Steady	0.2	0.2	0	18.2	2							
BH02B	Peak	1.7	0.0	0	2.2	2	2.4	NONE	0.20	999.00	1.84		1.85
	Steady	1.7	0.0	0	2.2	2							

GAS AND GROUNDWATER MONITORING RESULTS

Project: Switch, Port Talbot
Client: Hydrock
Time of start of visit: 10:30
Time of end of visit: 12:30

Job no: 2072250
Barometric pressure start of visit (mb): 999
Barometric pressure end of visit (mb): 1000

Date: 06.11.23
Visit no.: 3
Serial no. of analyser: G508232

Barometric pressure in preceding 24hrs (mb): 985

Weather conditions: Overcast
Ground conditions: Wet

Remarks: Steady state value are taken when there is no change for 1 minute. All measurements taken from the current ground level.

Monitoring Point		Methane (% vol) CH_4	Carbon Dioxide (% vol) CO_2	Hydrogen Sulphide (ppm) H_2S	Oxygen (% vol) O_2	Carbon Monoxide (ppm) CO	PID (ppm)	Free Phase Product (mm)	Gas flow average (l/hr)	Borehole Pressure (Pa)	Water Depth (mbgl)	Remarks	Base Depths (mbgl)
Ambient:		0.0	0.0	0	20.9	0	0.0						
BH01A	Peak	0.0	0.2	0	20.8	8	1.3	NONE	0.50	1000.00	1.84		5.50
	Steady	0.0	0.2	0	20.8	8							
BH01B	Peak	3.8	0.0	0	0.6	0	1.1	NONE	0.40	1000.00	1.76		1.77
	Steady	3.8	0.0	0	0.4	0							
BH02A	Peak	0.4	0.1	0	15.1	2	2.4	NONE	1.10	999.00	1.85		8.16
	Steady	0.4	0.1	0	15.1	2							
BH02B	Peak	0.8	0.1	0	0.7	0	2.1	NONE	-0.70	999.00	1.84		1.85
	Steady	0.8	0.1	0	0.4	0							

GAS AND GROUNDWATER MONITORING RESULTS

Project: Switch, Port Talbot
Client: Hydrock
Time of start of visit: 11:30
Time of end of visit: 13:30

Job no: 2072250

Barometric pressure start of visit (mb): 1024
Barometric pressure end of visit (mb): 1024

Date: 05.10.23
Visit no.: 1
Serial no. of analyser: G508232

CJAssociates

Barometric pressure in preceding 24hrs (mb): 1020

Weather conditions: Overcast
Ground conditions: Wet

Remarks: Steady state value are taken when there is no change for 1 minute. All measurements taken from the current ground level.

Monitoring Point		Methane (% vol) CH_4	Carbon Dioxide (% vol) CO_2	Hydrogen Sulphide (ppm) H_2S	Oxygen (% vol) O_2	Carbon Monoxide (ppm) CO	PID (ppm)	Free Phase Product (mm)	Gas flow average (l/hr)	Borehole Pressure (Pa)	Water Depth (mbgl)	Remarks	Base Depths (mbgl)
Ambient:		0.0	0.0	0	20.9	0	0.0						
BH01A	Peak	0.0	0.2	0	20.7	19	0.0	NONE	0.50	1024.00	2.14		5.48
	Steady	0.0	0.2	0	20.7	17							
BH01B	Peak	4.2	0.0	0	0.4	0	0.0	NONE	0.40	1024.00	1.76		1.77
	Steady	4.2	0.0	0	0.3	0							
BH02A	Peak	0.2	0.2	0.0	18.2	2.0	0.0	NONE	0.40	1024.00	2.14		8.14
	Steady	0.2	0.2	0.0	18.2	2.0							
BH02B	Peak	1.5	0	0	1.9	3	0.0	NONE	0.20	1024.00	1.84		1.85
	Steady	1.5	0	0	1.9	3							

Ground gas risk assessment

Hydrock

Site: SWITCH, Port Talbot
Job number: C - 26279
Client: Morgan Sindall

Gas analyser:
Equipment check OK: Y
Service in date: Y
Calibration check OK: Y
Name of person monitoring: CJ Associates

Notes on site weather conditions: 5.10.23 - Wet and overcast. 20.10.23 - Raining and wet. 6.11.23 - Overcast and wet.

Notes: LEL = lower explosive limit = 5%v/v. * where the flow is less than the limit of detection of the instrument, the detection limit is reported. GSVs are rounded to 3 places.

Monitoring round		Borehole details						Pressure and flow					Gas concentrations										GSV		Local conditions
Date	Time	Borehole	Single or dual gas tap	Response zone depth (m)	Depth to water or depth of hole if dry (m)	D denotes dry hole	Volume of headspace in BH (well pipie & filter pack) (m^3)	Atmospheric pressure (hPa)	Atm pressure falling / rising / steady	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	VOC (as ppm using PID)	CH_4 (%v/v) Initial	CH_4 (%v/v) Steady	CH_4 (%LEL) Initial	CH_4 (%LEL) Steady	CO_2 (%v/v) Initial	CO_2 (%v/v) Steady	O_2 (%v/v) Initial	O_2 (%v/v) Steady	Other Gases PID	Gas Screening Value (CH_4) (l/hr)	Gas Screening Value (CO_2) (l/hr)	Notes on condition of borehole and surrounding ground
								Max. individual values:				**1.1**			**4.4**				**0.2**		**20.8**	**0.0**	**0.0264**	**0.0014**	**Summary statistics for this monitoring period.**
								Min. individual values:				0.2			0.0				0.0		0.3	0.0	0	0	
								Worst-case GSVs based on max. individual flow and max. individual conc. over the duration of this table:															**0.0484**	**0.0022**	
05/10/23	11:30	BH01A	D	3.50-5.50	2.14		0.00798	1024	S	0.34	0.5	0.5	0	0	0			0.2	0.2	20.7	20.7		0	0.001	
20/10/23	11:30	BH01A	D	3.50-5.50	2.1		0.00783	999	S	-0.10	0.7	0.7	1.5	0	0			0.2	0.2	20	20		0	0.0014	
06/11/23	10:30	BH01A	D	3.50-5.50	1.84		0.00686	1000	R	-0.10	0.5	0.5	1.3	0	0			0.2	0.2	20.8	20.8		0	0.001	
05/10/23	11:30	BH01B	D	1.00-2.00	1.76		0.00657	1024	S	0.02	0.4	0.4	0	4.2	4.2			0	0	0.3	0.3		0.0168	0	
20/10/23	11:30	BH01B	D	1.00-2.00	1.76		0.00657	999	S	0.00	0.6	0.6	1.3	4.4	4.4			0	0	0.3	0.3		0.0264	0	
06/11/23	10:30	BH01B	D	1.00-2.00	1.76		0.00657	1000	R	-0.10	0.4	0.4	1.1	3.8	3.8			0	0	0.4	0.4		0.0152	0	
05/10/23	11:30	BH02A	D	3.60-6.00	2.14		0.00798	1024	S	0.02	0.4	0.4	0	0.2	0.2			0.2	0.2	18.2	18.2		0.0008	0.0008	
20/10/23	11:30	BH02A	D	3.60-6.00	2.07		0.00772	999	S	0.03	0.4	0.4	2.2	0.2	0.2			0.2	0.2	18.2	18.2		0.0008	0.0008	
06/11/23	10:30	BH02A	D	3.60-6.00	1.85		0.00690	999	R	-0.10	1.1	1.1	2.4	0.4	0.4			0.1	0.1	15.1	15.1		0.0044	0.0011	
05/10/23	11:30	BH02B	D	1.00-2.00	1.84		0.00686	1024	S	2.67	0.2	0.2	0	1.5	1.5			0	0	1.9	1.9		0.003	0	
20/10/23	11:30	BH02B	D	1.00-2.00	1.84		0.00686	999	S	-0.02	0.2	0.2	2.4	1.7	1.7			0	0	2.2	2.2		0.0034	0	
06/11/23	10:30	BH02B	D	1.00-2.00	1.84		0.00686	999	R	-5	-0.7	0.7	2.1	0.8	0.8			0.1	0.1	0.4	0.4		0.0056	0.0007	

Appendix H Contamination test results and GQRA

Contamination test results

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Mathew Holbourn
Hydrock
3rd Floor,
Wharton Place,
13 Wharton Street,
Cardiff
CF10 1GS

Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 23-12620

Site Reference:	Switch
Project / Job Ref:	26279
Order No:	PO029482
Sample Receipt Date:	11/10/2023
Sample Scheduled Date:	11/10/2023
Report Issue Number:	1
Reporting Date:	07/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

DETS Ltd
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Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

UKAS TESTING 4480

Water Analysis Certificate							
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: PO029482	**Depth (m)**	2.14	2.13				
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473				

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**ISO17025**	7.6	7.6			
Electrical Conductivity (at 25°C)	uS/cm	< 5	NONE	659	765			
Total Cyanide	ug/l	< 5	**ISO17025**	53	< 5			
Free Cyanide	ug/l	< 5	**ISO17025**	< 5	< 5			
Bromate (S)	ug BrO3/l	< 0.8	NONE	< 0.80	< 0.80			
Sulphate as SO_4	mg/l	< 1	**ISO17025**	93	86			
Ammoniacal Nitrogen as NH_4	ug/l	< 50	**ISO17025**	635	284			
Ammonia as NH_4	ug/l	< 50	**ISO17025**	635	284			
Ammonium as NH_4	ug/l	< 50	**ISO17025**	635	284			
Ammonium as NH_4	mg/l	< 0.05	**ISO17025**	0.64	0.28			
Chloride	mg/l	< 1	**ISO17025**	74	88			
Nitrate as N	mg/l	< 0.5	NONE	< 0.5	< 0.5			
Nitrite as N	mg/l	< 0.5	NONE	< 0.5	< 0.5			
Fluoride	mg/l	< 0.5	**ISO17025**	< 0.5	< 0.5			
Dissolved Organic Carbon (DOC)	mg/l	<1.0	**ISO17025**	14.7	11.7			
Hardness - Total	mgCaCO3/l	< 0.25	NONE	254	254			
Aluminium (dissolved)	ug/l	< 1	**ISO17025**	1	< 1			
Antimony (dissolved)	ug/l	< 0.2	**ISO17025**	0.3	< 0.2			
Arsenic (dissolved)	ug/l	< 0.2	**ISO17025**	2.1	0.7			
Barium (dissolved)	ug/l	< 0.2	**ISO17025**	84.0	21.0			
Boron (dissolved)	ug/l	< 1	**ISO17025**	173	241			
Cadmium (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Chromium (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20			
Chromium III	ug/l	< 20	NONE	< 20	< 20			
Cobalt (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	2.0			
Copper (dissolved)	ug/l	< 0.2	**ISO17025**	0.6	1.3			
Iron (dissolved)	ug/l	< 1	**ISO17025**	58	6			
Lead (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Manganese (dissolved)	ug/l	< 0.2	**ISO17025**	2530.0	492.0			
Mercury (dissolved)	ug/l	< 0.04	**ISO17025**	0.12	< 0.04			
Nickel (dissolved)	ug/l	< 0.2	**ISO17025**	2.3	1.4			
Selenium (dissolved)	ug/l	< 0.2	**ISO17025**	1.2	0.2			
Silver (dissolved) (S)	ug/l	< 0.2	NONE	< 0.2	< 0.2			
Tin (dissolved)	ug/l	< 0.1	**ISO17025**	0.1	< 0.1			
Vanadium (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Zinc (dissolved)	ug/l	< 1	**ISO17025**	2	3			
Calcium (dissolved)	mg/l	< 0.1	**ISO17025**	83.6	78.5			
Sodium (dissolved)	mg/l	< 0.1	**ISO17025**	43.2	67.3			
Total Phenols (monohydric)	ug/l	< 10	**ISO17025**	43	< 10			

Subcontracted analysis (S)
Insufficient sample I/S
Unsuitable Sample U/S

DETS Ltd
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Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Water Analysis Certificate - Speciated PAH							
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: PO029482	**Depth (m)**	2.14	2.13				
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473				

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	0.04	< 0.01			
Fluorene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.16	NONE	< 0.16	< 0.16			

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Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Water Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: PO029482	**Depth (m)**	2.14	2.13			
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473			

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C6 - C8 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C8 - C10 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C10 - C12 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C12 - C16 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C16 - C35 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C35 - C44 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	ug/l	< 70	NONE	< 70	< 70			
Aromatic >C5 - C7 : HS_1D_MS_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C7 - C8 : HS_1D_MS_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C8 - C10 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C10 - C12 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C12 - C16 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C16 - C21 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C21 - C35 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C35 - C44 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	ug/l	< 70	NONE	< 70	< 70			
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	ug/l	< 140	NONE	< 140	< 140			

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Water Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: PO029482	**Depth (m)**	2.14	2.13			
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473			

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/l	< 1	**ISO17025**	< 1	< 1			
Toluene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5			
Ethylbenzene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5			
p & m-xylene : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10			
o-xylene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5			
MTBE : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10			

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Water Analysis Certificate - Volatile Organic Compounds (VOC)							
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: PO029482	**Depth (m)**	2.14	2.13				
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473				

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
Vinyl Chloride	ug/l	< 5	ISO17025	< 5	< 5			
Chloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Bromomethane	ug/l	< 5	ISO17025	< 5	< 5			
Trichlorofluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
MTBE	ug/l	< 10	ISO17025	< 10	< 10			
trans-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
2,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroform	ug/l	< 5	ISO17025	< 5	< 5			
Bromochloromethane	ug/l	< 10	ISO17025	< 10	< 10			
1,1,1-Trichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Carbon Tetrachloride	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
Benzene	ug/l	< 1	ISO17025	< 1	< 1			
1,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Trichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Bromodichloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Dibromomethane	ug/l	< 5	ISO17025	< 5	< 5			
TAME	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Toluene	ug/l	< 5	ISO17025	< 5	< 5			
trans-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2-Trichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,3-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Tetrachloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Dibromochloromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dibromoethane	ug/l	< 5	ISO17025	< 5	< 5			
Chlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,1,2-Tetrachloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Ethyl Benzene	ug/l	< 5	ISO17025	< 5	< 5			
m,p-Xylene	ug/l	< 10	ISO17025	< 10	< 10			
o-Xylene	ug/l	< 5	ISO17025	< 5	< 5			
Styrene	ug/l	< 5	ISO17025	< 5	< 5			
Bromoform	ug/l	< 10	ISO17025	< 10	< 10			
Isopropylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2,2-Tetrachloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,2,3-Trichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
n-Propylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
Bromobenzene	ug/l	< 5	ISO17025	< 5	< 5			
2-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3,5-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
4-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
tert-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2,4-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
sec-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
p-Isopropyltoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,4-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
n-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
,2-Dibromo-3-chloropropane	ug/l	< 10	ISO17025	< 10	< 10			
Hexachlorobutadiene	ug/l	< 5	ISO17025	< 5	< 5			

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12620	**Date Sampled**	06/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: PO029482	**Depth (m)**	2.14
Reporting Date: 07/11/2023	**DETS Sample No**	679472

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12620	**Date Sampled**	06/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: PO029482	**Depth (m)**	2.13
Reporting Date: 07/11/2023	**DETS Sample No**	679473

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12620	**Date Sampled**	06/10/23	06/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: PO029482	**Depth (m)**	2.14	2.13			
Reporting Date: 07/11/2023	**DETS Sample No**	679472	679473			

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2,4-Trichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Nitrobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
0-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethoxy)methane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethyl)ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,3-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,4-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dimethylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Isophorone	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachloroethane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
p-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,6-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,5-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloro-3-methylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Methylnaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorocyclopentadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,6-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dimethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloroanaline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chlorophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
3-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Bromophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Diethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibenzofuran	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Azobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibutyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Carbazole	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-ethylhexyl)phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Benzyl butyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Di-n-octyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12620	**Date Sampled**	06/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: PO029482	**Depth (m)**	2.14
Reporting Date: 07/11/2023	**DETS Sample No**	679472

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	1H-Indene-1-one, 2,3-dihydro	95	µg/l	< 0.1	1.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12620	**Date Sampled**	06/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: PO029482	**Depth (m)**	2.13
Reporting Date: 07/11/2023	**DETS Sample No**	679473

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-12620
Hydrock
Site Reference: Switch
Project / Job Ref: 26279
Order No: PO029482
Reporting Date: 07/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

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List of HWOL Acronyms and Operators

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH LQM - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH LQM - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH LQM - Aliphatic >C16 - C35 - EH_CU_1D_AL
TPH LQM - Aliphatic >C35 - C44 - EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH LQM - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH LQM - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH LQM - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH LQM - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH LQM - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH LQM - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH LQM - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH LQM - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH LQM - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

4480

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13 Wharton Street,
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DETS Report No: 23-13124

Site Reference:	Switch
Project / Job Ref:	26279
Order No:	None Supplied
Sample Receipt Date:	23/10/2023
Sample Scheduled Date:	23/10/2023
Report Issue Number:	1
Reporting Date:	10/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Water Analysis Certificate							
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	2.10	2.07				
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694				

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**ISO17025**	7.8	11.1			
Electrical Conductivity (at 25°C)	uS/cm	< 5	NONE	610	775			
Total Cyanide	ug/l	< 5	**ISO17025**	106	11			
Free Cyanide	ug/l	< 5	**ISO17025**	< 5	< 5			
Bromate (S)	ug BrO3/l	< 0.8	NONE	< 0.80	< 0.80			
Sulphate as SO_4	mg/l	< 1	**ISO17025**	73	46			
Ammoniacal Nitrogen as NH_4	ug/l	< 50	**ISO17025**	803	2210			
Ammonia as NH_4	ug/l	< 50	**ISO17025**	803	2210			
Ammonium as NH_4	ug/l	< 50	**ISO17025**	803	2210			
Ammonium as NH_4	mg/l	< 0.05	**ISO17025**	0.80	2.21			
Chloride	mg/l	< 1	**ISO17025**	66	75			
Nitrate as N	mg/l	< 0.5	NONE	< 0.5	< 0.5			
Nitrite as N	mg/l	< 0.5	NONE	< 0.5	0.5			
Fluoride	mg/l	< 0.5	**ISO17025**	< 0.5	< 0.5			
Dissolved Organic Carbon (DOC)	mg/l	<1.0	**ISO17025**	14.3	9.5			
Hardness - Total	mgCaCO3/l	< 0.25	NONE	255	176			
Aluminium (dissolved)	ug/l	< 5	**ISO17025**	<5	264			
Antimony (dissolved)	ug/l	< 5	**ISO17025**	<5	<<5			
Arsenic (dissolved)	ug/l	< 5	**ISO17025**	<5	<5			
Barium (dissolved)	ug/l	< 5	**ISO17025**	52.2	165.0			
Boron (dissolved)	ug/l	< 5	**ISO17025**	151	99			
Cadmium (dissolved)	ug/l	< 0.4	**ISO17025**	<0.4	<0.4			
Chromium (dissolved)	ug/l	< 5	**ISO17025**	<5	<5			
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20			
Chromium III	ug/l	< 20	NONE	< 20	< 20			
Cobalt (dissolved)	ug/l	< 5	**ISO17025**	<5	<5			
Copper (dissolved)	ug/l	< 5	**ISO17025**	<5	34.2			
Iron (dissolved)	ug/l	< 5	**ISO17025**	78	6			
Lead (dissolved)	ug/l	< 5	**ISO17025**	<5	<5			
Manganese (dissolved)	ug/l	<5	**ISO17025**	1880.0	<5			
Mercury (dissolved)	ug/l	< 0.05	**ISO17025**	0.25	<0.05			
Nickel (dissolved)	ug/l	< 5	**ISO17025**	<5	5.9			
Selenium (dissolved)	ug/l	< 5	**ISO17025**	<5	<5			
Silver (dissolved) (S)	ug/l	< 0.13	NONE	<0.13	<0.13			
Tin (dissolved)	ug/l	< 5	**ISO17025**	< 5	< 5			
Vanadium (dissolved)	ug/l	< 5	**ISO17025**	< 5	< 5			
Zinc (dissolved)	ug/l	< 2	**ISO17025**	<2	<2			
Calcium (dissolved)	mg/l	< 0.2	**ISO17025**	88	70.5			
Sodium (dissolved)	mg/l	< 0.2	**ISO17025**	39.2	71.6			
Total Phenols (monohydric)	ug/l	< 10	**ISO17025**	163	10			

Subcontracted analysis (S)
Insufficient sample I/S
Unsuitable Sample U/S

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Water Analysis Certificate - Speciated PAH							
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	2.10	2.07				
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694				

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	82.45	0.02			
Acenaphthylene	ug/l	< 0.01	NONE	0.01	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	0.14	< 0.01			
Fluorene	ug/l	< 0.01	NONE	0.02	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	0.01	< 0.01			
Anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.16	NONE	82.63	< 0.16			

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Water Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	2.10	2.07			
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694			

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C6 - C8 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C8 - C10 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C10 - C12 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C12 - C16 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C16 - C35 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C35 - C44 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	ug/l	< 70	NONE	< 70	< 70			
Aromatic >C5 - C7 : HS_1D_MS_AR	ug/l	< 10	NONE	11	< 10			
Aromatic >C7 - C8 : HS_1D_MS_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C8 - C10 : EH_CU_1D_AR	ug/l	< 10	NONE	187	< 10			
Aromatic >C10 - C12 : EH_CU_1D_AR	ug/l	< 10	NONE	168	< 10			
Aromatic >C12 - C16 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C16 - C21 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C21 - C35 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C35 - C44 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	ug/l	< 70	NONE	365	< 70			
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	ug/l	< 140	NONE	365	< 140			

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Water Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	2.10	2.07			
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694			

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/l	< 1	**ISO17025**	11	< 1			
Toluene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5			
Ethylbenzene : HS_1D_MS	ug/l	< 5	**ISO17025**	55	< 5			
p & m-xylene : HS_1D_MS	ug/l	< 10	**ISO17025**	64	< 10			
o-xylene : HS_1D_MS	ug/l	< 5	**ISO17025**	29	< 5			
MTBE : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10			

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Water Analysis Certificate - Volatile Organic Compounds (VOC)							
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: Switch	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	2.10	2.07				
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694				

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
Vinyl Chloride	ug/l	< 5	ISO17025	< 5	< 5			
Chloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Bromomethane	ug/l	< 5	ISO17025	< 5	< 5			
Trichlorofluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
MTBE	ug/l	< 10	ISO17025	< 10	< 10			
trans-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
2,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroform	ug/l	< 5	ISO17025	< 5	< 5			
Bromochloromethane	ug/l	< 10	ISO17025	< 10	< 10			
1,1,1-Trichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Carbon Tetrachloride	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
Benzene	ug/l	< 1	ISO17025	11	< 1			
1,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Trichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Bromodichloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Dibromomethane	ug/l	< 5	ISO17025	< 5	< 5			
TAME	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Toluene	ug/l	< 5	ISO17025	< 5	< 5			
trans-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2-Trichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,3-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Tetrachloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Dibromochloromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dibromoethane	ug/l	< 5	ISO17025	< 5	< 5			
Chlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,1,2-Tetrachloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Ethyl Benzene	ug/l	< 5	ISO17025	55	< 5			
m,p-Xylene	ug/l	< 10	ISO17025	64	< 10			
o-Xylene	ug/l	< 5	ISO17025	29	< 5			
Styrene	ug/l	< 5	ISO17025	< 5	< 5			
Bromoform	ug/l	< 10	ISO17025	< 10	< 10			
Isopropylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2,2-Tetrachloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,2,3-Trichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
n-Propylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
Bromobenzene	ug/l	< 5	ISO17025	< 5	< 5			
2-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3,5-Trimethylbenzene	ug/l	< 5	ISO17025	8	< 5			
4-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
tert-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2,4-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
sec-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
p-Isopropyltoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,4-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
n-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
,2-Dibromo-3-chloropropane	ug/l	< 10	ISO17025	< 10	< 10			
Hexachlorobutadiene	ug/l	< 5	ISO17025	< 5	< 5			

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-13124	**Date Sampled**	20/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	2.10
Reporting Date: 10/11/2023	**DETS Sample No**	681693

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-13124	**Date Sampled**	20/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	2.07
Reporting Date: 10/11/2023	**DETS Sample No**	681694

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-13124	**Date Sampled**	20/10/23	20/10/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Switch	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	2.10	2.07			
Reporting Date: 10/11/2023	**DETS Sample No**	681693	681694			

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2,4-Trichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Nitrobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
0-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethoxy)methane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethyl)ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,3-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,4-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dimethylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Isophorone	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachloroethane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
p-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,6-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,5-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloro-3-methylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Methylnaphthalene	ug/l	< 0.1	NONE	1.6	< 0.1			
Hexachlorocyclopentadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,6-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dimethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloroanaline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chlorophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
3-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Bromophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Diethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibenzofuran	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Azobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibutyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Carbazole	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-ethylhexyl)phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Benzyl butyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Di-n-octyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-13124	**Date Sampled**	20/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	2.10
Reporting Date: 10/11/2023	**DETS Sample No**	681693

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	Naphthalene, 1,2,3,4-tetrahydro-	95	µg/l	< 0.1	1.8
2	Benzo[c]thiophene	94	µg/l	< 0.1	6.1
3	1H-Indenol	93	µg/l	< 0.1	1
4	1H-Inden-1-one, 2,3-dihydro-	97	µg/l	< 0.1	0.9
5	Naphthalene, 1-methyl-	96	µg/l	< 0.1	2

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-13124	**Date Sampled**	20/10/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: Switch	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	2.07
Reporting Date: 10/11/2023	**DETS Sample No**	681694

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-13124
Hydrock
Site Reference: Switch
Project / Job Ref: 26279
Order No: None Supplied
Reporting Date: 10/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

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List of HWOL Acronyms and Operators

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH LQM - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH LQM - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH LQM - Aliphatic >C16 - C35 - EH_CU_1D_AL
TPH LQM - Aliphatic >C35 - C44 - EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH LQM - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH LQM - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH LQM - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH LQM - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH LQM - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH LQM - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH LQM - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH LQM - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH LQM - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

4480

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Derwentside Environmental Testing Services Ltd
Unit 1
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t: 01622 850410

DETS Report No: 23-13826

Site Reference:	SWITCH
Project / Job Ref:	26279
Order No:	None Supplied
Sample Receipt Date:	08/11/2023
Sample Scheduled Date:	08/11/2023
Report Issue Number:	1
Reporting Date:	22/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Water Analysis Certificate							
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	1.84	1.85				
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475				

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**ISO17025**	7.7	8.3			
Electrical Conductivity (at 25°C)	uS/cm	< 5	NONE	513	665			
Total Cyanide	ug/l	< 5	**ISO17025**	391	5			
Free Cyanide	ug/l	< 5	**ISO17025**	< 5	< 5			
Bromate (S)	ug BrO3/l	< 0.8	NONE	< 0.80	< 0.80			
Sulphate as SO_4	mg/l	< 1	**ISO17025**	125	87			
Ammoniacal Nitrogen as NH_4	ug/l	< 50	**ISO17025**	1250	2230			
Ammonia as NH_4	ug/l	< 50	**ISO17025**	1250	2230			
Ammonium as NH_4	ug/l	< 50	**ISO17025**	1250	2230			
Ammonium as NH_4	mg/l	< 0.05	**ISO17025**	1.25	2.23			
Chloride	mg/l	< 1	**ISO17025**	31	95			
Nitrate as N	mg/l	< 0.5	NONE	< 0.5	< 0.5			
Nitrite as N	mg/l	< 0.5	NONE	< 0.5	< 0.5			
Fluoride	mg/l	< 0.5	**ISO17025**	< 0.5	< 0.5			
Dissolved Organic Carbon (DOC)	mg/l	<1.0	**ISO17025**	14.2	11.4			
Hardness - Total	mgCaCO3/l	< 0.25	NONE	144	150			
Aluminium (dissolved)	ug/l	< 1	**ISO17025**	3	268			
Antimony (dissolved)	ug/l	< 0.2	**ISO17025**	1.2	2.4			
Arsenic (dissolved)	ug/l	< 0.2	**ISO17025**	10.5	11.3			
Barium (dissolved)	ug/l	< 0.2	**ISO17025**	45.4	21.2			
Boron (dissolved)	ug/l	< 1	**ISO17025**	133	135			
Cadmium (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Chromium (dissolved)	ug/l	< 0.2	**ISO17025**	3.5	9.2			
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20			
Chromium III	ug/l	< 20	NONE	< 20	< 20			
Cobalt (dissolved)	ug/l	< 0.2	**ISO17025**	0.7	0.4			
Copper (dissolved)	ug/l	< 0.2	**ISO17025**	3.5	3.4			
Iron (dissolved)	ug/l	< 1	**ISO17025**	192	4			
Lead (dissolved)	ug/l	< 0.2	**ISO17025**	< 0.2	< 0.2			
Manganese (dissolved)	ug/l	< 0.2	**ISO17025**	251.0	0.4			
Mercury (dissolved)	ug/l	< 0.04	**ISO17025**	2.20	3.99			
Nickel (dissolved)	ug/l	< 0.2	**ISO17025**	2.7	3.1			
Selenium (dissolved)	ug/l	< 0.2	**ISO17025**	1.4	2.8			
Silver (dissolved) (S)	ug/l	< 0.2	NONE	< 0.2	< 0.2			
Tin (dissolved)	ug/l	< 0.1	**ISO17025**	0.1	0.6			
Vanadium (dissolved)	ug/l	< 0.2	**ISO17025**	85.9	46.7			
Zinc (dissolved)	ug/l	< 1	**ISO17025**	5	1			
Calcium (dissolved)	mg/l	< 0.1	**ISO17025**	52.1	59.8			
Sodium (dissolved)	mg/l	< 0.1	**ISO17025**	21.4	45.8			
Total Phenols (monohydric)	ug/l	< 10	**ISO17025**	63	< 10			

Subcontracted analysis (S)
Insufficient sample I/S
Unsuitable Sample U/S

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Water Analysis Certificate - Speciated PAH							
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	1.84	1.85				
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475				

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	< 0.01	0.02			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	0.69	0.04			
Fluorene	ug/l	< 0.01	NONE	0.11	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	0.10	0.01			
Anthracene	ug/l	< 0.01	NONE	0.02	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	0.04	< 0.01			
Pyrene	ug/l	< 0.01	NONE	0.02	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.16	NONE	0.98	< 0.16			

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Water Analysis Certificate - TPH LQM Banded							
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	1.84	1.85				
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475				

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C6 - C8 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C8 - C10 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C10 - C12 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C12 - C16 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C16 - C35 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic >C35 - C44 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10			
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	ug/l	< 70	NONE	< 70	< 70			
Aromatic >C5 - C7 : HS_1D_MS_AR	ug/l	< 10	NONE	133	< 10			
Aromatic >C7 - C8 : HS_1D_MS_AR	ug/l	< 10	NONE	134	< 10			
Aromatic >C8 - C10 : EH_CU_1D_AR	ug/l	< 10	NONE	42	< 10			
Aromatic >C10 - C12 : EH_CU_1D_AR	ug/l	< 10	NONE	23	< 10			
Aromatic >C12 - C16 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C16 - C21 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C21 - C35 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic >C35 - C44 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10			
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	ug/l	< 70	NONE	331	< 70			
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	ug/l	< 140	NONE	331	< 140			

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Water Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: SWITCH	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	1.84	1.85			
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475			

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene : HS_1D_MS	ug/l	< 1	**ISO17025**	133	< 1			
Toluene : HS_1D_MS	ug/l	< 5	**ISO17025**	134	< 5			
Ethylbenzene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5			
p & m-xylene : HS_1D_MS	ug/l	< 10	**ISO17025**	395	< 10			
o-xylene : HS_1D_MS	ug/l	< 5	**ISO17025**	154	< 5			
MTBE : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10			

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Water Analysis Certificate - Volatile Organic Compounds (VOC)							
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH	**TP / BH No**	BH01	BH02				
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied				
Order No: None Supplied	**Depth (m)**	1.84	1.85				
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475				

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
Vinyl Chloride	ug/l	< 5	ISO17025	< 5	< 5			
Chloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Bromomethane	ug/l	< 5	ISO17025	< 5	< 5			
Trichlorofluoromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
MTBE	ug/l	< 10	ISO17025	< 10	< 10			
trans-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
2,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Chloroform	ug/l	< 5	ISO17025	< 5	< 5			
Bromochloromethane	ug/l	< 10	ISO17025	< 10	< 10			
1,1,1-Trichloroethane	ug/l	< 5	ISO17025	< 5	< 5			
1,1-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Carbon Tetrachloride	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
Benzene	ug/l	< 1	ISO17025	133	< 1			
1,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Trichloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Bromodichloromethane	ug/l	< 5	ISO17025	< 5	< 5			
Dibromomethane	ug/l	< 5	ISO17025	< 5	< 5			
TAME	ug/l	< 5	ISO17025	< 5	< 5			
cis-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
Toluene	ug/l	< 5	ISO17025	134	< 5			
trans-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2-Trichloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,3-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
Tetrachloroethene	ug/l	< 5	ISO17025	< 5	< 5			
Dibromochloromethane	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dibromoethane	ug/l	< 5	ISO17025	< 5	< 5			
Chlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,1,2-Tetrachloroethane	ug/l	< 5	ISO17025	< 5	< 5			
Ethyl Benzene	ug/l	< 5	ISO17025	< 5	< 5			
m,p-Xylene	ug/l	< 10	ISO17025	395	< 10			
o-Xylene	ug/l	< 5	ISO17025	154	< 5			
Styrene	ug/l	< 5	ISO17025	< 5	< 5			
Bromoform	ug/l	< 10	ISO17025	< 10	< 10			
Isopropylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,1,2,2-Tetrachloroethane	ug/l	< 10	ISO17025	< 10	< 10			
1,2,3-Trichloropropane	ug/l	< 5	ISO17025	< 5	< 5			
n-Propylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
Bromobenzene	ug/l	< 5	ISO17025	< 5	< 5			
2-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3,5-Trimethylbenzene	ug/l	< 5	ISO17025	77	< 5			
4-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5			
tert-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2,4-Trimethylbenzene	ug/l	< 5	ISO17025	7	< 5			
sec-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
p-Isopropyltoluene	ug/l	< 5	ISO17025	< 5	< 5			
1,3-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,4-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
n-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5			
1,2-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5			
,2-Dibromo-3-chloropropane	ug/l	< 10	ISO17025	< 10	< 10			
Hexachlorobutadiene	ug/l	< 5	ISO17025	< 5	< 5			

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-13826	**Date Sampled**	06/11/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	1.84
Reporting Date: 22/11/2023	**DETS Sample No**	684474

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-13826	**Date Sampled**	06/11/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	1.85
Reporting Date: 22/11/2023	**DETS Sample No**	684475

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-13826	**Date Sampled**	06/11/23	06/11/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: SWITCH	**TP / BH No**	BH01	BH02			
Project / Job Ref: 26279	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	1.84	1.85			
Reporting Date: 22/11/2023	**DETS Sample No**	684474	684475			

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2,4-Trichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Nitrobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
0-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethoxy)methane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethyl)ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,3-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,4-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
1,2-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dimethylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Isophorone	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachloroethane	ug/l	< 0.1	NONE	< 0.1	< 0.1			
p-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,6-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4,5-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloro-3-methylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Methylnaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorocyclopentadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,6-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dimethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chloroanaline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Chlorophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
3-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1			
4-Bromophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
2,4-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Diethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibenzofuran	ug/l	< 0.1	NONE	0.2	< 0.1			
Azobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Dibutyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Carbazole	ug/l	< 0.1	NONE	< 0.1	< 0.1			
bis(2-ethylhexyl)phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Benzyl butyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			
Di-n-octyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1			

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-13826	**Date Sampled**	06/11/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	1.84
Reporting Date: 22/11/2023	**DETS Sample No**	684474

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	Indane	95	µg/l	< 0.1	11
2	Indene	97	µg/l	< 0.1	6.1
3	Naphthalene, 1-methyl-	96	µg/l	< 0.1	2.9
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-13826	**Date Sampled**	06/11/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	None Supplied
Order No: None Supplied	**Depth (m)**	1.85
Reporting Date: 22/11/2023	**DETS Sample No**	684475

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-13826
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: None Supplied
Reporting Date: 22/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

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List of HWOL Acronyms and Operators

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH LQM - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH LQM - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH LQM - Aliphatic >C16 - C35 - EH_CU_1D_AL
TPH LQM - Aliphatic >C35 - C44 - EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH LQM - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH LQM - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH LQM - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH LQM - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH LQM - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH LQM - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH LQM - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH LQM - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH LQM - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

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DETS Report No: 23-12154

Site Reference:	SWITCH, Port Talbot
Project / Job Ref:	C-26279
Order No:	None Supplied
Sample Receipt Date:	28/09/2023
Sample Scheduled Date:	28/09/2023
Report Issue Number:	4
Reporting Date:	14/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Reason for reissue:-
Correction of leachate metals LOD's

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01	TP01	TP01	TP01
Project / Job Ref: C-26279	**Additional Refs**	ES102	ES103	ES104	ES105	ES105
Order No: None Supplied	**Depth (m)**	0.30	0.65	1.20	1.70	1.70
Reporting Date: 14/11/2023	**DETS Sample No**	677413	677414	677415	677416	677417

Determinand	**Unit**	**RL**	**Accreditation**				(n)	
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Detected		Detected		
Sample Matrix (S)	Material Type	N/a	NONE	Chrysotile bundles present		Chrysotile bundles present		
Asbestos Type (S)	PLM Result	N/a	**ISO17025**	Chrysotile		Chrysotile		
pH	pH Units	N/a	**MCERTS**	10.7		8.6	9.1	
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1		
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	3380			1455	
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.34			0.15	
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	223			199	
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.22			0.20	
Total Sulphur	%	< 0.02	NONE	0.13			0.08	
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.047		0.056		
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	< 0.5			7.5	
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	< 0.05			0.75	
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	38			33	
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	19.1			16.6	
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	3			< 3	
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	1.6			< 1.5	
Arsenic (As)	mg/kg	< 2	**MCERTS**	14		23		
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	1.2		1.3		
W/S Boron	mg/kg	< 1	NONE	< 1		< 1		
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.6		1.3		
Chromium (III)	mg/kg	< 2	NONE	118		98		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2		
Copper (Cu)	mg/kg	< 4	**MCERTS**	91		177		
Lead (Pb)	mg/kg	< 3	**MCERTS**	141		167		
W/S Magnesium	mg/l	< 0.1	NONE	0.3			1.2	
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1		< 1		
Nickel (Ni)	mg/kg	< 3	**MCERTS**	19		43		
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2		< 2		
Vanadium (V)	mg/kg	< 1	**MCERTS**	146		161		
Zinc (Zn)	mg/kg	< 3	**MCERTS**	228		537		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02	TP02	TP02	TP02	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES101	ES103	ES104	ES104	ES105
Order No: None Supplied	**Depth (m)**	0.15	1.60	2.50	2.50	2.90
Reporting Date: 14/11/2023	**DETS Sample No**	677418	677419	677420	677421	677422

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**		Not Detected			Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	10.2	9.5	9.8		7.7
Free Cyanide	mg/kg	< 1	NONE		< 1			< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	2986		2332		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.30		0.23		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	278		130		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.28		0.13		
Total Sulphur	%	< 0.02	NONE	0.13		0.12		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**		0.049			0.025
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	< 0.5		< 0.5		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	< 0.05		< 0.05		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	30		51		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	14.8		25.7		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	4		< 3		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	2		< 1.5		
Arsenic (As)	mg/kg	< 2	**MCERTS**		12			13
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**		0.8			< 0.5
W/S Boron	mg/kg	< 1	NONE		< 1			1.2
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**		0.5			< 0.2
Chromium (III)	mg/kg	< 2	NONE		250			28
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2			< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**		51			13
Lead (Pb)	mg/kg	< 3	**MCERTS**		76			35
W/S Magnesium	mg/l	< 0.1	NONE	0.7		0.7		
Mercury (Hg)	mg/kg	< 1	**MCERTS**		< 1			< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**		16			12
Selenium (Se)	mg/kg	< 2	**MCERTS**		< 2			< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**		479			45
Zinc (Zn)	mg/kg	< 3	**MCERTS**		119			51
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2			< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03	TP03	TP03	TP03	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES101	ES103	ES104	ES105	ES101
Order No: None Supplied	**Depth (m)**	0.40	1.40	2.40	2.55	0.20
Reporting Date: 14/11/2023	**DETS Sample No**	677423	677424	677425	677426	677427

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	7.7	9.0	7.3	6.9	11.0
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	1009		9625		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.10		0.96		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	411		44		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.41		0.04		
Total Sulphur	%	< 0.02	NONE	0.05		0.20		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.011	0.052	0.080	0.014	0.030
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	3.3		< 0.5		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	0.33		< 0.05		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	29		25		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	14.3		12.3		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	< 3		5		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	< 1.5		2.6		
Arsenic (As)	mg/kg	< 2	**MCERTS**	6	13	7	9	10
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	1	2	< 0.5	0.7	1.1
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	0.6	0.6	< 0.2	0.4
Chromium (III)	mg/kg	< 2	NONE	25	175	36	11	210
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	15	62	16	19	35
Lead (Pb)	mg/kg	< 3	**MCERTS**	21	1880	48000	1630	622
W/S Magnesium	mg/l	< 0.1	NONE	22		8.6		
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	21	16	6	11	10
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	36	317	158	19	288
Zinc (Zn)	mg/kg	< 3	**MCERTS**	68	160	479	63	107
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04	TP04	TP04	TP04	TP04
Project / Job Ref: C-26279	**Additional Refs**	D1	ES103	D3	ES104	ES104
Order No: None Supplied	**Depth (m)**	0.30	1.00	1.00	1.20	1.20
Reporting Date: 14/11/2023	**DETS Sample No**	677428	677429	677430	677431	677432

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**		Not Detected			
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	10.7	9.9	9.9	9.7	
Free Cyanide	mg/kg	< 1	NONE		< 1			
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	2263		2632	2036	
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.23		0.26	0.20	
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	53		220	127	
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.05		0.22	0.13	
Total Sulphur	%	< 0.02	NONE	0.09		0.11	0.09	
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**		0.020			
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	< 0.5		< 0.5	< 0.5	
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	< 0.05		< 0.05	< 0.05	
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	21		40	36	
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	10.3		20.2	17.8	
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	< 3		4	4	
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	< 1.5		2.2	1.8	
Arsenic (As)	mg/kg	< 2	**MCERTS**		8			
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**		< 0.5			
W/S Boron	mg/kg	< 1	NONE		< 1			
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**		0.4			
Chromium (III)	mg/kg	< 2	NONE		284			
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2			
Copper (Cu)	mg/kg	< 4	**MCERTS**		36			
Lead (Pb)	mg/kg	< 3	**MCERTS**		109			
W/S Magnesium	mg/l	< 0.1	NONE	< 0.1		0.7	0.5	
Mercury (Hg)	mg/kg	< 1	**MCERTS**		< 1			
Nickel (Ni)	mg/kg	< 3	**MCERTS**		12			
Selenium (Se)	mg/kg	< 2	**MCERTS**		< 2			
Vanadium (V)	mg/kg	< 1	**MCERTS**		247			
Zinc (Zn)	mg/kg	< 3	**MCERTS**		93			
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2			

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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04	TP04	TP04	BH01	TP05
Project / Job Ref: C-26279	**Additional Refs**	D6	ES105	D9	ES101	ES101
Order No: None Supplied	**Depth (m)**	1.20	1.80	2.00	0.20	0.20
Reporting Date: 14/11/2023	**DETS Sample No**	677433	677434	677435	677436	677437

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Asbestos Screen (S)	N/a	N/a	**ISO17025**		Not Detected		Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	9.9	8.7	9.4	10.6	10.6
Free Cyanide	mg/kg	< 1	NONE		< 1		< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	2200		984		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.22		0.10		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	132		84		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.13		0.08		
Total Sulphur	%	< 0.02	NONE	0.10		0.07		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**		0.079		0.032	0.037
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	< 0.5		7.6		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	< 0.05		0.76		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	50		37		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	24.8		18.3		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	4		4		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	2.2		2.1		
Arsenic (As)	mg/kg	< 2	**MCERTS**		21		9	17
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**		0.6		1.3	1.3
W/S Boron	mg/kg	< 1	NONE		< 1		< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**		0.5		0.3	0.7
Chromium (III)	mg/kg	< 2	NONE		187		25	79
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2		< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**		58		19	82
Lead (Pb)	mg/kg	< 3	**MCERTS**		255		83	98
W/S Magnesium	mg/l	< 0.1	NONE	0.7		1.3		
Mercury (Hg)	mg/kg	< 1	**MCERTS**		< 1		< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**		15		7	12
Selenium (Se)	mg/kg	< 2	**MCERTS**		< 2		< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**		188		30	109
Zinc (Zn)	mg/kg	< 3	**MCERTS**		107		88	156
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2		< 2	< 2

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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	27/09/23				
Hydrock	**Time Sampled**	None Supplied				
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP05				
Project / Job Ref: C-26279	**Additional Refs**	D3				
Order No: None Supplied	**Depth (m)**	0.30				
Reporting Date: 14/11/2023	**DETS Sample No**	677438				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**					
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	10.4				
Free Cyanide	mg/kg	< 1	NONE					
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	3561				
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.36				
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	173				
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.17				
Total Sulphur	%	< 0.02	NONE	0.14				
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**					
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	< 0.5				
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	< 0.05				
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	26				
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	12.8				
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	4				
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	2.1				
Arsenic (As)	mg/kg	< 2	**MCERTS**					
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**					
W/S Boron	mg/kg	< 1	NONE					
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**					
Chromium (III)	mg/kg	< 2	NONE					
Chromium (hexavalent)	mg/kg	< 2	NONE					
Copper (Cu)	mg/kg	< 4	**MCERTS**					
Lead (Pb)	mg/kg	< 3	**MCERTS**					
W/S Magnesium	mg/l	< 0.1	NONE	0.4				
Mercury (Hg)	mg/kg	< 1	**MCERTS**					
Nickel (Ni)	mg/kg	< 3	**MCERTS**					
Selenium (Se)	mg/kg	< 2	**MCERTS**					
Vanadium (V)	mg/kg	< 1	**MCERTS**					
Zinc (Zn)	mg/kg	< 3	**MCERTS**					
Total Phenols (monohydric)	mg/kg	< 2	NONE					

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Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01	TP02	TP02	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES102	ES104	ES103	ES105	ES101
Order No: None Supplied	**Depth (m)**	0.30	1.20	1.60	2.90	0.40
Reporting Date: 14/11/2023	**DETS Sample No**	677413	677415	677419	677422	677423

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.45	0.61	9.62	2.20	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.18	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.39	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	1.07	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.77	5.81	1.03	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	**MCERTS**	0.26	1.18	0.32	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.69	5.80	1.67	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	**MCERTS**	1.46	3.93	1.23	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	1.13	2.72	0.99	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	**MCERTS**	1.24	2.57	1.01	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	1.21	2.44	1.04	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.33	0.92	0.34	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.81	1.82	0.67	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.55	0.98	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.35	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.57	0.82	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	10.5	31.6	17.9	2.2	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03	TP03	TP03	TP04	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES104	ES105	ES101	ES103
Order No: None Supplied	**Depth (m)**	1.40	2.40	2.55	0.20	1.00
Reporting Date: 14/11/2023	**DETS Sample No**	677424	677425	677426	677427	677429

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.14	< 0.1	< 0.1	0.27	0.16
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.14
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.45	< 0.1	< 0.1	0.52	1.66
Anthracene	mg/kg	< 0.1	**MCERTS**	0.15	< 0.1	< 0.1	< 0.1	0.61
Fluoranthene	mg/kg	< 0.1	**MCERTS**	0.88	< 0.1	< 0.1	1.35	4.93
Pyrene	mg/kg	< 0.1	**MCERTS**	0.71	< 0.1	< 0.1	1.20	3.81
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.57	< 0.1	< 0.1	0.81	2.98
Chrysene	mg/kg	< 0.1	**MCERTS**	0.62	< 0.1	< 0.1	0.92	2.82
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.70	< 0.1	< 0.1	0.79	2.92
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.24	< 0.1	< 0.1	0.26	0.80
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.52	< 0.1	< 0.1	0.69	2.11
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.37	< 0.1	< 0.1	< 0.1	1.41
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.49
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.31	< 0.1	< 0.1	< 0.1	1.05
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	5.7	< 1.6	< 1.6	6.8	25.9

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12154	**Date Sampled**	27/09/23	27/09/23	27/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04	BH01	TP05		
Project / Job Ref: C-26279	**Additional Refs**	ES105	ES101	ES101		
Order No: None Supplied	**Depth (m)**	1.80	0.20	0.20		
Reporting Date: 14/11/2023	**DETS Sample No**	677434	677436	677437		

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	19.80	< 0.1	0.25		
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	**MCERTS**	0.35	< 0.1	< 0.1		
Fluorene	mg/kg	< 0.1	**MCERTS**	0.32	< 0.1	< 0.1		
Phenanthrene	mg/kg	< 0.1	**MCERTS**	4.75	< 0.1	1.60		
Anthracene	mg/kg	< 0.1	**MCERTS**	0.87	< 0.1	0.56		
Fluoranthene	mg/kg	< 0.1	**MCERTS**	8.64	0.86	2.33		
Pyrene	mg/kg	< 0.1	**MCERTS**	5.83	0.77	1.94		
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	4.81	0.71	1.61		
Chrysene	mg/kg	< 0.1	**MCERTS**	5.38	0.66	1.42		
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	5.16	0.67	1.45		
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	1.35	0.36	0.54		
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	3.17	0.70	1.13		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	2.10	< 0.1	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	0.79	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	1.43	< 0.1	< 0.1		
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	64.7	4.7	12.8		

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01	TP02	TP02	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES104	ES105	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	1.20	1.70	1.60	2.50	2.90
Reporting Date: 14/11/2023	**DETS Sample No**	677415	677416	677419	677420	677422

Determinand	Unit	RL	Accreditation	(n)				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	13	9	8
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	18	11	7
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	5	18	10	< 3
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	58	83	58	56	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	20	15	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	58	88	126	101	< 30
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	0.02	0.10	0.71	0.55	12.60
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	0.23	0.23	0.07
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	4	< 2	10	6	15
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	4	3	13	9	16
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	6	10	8	5	2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	33	78	8	9	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	52	125	12	< 10	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	99	216	52	< 30	46
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	157	304	178	130	61

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

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03	TP03	TP04	TP04	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES105	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	1.40	2.55	1.00	1.20	1.80
Reporting Date: 14/11/2023	**DETS Sample No**	677424	677426	677429	677431	677434

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	27
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	42
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	5	8
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	54	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	< 30	< 30	< 30	69	77
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	0.06	< 0.01	0.01	< 0.01	0.12
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	4	48
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	2	5	73
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	3	9
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	20	20	40
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	29	29	65
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	< 30	< 30	51	60	236
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	< 60	< 60	< 60	129	313

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01	TP02	TP02	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES104	ES105	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	1.20	1.70	1.60	2.50	2.90
Reporting Date: 14/11/2023	**DETS Sample No**	677415	677416	677419	677420	677422

Determinand	Unit	RL	Accreditation		(n)			
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	20	100	714	546	12591
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	229	234	74
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	55	62	681
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	511	302	1051
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	174	142	191
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03	TP03	TP04	TP04	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES105	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	1.40	2.55	1.00	1.20	1.80
Reporting Date: 14/11/2023	**DETS Sample No**	677424	677426	677429	677431	677434

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	61	6	11	9	119
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	10	< 5	< 5	< 5	36
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	71
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	7	< 2	3	< 2	114
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	35
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP02	TP02	TP03	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES104	ES103	ES105	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.20	1.60	2.90	1.40	2.55
Reporting Date: 14/11/2023	**DETS Sample No**	677415	677419	677422	677424	677426

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Benzene	ug/kg	< 2	MCERTS	20	714	12590	61	6
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
TAME	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Toluene	ug/kg	< 5	MCERTS	< 5	229	74	10	< 5
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethyl Benzene	ug/kg	< 2	MCERTS	< 2	55	681	< 2	< 2
m,p-Xylene	ug/kg	< 2	MCERTS	3	511	1051	7	< 2
o-Xylene	ug/kg	< 2	MCERTS	< 2	174	191	< 2	< 2
Styrene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	14	< 5	< 5
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	107	51	< 5	< 5
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	77	98	< 5	< 5
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)							
DETS Report No: 23-12154	**Date Sampled**	27/09/23	27/09/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04	TP04				
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES105				
Order No: None Supplied	**Depth (m)**	1.00	1.80				
Reporting Date: 14/11/2023	**DETS Sample No**	677429	677434				

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5			
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5			
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10			
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10			
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5			
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5			
MTBE	ug/kg	< 5	MCERTS	< 5	< 5			
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5			
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5			
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5			
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5			
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5			
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10			
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5			
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
Benzene	ug/kg	< 2	MCERTS	11	119			
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5			
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5			
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5			
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5			
TAME	ug/kg	< 5	MCERTS	< 5	< 5			
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5			
Toluene	ug/kg	< 5	MCERTS	< 5	36			
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5			
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10			
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5			
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	< 5			
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5			
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5			
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5			
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
Ethyl Benzene	ug/kg	< 2	MCERTS	< 2	71			
m,p-Xylene	ug/kg	< 2	MCERTS	3	114			
o-Xylene	ug/kg	< 2	MCERTS	< 2	35			
Styrene	ug/kg	< 5	MCERTS	< 5	< 5			
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10			
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5			
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5			
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5			
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5			
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5			
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5			
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	160			
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5			
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5			
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	152			
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5			
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5			
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5			
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5			
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5			
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5			
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10			
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5			

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.20
Reporting Date: 14/11/2023	**DETS Sample No**	677415

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.60
Reporting Date: 14/11/2023	**DETS Sample No**	677419

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.90
Reporting Date: 14/11/2023	**DETS Sample No**	677422

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.40
Reporting Date: 14/11/2023	**DETS Sample No**	677424

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.55
Reporting Date: 14/11/2023	**DETS Sample No**	677426

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 14/11/2023	**DETS Sample No**	677429

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	1.80
Reporting Date: 14/11/2023	**DETS Sample No**	677434

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP02	TP02	TP03	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES104	ES103	ES105	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.20	1.60	2.90	1.40	2.55
Reporting Date: 14/11/2023	**DETS Sample No**	677415	677419	677422	677424	677426

Determinand	Unit	RL	Accreditation					
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethoxy)methane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethyl)ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachloroethane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Cresol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2,4,6-Trichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	mg/kg	< 0.1	**MCERTS**	0.2	0.8	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	mg/kg	< 0.1	**MCERTS**	0.4	0.3	< 0.1	0.1	< 0.1
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibutyl phthalate	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	mg/kg	< 0.1	**ISO17025**	0.4	0.2	< 0.1	< 0.1	< 0.1
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Benzyl butyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12154	**Date Sampled**	27/09/23	27/09/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04	TP04			
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES105			
Order No: None Supplied	**Depth (m)**	1.00	1.80			
Reporting Date: 14/11/2023	**DETS Sample No**	677429	677434			

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
1,2,4-Trichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
Nitrobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
bis(2-chloroethoxy)methane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
bis(2-chloroethyl)ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
2,4-Dichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
2-Chlorophenol	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
1,3-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
1,4-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
1,2-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
2,4-Dimethylphenol	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15			
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
Hexachloroethane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
p-Cresol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15			
2,4,6-Trichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
2,4,5-Trichlorophenol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15			
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
2-Methylnaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.4			
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
Hexachlorobutadiene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
2,6-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
2-Chloronaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15	< 0.15			
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
4-Bromophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Hexachlorobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
2,4-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Diethyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Dibenzofuran	mg/kg	< 0.1	**MCERTS**	0.1	0.2			
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1			
Dibutyl phthalate	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1			
Carbazole	mg/kg	< 0.1	**ISO17025**	0.2	0.5			
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15			
Benzyl butyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Di-n-octyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.20
Reporting Date: 14/11/2023	**DETS Sample No**	677415

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.60
Reporting Date: 14/11/2023	**DETS Sample No**	677419

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	Naphthalene, 1-methyl-	94	mg/kg	< 0.1	0.9
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.90
Reporting Date: 14/11/2023	**DETS Sample No**	677422

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.40
Reporting Date: 14/11/2023	**DETS Sample No**	677424

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP03
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.55
Reporting Date: 14/11/2023	**DETS Sample No**	677426

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 14/11/2023	**DETS Sample No**	677429

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	1.80
Reporting Date: 14/11/2023	**DETS Sample No**	677434

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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4480

Leachate Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	26/09/23	27/09/23	
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01	TP02	TP04	
Project / Job Ref: C-26279	**Additional Refs**	ES103	ES105	ES104	ES104	
Order No: None Supplied	**Depth (m)**	0.65	1.70	2.50	1.20	
Reporting Date: 14/11/2023	**DETS Sample No**	677414	677417	677421	677432	

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**ISO17025**		7.0	7.7	7.7	
Electrical Conductivity	uS/cm	< 5	NONE		164	200	176	
Total Cyanide	ug/l	< 5	**ISO17025**		< 5	25	< 5	
Free Cyanide	ug/l	< 5	**ISO17025**		< 5	< 5	< 5	
Sulphate as SO_4	mg/l	< 1	**ISO17025**		9	9	7	
Ammoniacal Nitrogen as NH_4	ug/l	< 50	**ISO17025**		596	232	416	
Ammonia as NH_4	ug/l	< 50	**ISO17025**		596	232	416	
Ammonium as NH_4	ug/l	< 50	**ISO17025**		596	232	416	
Chloride	mg/l	< 1	**ISO17025**		3	2	2	
Nitrate as NO_3	mg/l	< 0.5	**ISO17025**		< 0.5	< 0.5	0.5	
Nitrite as NO_2	mg/l	< 0.5	NONE		< 0.5	< 0.5	0.7	
Fluoride	mg/l	< 0.5	**ISO17025**		< 0.5	< 0.5	< 0.5	
Bromate (S)	ug BrO3/l	< 0.8	NONE		< 0.80	< 0.80	< 0.80	
Aluminium	ug/l	< 5	**ISO17025**		215	369	446	
Antimony	ug/l	< 5	**ISO17025**		5	< 5	< 5	
Arsenic	ug/l	< 5	**ISO17025**		28.0	11.0	6.0	
Barium	ug/l	< 5	**ISO17025**		11.0	26.0	12.0	
Boron	ug/l	< 5	**ISO17025**		63	68	68	
Cadmium	ug/l	< 0.4	**ISO17025**		<0.4	<0.4	<0.4	
Chromium	ug/l	< 5	**ISO17025**		<5	<5	6.0	
Chromium (hexavalent)	ug/l	< 20	NONE		< 20	< 20	< 20	
Chromium III	ug/l	< 20	NONE		< 20	< 20	< 20	
Cobalt	ug/l	< 5	**ISO17025**		<5	<5	<5	
Copper	ug/l	< 5	**ISO17025**		29.0	9.0	9.0	
Iron	ug/l	< 5	**ISO17025**		97	27	70	
Lead	ug/l	< 5	**ISO17025**		< 5	< 5	< 5	
Manganese	ug/l	<5	**ISO17025**		12	< 5	< 5	
Mercury	ug/l	< 0.05	**ISO17025**		0.40	0.61	0.18	
Nickel	ug/l	< 5	**ISO17025**		< 5	< 5	< 5	
Selenium	ug/l	< 5	**ISO17025**		< 5	< 5	< 5	
Silver (S)	ug/l	< 0.13	NONE		< 0.130	< 0.130	< 0.130	
Tin	ug/l	< 5	**ISO17025**		< 5	< 5	< 5	
Vanadium	ug/l	< 5	**ISO17025**		250	594	199	
Zinc	ug/l	< 2	**ISO17025**		7	4	6	
Calcium	mg/l	< 0.2	**ISO17025**		18.4	29.9	22.6	
Sodium	mg/l	< 0.2	**ISO17025**		3.2	1.5	2.2	
Total Phenols (monohydric)	ug/l	< 10	**ISO17025**		< 10	< 10	< 10	

Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Leachate Analysis Certificate - Speciated PAH						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	27/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP02	TP04		
Project / Job Ref: C-26279	**Additional Refs**	ES105	ES104	ES104		
Order No: None Supplied	**Depth (m)**	1.70	2.50	1.20		
Reporting Date: 14/11/2023	**DETS Sample No**	677417	677421	677432		

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	1.83	1.95	2.49		
Acenaphthylene	ug/l	< 0.01	NONE	0.13	0.01	0.43		
Acenaphthene	ug/l	< 0.01	NONE	0.54	0.06	0.04		
Fluorene	ug/l	< 0.01	NONE	0.53	0.03	0.13		
Phenanthrene	ug/l	< 0.01	NONE	1.01	0.07	0.38		
Anthracene	ug/l	< 0.01	NONE	0.20	0.01	0.08		
Fluoranthene	ug/l	< 0.01	NONE	0.39	0.05	0.06		
Pyrene	ug/l	< 0.01	NONE	0.23	0.04	0.07		
Benzo(a)anthracene	ug/l	< 0.01	NONE	0.05	< 0.01	< 0.01		
Chrysene	ug/l	< 0.01	NONE	0.09	0.01	< 0.01		
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	0.10	< 0.01	< 0.01		
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	0.04	< 0.01	< 0.01		
Benzo(a)pyrene	ug/l	< 0.01	NONE	0.04	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008	< 0.008		
Total EPA-16 PAHs	ug/l	< 0.16	NONE	5.18	2.23	3.68		

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Leachate Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	27/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP02	TP04		
Project / Job Ref: C-26279	**Additional Refs**	ES105	ES104	ES104		
Order No: None Supplied	**Depth (m)**	1.70	2.50	1.20		
Reporting Date: 14/11/2023	**DETS Sample No**	677417	677421	677432		

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Vinyl Chloride	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromomethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Trichlorofluoromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
MTBE	ug/l	< 10	ISO17025	< 10	< 10	< 10		
trans-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
cis-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
2,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloroform	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromochloromethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,1,1-Trichloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Carbon Tetrachloride	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dichloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Benzene	ug/l	< 1	ISO17025	< 1	17	< 1		
1,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Trichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromodichloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Dibromomethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
TAME	ug/l	< 5	ISO17025	< 5	< 5	< 5		
cis-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Toluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
trans-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,2-Trichloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,3-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Tetrachloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Dibromochloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dibromoethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,1,2-Tetrachloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Ethyl Benzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
m,p-Xylene	ug/l	< 10	ISO17025	< 10	< 10	< 10		
o-Xylene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Styrene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromoform	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Isopropylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,2,2-Tetrachloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,2,3-Trichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
n-Propylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
2-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,3,5-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
4-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
tert-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2,4-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
sec-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
p-Isopropyltoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,3-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,4-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
n-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
,2-Dibromo-3-chloropropane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Hexachlorobutadiene	ug/l	< 5	ISO17025	< 5	< 5	< 5		

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	1.70
Reporting Date: 14/11/2023	**DETS Sample No**	677417

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.50
Reporting Date: 14/11/2023	**DETS Sample No**	677421

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.20
Reporting Date: 14/11/2023	**DETS Sample No**	677432

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12154	**Date Sampled**	26/09/23	26/09/23	27/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP02	TP04		
Project / Job Ref: C-26279	**Additional Refs**	ES105	ES104	ES104		
Order No: None Supplied	**Depth (m)**	1.70	2.50	1.20		
Reporting Date: 14/11/2023	**DETS Sample No**	677417	677421	677432		

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,2,4-Trichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Nitrobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
0-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-chloroethoxy)methane	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-chloroethyl)ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,3-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,2-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dimethylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Isophorone	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachloroethane	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
p-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,6-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,5-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Methylnaphthalene	ug/l	< 0.1	NONE	0.3	< 0.1	< 0.1		
Hexachlorocyclopentadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dimethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chloronaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chloroanaline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chlorophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
3-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Bromophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Diethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dibenzofuran	ug/l	< 0.1	NONE	0.3	< 0.1	< 0.1		
Azobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dibutyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Carbazole	ug/l	< 0.1	NONE	1.5	< 0.1	< 0.1		
bis(2-ethylhexyl)phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Benzyl butyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Di-n-octyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01
Project / Job Ref: C-26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	1.70
Reporting Date: 14/11/2023	**DETS Sample No**	677417

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	26/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP02
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.50
Reporting Date: 14/11/2023	**DETS Sample No**	677421

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12154	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP04
Project / Job Ref: C-26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.20
Reporting Date: 14/11/2023	**DETS Sample No**	677432

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Bulk Analysis Certificate						
DETS Report No: 23-12154	**Date Sampled**	26/09/23				
Hydrock	**Time Sampled**	None Supplied				
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01				
Project / Job Ref: C-26279	**Additional Refs**	ES103				
Order No: None Supplied	**Depth (m)**	0.65				
Reporting Date: 14/11/2023	**DETS Sample No**	677414				

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**	Not Detected				
Sample Matrix (S)	Material Type	N/a	NONE	Woven				

The samples have been examined to identify the presence of asbestiform minerals by polarising light microscopy and dispersion staining technique to In-House Procedures QTSE600 Determination of Asbestos in Bulk Materials; Asbestos in Soils/Sediments (fibre screening and identification) that is in accordance with the Health and Safety Executive HSG 248 Appendix 2.

This report refers to samples as received, and Dets Ltd, takes no responsibility for the accuracy or competence of sampling by others.

The material description shall be regarded as tentative and is not included in our scope of UKAS Accreditation.

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

RL: Reporting Limit

Subcontracted analysis (S)

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 23-12154	
Hydrock	
Site Reference: SWITCH, Port Talbot	
Project / Job Ref: C-26279	
Order No: None Supplied	
Reporting Date: 14/11/2023	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
677413	TP01	ES102	0.30	9	Brown gravelly sand with stones and concrete
677415	TP01	ES104	1.20	9.3	Brown gravelly sand with stones and concrete
677416	TP01	ES105	1.70	12.9	Brown sandy gravel with stones and concrete
677418	TP02	ES101	0.15	10.5	Brown gravelly sand with stones and concrete
677419	TP02	ES103	1.60	8.9	Black gravelly sand with stones and concrete
677420	TP02	ES104	2.50	10.4	Black gravelly sand with stones and concrete
677422	TP02	ES105	2.90	20.5	Black sandy clay
677423	TP03	ES101	0.40	12.2	Light brown sandy clay
677424	TP03	ES103	1.40	7.6	Black sandy clay with stones and concrete
677425	TP03	ES104	2.40	4.5	Red clay
677426	TP03	ES105	2.55	17.9	Brown sandy clay with stones
677427	TP04	ES101	0.20	7.4	Brown gravelly sand with stones and concrete
677428	TP04	D1	0.30	6.7	Brown gravelly sand with stones and concrete
677429	TP04	ES103	1.00	6.8	Black gravelly sand with stones and concrete
677430	TP04	D3	1.00	7.9	Brown loamy sand with stones and concrete
677431	TP04	ES104	1.20	8.9	Black loamy sand with stones and concrete
677433	TP04	D6	1.20	8.3	Black loamy sand with stones and concrete
677434	TP04	ES105	1.80	14.7	Black loamy sand with stones and concrete
677435	TP04	D9	2.00	17.1	Black sandy gravel with stones and concrete
677436	BH01	ES101	0.20	6.6	Brown gravelly sand with stones and concrete
677437	TP05	ES101	0.20	8.8	Brown gravelly sand with stones and concrete
677438	TP05	D3	0.30	7.3	Brown gravelly sand with stones and concrete

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-12154
Hydrock
Site Reference: SWITCH, Port Talbot
Project / Job Ref: C-26279
Order No: None Supplied
Reporting Date: 14/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-12154
Hydrock
Site Reference: SWITCH, Port Talbot
Project / Job Ref: C-26279
Order No: None Supplied
Reporting Date: 14/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

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List of HWOL Acronyms and Operators
DETS Report No: 23-12154
Hydrock
Site Reference: SWITCH, Port Talbot
Project / Job Ref: C-26279
Order No: None Supplied
Reporting Date: 14/11/2023

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH LQM - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH LQM - Aliphatic >C16 - C35 - EH_CU_1D_AL
TPH LQM - Aliphatic >C35 - C44 - EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH LQM - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH LQM - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH LQM - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH LQM - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH LQM - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH LQM - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH LQM - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH LQM - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH LQM - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

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DETS Report No: 23-12382

Site Reference:	SWITCH
Project / Job Ref:	26279
Order No:	PO29482
Sample Receipt Date:	02/10/2023
Sample Scheduled Date:	04/10/2023
Report Issue Number:	2
Reporting Date:	09/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Reason for reissue:-
Correction of leachate metals LOD's

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP05	TP05	TP05
Project / Job Ref: 26279	**Additional Refs**	ES103	D4	D6	ES104	ES105
Order No: None Supplied	**Depth (m)**	1.00	1.00	2.00	2.00	2.80
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678382	678383	678384	678385

Determinand	**Unit**	**RL**	**Accreditation**	(n)	(n)	(n)	(n)	
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected			Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	11.9	10.6	9.2	8.8	7.5
Free Cyanide	mg/kg	< 1	NONE	< 1			< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**		3219	1938		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**		0.32	0.19		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**		240	133		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**		0.24	0.13		
Total Sulphur	%	< 0.02	NONE		0.14	0.11		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.049			0.081	0.012
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**		3	42.5		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**		0.30	4.25		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**		56	44		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**		28	22		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**		< 3	5		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**		< 1.5	2.4		
Arsenic (As)	mg/kg	< 2	**MCERTS**	14			19	6
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.6			2.3	0.7
W/S Boron	mg/kg	< 1	NONE	< 1			1.9	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2			< 0.2	< 0.2
Chromium (III)	mg/kg	< 2	NONE	715			216	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	64			51	10
Lead (Pb)	mg/kg	< 3	**MCERTS**	97			46	6
W/S Magnesium	mg/l	< 0.1	NONE		0.6	0.4		
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1			< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	20			16	12
Selenium (Se)	mg/kg	< 2	**MCERTS**	7.2			< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	797			304	16
Zinc (Zn)	mg/kg	< 3	**MCERTS**	163			117	45
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)
(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP06	TP06	TP06	TP06	TP06
Project / Job Ref: 26279	**Additional Refs**	D2	ES102	D6	ES104	ES106
Order No: None Supplied	**Depth (m)**	0.30	0.50	1.00	1.50	2.50
Reporting Date: 09/11/2023	**DETS Sample No**	678386	678387	678388	678389	678390

Determinand	**Unit**	**RL**	**Accreditation**	(n)				
Asbestos Screen (S)	N/a	N/a	**ISO17025**		Not Detected		Not Detected	
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	11.3	9.6	10.1	9.8	
Free Cyanide	mg/kg	< 1	NONE		< 1		< 1	
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	5753		3175		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.58		0.32		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	220		164		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.22		0.16		
Total Sulphur	%	< 0.02	NONE	0.20		0.13		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**		0.026		0.021	
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	0.7		6		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	0.07		0.60		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	23		31		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	11.4		15.5		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	5		< 3		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	2.6		< 1.5		
Arsenic (As)	mg/kg	< 2	**MCERTS**		24		11	
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**		1		< 0.5	
W/S Boron	mg/kg	< 1	NONE		< 1		< 1	
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**		0.3		< 0.2	
Chromium (III)	mg/kg	< 2	NONE		65		175	
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2		< 2	
Copper (Cu)	mg/kg	< 4	**MCERTS**		63		38	
Lead (Pb)	mg/kg	< 3	**MCERTS**		158		65	
W/S Magnesium	mg/l	< 0.1	NONE	0.4		0.7		
Mercury (Hg)	mg/kg	< 1	**MCERTS**		< 1		< 1	
Nickel (Ni)	mg/kg	< 3	**MCERTS**		17		13	
Selenium (Se)	mg/kg	< 2	**MCERTS**		< 2		< 2	
Vanadium (V)	mg/kg	< 1	**MCERTS**		94		284	
Zinc (Zn)	mg/kg	< 3	**MCERTS**		230		82	
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2		< 2	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07	TP07	TP07	TP07	TP07
Project / Job Ref: 26279	**Additional Refs**	ES101	D4	ES103	D9	ES105
Order No: None Supplied	**Depth (m)**	0.20	0.50	1.00	2.00	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678391	678392	678393	678394	678395

Determinand	**Unit**	**RL**	**Accreditation**	(n)		(n)		
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected		Not Detected		Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	10.4	8.3	10.4	10.0	7.4
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1		< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**		679		1904	
Total Sulphate as SO_4	%	< 0.02	**MCERTS**		0.07		0.19	
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**		90		83	
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**		0.09		0.08	
Total Sulphur	%	< 0.02	NONE		0.03		0.09	
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.021		0.045		0.090
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**		13.2		1.5	
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**		1.32		0.15	
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**		21		89	
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**		10.7		44.6	
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**		12		18	
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**		6.2		8.9	
Arsenic (As)	mg/kg	< 2	**MCERTS**	11		13		58
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8		1.3		0.6
W/S Boron	mg/kg	< 1	NONE	< 1		< 1		2.2
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.3		0.4		0.4
Chromium (III)	mg/kg	< 2	NONE	57		283		66
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2		< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	26		503		142
Lead (Pb)	mg/kg	< 3	**MCERTS**	102		139		233
W/S Magnesium	mg/l	< 0.1	NONE		7.4		0.5	
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1		< 1		< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	9		14		17
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2		< 2		< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	73		344		106
Zinc (Zn)	mg/kg	< 3	**MCERTS**	150		164		366
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2		< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07	TP07	BH01	BH01	BH01
Project / Job Ref: 26279	**Additional Refs**	ES106	D12	ES103	ES105	ES106
Order No: None Supplied	**Depth (m)**	3.00	3.00	1.10	3.00	5.50
Reporting Date: 09/11/2023	**DETS Sample No**	678396	678397	678398	678399	678400

Determinand	**Unit**	**RL**	**Accreditation**	(n)	(n)	(n)		(n)
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected		Not Detected	Not Detected	Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	7.4	7.6	10.3	8.2	7.4
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**		628		< 200	< 200
Total Sulphate as SO_4	%	< 0.02	**MCERTS**		0.06		< 0.02	< 0.02
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**		18		< 10	< 10
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**		0.02		< 0.01	< 0.01
Total Sulphur	%	< 0.02	NONE		0.06		< 0.02	< 0.02
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.007		0.042	0.001	< 0.001
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**		33.9		2.5	1.9
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**		3.39		0.25	0.19
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**		105		3	2
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**		52.4		1.4	1.2
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**		< 3		< 3	< 3
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**		< 1.5		< 1.5	< 1.5
Arsenic (As)	mg/kg	< 2	**MCERTS**	7		22	< 2	< 2
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	< 0.5		1.1	< 0.5	< 0.5
W/S Boron	mg/kg	< 1	NONE	< 1		< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2		< 0.2	< 0.2	< 0.2
Chromium (III)	mg/kg	< 2	NONE	18		330	11	5
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	11		76	< 4	< 4
Lead (Pb)	mg/kg	< 3	**MCERTS**	13		121	3	< 3
W/S Magnesium	mg/l	< 0.1	NONE		0.2		0.4	0.4
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	6		29	7	6
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2		2.3	< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	24		582	15	5
Zinc (Zn)	mg/kg	< 3	**MCERTS**	28		183	19	15
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02	BH02	BH02	TP08	TP08
Project / Job Ref: 26279	**Additional Refs**	ES103	ES104	ES105	D2	ES103
Order No: None Supplied	**Depth (m)**	1.00	2.80	3.70	0.10	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678401	678402	678403	678404	678405

Determinand	**Unit**	**RL**	**Accreditation**		(n)	(n)		
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected		Not Detected
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	11.1	7.9	10.0	8.4	10.2
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1		< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**				250	
Total Sulphate as SO_4	%	< 0.02	**MCERTS**				0.03	
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**				12	
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**				0.01	
Total Sulphur	%	< 0.02	NONE				< 0.02	
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.037	0.015	0.007		0.063
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**				2	
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**				0.20	
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**				15	
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**				7.3	
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**				< 3	
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**				< 1.5	
Arsenic (As)	mg/kg	< 2	**MCERTS**	17	12	5		12
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.7	0.6	0.5		1.2
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2	< 0.2		0.7
Chromium (III)	mg/kg	< 2	NONE	580	27	24		301
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	59	19	8		53
Lead (Pb)	mg/kg	< 3	**MCERTS**	74	13	9		128
W/S Magnesium	mg/l	< 0.1	NONE				3	
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1		< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	18	14	20		18
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**	755	37	32		394
Zinc (Zn)	mg/kg	< 3	**MCERTS**	123	47	56		236
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08	TP08	TP08	TP09	TP09
Project / Job Ref: 26279	**Additional Refs**	ES104	D7	D9	ES103	ES104
Order No: None Supplied	**Depth (m)**	1.00	1.50	1.50	1.00	3.00
Reporting Date: 09/11/2023	**DETS Sample No**	678406	678407	678408	678409	678410

Determinand	**Unit**	**RL**	**Accreditation**			(n)	(n)	
Asbestos Screen (S)	N/a	N/a	**ISO17025**				Not Detected	Detected
Sample Matrix (S)	Material Type	N/a	NONE					Loose Fibres
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					Chrysotile
pH	pH Units	N/a	**MCERTS**		10.3	9.0	10.5	8.9
Free Cyanide	mg/kg	< 1	NONE				< 1	< 1
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**		1152	1240		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**		0.12	0.12		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**		51	33		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**		0.05	0.03		
Total Sulphur	%	< 0.02	NONE		0.06	0.07		
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**				0.048	0.014
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**		1.9	2		
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**		0.19	0.20		
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**		16	17		
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**		7.8	8.4		
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**		7	< 3		
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**		3.5	< 1.5		
Arsenic (As)	mg/kg	< 2	**MCERTS**				17	8
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**				0.9	< 0.5
W/S Boron	mg/kg	< 1	NONE				< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**				0.3	< 0.2
Chromium (III)	mg/kg	< 2	NONE				435	91
Chromium (hexavalent)	mg/kg	< 2	NONE				< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**				73	19
Lead (Pb)	mg/kg	< 3	**MCERTS**				126	36
W/S Magnesium	mg/l	< 0.1	NONE		0.5	< 0.1		
Mercury (Hg)	mg/kg	< 1	**MCERTS**				< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**				20	14
Selenium (Se)	mg/kg	< 2	**MCERTS**				< 2	< 2
Vanadium (V)	mg/kg	< 1	**MCERTS**				617	111
Zinc (Zn)	mg/kg	< 3	**MCERTS**				217	109
Total Phenols (monohydric)	mg/kg	< 2	NONE				< 2	< 2

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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP09	TP09	TP10	TP10	TP10
Project / Job Ref: 26279	**Additional Refs**	D7	D9	ES101	ES102	D6
Order No: None Supplied	**Depth (m)**	2.00	3.00	0.20	0.50	0.85
Reporting Date: 09/11/2023	**DETS Sample No**	678411	678412	678413	678414	678415

Determinand	**Unit**	**RL**	**Accreditation**	(n)		(n)	(n)	(n)
Asbestos Screen (S)	N/a	N/a	**ISO17025**			Not Detected	Not Detected	
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	8.9	10.4	10.2	10.9	9.2
Free Cyanide	mg/kg	< 1	NONE			< 1	< 1	
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	2701	751			1163
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.27	0.08			0.12
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	183	52			97
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.18	0.05			0.10
Total Sulphur	%	< 0.02	NONE	0.14	0.05			0.06
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**			0.044	0.032	
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**	2.9	10.5			14.1
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**	0.29	1.05			1.41
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**	28	11			13
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**	13.9	5.6			6.5
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**	< 3	< 3			< 3
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**	< 1.5	< 1.5			< 1.5
Arsenic (As)	mg/kg	< 2	**MCERTS**			11	23	
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**			0.5	1	
W/S Boron	mg/kg	< 1	NONE			< 1	< 1	
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**			0.4	0.6	
Chromium (III)	mg/kg	< 2	NONE			24	31	
Chromium (hexavalent)	mg/kg	< 2	NONE			< 2	< 2	
Copper (Cu)	mg/kg	< 4	**MCERTS**			27	56	
Lead (Pb)	mg/kg	< 3	**MCERTS**			46	238	
W/S Magnesium	mg/l	< 0.1	NONE	0.7	0.6			0.9
Mercury (Hg)	mg/kg	< 1	**MCERTS**			< 1	< 1	
Nickel (Ni)	mg/kg	< 3	**MCERTS**			9	20	
Selenium (Se)	mg/kg	< 2	**MCERTS**			< 2	< 2	
Vanadium (V)	mg/kg	< 1	**MCERTS**			38	42	
Zinc (Zn)	mg/kg	< 3	**MCERTS**			132	310	
Total Phenols (monohydric)	mg/kg	< 2	NONE			< 2	< 2	

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Subcontracted analysis (S)

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Soil Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP10	TP10	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES103	ES104	ES105		
Order No: None Supplied	**Depth (m)**	1.00	2.10	2.60		
Reporting Date: 09/11/2023	**DETS Sample No**	678416	678417	678418		

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected		Not Detected		
Sample Matrix (S)	Material Type	N/a	NONE					
Asbestos Type (S)	PLM Result	N/a	**ISO17025**					
pH	pH Units	N/a	**MCERTS**	9.4		7.4		
Free Cyanide	mg/kg	< 1	NONE	< 1		< 1		
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**					
Total Sulphate as SO_4	%	< 0.02	**MCERTS**					
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**					
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**					
Total Sulphur	%	< 0.02	NONE					
Fraction Organic Carbon (FOC)	Units	< 0.001	**MCERTS**	0.050		0.013		
Ammonium as NH_4	mg/kg	< 0.5	**MCERTS**					
Ammonium as NH_4	mg/l	< 0.05	**MCERTS**					
W/S Chloride (2:1)	mg/kg	< 1	**MCERTS**					
W/S Chloride (2:1)	mg/l	< 0.5	**MCERTS**					
Water Soluble Nitrate (2:1) as NO_3	mg/kg	< 3	**MCERTS**					
Water Soluble Nitrate (2:1) as NO_3	mg/l	< 1.5	**MCERTS**					
Arsenic (As)	mg/kg	< 2	**MCERTS**	21		13		
Beryllium (Be)	mg/kg	< 0.5	**MCERTS**	0.8		1		
W/S Boron	mg/kg	< 1	NONE	< 1		1.9		
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.8		< 0.2		
Chromium (III)	mg/kg	< 2	NONE	74		18		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2		
Copper (Cu)	mg/kg	< 4	**MCERTS**	83		11		
Lead (Pb)	mg/kg	< 3	**MCERTS**	196		15		
W/S Magnesium	mg/l	< 0.1	NONE					
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1		< 1		
Nickel (Ni)	mg/kg	< 3	**MCERTS**	39		18		
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2		< 2		
Vanadium (V)	mg/kg	< 1	**MCERTS**	102		26		
Zinc (Zn)	mg/kg	< 3	**MCERTS**	440		116		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2		

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Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP05	TP06	TP06
Project / Job Ref: 26279	**Additional Refs**	ES103	ES104	ES105	ES102	ES104
Order No: None Supplied	**Depth (m)**	1.00	2.00	2.80	0.50	1.50
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678384	678385	678387	678389

Determinand	**Unit**	**RL**	**Accreditation**	(n)	(n)			
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.74	< 0.1	< 0.1	2.12	3.70
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.56
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.17
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.86	0.27	< 0.1	0.96	0.32
Anthracene	mg/kg	< 0.1	**MCERTS**	0.46	< 0.1	< 0.1	0.21	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.41	0.34	< 0.1	1.77	0.47
Pyrene	mg/kg	< 0.1	**MCERTS**	1.25	0.27	< 0.1	1.77	0.44
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	1.03	0.25	< 0.1	1.34	0.34
Chrysene	mg/kg	< 0.1	**MCERTS**	0.97	0.23	< 0.1	1.21	0.35
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.83	0.20	< 0.1	1.49	0.47
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.61	< 0.1	< 0.1	0.52	0.15
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	0.81	0.14	< 0.1	1.05	0.34
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.13	< 0.1	1.20	0.29
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	0.31
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	9	1.8	< 1.6	13.6	7.9

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

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07	TP07	TP07	TP07	BH01
Project / Job Ref: 26279	**Additional Refs**	ES101	ES103	ES105	ES106	ES103
Order No: None Supplied	**Depth (m)**	0.20	1.00	2.60	3.00	1.10
Reporting Date: 09/11/2023	**DETS Sample No**	678391	678393	678395	678396	678398

Determinand	**Unit**	**RL**	**Accreditation**	(n)	(n)		(n)	(n)
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.38	0.33	< 0.1	< 0.1	4.06
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	3.36	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	1.02	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.55	0.54	0.18	1.21	0.67
Anthracene	mg/kg	< 0.1	**MCERTS**	0.11	0.17	< 0.1	0.27	0.15
Fluoranthene	mg/kg	< 0.1	**MCERTS**	0.90	1	0.23	0.46	0.82
Pyrene	mg/kg	< 0.1	**MCERTS**	0.73	0.86	0.20	0.36	0.62
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.62	0.66	< 0.1	0.20	0.58
Chrysene	mg/kg	< 0.1	**MCERTS**	0.80	0.68	0.17	0.19	0.63
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.81	0.84	0.23	0.17	0.70
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.31	0.27	< 0.1	< 0.1	0.27
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.59	0.17	0.14	0.54
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.43	0.22	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.13	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.40	0.26	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	5.2	6.9	1.7	7.4	9

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	28/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01	BH01	BH02	BH02	BH02
Project / Job Ref: 26279	**Additional Refs**	ES105	ES106	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	3.00	5.50	1.00	2.80	3.70
Reporting Date: 09/11/2023	**DETS Sample No**	678399	678400	678401	678402	678403

Determinand	Unit	RL	Accreditation		(n)		(n)	(n)
Naphthalene	mg/kg	< 0.1	**MCERTS**	1.24	< 0.1	0.62	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	0.12	< 0.1	0.12	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.77	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.18	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	1.03	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.85	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.64	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.60	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.71	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.26	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.54	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.37	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.35	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	< 1.6	< 1.6	7	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08	TP09	TP09	TP10	TP10
Project / Job Ref: 26279	**Additional Refs**	ES103	ES103	ES104	ES101	ES102
Order No: None Supplied	**Depth (m)**	1.00	1.00	3.00	0.20	0.50
Reporting Date: 09/11/2023	**DETS Sample No**	678405	678409	678410	678413	678414

Determinand	**Unit**	**RL**	**Accreditation**		(n)		(n)	(n)
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.43	0.56	0.25	< 0.1	0.56
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	**MCERTS**	1.81	0.49	0.48	0.78	1.78
Anthracene	mg/kg	< 0.1	**MCERTS**	1	< 0.1	< 0.1	0.30	0.42
Fluoranthene	mg/kg	< 0.1	**MCERTS**	3.48	0.75	0.73	1.48	2.94
Pyrene	mg/kg	< 0.1	**MCERTS**	2.54	0.63	0.52	1.24	2.30
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	2.41	0.51	0.44	1.14	1.91
Chrysene	mg/kg	< 0.1	**MCERTS**	2.23	0.49	0.46	1.12	1.97
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	2.30	0.64	0.43	1.15	2.33
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.87	0.21	0.13	0.42	0.54
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	1.64	0.46	0.26	0.88	1.81
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	1.19	0.35	0.16	0.70	1.27
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	1.18	0.34	0.16	< 0.1	1.03
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	21.1	5.4	4	9.2	18.9

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23				
Hydrock	**Time Sampled**	None Supplied	None Supplied				
Site Reference: SWITCH	**TP / BH No**	TP10	TP10				
Project / Job Ref: 26279	**Additional Refs**	ES103	ES105				
Order No: None Supplied	**Depth (m)**	1.00	2.60				
Reporting Date: 09/11/2023	**DETS Sample No**	678416	678418				

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	0.39	< 0.1			
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1			
Phenanthrene	mg/kg	< 0.1	**MCERTS**	1.80	< 0.1			
Anthracene	mg/kg	< 0.1	**MCERTS**	0.26	< 0.1			
Fluoranthene	mg/kg	< 0.1	**MCERTS**	2.94	< 0.1			
Pyrene	mg/kg	< 0.1	**MCERTS**	2.02	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	2.06	< 0.1			
Chrysene	mg/kg	< 0.1	**MCERTS**	2.44	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	2.63	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	1.22	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	2.08	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	1.55	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	0.52	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	1.41	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	21.3	< 1.6			

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP05	TP06	TP06
Project / Job Ref: 26279	**Additional Refs**	ES103	ES104	ES105	ES102	ES104
Order No: None Supplied	**Depth (m)**	1.00	2.00	2.80	0.50	1.50
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678384	678385	678387	678389

Determinand	Unit	RL	Accreditation	(n)	(n)			
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	< 30	< 30	< 30	< 30	< 30
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	0.11	0.16	< 0.01	0.09	0.04
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	0.08	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	10	8
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	9	13
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	7	12
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	9	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	40	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	< 30	< 30	< 30	75	34
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	< 60	< 60	< 60	75	< 60

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

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07	TP07	TP07	TP07	BH01
Project / Job Ref: 26279	**Additional Refs**	ES101	ES103	ES105	ES106	ES103
Order No: None Supplied	**Depth (m)**	0.20	1.00	2.60	3.00	1.10
Reporting Date: 09/11/2023	**DETS Sample No**	678391	678393	678395	678396	678398

Determinand	Unit	RL	Accreditation	(n)	(n)		(n)	(n)
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	344	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	122	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	4	< 3	< 3	26	< 3
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	76	< 10	< 10	< 10	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	80	< 30	< 30	491	< 30
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.93
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	0.39
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	416	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	843	6
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	3	2	< 2	115	5
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	11	13	< 3	21	10
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	165	61	< 10	< 10	35
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	18	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	196	75	< 30	1395	57
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	276	75	< 60	1886	< 60

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	28/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01	BH01	BH02	BH02	BH02
Project / Job Ref: 26279	**Additional Refs**	ES105	ES106	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	3.00	5.50	1.00	2.80	3.70
Reporting Date: 09/11/2023	**DETS Sample No**	678399	678400	678401	678402	678403

Determinand	**Unit**	**RL**	**Accreditation**		(n)		(n)	(n)
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	< 30	< 30	< 30	< 30	< 30
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	0.04	< 0.01	0.16	0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	0.13	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	5	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	4	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	< 3	< 3	8	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	< 30	< 30	< 30	< 30	< 30
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	< 60	< 60	< 60	< 60	< 60

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Soil Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08	TP09	TP09	TP10	TP10
Project / Job Ref: 26279	**Additional Refs**	ES103	ES103	ES104	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.00	1.00	3.00	1.00	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678405	678409	678410	678416	678418

Determinand	Unit	RL	Accreditation	(n)				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	**MCERTS**	11	< 3	< 3	< 3	< 3
Aliphatic >C16 - C35 : EH_CU_1D_AL	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	33	< 10
Aliphatic >C35 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 30	NONE	< 30	< 30	< 30	33	< 30
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	0.04	0.01	< 0.01	0.02	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	**MCERTS**	5	< 2	< 2	3	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	**MCERTS**	15	8	4	15	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	**MCERTS**	47	34	< 10	66	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 30	NONE	67	42	< 30	83	< 30
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	mg/kg	< 60	NONE	78	< 60	< 60	116	< 60

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP05	TP06	TP06
Project / Job Ref: 26279	**Additional Refs**	ES103	ES104	ES105	ES102	ES104
Order No: None Supplied	**Depth (m)**	1.00	2.00	2.80	0.50	1.50
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678384	678385	678387	678389

Determinand	Unit	RL	Accreditation	(n)	(n)			
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	109	162	< 2	92	44
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	18	< 5	< 5	82	24
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	5	180	6	160	12
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	16	157	10	171	34
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	4	40	< 2	51	6
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07	TP07	TP07	TP07	BH01
Project / Job Ref: 26279	**Additional Refs**	ES101	ES103	ES105	ES106	ES103
Order No: None Supplied	**Depth (m)**	0.20	1.00	2.60	3.00	1.10
Reporting Date: 09/11/2023	**DETS Sample No**	678391	678393	678395	678396	678398

Determinand	Unit	RL	Accreditation	(n)	(n)		(n)	(n)
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	930
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	387
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	85	< 2	18	17161	59
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	64	3	21	58528	341
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	24	< 2	< 2	9780	63
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	28/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01	BH01	BH02	BH02	BH02
Project / Job Ref: 26279	**Additional Refs**	ES105	ES106	ES103	ES104	ES105
Order No: None Supplied	**Depth (m)**	3.00	5.50	1.00	2.80	3.70
Reporting Date: 09/11/2023	**DETS Sample No**	678399	678400	678401	678402	678403

Determinand	Unit	RL	Accreditation		(n)		(n)	(n)
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	45	7	157	15	< 2
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	49	< 5	130	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	13	< 2	25	< 2	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	47	5	108	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	12	< 2	26	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08	TP09	TP09	TP10	TP10
Project / Job Ref: 26279	**Additional Refs**	ES103	ES103	ES104	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.00	1.00	3.00	1.00	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678405	678409	678410	678416	678418

Determinand	Unit	RL	Accreditation		(n)			
Benzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	39	11	6	18	4
Toluene : HS_1D_MS	ug/kg	< 5	**MCERTS**	24	7	< 5	15	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	< 2	4	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	11	3	< 2	14	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	**MCERTS**	3	< 2	< 2	4	< 2
MTBE : HS_1D_MS	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP06	TP07	TP07
Project / Job Ref: 26279	**Additional Refs**	ES103	ES105	ES104	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.00	2.80	1.50	1.00	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678385	678389	678393	678395

Determinand	Unit	RL	Accreditation	(n)			(n)	
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	58
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Benzene	ug/kg	< 2	MCERTS	109	< 2	44	< 2	< 2
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
TAME	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Toluene	ug/kg	< 5	MCERTS	18	< 5	24	< 5	< 5
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	174
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethyl Benzene	ug/kg	< 2	MCERTS	5	6	12	< 2	18
m,p-Xylene	ug/kg	< 2	MCERTS	16	10	34	3	21
o-Xylene	ug/kg	< 2	MCERTS	4	< 2	6	< 2	< 2
Styrene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	6	< 5	9
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	28/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01	BH02	BH02	TP08	TP09
Project / Job Ref: 26279	**Additional Refs**	ES103	ES103	ES104	ES103	ES103
Order No: None Supplied	**Depth (m)**	1.10	1.00	2.80	1.00	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678398	678401	678402	678405	678409

Determinand	Unit	RL	Accreditation	(n)		(n)		(n)
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Benzene	ug/kg	< 2	MCERTS	930	157	15	39	11
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
TAME	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Toluene	ug/kg	< 5	MCERTS	387	130	< 5	24	7
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	8	< 5	< 5	< 5
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethyl Benzene	ug/kg	< 2	MCERTS	59	25	< 2	3	< 2
m,p-Xylene	ug/kg	< 2	MCERTS	341	108	< 2	11	3
o-Xylene	ug/kg	< 2	MCERTS	63	26	< 2	3	< 2
Styrene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	37	43	< 5	< 5	< 5
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	34	27	< 5	< 5	< 5
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP09	TP10	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES104	ES103	ES105		
Order No: None Supplied	**Depth (m)**	3.00	1.00	2.60		
Reporting Date: 09/11/2023	**DETS Sample No**	678410	678416	678418		

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Chloromethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
Chloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Bromomethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Chloroform	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Bromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Benzene	ug/kg	< 2	MCERTS	6	18	4		
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Trichloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Dibromomethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
TAME	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Toluene	ug/kg	< 5	MCERTS	< 5	15	< 5		
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Chlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Ethyl Benzene	ug/kg	< 2	MCERTS	< 2	4	< 2		
m,p-Xylene	ug/kg	< 2	MCERTS	< 2	14	< 2		
o-Xylene	ug/kg	< 2	MCERTS	< 2	4	< 2		
Styrene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Bromoform	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Bromobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10	< 10	< 10		
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678381

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.80
Reporting Date: 09/11/2023	**DETS Sample No**	678385

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP06
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.50
Reporting Date: 09/11/2023	**DETS Sample No**	678389

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678393

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678395

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.10
Reporting Date: 09/11/2023	**DETS Sample No**	678398

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	28/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678401

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.80
Reporting Date: 09/11/2023	**DETS Sample No**	678402

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678405

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP09
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678409

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP09
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	3.00
Reporting Date: 09/11/2023	**DETS Sample No**	678410

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678416

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678418

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/kg	< 10	< 10
2	N/a	N/a	µg/kg	< 10	< 10
3	N/a	N/a	µg/kg	< 10	< 10
4	N/a	N/a	µg/kg	< 10	< 10
5	N/a	N/a	µg/kg	< 10	< 10

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05	TP05	TP06	TP07	TP07
Project / Job Ref: 26279	**Additional Refs**	ES103	ES105	ES104	ES103	ES105
Order No: None Supplied	**Depth (m)**	1.00	2.80	1.50	1.00	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678381	678385	678389	678393	678395

Determinand	Unit	RL	Accreditation	(n)			(n)	
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethoxy)methane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethyl)ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachloroethane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Cresol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2,4,6-Trichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	1.2	0.1	0.2
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.5	< 0.1	0.1
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibutyl phthalate	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	0.2	< 0.1
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Benzyl butyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	28/09/23	29/09/23	29/09/23	29/09/23
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01	BH02	BH02	TP08	TP09
Project / Job Ref: 26279	**Additional Refs**	ES103	ES103	ES104	ES103	ES103
Order No: None Supplied	**Depth (m)**	1.10	1.00	2.80	1.00	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678398	678401	678402	678405	678409

Determinand	Unit	RL	Accreditation	(n)		(n)		(n)
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nitrobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethoxy)methane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
bis(2-chloroethyl)ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachloroethane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Cresol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2,4,6-Trichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	mg/kg	< 0.1	**MCERTS**	1.1	0.3	< 0.1	0.4	0.1
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	0.2	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	mg/kg	< 0.1	**MCERTS**	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibutyl phthalate	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	mg/kg	< 0.1	**ISO17025**	< 0.1	0.2	< 0.1	< 0.1	< 0.1
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Benzyl butyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12382	**Date Sampled**	29/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP09	TP10	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES104	ES103	ES105		
Order No: None Supplied	**Depth (m)**	3.00	1.00	2.60		
Reporting Date: 09/11/2023	**DETS Sample No**	678410	678416	678418		

Determinand	Unit	RL	Accreditation					
Phenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,2,4-Trichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Nitrobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
0-Cresol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-chloroethoxy)methane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
bis(2-chloroethyl)ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
2,4-Dichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
2-Chlorophenol	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
1,3-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
1,2-Dichlorobenzene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
2,4-Dimethylphenol	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15		
Isophorone	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachloroethane	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
p-Cresol	mg/kg	< 0.15	**MCERTS**	< 0.15	0.24	< 0.15		
2,4,6-Trichlorophenol	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
2,4,5-Trichlorophenol	mg/kg	< 0.15	**MCERTS**	< 0.15	< 0.15	< 0.15		
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Methylnaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.2	< 0.1		
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chloronaphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
4-Chloroanaline	mg/kg	< 0.15	NONE	0.17	< 0.15	< 0.15		
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Bromophenyl phenyl ether	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Hexachlorobenzene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
2,4-Dinitrotoluene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Diethyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Dibenzofuran	mg/kg	< 0.1	**MCERTS**	< 0.1	0.1	< 0.1		
Azobenzene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dibutyl phthalate	mg/kg	< 0.1	**ISO17025**	< 0.1	< 0.1	< 0.1		
Carbazole	mg/kg	< 0.1	**ISO17025**	0.3	0.3	< 0.1		
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	**ISO17025**	< 0.15	< 0.15	< 0.15		
Benzyl butyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		
Di-n-octyl phthalate	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	< 0.1		

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678381

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP05
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.80
Reporting Date: 09/11/2023	**DETS Sample No**	678385

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP06
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.50
Reporting Date: 09/11/2023	**DETS Sample No**	678389

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	Naphthalene, 1,2,3,4-tetrahydro-	Naphthalene, 1,2,3,4-tetrahydro-	mg/kg	< 0.1	3.2
2	Naphthalene, 1-methyl-	91	mg/kg	< 0.1	1.2
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678393

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP07
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678395

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH01
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.10
Reporting Date: 09/11/2023	**DETS Sample No**	678398

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	28/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678401

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	Naphthalene, 1,2,3,4-tetrahydro-	95	mg/kg	< 0.1	1.1
2	Naphthalene, 1-methyl-	91	mg/kg	< 0.1	0.2
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	BH02
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.80
Reporting Date: 09/11/2023	**DETS Sample No**	678402

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678405

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP09
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678409

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP09
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	3.00
Reporting Date: 09/11/2023	**DETS Sample No**	678410

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES103
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678416

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES105
Order No: None Supplied	**Depth (m)**	2.60
Reporting Date: 09/11/2023	**DETS Sample No**	678418

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	**Unit**	**RL**	**Accreditation**					
pH	pH Units	N/a	**ISO17025**	7.5	9.4	9.7		
Electrical Conductivity	uS/cm	< 5	NONE	63	166	185		
Total Cyanide	ug/l	< 5	**ISO17025**	< 5	< 5	11		
Free Cyanide	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Sulphate as SO_4	mg/l	< 1	**ISO17025**	3	10	13		
Ammoniacal Nitrogen as NH_4	ug/l	< 50	**ISO17025**	3010	500	144		
Ammonia as NH_4	ug/l	< 50	**ISO17025**	3010	500	144		
Ammonium as NH_4	ug/l	< 50	**ISO17025**	3010	500	144		
Chloride	mg/l	< 1	**ISO17025**	< 1	2	2		
Nitrate as NO_3	mg/l	< 0.5	**ISO17025**	< 0.5	< 0.5	0.5		
Nitrite as NO_2	mg/l	< 0.5	NONE	< 0.5	< 0.5	< 0.5		
Fluoride	mg/l	< 0.5	**ISO17025**	< 0.5	< 0.5	< 0.5		
Bromate (S)	ug BrO3/l	< 0.8	NONE	< 0.80	< 0.80	< 0.80		
Aluminium	ug/l	< 5	**ISO17025**	100	213	686		
Antimony	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Arsenic	ug/l	< 5	**ISO17025**	< 5	10.0	6.0		
Barium	ug/l	< 5	**ISO17025**	< 5	26.0	15.0		
Boron	ug/l	< 5	**ISO17025**	50	59	71		
Cadmium	ug/l	< 0.4	**ISO17025**	< 0.4	< 0.4	< 0.4		
Chromium	ug/l	< 5	**ISO17025**	< 5	< 5	7.0		
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20	< 20		
Chromium III	ug/l	< 20	NONE	< 20	< 20	< 20		
Cobalt	ug/l	< 5	**ISO17025**	<5	<5	<5		
Copper	ug/l	< 5	**ISO17025**	< 5	18.0	< 5		
Iron	ug/l	< 5	**ISO17025**	350	50	15		
Lead	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Manganese	ug/l	<5	**ISO17025**	40.0	7.0	< 5		
Mercury	ug/l	< 0.05	**ISO17025**	< 0.05	0.66	0.42		
Nickel	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Selenium	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Silver (S)	ug/l	< 0.13	NONE	0.200	< 0.130	< 0.130		
Tin	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Vanadium	ug/l	< 5	**ISO17025**	< 5	481	191		
Zinc	ug/l	< 2	**ISO17025**	23	4	5		
Calcium	mg/l	< 0.2	**ISO17025**	0.7	26.8	26.7		
Sodium	mg/l	< 0.2	**ISO17025**	4.2	2.1	2.4		
Total Phenols (monohydric)	ug/l	< 10	**ISO17025**	< 10	< 10	< 10		

Subcontracted analysis (S)

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Leachate Analysis Certificate - Speciated PAH						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	< 0.01	0.34	< 0.01		
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01	0.01	< 0.01		
Acenaphthene	ug/l	< 0.01	NONE	< 0.01	0.04	< 0.01		
Fluorene	ug/l	< 0.01	NONE	< 0.01	0.03	< 0.01		
Phenanthrene	ug/l	< 0.01	NONE	< 0.01	0.04	0.02		
Anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008	< 0.008		
Total EPA-16 PAHs	ug/l	< 0.16	NONE	< 0.16	0.46	< 0.16		

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Leachate Analysis Certificate - TPH LQM Banded						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C6 - C8 : HS_1D_MS_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C8 - C10 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C10 - C12 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C12 - C16 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C16 - C35 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic >C35 - C44 : EH_CU_1D_AL	ug/l	< 10	NONE	< 10	< 10	< 10		
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	ug/l	< 70	NONE	< 70	< 70	< 70		
Aromatic >C5 - C7 : HS_1D_MS_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C7 - C8 : HS_1D_MS_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C8 - C10 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C10 - C12 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C12 - C16 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C16 - C21 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C21 - C35 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic >C35 - C44 : EH_CU_1D_AR	ug/l	< 10	NONE	< 10	< 10	< 10		
Aromatic (>C5 - C44) : HS_1D_MS+EH_CU_1D_AR	ug/l	< 70	NONE	< 70	< 70	< 70		
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Total	ug/l	< 140	NONE	< 140	< 140	< 140		

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Leachate Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	ug/l	< 1	**ISO17025**	< 1	< 1	< 1		
Toluene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
Ethylbenzene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
p & m-xylene : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10	< 10		
o-xylene : HS_1D_MS	ug/l	< 5	**ISO17025**	< 5	< 5	< 5		
MTBE : HS_1D_MS	ug/l	< 10	**ISO17025**	< 10	< 10	< 10		

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Leachate Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Vinyl Chloride	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromomethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Trichlorofluoromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
MTBE	ug/l	< 10	ISO17025	< 10	< 10	< 10		
trans-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
cis-1,2-Dichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
2,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chloroform	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromochloromethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,1,1-Trichloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Carbon Tetrachloride	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dichloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Benzene	ug/l	< 1	ISO17025	< 1	< 1	< 1		
1,2-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Trichloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromodichloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Dibromomethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
TAME	ug/l	< 5	ISO17025	< 5	< 5	< 5		
cis-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Toluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
trans-1,3-Dichloropropene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,2-Trichloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,3-Dichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Tetrachloroethene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Dibromochloromethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dibromoethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Chlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,1,2-Tetrachloroethane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Ethyl Benzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
m,p-Xylene	ug/l	< 10	ISO17025	< 10	< 10	< 10		
o-Xylene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Styrene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromoform	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Isopropylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,1,2,2-Tetrachloroethane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
1,2,3-Trichloropropane	ug/l	< 5	ISO17025	< 5	< 5	< 5		
n-Propylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
Bromobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
2-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,3,5-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
4-Chlorotoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
tert-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2,4-Trimethylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
sec-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
p-Isopropyltoluene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,3-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,4-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
n-Butylbenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
1,2-Dichlorobenzene	ug/l	< 5	ISO17025	< 5	< 5	< 5		
,2-Dibromo-3-chloropropane	ug/l	< 10	ISO17025	< 10	< 10	< 10		
Hexachlorobutadiene	ug/l	< 5	ISO17025	< 5	< 5	< 5		

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP06
Project / Job Ref: 26279	**Additional Refs**	ES106
Order No: None Supplied	**Depth (m)**	2.50
Reporting Date: 09/11/2023	**DETS Sample No**	678390

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678406

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Volatile Organic Compounds TIC (VOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.10
Reporting Date: 09/11/2023	**DETS Sample No**	678417

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 5	< 5
2	N/a	N/a	µg/l	< 5	< 5
3	N/a	N/a	µg/l	< 5	< 5
4	N/a	N/a	µg/l	< 5	< 5
5	N/a	N/a	µg/l	< 5	< 5

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 23-12382	**Date Sampled**	27/09/23	29/09/23	29/09/23		
Hydrock	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: SWITCH	**TP / BH No**	TP06	TP08	TP10		
Project / Job Ref: 26279	**Additional Refs**	ES106	ES104	ES104		
Order No: None Supplied	**Depth (m)**	2.50	1.00	2.10		
Reporting Date: 09/11/2023	**DETS Sample No**	678390	678406	678417		

Determinand	**Unit**	**RL**	**Accreditation**					
Phenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,2,4-Trichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Nitrobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
0-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-chloroethoxy)methane	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-chloroethyl)ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,3-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,4-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
1,2-Dichlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dimethylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Isophorone	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachloroethane	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
p-Cresol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,6-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4,5-Trichlorophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chloro-3-methylphenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Methylnaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorocyclopentadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobutadiene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,6-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dimethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2-Chloronaphthalene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chloroanaline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Nitrophenol	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Chlorophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
3-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Nitroaniline	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
4-Bromophenyl phenyl ether	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Hexachlorobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
2,4-Dinitrotoluene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Diethyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dibenzofuran	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Azobenzene	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Dibutyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Carbazole	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
bis(2-ethylhexyl)phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Benzyl butyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		
Di-n-octyl phthalate	ug/l	< 0.1	NONE	< 0.1	< 0.1	< 0.1		

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	27/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP06
Project / Job Ref: 26279	**Additional Refs**	ES106
Order No: None Supplied	**Depth (m)**	2.50
Reporting Date: 09/11/2023	**DETS Sample No**	678390

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP08
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	1.00
Reporting Date: 09/11/2023	**DETS Sample No**	678406

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Leachate Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 23-12382	**Date Sampled**	29/09/23
Hydrock	**Time Sampled**	None Supplied
Site Reference: SWITCH	**TP / BH No**	TP10
Project / Job Ref: 26279	**Additional Refs**	ES104
Order No: None Supplied	**Depth (m)**	2.10
Reporting Date: 09/11/2023	**DETS Sample No**	678417

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	µg/l	< 0.1	< 0.1
2	N/a	N/a	µg/l	< 0.1	< 0.1
3	N/a	N/a	µg/l	< 0.1	< 0.1
4	N/a	N/a	µg/l	< 0.1	< 0.1
5	N/a	N/a	µg/l	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 23-12382	
Hydrock	
Site Reference: SWITCH	
Project / Job Ref: 26279	
Order No: None Supplied	
Reporting Date: 09/11/2023	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
678381	TP05	ES103	1.00	8.5	Brown sandy gravel with stones and concrete
678382	TP05	D4	1.00	7.1	Brown sandy gravel with stones and concrete
678383	TP05	D6	2.00	13	Black sandy gravel with stones and concrete
678384	TP05	ES104	2.00	15.9	Black sandy gravel with stones and concrete
678385	TP05	ES105	2.80	17.6	Brown sandy clay with stones
678386	TP06	D2	0.30	10.5	Brown sandy gravel with stones and concrete
678387	TP06	ES102	0.50	9.3	Brown gravelly sand with stones and concrete
678388	TP06	D6	1.00	5.9	Black gravelly sand with stones and concrete
678389	TP06	ES104	1.50	5.6	Brown sandy clay with stones
678391	TP07	ES101	0.20	10.1	Brown sandy gravel with stones and concrete
678392	TP07	D4	0.50	14.5	Light brown sandy clay with stones
678393	TP07	ES103	1.00	10	Brown sandy gravel with stones and concrete
678394	TP07	D9	2.00	8.1	Brown gravelly sand with stones and concrete
678395	TP07	ES105	2.60	34.9	Black loamy clay with stones and vegetation
678396	TP07	ES106	3.00	11.7	Black loamy gravel with stones
678397	TP07	D12	3.00	10.7	Brown loamy gravel with stones and oil / petroleum
678398	BH01	ES103	1.10	8.6	Black sandy gravel with stones and concrete
678399	BH01	ES105	3.00	2.4	Brown gravelly sand with stones and oil / petroleum
678400	BH01	ES106	5.50	2.3	Brown gravel with stones
678401	BH02	ES103	1.00	10.3	Brown sandy clay with stones and concrete
678402	BH02	ES104	2.80	15.6	Grey clay with stones
678403	BH02	ES105	3.70	4.4	Brown gravel with stones
678404	TP08	D2	0.10	6.6	Red gravelly sand with stones
678405	TP08	ES103	1.00	8.7	Brown gravelly sand with stones and concrete
678407	TP08	D7	1.50	6.1	Brown gravelly sand with stones and concrete
678408	TP08	D9	1.50	2.8	Brown gravel with stones
678409	TP09	ES103	1.00	10.6	Black sandy gravel with stones and concrete
678410	TP09	ES104	3.00	16.8	Brown sandy clay with stones
678411	TP09	D7	2.00	10.3	Black sandy gravel with stones and concrete
678412	TP09	D9	3.00	17.9	Brown sandy clay with stones
678413	TP10	ES101	0.20	9.9	Brown sandy gravel with stones and concrete
678414	TP10	ES102	0.50	9.5	Brown sandy gravel with stones and concrete
678415	TP10	D6	0.85	8.5	Black sandy gravel with stones and concrete
678416	TP10	ES103	1.00	8.3	Black gravelly sand with stones and concrete
678418	TP10	ES105	2.60	15.1	Grey clay

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-12382
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: None Supplied
Reporting Date: 09/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

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Water Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-12382
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: None Supplied
Reporting Date: 09/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

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List of HWOL Acronyms and Operators
DETS Report No: 23-12382
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: None Supplied
Reporting Date: 27/10/2023

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH LQM - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH LQM - Aliphatic >C16 - C35 - EH_CU_1D_AL
TPH LQM - Aliphatic >C35 - C44 - EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH LQM - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH LQM - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH LQM - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH LQM - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH LQM - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH LQM - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH LQM - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH LQM - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH LQM - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH LQM - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH LQM - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH LQM - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

4480

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PL7 5BP

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DETS Report No: 23-14071

Site Reference:	SWITCH, Port Talbot
Project / Job Ref:	C-26279
Order No:	P029482
Sample Receipt Date:	14/11/2023
Sample Scheduled Date:	14/11/2023
Report Issue Number:	2
Reporting Date:	28/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.
This report supersedes 23-14071, issue no.1.
Reissue reason: Sample ID amended.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Soil Analysis Certificate						
DETS Report No: 23-14071	**Date Sampled**	26/09/23	26/09/23			
Hydrock	**Time Sampled**	None Supplied	None Supplied			
Site Reference: SWITCH, Port Talbot	**TP / BH No**	TP01	TP01			
Project / Job Ref: C-26279	**Additional Refs**	ES102	ES104			
Order No: P029482	**Depth (m)**	0.30	1.20			
Reporting Date: 28/11/2023	**DETS Sample No**	685538	685539			

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Quantification (S)	%	< 0.001	**ISO17025**	0.005	0.002			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-14071
Hydrock
Site Reference: SWITCH, Port Talbot
Project / Job Ref: C-26279
Order No: P029482
Reporting Date: 28/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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List of HWOL Acronyms and Operators
DETS Report No: 23-14071
Hydrock
Site Reference: SWITCH, Port Talbot
Project / Job Ref: C-26279
Order No: P029482
Reporting Date: 28/11/2023

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym

Matthew Holbourn
Hydrock
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Wharton Place,
13 Wharton Street,
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CF10 1GS

Derwentside Environmental Testing Services Ltd
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Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 23-14072

Site Reference:	SWITCH
Project / Job Ref:	26279
Order No:	PO29482
Sample Receipt Date:	02/10/2023
Sample Scheduled Date:	14/11/2023
Report Issue Number:	1
Reporting Date:	20/11/2023

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Soil Analysis Certificate							
DETS Report No: 23-14072	**Date Sampled**	29/09/23					
Hydrock	**Time Sampled**	None Supplied					
Site Reference: SWITCH	**TP / BH No**	TP09					
Project / Job Ref: 26279	**Additional Refs**	ES104					
Order No: PO29482	**Depth (m)**	3.00					
Reporting Date: 20/11/2023	**DETS Sample No**	685540					

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Quantification (S)	%	< 0.001	**ISO17025**	0.001				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 23-14072
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: PO29482
Reporting Date: 20/11/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
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Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
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Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
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Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

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List of HWOL Acronyms and Operators
DETS Report No: 23-14072
Hydrock
Site Reference: SWITCH
Project / Job Ref: 26279
Order No: PO29482
Reporting Date: 20/11/2023

Acronym	**Description**
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym

GAC derivation

Background

Initially, the Hydrock GAC were derived following the publishing of soil guideline values (SGV), toxicological (TOX) reports and associated publications by the Environment Agency (EA) in 2009 referenced under Science Report SC050021 (EA, 2009a, b, c, d). The Hydrock GAC have then been periodically updated following publication of new information on toxicological, physico-chemical, land use or receptor parameters, namely:

- LQM/CIEH, 2009. LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment, second edition. Nathanial, C. P., McCaffrey, C., Ashmore, M., Cheng, Y., Gillet, A. G., Ogden, R. C. and Scott, D.
- CL:AIRE, 2010. 'The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment'. Environmental Industries Commission, The Association of Geotechnical and Geoenvironmental Specialists and Contaminated Land: Applications in Real Environment.
- CL:AIRE, 2014. 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination', Revision 2, DEFRA research project SP1010. Contaminated Land: Applications in Real Environment.
- LQM/CIEH, 2015. 'The LQM/CIEH S4ULs for Human Health Risk Assessment'. Nathanial, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C. and Nathanial, J. F.
- CL:AIRE, 2021. 'C4SL Phase 2 Technical Reports'. Contaminated Land: Applications in Real Environment.

Land use scenarios

Hydrock has derived generic assessment criteria (GAC) for human health based on the six exposure scenarios defined in CL:AIRE (2014) using generic default assumptions from published guidance. GAC for each exposure scenario have been derived for three soil organic matter (SOM) contents, 1%, 2.5% and 6%.

All GAC have been rounded to two significant figures.

Exposure parameters

The exposure parameters used for the Hydrock GAC are the default parameters stated in SR3, unless updated in CL:AIRE (2014) where the CL:AIRE (2014) values have been adopted.

Approach to consumption rates

Hydrock have adopted the 90th percentile consumption rates from Table 3.4 of CL:AIRE (2014) for all produce types. This is noted to be more conservative than the "top two" approach taken in the derivation of C4SLs.

Approach to plant uptake for GAC omitted in CL:AIRE (2010)

Plant uptake factors were not identified in CL:AIRE (2010) for antimony, barium and molybdenum. Hydrock has sourced the required parameter values from ORNL (1984) in order to derive GAC that are inclusive of the homegrown produce exposure pathway.

Chemical and toxicity parameters

The chemical and toxicity parameters have been adopted based on the following documents:

- IRIS, 2016. 'Toxicological Review of Trimethylbenzenes'. Integrated Risk Information System, National Centre for Environmental Assessment, office of Research and Development, U.S. Environmental Protection Agency.
- LQM/CIEH, 2015.

- ORNL, 1984. 'ORNL-5786. A Review and Analysis of Parameters for Assessing Transport of Environmentally released Radionuclides through Agriculture'. Oak Ridge National Laboratory.
- CL:AIRE, 2010.
- RIVM, 2001. RIVM Report 711701 025 'HCV Re-evaluation of human-toxicological maximum-permissible risk levels'. National Institute of Public Health and the Environment.
- LQM/CIEH, 2009.
- EA, 2009a.

Approach to Cyanide GAC

The Hydrock GAC for free cyanide have been derived based on ingestion of a bolus of contaminated soil. The GAC are derived for acute exposure of a child (0-6 years old) for all land uses except commercial, where the GAC are derived for acute exposure of an adult (16-65 years old). For the purpose of GQRA, the child value may be adopted for all land use scenarios.

For complex cyanide, the GAC have been derived based on chronic exposure, using the default exposure scenarios but excluding the consumption of homegrown produce, soil attached to homegrown produce, indoor vapour and outdoor vapour pathways. The chronic health criteria value (HCV) for complex cyanide is based on the EA (2009a) HCV for free cyanide and the ratio of toxicity between free and complex cyanide proposed by RIVM (2001).

Approach to Phenol GAC

In accordance with the EA Science Report SC050021 / Phenol SGV, a $GAC_{ing/inh}$ has been derived for ingested and inhaled phenol using the CLEA model, with a GAC_{derm} derived for dermal contact using Equation 5.7 within SR3. The lower of the $GAC_{ing/inh}$ and GAC_{derm} has been adopted as the final GAC.

Approach to PCB GAC

GAC for assessing the non-dioxin-like risk from PCBs have been based on the "Dutch 7". As the TDI used by the authors of the Dutch guidance is for the sum of the 7 individual congeners, the TDI has been divided by 7 to create a TDI for each congener. The non-dioxin-like risk from PCBs is therefore assessed using a Hazard Index approach as for total petroleum hydrocarbons (TPH).

Sub-surface soil to indoor air correction factors

Reflecting the approach taken by the Environment Agency in the development of revised SGV in 2009 for BTEX, a sub-surface soil to indoor air correction factor of 10 has been applied for petroleum hydrocarbons in order to account for over-prediction of vapour intrusion into building using the Johnson and Ettinger approach.

The correction factor of 10 has been applied to the following petroleum hydrocarbons (it makes negligible difference to less volatile TPH and PAH compounds):

- TPHCWG fractions, namely aliphatic EC>5-44 and aromatic EC>6-44;
- PAHs (acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene), benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h,)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, pyrene);
- BTEX;
- Isopropylbenzene;
- Propylbenzene;
- 1,2,4- and 1,3,5-trimethylbenzene; and
- Styrene.

Approach to saturation limits

The CLEA model includes a traffic light colour system to highlight when saturated soil conditions have potentially been exceeded for the vapour pathways during calculation of assessment criteria. The colours represent:

- Green: the assessment criteria do not exceed the saturated soil concentration.
- Amber: the assessment criteria exceed the saturated soil concentration but the contribution of the indoor and outdoor vapour pathway to total exposure is less than 10% and will not significantly affect the assessment criteria.
- Red: the assessment criteria exceed the saturated soil concentration and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10% and will significantly affect the assessment criteria.

Hydrock have not applied any further calculations or assessment in relation to saturation limits during GAC derivation, with the CLEA-modelled GAC being presented as the GAC. Consideration of saturation limits is undertaken during the data assessment stage.

References

CL:AIRE, 2010. 'The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment'. Environmental Industries Commission, The Association of Geotechnical and Geoenvironmental Specialists and Contaminated Land: Applications in Real Environment.

CL:AIRE, 2014. 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination', Revision 2, DEFRA research project SP1010. Contaminated Land: Applications in Real Environment

CL:AIRE, 2021. C4SL Phase 2 Technical Reports for tetrachloroethene, trichloroethene and vinyl chloride. Contaminated Land: Applications in Real Environment.

EA, 2009a. 'Science Reports SC050021 – SGV and TOX reports for: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs'; 'Supplementary information for the derivation of SGV for: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs', and 'Contaminants in soil: updated collation of toxicological data and intake values for humans: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs'. Environment Agency.

EA, 2009b. 'Science Report – SC050021/SR2. Human health toxicological assessment of contaminants in soil'. Environment Agency.

EA, 2009c. 'Science Report – SC050021/SR3. Updated technical background to the CLEA model'. Environment Agency.

EA, 2009d. 'Science Report – SC050021/SR4. CLEA Software (version 1.05) Handbook'. Environment Agency.

IRIS, 2016. 'Toxicological Review of Trimethylbenzenes'. Integrated Risk Information System, National Centre for Environmental Assessment, office of Research and Development, U.S. Environmental Protection Agency.

LQM/CIEH, 2009. LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment, second edition. Nathanial, C. P., McCaffrey, C., Ashmore, M., Cheng, Y., Gillet, A. G., Ogden, R. C. and Scott, D.

LQM/CIEH, 2015. 'The LQM/CIEH S4ULs for Human Health Risk Assessment'. Nathanial, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C. and Nathanial, J. F.

ORNL, 1984. 'ORNL-5786. A Review and Analysis of Parameters for Assessing Transport of Environmentally released Radionuclides through Agriculture'. Oak Ridge National Laboratory.

RIVM, 2001. RIVM Report 711701 025 'HCV Re-evaluation of human-toxicological maximum-permissible risk levels'. National Institute of Public Health and the Environment.

Human health GQRA

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

All values in mg/kg unless otherwise stated

CAS No / P Code	Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Results of Significance Test	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)												
															Date	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
															Zone												
															Location	TP01	TP01	TP01	TP01	TP01	TP02	TP02	TP02	TP02	TP02	TP03	TP03
															Depth (m bgl)	0.3	0.65	1.2	1.7	1.7	0.15	1.6	2.5	2.5	2.9	0.4	1.4
															Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG
-	**Asbestos**																											
P1020	Asbestos Identified	Y/N	64	-	-	-	-	No. of detects:	3	-	-	-	-			Y	N	Y	N	N	N	N	N	N	N	N	N
P1889	Asbestos Screen Name		3	-	-	-	-	-		-	-	-	-			Chrysotile		Chrysotile									
P1935	Asbestos Quant. Total	0.001	3	0.001	0.005	0.003	0.002	No. > LOD:	3	-	-	-	-			0.005		0.002									
o	**Hydrock Default Suite - FOC / SOM / pH**									-																		
P1085	FOC (dimensionless)	0.001	35	0.001	0.090	0.036	0.032	0.02		-	-	-	-			0.047		0.056				0.049			0.025	0.011	0.052
-	SOM (calculated)	0.1724	35	0.16	15.52	6.16	5.52	4.11		-	-	-	-			8.1028		9.6544				8.4476			4.31	1.8964	8.9648
P1334	pH (su)	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	-	-			10.7		8.6	9.1		10.2	9.5	9.8		7.7	7.7	9
-	**Hydrock Default Suite - Metals & PAH**																											
7440-38-2	Arsenic	2	35	1.99	58.00	14.00	12.00	9.68	0	NR	640	C4SL - CL:AIRE 2014	Potentially Suitable for Use			14		23				12			13	6	13
7440-41-7	Beryllium	0.5	35	0.49	2.30	0.88	0.80	0.43	0	NR	12	Hydrock Derived	Potentially Suitable for Use			1.2		1.3				0.8			0.5	1	2
7440-42-8	Boron	1	35	0.99	2.20	1.08	0.99	0.29	0	NR	240000	Hydrock Derived	Potentially Suitable for Use			1		1				1			1.2	1.0	1.0
7440-43-9	Cadmium	0.2	35	0.19	1.30	0.38	0.30	0.25	0	NR	410	C4SL - CL:AIRE 2014	Potentially Suitable for Use			0.6		1.3				0.5			0.19	0.19	0.6
16065-83-1	Chromium (III)	2	35	5.00	715.00	145.23	74.00	168.99	0	NR	8400	Hydrock Derived	Potentially Suitable for Use			118		98				250			28	25	175
18540-29-9	Chromium (VI)	2	35	1.90	1.99	1.99	1.99	0.02	0	NR	49	C4SL - CL:AIRE 2014	Potentially Suitable for Use			1.99		1.99				1.99			1.9	1.99	1.99
7440-50-8	Copper	4	35	3.99	503.00	59.26	38.00	86.16	0	NR	68000	Hydrock Derived	Potentially Suitable for Use			91		177				51			13	15	62
7439-92-1	Lead	3	35	2.99	48000.00	1570.97	98.00	8088.89	1	NR	2300	C4SL - CL:AIRE 2014	Further Assessment Required			141		167				76			35	21	1880
7439-97-6	Mercury, inorganic	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	1100	Hydrock Derived	Potentially Suitable for Use			0.99		0.99				0.99			0.99	0.99	0.99
7440-02-0	Nickel	3	35	6.00	43.00	15.89	15.00	8.13	0	NR	980	Hydrock Derived	Potentially Suitable for Use			19		43				16			12	21	16
7782-49-2	Selenium	2	35	1.99	7.20	2.15	1.99	0.88	0	NR	12000	Hydrock Derived	Potentially Suitable for Use			1.99		1.99				1.99			1.99	1.99	1.99
7440-62-2	Vanadium	1	35	5.00	797.00	200.60	109.00	218.03	0	NR	9000	Hydrock Derived	Potentially Suitable for Use			146		161				479			45	36	317
7440-66-6	Zinc	3	35	15.00	537.00	160.11	119.00	128.67	0	NR	730000	Hydrock Derived	Potentially Suitable for Use			228		537				119			51	68	160
P1095	Cyanide (free)	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	24	Acute Risk - SoBRA 2020	Potentially Suitable for Use			0.99		0.99				0.99			0.99	0.99	0.99
P1186	Total Phenols (Monohydric)	2	35	1.99	2.00	1.99	1.99	0.00	0	70308	1300	Hydrock Derived	Potentially Suitable for Use			2		2				1.99			1.99	1.99	1.99
83-32-9	Acenaphthene	0.1	35	0.09	3.36	0.21	0.09	0.56	0	336	110000	Hydrock Derived	Potentially Suitable for Use			0.09		0.39				0.09			0.09	0.09	0.09
208-96-8	Acenaphthylene	0.1	35	0.09	0.18	0.09	0.09	0.02	0	506	110000	Hydrock Derived	Potentially Suitable for Use			0.09		0.18				0.09			0.09	0.09	0.09
120-12-7	Anthracene	0.1	35	0.09	1.18	0.26	0.11	0.28	0	6.96	540000	Hydrock Derived	Potentially Suitable for Use			0.26		1.18				0.32			0.09	0.09	0.15
56-55-3	Benz(a)anthracene	0.1	35	0.09	4.81	0.90	0.58	1.05	0	10.27	180	Hydrock Derived	Potentially Suitable for Use			1.13		2.72				0.99			0.09	0.09	0.57
50-32-8	Benzo(a)pyrene	0.1	35	0.09	3.17	0.69	0.52	0.75	0	5.46	77	C4SL - CL:AIRE 2014	Potentially Suitable for Use			0.81		1.82				0.67			0.09	0.09	0.52
205-99-2	Benzo(b)fluoranthene	0.1	35	0.09	5.16	0.95	0.70	1.10	0	7.29	45	Hydrock Derived	Potentially Suitable for Use			1.21		2.44				1.04			0.09	0.09	0.7
191-24-2	Benzo(ghi)perylene	0.1	35	0.09	1.43	0.33	0.09	0.41	0	0.09	4000	Hydrock Derived	Potentially Suitable for Use			0.57		0.82				0.09			0.09	0.09	0.31
207-08-9	Benzo(k)fluoranthene	0.1	35	0.09	1.35	0.35	0.26	0.33	0	4.12	1200	Hydrock Derived	Potentially Suitable for Use			0.33		0.92				0.34			0.09	0.09	0.24
218-01-9	Chrysene	0.1	35	0.09	5.38	0.92	0.62	1.10	0	2.64	360	Hydrock Derived	Potentially Suitable for Use			1.24		2.57				1.01			0.09	0.09	0.62
53-70-3	Dibenz(ah)anthracene	0.1	35	0.09	0.79	0.14	0.09	0.15	0	0.024	3.6	Hydrock Derived	Potentially Suitable for Use			0.09		0.35				0.09			0.09	0.09	0.09
206-44-0	Fluoranthene	0.1	35	0.09	8.64	1.42	0.86	1.86	0	113	23000	Hydrock Derived	Potentially Suitable for Use			1.69		5.8				1.67			0.09	0.09	0.88
86-73-7	Fluorene	0.1	35	0.09	1.07	0.15	0.09	0.23	0	183	72000	Hydrock Derived	Potentially Suitable for Use			0.09		1.07				0.09			0.09	0.09	0.09
193-39-5	Indeno(123cd)pyrene	0.1	35	0.09	2.10	0.43	0.09	0.53	0	0.37	510	Hydrock Derived	Potentially Suitable for Use			0.55		0.98				0.09			0.09	0.09	0.37
91-20-3	Naphthalene	0.1	35	0.09	19.80	1.43	0.27	3.67	0	432	7800	Hydrock Derived	Potentially Suitable for Use			0.45		0.61				9.62			2.2	0.09	0.14
85-01-8	Phenanthrene	0.1	35	0.09	5.81	0.89	0.52	1.24	0	214	23000	Hydrock Derived	Potentially Suitable for Use			0.77		5.81				1.03			0.09	0.09	0.45
129-00-0	Pyrene	0.1	35	0.09	5.83	1.10	0.71	1.30	0	13.2	55000	Hydrock Derived	Potentially Suitable for Use			1.46		3.93				1.23			0.09	0.09	0.71
P1310	PAH 16 Total	1.6	35	1.59	64.70	9.90	6.80	12.28			-		-			10.5		31.6				17.9			2.2	1.59	5.7
o	**TPH fractions**																											
P1407	TPH ali EC05-EC06	0.01	30	0.01	0.01	0.01	0.01	0.000	0	1150	12000	Hydrock Derived	-					0.009	0.009			0.009	0.009		0.009		0.009
P1408	TPH ali >EC06-EC08	0.05	30	0.05	0.05	0.05	0.05	0.000	0	736	40000	Hydrock Derived	-					0.049	0.049			0.049	0.049		0.049		0.049
P1409	TPH ali >EC08-EC10	2	30	1.99	344.00	15.03	2.00	62.340	0	451	11000	Hydrock Derived	-					1.99	1.99			13	9		8		1.99
P1410	TPH ali >EC10-EC12	2	30	1.99	122.00	8.33	2.00	22.86	0	283	47000	Hydrock Derived	-					1.99	1.99			18	11		7		1.99
P1411	TPH ali >EC12-EC16	3	30	2.99	26.00	5.10	3.00	5.15	0	142	90000	Hydrock Derived	-					2.99	5			18	10		2.99		2.99
P1938	TPH ali >EC16-EC35	10	30	9.99	83.00	21.60	10.00	22.62	0	51	1800000	Hydrock Derived	-					58	83			58	56		9.99		9.99
P1415	TPH ali >EC35-EC44	10	30	9.99	20.00	10.50	10.00	2.01	0	51	1800000	Hydrock Derived	-					9.99	9.99			20	15		9.99		9.99
P1420	TPH ali >EC5-EC44	30	30	29.99	491.00	58.43	29.99	85.69			-		-					58	88			126	101		29.99		29.99
P1441	TPH aro EC05-EC07	0.01	30	0.01	12.60	0.53	0.02	2.29	0	4708	86000	Hydrock Derived	-					0.02	0.1			0.71	0.55		12.6		0.06
P1355	TPH aro >EC07-EC08	0.05	30	0.05	0.39	0.08	0.05	0.08	0	4357	180000	Hydrock Derived	-					0.049	0.049			0.23	0.23		0.07		0.049

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

All values in mg/kg unless otherwise stated

CAS No / P Code	Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	Date	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
														Zone												
														Location	TP01	TP01	TP01	TP01	TP01	TP02	TP02	TP02	TP02	TP02	TP03	TP03
													Results of Significance Test	Depth (m bgl)	0.3	0.65	1.2	1.7	1.7	0.15	1.6	2.5	2.5	2.9	0.4	1.4
														Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG
P1356	TPH aro >EC08-EC10	2	30	1.99	416.00	18.76	2.00	75.53	0	3578	17000	Hydrock Derived	-				4	1.99			10	6		15		1.99
P1357	TPH aro >EC10-EC12	2	30	1.99	843.00	34.50	2.00	153.26	0	2149	34000	Hydrock Derived	-				4	3			13	9		16		1.99
P1358	TPH aro >EC12-EC16	2	30	1.99	115.00	7.57	2.00	20.48	0	1004	38000	Hydrock Derived	-				6	10			8	5		2		1.99
P1359	TPH aro >EC16-EC21	3	30	2.99	78.00	12.03	8.00	15.53	0	321	28000	Hydrock Derived	-				33	78			8	9		2.99		2.99
P1360	TPH aro >EC21-EC35	10	30	9.99	165.00	31.00	10.00	36.55	0	29	28000	Hydrock Derived	-				52	125			12	9.99		9.99		9.99
P1362	TPH aro >EC35-EC44	10	30	9.99	18.00	10.26	10.00	1.46	0	29	28000	Hydrock Derived	-				9.99	9.99			9.99	9.99		9.99		9.99
P1941	TPH aro >EC5-EC44	30	30	29.90	1395.00	106.79	38.00	249.61			-		-				99	216			52	29.9		46		29.9
P1373	Total TPH >EC5-EC44	60	30	59.90	1886.00	159.92	60.00	334.35			-		-				157	304			178	130		61		59.9
o	**VOCs - BTEX & MTBE**																									
71-43-2	Benzene	2	30	0.00	12.59	0.53	0.02	2.29	0	4708	98	C4SL - CL:AIRE 2014	-				0.02	0.1			0.714	0.546		12.591		0.061
108-88-3	Toluene	5	30	0.00	0.39	0.05	0.00	0.09	0	4357	180000	Hydrock Derived	-				0.00499	0.00499			0.229	0.234		0.074		0.01
100-41-4	Ethylbenzene	2	30	0.00	17.16	0.62	0.00	3.13	0	2844	27000	Hydrock Derived	-				0.00199	0.00199			0.055	0.062		0.681		0.00199
95-47-6	Xylene, o-	2	30	0.00	9.78	0.35	0.00	1.78	0	2618	33000	Hydrock Derived	-				0.00199	0.00199			0.174	0.142		0.191		0.00199
1330-20-7	Xylene, p- (or combined m & p)	2	30	0.00	58.53	2.05	0.01	10.67	0	3167	30000	Hydrock Derived	-				0.003	0.00199			0.511	0.302		1.051		0.007
1634-04-4	MTBE	5	30	0.00	0.00	0.00	0.00	0.00	0	62749	22000	Hydrock Derived	-				0.00499	0.00499			0.00499	0.00499		0.00499		0.00499
o	**VOCs - other benzenes**																									
98-82-8	Iso-propylbenzene	5	20	0.00	0.01	0.01	0.00	0.00	0	2255	54000	Hydrock Derived	-				0.00499				0.00499			0.014		0.00499
103-65-1	Propylbenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	2332	100000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
95-63-6	1,2,4-Trimethylbenzene	5	20	0.00	0.15	0.02	0.00	0.04	0	3245	9.5	Hydrock Derived	-				0.00499				0.077			0.098		0.00499
108-67-8	1,3,5-Trimethylbenzene	5	20	0.00	0.16	0.02	0.00	0.04	0	1304	9.5	Hydrock Derived	-				0.00499				0.107			0.051		0.00499
o	**VOCs - chlorobenzenes**																									
108-86-1	Bromobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	4579	490	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
108-90-7	Chlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3494	290	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
95-50-1	1,2-Dichlorobenzene	5	7	0.00	0.00	0.00	0.00	0.00	0	3239	11000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
541-73-1	1,3-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3011	170	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
106-46-7	1,4-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	1275	21000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
118-74-1	Hexachlorobenzene	0.1	20	0.09	0.09	0.09	0.09	0.00	0	1.19	120	Hydrock Derived	-				0.09				0.09			0.09		0.09
120-82-1	1,2,4-trichlorobenzene	0.1	20	0.00	0.00	0.00	0.00	0.00	0	1876	1300	Hydrock Derived	-				0.00009				0.00009			0.00009		0.00009
o	**VOCs - chloroalkanes & alkanes**																									
75-27-4	Bromodichloromethane	5	20	0.00	0.00	0.00	0.00	0.00	0	6571	7.1	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
75-00-3	Chloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5709	2000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
75-01-4	Chloroethene (aka vinyl chloride)	5	20	0.00	0.00	0.00	0.00	0.00	0	2688	2.2	C4SL - CL:AIRE 2021	-				0.00499				0.00499			0.00499		0.00499
74-87-3	Chloromethane	10	20	0.01	0.01	0.01	0.01	0.00	0	2987	1.5	Hydrock Derived	-				0.00999				0.00999			0.00999		0.00999
75-34-3	1,1-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5605	800	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
107-06-2	1,2-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	7361	29	C4SL - CL:AIRE 2021	-				0.00499				0.00499			0.00499		0.00499
75-35-4	1,1-Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7944	87	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
156-59-2	Cis 1,2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12856	44	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
156-60-5	Trans 1,2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12594	76	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
630-20-6	1,1,1,2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	14017	560	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
79-34-5	1,1,2,2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	11983	1100	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
79-01-6	Trichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7138	3.4	C4SL - CL:AIRE 2021	-				0.00499				0.00499			0.00499		0.00499
71-55-6	1,1,1-Trichloroethane	5	18	0.00	0.00	0.00	0.00	0.00	0	6392	3000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
o	**Other phenols & chlorophenols**																									
108-95-2	Phenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	70308	1300	Hydrock Derived	-				0.09				0.09			0.09		0.09
95-57-8	2-Chlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	306526	4300	Hydrock Derived	-				0.09				0.09			0.09		0.09
120-83-2	2,4-Dichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	23348	4200	Hydrock Derived	-				0.09				0.09			0.09		0.09
105-67-9	2,4-Dimethylphenol	0.15	20	0.15	0.15	0.15	0.15	0.00	0	7238	30000	Hydrock Derived	-				0.149				0.149			0.149		0.149
88-06-2	2,4,6-Trichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	4679	4300	Hydrock Derived	-				0.09				0.09			0.09		0.09
o	**Phthalates**																									
84-66-2	Diethyl Phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	65	280000	Hydrock Derived	-				0.09				0.09			0.09		0.09
117-84-0	Di-n-octyl phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	196	89000	Hydrock Derived	-				0.09				0.09			0.09		0.09
o	**Other organics**																									
121-14-2	2,4-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	3800	Hydrock Derived	-				0.09				0.09			0.09		0.09

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

All values in mg/kg unless otherwise stated

CAS No / P Code	Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	Date	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
														Zone												
														Location	TP01	TP01	TP01	TP01	TP01	TP02	TP02	TP02	TP02	TP02	TP03	TP03
													Results of Significance Test	Depth (m bgl)	0.3	0.65	1.2	1.7	1.7	0.15	1.6	2.5	2.5	2.9	0.4	1.4
														Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG
606-20-2	2,6-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	1403	1900	Hydrock Derived	-				0.09				0.09			0.09		0.09
100-42-5	Styrene	5	20	0.00	0.00	0.00	0.00	0.00	0	3347	23000	Hydrock Derived	-				0.00499				0.00499			0.00499		0.00499
91-58-7	2-Chloronaphthalene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	2100	Hydrock Derived	-				0.09				0.09			0.09		0.09
o	**Other VOC Suite Substances which do not have a GAC**																									
74-83-9	Bromomethane	10	20	0.01	0.01	0.01	0.01	0.00			-		-				0.00999				0.00999			0.00999		0.00999
75-69-4	Trichlorofluoromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
594-20-7	2,2-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
563-58-6	1,1-Dichloropropene	10	20	0.01	0.01	0.01	0.01	0.00			-		-				0.00999				0.00999			0.00999		0.00999
74-95-3	Dibromomethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
10061-01-5	Cis-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
10061-02-6	Trans-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
142-28-9	1,3-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
124-48-1	Dibromochloromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
106-93-4	1,2-Dibromoethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
95-49-8	2-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
106-43-4	4-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
98-06-6	tert butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
135-98-8	sec butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
99-87-6	Isopropyltoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
104-51-8	n butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-				0.00499				0.00499			0.00499		0.00499
96-12-8	1,2-Dibromo-3-chloropropane	10	20	0.01	0.01	0.01	0.01	0.00			-		-				0.00999				0.00999			0.00999		0.00999
	Other SVOC Suite Substances which do not have a GAC																									
111-44-4	Bis(2-chloroethyl)ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
98-95-3	Nitrobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
78-59-1	Isophorone	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
88-75-5	2-Nitrophenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
111-91-1	Bis(2-chloroethoxy)methane	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
59-50-7	4-Chloro-3-methylphenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
95-95-4	2,4,5-Trichlorophenol	0.15	20	0.15	0.15	0.15	0.15	0.00			-		-				0.149				0.149			0.149		0.149
91-57-6	2-Methylnaphthalene	0.1	20	0.09	1.20	0.29	0.10	0.34			-		-				0.2				0.8			0.09		0.09
131-11-3	Dimethyl phthalate	0.1	20	0.09	0.20	0.10	0.10	0.02			-		-				0.09				0.09			0.09		0.09
132-64-9	Dibenzofuran	0.1	20	0.09	0.50	0.15	0.10	0.12			-		-				0.4				0.3			0.09		0.09
7005-72-3	4-Chlorophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
100-01-6	4-Nitroaniline	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
103-33-3	Azobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
101-55-3	Bromophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-				0.09				0.09			0.09		0.09
86-74-8	Carbazole	0.1	20	0.09	0.50	0.17	0.10	0.12			-		-				0.4				0.2			0.09		0.09
	TPH Additivity Check		**HAZARD QUOTIENTS FOR EACH FRACTION**																							
													Aliphatics >EC5-EC6				0.00000075	0.00000075			0.00000075	0.00000075		0.00000075		0.00000075
													Aliphatics >EC6-EC8				0.000001225	0.000001225			0.000001225	0.000001225		0.000001225		0.000001225
												Considered additive	Aliphatics >EC8-EC10				0.000180909	0.000180909			0.001181818	0.000818182		0.000727273		0.000180909
													Aliphatics >EC10-EC12				4.23404E-05	4.23404E-05			0.000382979	0.000234043		0.000148936		4.23404E-05
													Aliphatics >EC12-EC16				3.32222E-05	5.55556E-05			0.0002	0.000111111		3.32222E-05		3.32222E-05
													Aliphatics >EC16-EC35				3.22222E-05	4.61111E-05			3.22222E-05	3.11111E-05		0.00000555		0.00000555
													Aliphatics >EC35-EC44				0.00000555	0.00000555			1.11111E-05	8.33333E-06		0.00000555		0.00000555
													Aromatics EC5-EC7				2.32558E-07	1.16279E-06			8.25581E-06	6.39535E-06		0.000146512		6.97674E-07
													Aromatics >EC7-EC8				2.72222E-07	2.72222E-07			1.27778E-06	1.27778E-06		3.88889E-07		2.72222E-07
												Considered additive	Aromatics >EC8-EC10				0.000235294	0.000117059			0.000588235	0.000352941		0.000882353		0.000117059
													Aromatics >EC10-EC12				0.000117647	8.82353E-05			0.000382353	0.000264706		0.000470588		5.85294E-05
													Aromatics >EC12-EC16				0.000157895	0.000263158			0.000210526	0.000131579		5.26316E-05		5.23684E-05
												Considered additive	Aromatics >EC16-EC21				0.001178571	0.002785714			0.000285714	0.000321429		0.000106786		0.000106786
													Aromatics >EC21-EC35				0.001857143	0.004464286			0.000428571	0.000356786		0.000356786		0.000356786
													Aromatics >EC35-EC44				0.000356786	0.000356786			0.000356786	0.000356786		0.000356786		0.000356786
												Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.	**Hazard Index for ali>C8-C16**				**0.000256472**	**0.000278805**			**0.001764797**	**0.001163335**		**0.000909431**		**0.000256472**
													Hazard Index for aro>C8-C16				**0.000510836**	**0.000468452**			**0.001181115**	**0.000749226**		**0.001405573**		**0.000227957**

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

All values in mg/kg unless otherwise stated

CAS No / P Code	Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source

Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)													
	Date	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
	Zone												
	Location	TP01	TP01	TP01	TP01	TP01	TP02	TP02	TP02	TP02	TP02	TP03	TP03
	Depth (m bgl)	0.3	0.65	1.2	1.7	1.7	0.15	1.6	2.5	2.5	2.9	0.4	1.4
Results of Significance Test	Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG
Hazard Index for aro>C16-C35				0.003035714	0.00725			0.000714286	0.000678214		0.000463571		0.000463571

Legend:

Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Tidal Flat Deposits		
Alluvial Fan Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
	'<10	Value excluded from statistical analysis
	Y	Text result
	-	Represents a determinand that was not tested.
	*	represents a data point that is not included in the current filter settings

Template Version:
1.06: 20/07/23

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Hydrock

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	Results of Significance Test	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
														TP03	TP03	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	BH01	TP05	TP05
														2.4	2.55	0.2	0.3	1	1	1.2	1.2	1.2	1.8	2	0.2	0.2	0.3
														MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
Asbestos																											
Asbestos Identified	Y/N	64	-	-	-	-	No. of detects:	3	-	-	-	-		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Asbestos Screen Name		3	-	-	-	-	-		-	-	-	-															
Asbestos Quant. Total	0.001	3	0.001	0.005	0.003	0.002	No. > LOD:	3	-	-	-	-															
Hydrock Default Suite - FOC / SOM / pH									-																		
FOC (dimensionless)	0.001	35	0.001	0.090	0.036	0.032	0.02		-	-	-	-		0.08	0.014	0.03		0.02					0.079		0.032	0.037	
SOM (calculated)	0.1724	35	0.16	15.52	6.16	5.52	4.11		-	-	-	-		13.792	2.4136	5.172		3.448					13.6196		5.5168	6.3788	
pH (su)	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	-	-		7.3	6.9	11	10.7	9.9	9.9	9.7		9.9	8.7	9.4	10.6	10.6	10.4
Hydrock Default Suite - Metals & PAH																											
Arsenic	2	35	1.99	58.00	14.00	12.00	9.68	0	NR	640	C4SL - CL:AIRE 2014	Potentially Suitable for Use		7	9	10		8					21		9	17	
Beryllium	0.5	35	0.49	2.30	0.88	0.80	0.43	0	NR	12	Hydrock Derived	Potentially Suitable for Use		0.5	0.7	1.1		0.5					0.6		1.3	1.3	
Boron	1	35	0.99	2.20	1.08	0.99	0.29	0	NR	240000	Hydrock Derived	Potentially Suitable for Use		1.0	1.0	1.0		1.0					1.0		0.99	0.99	
Cadmium	0.2	35	0.19	1.30	0.38	0.30	0.25	0	NR	410	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.6	0.19	0.4		0.4					0.5		0.3	0.7	
Chromium (III)	2	35	5.00	715.00	145.23	74.00	168.99	0	NR	8400	Hydrock Derived	Potentially Suitable for Use		36	11	210		284					187		25	79	
Chromium (VI)	2	35	1.90	1.99	1.99	1.99	0.02	0	NR	49	C4SL - CL:AIRE 2014	Potentially Suitable for Use		1.99	1.99	1.99		1.99					1.99		1.99	1.99	
Copper	4	35	3.99	503.00	59.26	38.00	86.16	0	NR	68000	Hydrock Derived	Potentially Suitable for Use		16	19	35		36					58		19	82	
Lead	3	35	2.99	48000.00	1570.97	98.00	8088.89	1	NR	2300	C4SL - CL:AIRE 2014	Further Assessment Required		48000	1630	622		109					255		83	98	
Mercury, inorganic	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	1100	Hydrock Derived	Potentially Suitable for Use		0.99	0.99	0.99		0.99					0.99		0.99	0.99	
Nickel	3	35	6.00	43.00	15.89	15.00	8.13	0	NR	980	Hydrock Derived	Potentially Suitable for Use		6	11	10		12					15		7	12	
Selenium	2	35	1.99	7.20	2.15	1.99	0.88	0	NR	12000	Hydrock Derived	Potentially Suitable for Use		1.99	1.99	1.99		1.99					1.99		1.99	1.99	
Vanadium	1	35	5.00	797.00	200.60	109.00	218.03	0	NR	9000	Hydrock Derived	Potentially Suitable for Use		158	19	288		247					188		30	109	
Zinc	3	35	15.00	537.00	160.11	119.00	128.67	0	NR	730000	Hydrock Derived	Potentially Suitable for Use		479	63	107		93					107		88	156	
Cyanide (free)	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	24	Acute Risk - SoBRA 2020	Potentially Suitable for Use		0.99	0.99	0.99		0.99					0.99		0.99	0.99	
Total Phenols (Monohydric)	2	35	1.99	2.00	1.99	1.99	0.00	0	70308	1300	Hydrock Derived	Potentially Suitable for Use		1.99	1.99	1.99		1.99					1.99		1.99	1.99	
Acenaphthene	0.1	35	0.09	3.36	0.21	0.09	0.56	0	336	110000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		0.09					0.35		0.09	0.09	
Acenaphthylene	0.1	35	0.09	0.18	0.09	0.09	0.02	0	506	110000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		0.09					0.09		0.09	0.09	
Anthracene	0.1	35	0.09	1.18	0.26	0.11	0.28	0	6.96	540000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		0.61					0.87		0.09	0.56	
Benz(a)anthracene	0.1	35	0.09	4.81	0.90	0.58	1.05	0	10.27	180	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.81		2.98					4.81		0.71	1.61	
Benzo(a)pyrene	0.1	35	0.09	3.17	0.69	0.52	0.75	0	5.46	77	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.09	0.09	0.69		2.11					3.17		0.7	1.13	
Benzo(b)fluoranthene	0.1	35	0.09	5.16	0.95	0.70	1.10	0	7.29	45	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.79		2.92					5.16		0.67	1.45	
Benzo(ghi)perylene	0.1	35	0.09	1.43	0.33	0.09	0.41	0	0.09	4000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		1.05					1.43		0.09	0.09	
Benzo(k)fluoranthene	0.1	35	0.09	1.35	0.35	0.26	0.33	0	4.12	1200	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.26		0.8					1.35		0.36	0.54	
Chrysene	0.1	35	0.09	5.38	0.92	0.62	1.10	0	2.64	360	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.92		2.82					5.38		0.66	1.42	
Dibenz(ah)anthracene	0.1	35	0.09	0.79	0.14	0.09	0.15	0	0.024	3.6	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		0.49					0.79		0.09	0.09	
Fluoranthene	0.1	35	0.09	8.64	1.42	0.86	1.86	0	113	23000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	1.35		4.93					8.64		0.86	2.33	
Fluorene	0.1	35	0.09	1.07	0.15	0.09	0.23	0	183	72000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		0.14					0.32		0.09	0.09	
Indeno(123cd)pyrene	0.1	35	0.09	2.10	0.43	0.09	0.53	0	0.37	510	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.09		1.41					2.1		0.09	0.09	
Naphthalene	0.1	35	0.09	19.80	1.43	0.27	3.67	0	432	7800	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.27		0.16					19.8		0.09	0.25	
Phenanthrene	0.1	35	0.09	5.81	0.89	0.52	1.24	0	214	23000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	0.52		1.66					4.75		0.09	1.6	
Pyrene	0.1	35	0.09	5.83	1.10	0.71	1.30	0	13.2	55000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09	1.2		3.81					5.83		0.77	1.94	
PAH 16 Total	1.6	35	1.59	64.70	9.90	6.80	12.28			-		-		1.59	1.59	6.8		25.9					64.7		4.7	12.8	
TPH fractions																											
TPH ali EC05-EC06	0.01	30	0.01	0.01	0.01	0.01	0.000	0	1150	12000	Hydrock Derived	-			0.009			0.009		0.009			0.009				
TPH ali >EC06-EC08	0.05	30	0.05	0.05	0.05	0.05	0.000	0	736	40000	Hydrock Derived	-			0.049			0.049		0.049			0.049				
TPH ali >EC08-EC10	2	30	1.99	344.00	15.03	2.00	62.340	0	451	11000	Hydrock Derived	-			1.99			1.99		1.99			27				
TPH ali >EC10-EC12	2	30	1.99	122.00	8.33	2.00	22.86	0	283	47000	Hydrock Derived	-			1.99			1.99		1.99			42				
TPH ali >EC12-EC16	3	30	2.99	26.00	5.10	3.00	5.15	0	142	90000	Hydrock Derived	-			2.99			2.99		5			8				
TPH ali >EC16-EC35	10	30	9.99	83.00	21.60	10.00	22.62	0	51	1800000	Hydrock Derived	-			9.99			9.99		54			9.99				
TPH ali >EC35-EC44	10	30	9.99	20.00	10.50	10.00	2.01	0	51	1800000	Hydrock Derived	-			9.99			9.99		10			9.99				
TPH ali >EC5-EC44	30	30	29.99	491.00	58.43	29.99	85.69			-		-			29.99			29.99		69			77				
TPH aro EC05-EC07	0.01	30	0.01	12.60	0.53	0.02	2.29	0	4708	86000	Hydrock Derived	-			0.009			0.01		0.009			0.12				
TPH aro >EC07-EC08	0.05	30	0.05	0.39	0.08	0.05	0.08	0	4357	180000	Hydrock Derived	-			0.049			0.049		0.049			0.049				

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP03	TP03	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	BH01	TP05	TP05
												Results of Significance Test	2.4	2.55	0.2	0.3	1	1	1.2	1.2	1.2	1.8	2	0.2	0.2	0.3
													MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
TPH aro >EC08-EC10	2	30	1.99	416.00	18.76	2.00	75.53	0	3578	17000	Hydrock Derived	-		1.99			1.99		4			48				
TPH aro >EC10-EC12	2	30	1.99	843.00	34.50	2.00	153.26	0	2149	34000	Hydrock Derived	-		1.99			2		5			73				
TPH aro >EC12-EC16	2	30	1.99	115.00	7.57	2.00	20.48	0	1004	38000	Hydrock Derived	-		1.99			1.99		3			9				
TPH aro >EC16-EC21	3	30	2.99	78.00	12.03	8.00	15.53	0	321	28000	Hydrock Derived	-		2.99			20		20			40				
TPH aro >EC21-EC35	10	30	9.99	165.00	31.00	10.00	36.55	0	29	28000	Hydrock Derived	-		9.99			29		29			65				
TPH aro >EC35-EC44	10	30	9.99	18.00	10.26	10.00	1.46	0	29	28000	Hydrock Derived	-		9.99			9.99		9.99			9.99				
TPH aro >EC5-EC44	30	30	29.90	1395.00	106.79	38.00	249.61			-		-		29.9			51		60			236				
Total TPH >EC5-EC44	60	30	59.90	1886.00	159.92	60.00	334.35			-		-		59.9			59.9		129			313				
VOCs - BTEX & MTBE																										
Benzene	2	30	0.00	12.59	0.53	0.02	2.29	0	4708	98	C4SL - CL:AIRE 2014	-		0.006			0.011		0.009			0.119				
Toluene	5	30	0.00	0.39	0.05	0.00	0.09	0	4357	180000	Hydrock Derived	-		0.00499			0.00499		0.00499			0.036				
Ethylbenzene	2	30	0.00	17.16	0.62	0.00	3.13	0	2844	27000	Hydrock Derived	-		0.00199			0.00199		0.00199			0.071				
Xylene, o-	2	30	0.00	9.78	0.35	0.00	1.78	0	2618	33000	Hydrock Derived	-		0.00199			0.00199		0.00199			0.035				
Xylene, p- (or combined m & p)	2	30	0.00	58.53	2.05	0.01	10.67	0	3167	30000	Hydrock Derived	-		0.00199			0.003		0.00199			0.114				
MTBE	5	30	0.00	0.00	0.00	0.00	0.00	0	62749	22000	Hydrock Derived	-		0.00499			0.00499		0.00499			0.00499				
VOCs - other benzenes																										
Iso-propylbenzene	5	20	0.00	0.01	0.01	0.00	0.00	0	2255	54000	Hydrock Derived	-		0.00499			0.00499					0.00499				
Propylbenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	2332	100000	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.2.4-Trimethylbenzene	5	20	0.00	0.15	0.02	0.00	0.04	0	3245	9.5	Hydrock Derived	-		0.00499			0.00499					0.152				
1.3.5-Trimethylbenzene	5	20	0.00	0.16	0.02	0.00	0.04	0	1304	9.5	Hydrock Derived	-		0.00499			0.00499					0.16				
VOCs - chlorobenzenes																										
Bromobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	4579	490	Hydrock Derived	-		0.00499			0.00499					0.00499				
Chlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3494	290	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.2-Dichlorobenzene	5	7	0.00	0.00	0.00	0.00	0.00	0	3239	11000	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.3-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3011	170	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.4-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	1275	21000	Hydrock Derived	-		0.00499			0.00499					0.00499				
Hexachlorobenzene	0.1	20	0.09	0.09	0.09	0.09	0.00	0	1.19	120	Hydrock Derived	-		0.09			0.09					0.09				
1.2.4-trichlorobenzene	0.1	20	0.00	0.00	0.00	0.00	0.00	0	1876	1300	Hydrock Derived	-		0.00009			0.00009					0.00009				
VOCs - chloroalkanes & alkanes																										
Bromodichloromethane	5	20	0.00	0.00	0.00	0.00	0.00	0	6571	7.1	Hydrock Derived	-		0.00499			0.00499					0.00499				
Chloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5709	2000	Hydrock Derived	-		0.00499			0.00499					0.00499				
Chloroethene (aka vinyl chloride)	5	20	0.00	0.00	0.00	0.00	0.00	0	2688	2.2	C4SL - CL:AIRE 2021	-		0.00499			0.00499					0.00499				
Chloromethane	10	20	0.01	0.01	0.01	0.01	0.00	0	2987	1.5	Hydrock Derived	-		0.00999			0.00999					0.00999				
1.1-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5605	800	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.2-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	7361	29	C4SL - CL:AIRE 2021	-		0.00499			0.00499					0.00499				
1.1-Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7944	87	Hydrock Derived	-		0.00499			0.00499					0.00499				
Cis 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12856	44	Hydrock Derived	-		0.00499			0.00499					0.00499				
Trans 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12594	76	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.1.1.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	14017	560	Hydrock Derived	-		0.00499			0.00499					0.00499				
1.1.2.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	11983	1100	Hydrock Derived	-		0.00499			0.00499					0.00499				
Trichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7138	3.4	C4SL - CL:AIRE 2021	-		0.00499			0.00499					0.00499				
1.1.1-Trichloroethane	5	18	0.00	0.00	0.00	0.00	0.00	0	6392	3000	Hydrock Derived	-		0.00499			0.00499					0.00499				
Other phenols & chlorophenols																										
Phenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	70308	1300	Hydrock Derived	-		0.09			0.09					0.09				
2-Chlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	306526	4300	Hydrock Derived	-		0.09			0.09					0.09				
2.4-Dichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	23348	4200	Hydrock Derived	-		0.09			0.09					0.09				
2.4-Dimethylphenol	0.15	20	0.15	0.15	0.15	0.15	0.00	0	7238	30000	Hydrock Derived	-		0.149			0.149					0.149				
2.4.6-Trichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	4679	4300	Hydrock Derived	-		0.09			0.09					0.09				
Phthalates																										
Diethyl Phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	65	280000	Hydrock Derived	-		0.09			0.09					0.09				
Di-n-octyl phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	196	89000	Hydrock Derived	-		0.09			0.09					0.09				
Other organics																										
2.4-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	3800	Hydrock Derived	-		0.09			0.09					0.09				

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP03	TP03	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	BH01	TP05	TP05
												Results of Significance Test	2.4	2.55	0.2	0.3	1	1	1.2	1.2	1.2	1.8	2	0.2	0.2	0.3
													MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
2,6-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	1403	1900	Hydrock Derived	-		0.09			0.09					0.09				
Styrene	5	20	0.00	0.00	0.00	0.00	0.00	0	3347	23000	Hydrock Derived	-		0.00499			0.00499					0.00499				
2-Chloronaphthalene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	2100	Hydrock Derived	-		0.09			0.09					0.09				
Other VOC Suite Substances which do not have a GAC																										
Bromomethane	10	20	0.01	0.01	0.01	0.01	0.00			-		-		0.00999			0.00999					0.00999				
Trichlorofluoromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
2,2-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
1,1-Dichloropropene	10	20	0.01	0.01	0.01	0.01	0.00			-		-		0.00999			0.00999					0.00999				
Dibromomethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
Cis-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
Trans-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
1,3-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
Dibromochloromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
1,2-Dibromoethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
2-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
4-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
tert butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
sec butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
Isopropyltoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
n butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-		0.00499			0.00499					0.00499				
1,2-Dibromo-3-chloropropane	10	20	0.01	0.01	0.01	0.01	0.00			-		-		0.00999			0.00999					0.00999				
Other SVOC Suite Substances which do not have a GAC																										
Bis(2-chloroethyl)ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Nitrobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Isophorone	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
2-Nitrophenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Bis(2-chloroethoxy)methane	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
4-Chloro-3-methylphenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
2,4,5-Trichlorophenol	0.15	20	0.15	0.15	0.15	0.15	0.00			-		-		0.149			0.149					0.149				
2-Methylnaphthalene	0.1	20	0.09	1.20	0.29	0.10	0.34			-		-		0.09			0.09					0.4				
Dimethyl phthalate	0.1	20	0.09	0.20	0.10	0.10	0.02			-		-		0.09			0.09					0.09				
Dibenzofuran	0.1	20	0.09	0.50	0.15	0.10	0.12			-		-		0.09			0.09					0.2				
4-Chlorophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
4-Nitroaniline	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Azobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Bromophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-		0.09			0.09					0.09				
Carbazole	0.1	20	0.09	0.50	0.17	0.10	0.12			-		-		0.09			0.2					0.5				
TPH Additivity Check		**HAZARD QUOTIENTS FOR EACH FRACTION**																								
												Aliph		0.00000075			0.00000075		0.00000075			0.00000075				
												Aliph		0.000001225			0.000001225		0.000001225			0.000001225				
										Considered additive		Aliph		0.000180909			0.000180909		0.000180909			0.002454545				
												Aliph		4.23404E-05			4.23404E-05		4.23404E-05			0.000893617				
												Aliph		3.32222E-05			3.32222E-05		5.55556E-05			8.88889E-05				
												Aliphat		0.00000555			0.00000555		0.00003			0.00000555				
												Aliphat		0.00000555			0.00000555		5.55556E-06			0.00000555				
												Aro		1.04651E-07			1.16279E-07		1.04651E-07			1.39535E-06				
												Arom		2.72222E-07			2.72222E-07		2.72222E-07			2.72222E-07				
										Considered additive		Arom		0.000117059			0.000117059		0.000235294			0.002823529				
												Arom		5.85294E-05			5.88235E-05		0.000147059			0.002147059				
												Arom		5.23684E-05			5.23684E-05		7.89474E-05			0.000236842				
										Considered additive		Arom		0.000106786			0.000714286		0.000714286			0.001428571				
												Arom		0.000356786			0.001035714		0.001035714			0.002321429				
												Aromat		0.000356786			0.000356786		0.000356786			0.000356786				
												Hazard Index		**0.000256472**			**0.000256472**		**0.000278805**			**0.003437051**				
										Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.		**Hazard Index**		**0.000227957**			**0.000228251**		**0.0004613**			**0.00520743**				

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:	**Default - Human Health - commercial (6%SOM)**
Client:	
Site:	
Job no.:	
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**All**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Dataset mean SOM% **6.16**

Scenario SOM% **6**

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)														
													26/09/23	26/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP03	TP03	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	TP04	BH01	TP05	TP05
													2.4	2.55	0.2	0.3	1	1	1.2	1.2	1.2	1.8	2	0.2	0.2	0.3
												Results of Significance Test	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
												Hazard Index f		0.000463571			0.00175		0.00175			0.00375				

Legend:

Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Tidal Flat Deposits		
Alluvial Fan Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
	<10	Value excluded from statistical analysis
	Y	Text result
	-	Represents a determinand that was not tested.
	•	represents a data point that is not included in the current filter settings

n:

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Hydrock

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	Results of Significance Test	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
														TP05	TP05	TP05	TP05	TP05	TP06	TP06	TP06	TP06	TP06	TP07	TP07	TP07	TP07
														1	1	2	2	2.8	0.3	0.5	1	1.5	2.5	0.2	0.5	1	2
														MG	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG
Asbestos																											
Asbestos Identified	Y/N	64	-	-	-	-	No. of detects:	3	-	-	-	-		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Asbestos Screen Name		3	-	-	-	-	-		-	-	-	-															
Asbestos Quant. Total	0.001	3	0.001	0.005	0.003	0.002	No. > LOD:	3	-	-	-	-															
Hydrock Default Suite - FOC / SOM / pH									-																		
FOC (dimensionless)	0.001	35	0.001	0.090	0.036	0.032	0.02		-	-	-	-		0.049			0.081	0.012		0.026		0.021		0.021		0.045	
SOM (calculated)	0.1724	35	0.16	15.52	6.16	5.52	4.11		-	-	-	-		8.4476			13.9644	2.0688		4.4824		3.6204		3.6204		7.758	
pH (su)	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	-	-		11.9	10.6	9.2	8.8	7.5	11.3	9.6	10.1	9.8		10.4	8.3	10.4	10
Hydrock Default Suite - Metals & PAH																											
Arsenic	2	35	1.99	58.00	14.00	12.00	9.68	0	NR	640	C4SL - CL:AIRE 2014	Potentially Suitable for Use		14			19	6		24		11		11		13	
Beryllium	0.5	35	0.49	2.30	0.88	0.80	0.43	0	NR	12	Hydrock Derived	Potentially Suitable for Use		0.6			2.3	0.7		1		0.49		0.8		1.3	
Boron	1	35	0.99	2.20	1.08	0.99	0.29	0	NR	240000	Hydrock Derived	Potentially Suitable for Use		0.99			1.9	0.99		0.99		0.99		0.99		0.99	
Cadmium	0.2	35	0.19	1.30	0.38	0.30	0.25	0	NR	410	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.19			0.19	0.19		0.3		0.19		0.3		0.4	
Chromium (III)	2	35	5.00	715.00	145.23	74.00	168.99	0	NR	8400	Hydrock Derived	Potentially Suitable for Use		715			216	11		65		175		57		283	
Chromium (VI)	2	35	1.90	1.99	1.99	1.99	0.02	0	NR	49	C4SL - CL:AIRE 2014	Potentially Suitable for Use		1.99			1.99	1.99		1.99		1.99		1.99		1.99	
Copper	4	35	3.99	503.00	59.26	38.00	86.16	0	NR	68000	Hydrock Derived	Potentially Suitable for Use		64			51	10		63		38		26		503	
Lead	3	35	2.99	48000.00	1570.97	98.00	8088.89	1	NR	2300	C4SL - CL:AIRE 2014	Further Assessment Required		97			46	6		158		65		102		139	
Mercury, inorganic	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	1100	Hydrock Derived	Potentially Suitable for Use		0.99			0.99	0.99		0.99		0.99		0.99		0.99	
Nickel	3	35	6.00	43.00	15.89	15.00	8.13	0	NR	980	Hydrock Derived	Potentially Suitable for Use		20			16	12		17		13		9		14	
Selenium	2	35	1.99	7.20	2.15	1.99	0.88	0	NR	12000	Hydrock Derived	Potentially Suitable for Use		7.2			1.99	1.99		1.99		1.99		1.99		1.99	
Vanadium	1	35	5.00	797.00	200.60	109.00	218.03	0	NR	9000	Hydrock Derived	Potentially Suitable for Use		797			304	16		94		284		73		344	
Zinc	3	35	15.00	537.00	160.11	119.00	128.67	0	NR	730000	Hydrock Derived	Potentially Suitable for Use		163			117	45		230		82		150		164	
Cyanide (free)	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	24	Acute Risk - SoBRA 2020	Potentially Suitable for Use		0.99			0.99	0.99		0.99		0.99		0.99		0.99	
Total Phenols (Monohydric)	2	35	1.99	2.00	1.99	1.99	0.00	0	70308	1300	Hydrock Derived	Potentially Suitable for Use		1.99			1.99	1.99		1.99		1.99		1.99		1.99	
Acenaphthene	0.1	35	0.09	3.36	0.21	0.09	0.56	0	336	110000	Hydrock Derived	Potentially Suitable for Use		0.09			0.09	0.09		0.09		0.56		0.09		0.09	
Acenaphthylene	0.1	35	0.09	0.18	0.09	0.09	0.02	0	506	110000	Hydrock Derived	Potentially Suitable for Use		0.09			0.09	0.09		0.09		0.09		0.09		0.09	
Anthracene	0.1	35	0.09	1.18	0.26	0.11	0.28	0	6.96	540000	Hydrock Derived	Potentially Suitable for Use		0.46			0.09	0.09		0.21		0.09		0.11		0.17	
Benz(a)anthracene	0.1	35	0.09	4.81	0.90	0.58	1.05	0	10.27	180	Hydrock Derived	Potentially Suitable for Use		1.03			0.25	0.09		1.34		0.34		0.62		0.66	
Benzo(a)pyrene	0.1	35	0.09	3.17	0.69	0.52	0.75	0	5.46	77	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.81			0.14	0.09		1.05		0.34		0.09		0.59	
Benzo(b)fluoranthene	0.1	35	0.09	5.16	0.95	0.70	1.10	0	7.29	45	Hydrock Derived	Potentially Suitable for Use		0.83			0.2	0.09		1.49		0.47		0.81		0.84	
Benzo(ghi)perylene	0.1	35	0.09	1.43	0.33	0.09	0.41	0	0.09	4000	Hydrock Derived	Potentially Suitable for Use		0.09			0.09	0.09		0.09		0.31		0.09		0.4	
Benzo(k)fluoranthene	0.1	35	0.09	1.35	0.35	0.26	0.33	0	4.12	1200	Hydrock Derived	Potentially Suitable for Use		0.61			0.09	0.09		0.52		0.15		0.31		0.27	
Chrysene	0.1	35	0.09	5.38	0.92	0.62	1.10	0	2.64	360	Hydrock Derived	Potentially Suitable for Use		0.97			0.23	0.09		1.21		0.35		0.8		0.68	
Dibenz(ah)anthracene	0.1	35	0.09	0.79	0.14	0.09	0.15	0	0.024	3.6	Hydrock Derived	Potentially Suitable for Use		0.09			0.09	0.09		0.09		0.09		0.09		0.13	
Fluoranthene	0.1	35	0.09	8.64	1.42	0.86	1.86	0	113	23000	Hydrock Derived	Potentially Suitable for Use		1.41			0.34	0.09		1.77		0.47		0.9		1	
Fluorene	0.1	35	0.09	1.07	0.15	0.09	0.23	0	183	72000	Hydrock Derived	Potentially Suitable for Use		0.09			0.09	0.09		0.09		0.17		0.09		0.09	
Indeno(123cd)pyrene	0.1	35	0.09	2.10	0.43	0.09	0.53	0	0.37	510	Hydrock Derived	Potentially Suitable for Use		0.09			0.13	0.09		1.2		0.29		0.09		0.43	
Naphthalene	0.1	35	0.09	19.80	1.43	0.27	3.67	0	432	7800	Hydrock Derived	Potentially Suitable for Use		0.74			0.09	0.09		2.12		3.7		0.38		0.33	
Phenanthrene	0.1	35	0.09	5.81	0.89	0.52	1.24	0	214	23000	Hydrock Derived	Potentially Suitable for Use		0.86			0.27	0.09		0.96		0.32		0.55		0.54	
Pyrene	0.1	35	0.09	5.83	1.10	0.71	1.30	0	13.2	55000	Hydrock Derived	Potentially Suitable for Use		1.25			0.27	0.09		1.77		0.44		0.73		0.86	
PAH 16 Total	1.6	35	1.59	64.70	9.90	6.80	12.28			-		-		9			1.8	1.59		13.6		7.9		5.2		6.9	
TPH fractions																											
TPH ali EC05-EC06	0.01	30	0.01	0.01	0.01	0.01	0.000	0	1150	12000	Hydrock Derived	-		0.0099			0.0099	0.0099		0.0099		0.0099		0.0099		0.0099	
TPH ali >EC06-EC08	0.05	30	0.05	0.05	0.05	0.05	0.000	0	736	40000	Hydrock Derived	-		0.0499			0.0499	0.0499		0.0499		0.0499		0.0499		0.0499	
TPH ali >EC08-EC10	2	30	1.99	344.00	15.03	2.00	62.340	0	451	11000	Hydrock Derived	-		1.999			1.999	1.999		1.999		1.999		1.999		1.999	
TPH ali >EC10-EC12	2	30	1.99	122.00	8.33	2.00	22.86	0	283	47000	Hydrock Derived	-		1.999			1.999	1.999		1.999		1.999		1.999		1.999	
TPH ali >EC12-EC16	3	30	2.99	26.00	5.10	3.00	5.15	0	142	90000	Hydrock Derived	-		2.999			2.999	2.999		2.999		2.999		4		2.999	
TPH ali >EC16-EC35	10	30	9.99	83.00	21.60	10.00	22.62	0	51	1800000	Hydrock Derived	-		9.999			9.999	9.999		9.999		9.999		76		9.999	
TPH ali >EC35-EC44	10	30	9.99	20.00	10.50	10.00	2.01	0	51	1800000	Hydrock Derived	-		9.999			9.999	9.999		9.999		9.999		9.999		9.999	
TPH ali >EC5-EC44	30	30	29.99	491.00	58.43	29.99	85.69			-		-		29.99			29.99	29.99		29.99		29.99		80		29.99	
TPH aro EC05-EC07	0.01	30	0.01	12.60	0.53	0.02	2.29	0	4708	86000	Hydrock Derived	-		0.11			0.16	0.0099		0.09		0.04		0.0099		0.0099	
TPH aro >EC07-EC08	0.05	30	0.05	0.39	0.08	0.05	0.08	0	4357	180000	Hydrock Derived	-		0.0499			0.0499	0.0499		0.08		0.0499		0.0499		0.0499	

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP05	TP05	TP05	TP05	TP05	TP06	TP06	TP06	TP06	TP06	TP07	TP07	TP07	TP07
												Results of Significance Test	1	1	2	2	2.8	0.3	0.5	1	1.5	2.5	0.2	0.5	1	2
													MG	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG
TPH aro >EC08-EC10	2	30	1.99	416.00	18.76	2.00	75.53	0	3578	17000	Hydrock Derived	-	1.999			1.999	1.999		10		8		1.999		1.999	
TPH aro >EC10-EC12	2	30	1.99	843.00	34.50	2.00	153.26	0	2149	34000	Hydrock Derived	-	1.999			1.999	1.999		9		13		1.999		1.999	
TPH aro >EC12-EC16	2	30	1.99	115.00	7.57	2.00	20.48	0	1004	38000	Hydrock Derived	-	1.999			1.999	1.999		7		12		3		2	
TPH aro >EC16-EC21	3	30	2.99	78.00	12.03	8.00	15.53	0	321	28000	Hydrock Derived	-	2.999			2.999	2.999		9		2.999		11		13	
TPH aro >EC21-EC35	10	30	9.99	165.00	31.00	10.00	36.55	0	29	28000	Hydrock Derived	-	9.999			9.999	9.999		40		9.999		165		61	
TPH aro >EC35-EC44	10	30	9.99	18.00	10.26	10.00	1.46	0	29	28000	Hydrock Derived	-	9.999			9.999	9.999		9.999		9.999		18		9.999	
TPH aro >EC5-EC44	30	30	29.90	1395.00	106.79	38.00	249.61			-		-	29.99			29.99	29.99		75		34		196		75	
Total TPH >EC5-EC44	60	30	59.90	1886.00	159.92	60.00	334.35			-		-	59.999			59.999	59.999		75		59.999		276		75	
VOCs - BTEX & MTBE																										
Benzene	2	30	0.00	12.59	0.53	0.02	2.29	0	4708	98	C4SL - CL:AIRE 2014	-	0.109			0.162	0.001999		0.092		0.044		0.001999		0.001999	
Toluene	5	30	0.00	0.39	0.05	0.00	0.09	0	4357	180000	Hydrock Derived	-	0.018			0.004999	0.004999		0.082		0.024		0.004999		0.004999	
Ethylbenzene	2	30	0.00	17.16	0.62	0.00	3.13	0	2844	27000	Hydrock Derived	-	0.005			0.18	0.006		0.16		0.012		0.085		0.001999	
Xylene, o-	2	30	0.00	9.78	0.35	0.00	1.78	0	2618	33000	Hydrock Derived	-	0.004			0.04	0.001999		0.051		0.006		0.024		0.001999	
Xylene, p- (or combined m & p)	2	30	0.00	58.53	2.05	0.01	10.67	0	3167	30000	Hydrock Derived	-	0.016			0.157	0.01		0.171		0.034		0.064		0.003	
MTBE	5	30	0.00	0.00	0.00	0.00	0.00	0	62749	22000	Hydrock Derived	-	0.004999			0.004999	0.004999		0.004999		0.004999		0.004999		0.004999	
VOCs - other benzenes																										
Iso-propylbenzene	5	20	0.00	0.01	0.01	0.00	0.00	0	2255	54000	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Propylbenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	2332	100000	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.2.4-Trimethylbenzene	5	20	0.00	0.15	0.02	0.00	0.04	0	3245	9.5	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.3.5-Trimethylbenzene	5	20	0.00	0.16	0.02	0.00	0.04	0	1304	9.5	Hydrock Derived	-	0.004999				0.004999				0.006				0.004999	
VOCs - chlorobenzenes																										
Bromobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	4579	490	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Chlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3494	290	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.2-Dichlorobenzene	5	7	0.00	0.00	0.00	0.00	0.00	0	3239	11000	Hydrock Derived	-														
1.3-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3011	170	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.4-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	1275	21000	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Hexachlorobenzene	0.1	20	0.09	0.09	0.09	0.09	0.00	0	1.19	120	Hydrock Derived	-	0.09				0.09				0.09				0.09	
1.2.4-trichlorobenzene	0.1	20	0.00	0.00	0.00	0.00	0.00	0	1876	1300	Hydrock Derived	-	0.00009				0.00009				0.00009				0.00009	
VOCs - chloroalkanes & alkanes																										
Bromodichloromethane	5	20	0.00	0.00	0.00	0.00	0.00	0	6571	7.1	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Chloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5709	2000	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Chloroethene (aka vinyl chloride)	5	20	0.00	0.00	0.00	0.00	0.00	0	2688	2.2	C4SL - CL:AIRE 2021	-	0.004999				0.004999				0.004999				0.004999	
Chloromethane	10	20	0.01	0.01	0.01	0.01	0.00	0	2987	1.5	Hydrock Derived	-	0.00999				0.00999				0.00999				0.00999	
1.1-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5605	800	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.2-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	7361	29	C4SL - CL:AIRE 2021	-	0.004999				0.004999				0.004999				0.004999	
1.1-Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7944	87	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Cis 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12856	44	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Trans 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12594	76	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.1.1.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	14017	560	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
1.1.2.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	11983	1100	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Trichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7138	3.4	C4SL - CL:AIRE 2021	-	0.004999				0.004999				0.004999				0.004999	
1.1.1-Trichloroethane	5	18	0.00	0.00	0.00	0.00	0.00	0	6392	3000	Hydrock Derived	-	0.004999				0.004999				0.004999				0.004999	
Other phenols & chlorophenols																										
Phenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	70308	1300	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
2-Chlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	306526	4300	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
2.4-Dichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	23348	4200	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
2.4-Dimethylphenol	0.15	20	0.15	0.15	0.15	0.15	0.00	0	7238	30000	Hydrock Derived	-	0.149999				0.149999				0.149999				0.149999	
2.4.6-Trichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	4679	4300	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
Phthalates																										
Diethyl Phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	65	280000	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
Di-n-octyl phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	196	89000	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
Other organics																										
2.4-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	3800	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP05	TP05	TP05	TP05	TP05	TP06	TP06	TP06	TP06	TP06	TP07	TP07	TP07	TP07
													1	1	2	2	2.8	0.3	0.5	1	1.5	2.5	0.2	0.5	1	2
												Results of Significance Test	MG	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG
2,6-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	1403	1900	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
Styrene	5	20	0.00	0.00	0.00	0.00	0.00	0	3347	23000	Hydrock Derived	-	0.00499				0.00499				0.00499				0.00499	
2-Chloronaphthalene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	2100	Hydrock Derived	-	0.0999				0.0999				0.0999				0.0999	
Other VOC Suite Substances which do not have a GAC																										
Bromomethane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999				0.00999				0.00999				0.00999	
Trichlorofluoromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
2,2-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
1,1-Dichloropropene	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999				0.00999				0.00999				0.00999	
Dibromomethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
Cis-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
Trans-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
1,3-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
Dibromochloromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
1,2-Dibromoethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
2-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
4-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
tert butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
sec butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
Isopropyltoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
n butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499				0.00499				0.00499				0.00499	
1,2-Dibromo-3-chloropropane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999				0.00999				0.00999				0.00999	
Other SVOC Suite Substances which do not have a GAC																										
Bis(2-chloroethyl)ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Nitrobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Isophorone	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
2-Nitrophenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Bis(2-chloroethoxy)methane	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
4-Chloro-3-methylphenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
2,4,5-Trichlorophenol	0.15	20	0.15	0.15	0.15	0.15	0.00			-		-	0.149				0.149				0.149				0.149	
2-Methylnaphthalene	0.1	20	0.09	1.20	0.29	0.10	0.34			-		-	0.0999				0.0999				1.2				0.0999	
Dimethyl phthalate	0.1	20	0.09	0.20	0.10	0.10	0.02			-		-	0.0999				0.0999				0.0999				0.0999	
Dibenzofuran	0.1	20	0.09	0.50	0.15	0.10	0.12			-		-	0.0999				0.0999				0.5				0.0999	
4-Chlorophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
4-Nitroaniline	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Azobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Bromophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999				0.0999				0.0999				0.0999	
Carbazole	0.1	20	0.09	0.50	0.17	0.10	0.12			-		-	0.0999				0.0999				0.0999				0.2	
TPH Additivity Check		**HAZARD QUOTIENTS FOR EACH FRACTION**																								
												Aliph	0.000000825			0.000000825	0.000000825		0.000000825		0.000000825		0.000000825		0.000000825	
												Aliph	1.2475E-06			1.2475E-06	1.2475E-06		1.2475E-06		1.2475E-06		1.2475E-06		1.2475E-06	
										Considered additive		Aliph	0.000181727			0.000181727	0.000181727		0.000181727		0.000181727		0.000181727		0.000181727	
												Aliph	4.25319E-05			4.25319E-05	4.25319E-05		4.25319E-05		4.25319E-05		4.25319E-05		4.25319E-05	
												Aliph	3.33222E-05			3.33222E-05	3.33222E-05		3.33222E-05		3.33222E-05		4.44444E-05		3.33222E-05	
												Aliphat	0.000005555			0.000005555	0.000005555		0.000005555		0.000005555		4.22222E-05		0.000005555	
												Aliphat	0.000005555			0.000005555	0.000005555		0.000005555		0.000005555		0.000005555		0.000005555	
												Aro	1.27907E-06			1.86047E-06	1.15116E-07		1.04651E-06		4.65116E-07		1.15116E-07		1.15116E-07	
												Arom	2.77222E-07			2.77222E-07	2.77222E-07		4.44444E-07		2.77222E-07		2.77222E-07		2.77222E-07	
										Considered additive		Arom	0.000117588			0.000117588	0.000117588		0.000588235		0.000470588		0.000117588		0.000117588	
												Arom	5.87941E-05			5.87941E-05	5.87941E-05		0.000264706		0.000382353		5.87941E-05		5.87941E-05	
												Arom	5.26053E-05			5.26053E-05	5.26053E-05		0.000184211		0.000315789		7.89474E-05		5.26316E-05	
										Considered additive		Arom	0.000107107			0.000107107	0.000107107		0.000321429		0.000107107		0.000392857		0.000464286	
												Arom	0.000357107			0.000357107	0.000357107		0.001428571		0.000357107		0.005892857		0.002178571	
												Aromat	0.000357107			0.000357107	0.000357107		0.000357107		0.000357107		0.000642857		0.000357107	
												Hazard Index	**0.000257581**			**0.000257581**	**0.000257581**		**0.000257581**		**0.000257581**		**0.000268704**		**0.000257581**	
										Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.		**Hazard Index**	**0.000228988**			**0.000228988**	**0.000228988**		**0.001037152**		**0.001168731**		**0.00025533**		**0.000229014**	

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:	**Default - Human Health - commercial (6%SOM)**
Client:	
Site:	
Job no.:	
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**All**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Dataset mean SOM% **6.16**

Scenario SOM% **6**

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source																
												Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
													TP05	TP05	TP05	TP05	TP05	TP06	TP06	TP06	TP06	TP06	TP07	TP07	TP07	TP07
												Results of Significance Test	1	1	2	2	2.8	0.3	0.5	1	1.5	2.5	0.2	0.5	1	2
													MG	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG
												Hazard Index f	0.000464214			0.000464214	0.000464214		0.00175		0.000464214		0.006285714		0.002642857	

Legend:

Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Tidal Flat Deposits		
Alluvial Fan Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
	<10	Value excluded from statistical analysis
	Y	Text result
	-	Represents a determinand that was not tested.
	+	represents a data point that is not included in the current filter settings

n:

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:	**Default - Human Health - commercial (6%SOM)**
Client:	
Site:	
Job no.:	
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**All**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Dataset mean SOM% **6.16**

Scenario SOM% **6**

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	29/09/23	29/09/23	29/09/23	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP07	TP07	TP07	BH01	BH01	BH01	BH02	BH02	BH02	TP08	TP08	TP08	TP08	TP08
												Results of Significance Test	2.6	3	3	1.1	3	5.5	1	2.8	3.7	0.1	1	1	1.5	1.5
													TFD	AFD	AFD	MG	AFD	AFD	MG	TFD	AFD	MG	MG	MG	MG	MG
Asbestos																										
Asbestos Identified	Y/N	64	-	-	-	-	No. of detects:	3	-	-	-	-	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Asbestos Screen Name		3	-	-	-	-	-		-	-	-	-														
Asbestos Quant. Total	0.001	3	0.001	0.005	0.003	0.002	No. > LOD:	3	-	-	-	-														
Hydrock Default Suite - FOC / SOM / pH									-																	
FOC (dimensionless)	0.001	35	0.001	0.090	0.036	0.032	0.02		-	-	-	-	0.09	0.007		0.042	0.001	0.0009	0.037	0.015	0.007		0.063			
SOM (calculated)	0.1724	35	0.16	15.52	6.16	5.52	4.11		-	-	-	-	15.516	1.2068		7.2408	0.1724	0.15516	6.3788	2.586	1.2068		10.8612			
pH (su)	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	-	-	7.4	7.4	7.6	10.3	8.2	7.4	11.1	7.9	10	8.4	10.2		10.3	9
Hydrock Default Suite - Metals & PAH																										
Arsenic	2	35	1.99	58.00	14.00	12.00	9.68	0	NR	640	C4SL - CL:AIRE 2014	Potentially Suitable for Use	58	7		22	1.99	1.99	17	12	5		12			
Beryllium	0.5	35	0.49	2.30	0.88	0.80	0.43	0	NR	12	Hydrock Derived	Potentially Suitable for Use	0.6	0.49		1.1	0.49	0.49	0.7	0.6	0.5		1.2			
Boron	1	35	0.99	2.20	1.08	0.99	0.29	0	NR	240000	Hydrock Derived	Potentially Suitable for Use	2.2	0.99		0.99	0.99	0.99	0.99	0.99	0.99		0.99			
Cadmium	0.2	35	0.19	1.30	0.38	0.30	0.25	0	NR	410	C4SL - CL:AIRE 2014	Potentially Suitable for Use	0.4	0.19		0.19	0.19	0.19	0.19	0.19	0.19		0.7			
Chromium (III)	2	35	5.00	715.00	145.23	74.00	168.99	0	NR	8400	Hydrock Derived	Potentially Suitable for Use	66	18		330	11	5	580	27	24		301			
Chromium (VI)	2	35	1.90	1.99	1.99	1.99	0.02	0	NR	49	C4SL - CL:AIRE 2014	Potentially Suitable for Use	1.99	1.99		1.99	1.99	1.99	1.99	1.99	1.99		1.99			
Copper	4	35	3.99	503.00	59.26	38.00	86.16	0	NR	68000	Hydrock Derived	Potentially Suitable for Use	142	11		76	3.99	3.99	59	19	8		53			
Lead	3	35	2.99	48000.00	1570.97	98.00	8088.89	1	NR	2300	C4SL - CL:AIRE 2014	Further Assessment Required	233	13		121	3	2.99	74	13	9		128			
Mercury, inorganic	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	1100	Hydrock Derived	Potentially Suitable for Use	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99		0.99			
Nickel	3	35	6.00	43.00	15.89	15.00	8.13	0	NR	980	Hydrock Derived	Potentially Suitable for Use	17	6		29	7	6	18	14	20		18			
Selenium	2	35	1.99	7.20	2.15	1.99	0.88	0	NR	12000	Hydrock Derived	Potentially Suitable for Use	1.99	1.99		2.3	1.99	1.99	1.99	1.99	1.99		1.99			
Vanadium	1	35	5.00	797.00	200.60	109.00	218.03	0	NR	9000	Hydrock Derived	Potentially Suitable for Use	106	24		582	15	5	755	37	32		394			
Zinc	3	35	15.00	537.00	160.11	119.00	128.67	0	NR	730000	Hydrock Derived	Potentially Suitable for Use	366	28		183	19	15	123	47	56		236			
Cyanide (free)	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	24	Acute Risk - SoBRA 2020	Potentially Suitable for Use	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99		0.99			
Total Phenols (Monohydric)	2	35	1.99	2.00	1.99	1.99	0.00	0	70308	1300	Hydrock Derived	Potentially Suitable for Use	1.99	1.99		1.99	1.99	1.99	1.99	1.99	1.99		1.99			
Acenaphthene	0.1	35	0.09	3.36	0.21	0.09	0.56	0	336	110000	Hydrock Derived	Potentially Suitable for Use	0.09	3.36		0.09	0.12	0.09	0.12	0.09	0.09		0.09			
Acenaphthylene	0.1	35	0.09	0.18	0.09	0.09	0.02	0	506	110000	Hydrock Derived	Potentially Suitable for Use	0.09	0.09		0.09	0.09	0.09	0.09	0.09	0.09		0.09			
Anthracene	0.1	35	0.09	1.18	0.26	0.11	0.28	0	6.96	540000	Hydrock Derived	Potentially Suitable for Use	0.09	0.27		0.15	0.09	0.09	0.18	0.09	0.09		1			
Benz(a)anthracene	0.1	35	0.09	4.81	0.90	0.58	1.05	0	10.27	180	Hydrock Derived	Potentially Suitable for Use	0.09	0.2		0.58	0.09	0.09	0.64	0.09	0.09		2.41			
Benzo(a)pyrene	0.1	35	0.09	3.17	0.69	0.52	0.75	0	5.46	77	C4SL - CL:AIRE 2014	Potentially Suitable for Use	0.17	0.14		0.54	0.09	0.09	0.54	0.09	0.09		1.64			
Benzo(b)fluoranthene	0.1	35	0.09	5.16	0.95	0.70	1.10	0	7.29	45	Hydrock Derived	Potentially Suitable for Use	0.23	0.17		0.7	0.09	0.09	0.71	0.09	0.09		2.3			
Benzo(ghi)perylene	0.1	35	0.09	1.43	0.33	0.09	0.41	0	0.09	4000	Hydrock Derived	Potentially Suitable for Use	0.26	0.09		0.09	0.09	0.09	0.35	0.09	0.09		1.18			
Benzo(k)fluoranthene	0.1	35	0.09	1.35	0.35	0.26	0.33	0	4.12	1200	Hydrock Derived	Potentially Suitable for Use	0.09	0.09		0.27	0.09	0.09	0.26	0.09	0.09		0.87			
Chrysene	0.1	35	0.09	5.38	0.92	0.62	1.10	0	2.64	360	Hydrock Derived	Potentially Suitable for Use	0.17	0.19		0.63	0.09	0.09	0.6	0.09	0.09		2.23			
Dibenz(ah)anthracene	0.1	35	0.09	0.79	0.14	0.09	0.15	0	0.024	3.6	Hydrock Derived	Potentially Suitable for Use	0.09	0.09		0.09	0.09	0.09	0.09	0.09	0.09		0.09			
Fluoranthene	0.1	35	0.09	8.64	1.42	0.86	1.86	0	113	23000	Hydrock Derived	Potentially Suitable for Use	0.23	0.46		0.82	0.09	0.09	1.03	0.09	0.09		3.48			
Fluorene	0.1	35	0.09	1.07	0.15	0.09	0.23	0	183	72000	Hydrock Derived	Potentially Suitable for Use	0.09	1.02		0.09	0.09	0.09	0.09	0.09	0.09		0.09			
Indeno(123cd)pyrene	0.1	35	0.09	2.10	0.43	0.09	0.53	0	0.37	510	Hydrock Derived	Potentially Suitable for Use	0.22	0.09		0.09	0.09	0.09	0.37	0.09	0.09		1.19			
Naphthalene	0.1	35	0.09	19.80	1.43	0.27	3.67	0	432	7800	Hydrock Derived	Potentially Suitable for Use	0.09	0.09		4.06	1.24	0.09	0.62	0.09	0.09		0.43			
Phenanthrene	0.1	35	0.09	5.81	0.89	0.52	1.24	0	214	23000	Hydrock Derived	Potentially Suitable for Use	0.18	1.21		0.67	0.09	0.09	0.77	0.09	0.09		1.81			
Pyrene	0.1	35	0.09	5.83	1.10	0.71	1.30	0	13.2	55000	Hydrock Derived	Potentially Suitable for Use	0.2	0.36		0.62	0.09	0.09	0.85	0.09	0.09		2.54			
PAH 16 Total	1.6	35	1.59	64.70	9.90	6.80	12.28			-		-	1.7	7.4		9	1.59	1.59	7	1.59	1.59		21.1			
TPH fractions																										
TPH ali EC05-EC06	0.01	30	0.01	0.01	0.01	0.01	0.000	0	1150	12000	Hydrock Derived	-	0.0099	0.0099		0.0099	0.0099	0.0099	0.0099	0.0099	0.0099		0.0099			
TPH ali >EC06-EC08	0.05	30	0.05	0.05	0.05	0.05	0.000	0	736	40000	Hydrock Derived	-	0.0499	0.0499		0.0499	0.0499	0.0499	0.0499	0.0499	0.0499		0.0499			
TPH ali >EC08-EC10	2	30	1.99	344.00	15.03	2.00	62.340	0	451	11000	Hydrock Derived	-	1.999	344		1.999	1.999	1.999	1.999	1.999	1.999		1.999			
TPH ali >EC10-EC12	2	30	1.99	122.00	8.33	2.00	22.86	0	283	47000	Hydrock Derived	-	1.999	122		1.999	1.999	1.999	1.999	1.999	1.999		1.999			
TPH ali >EC12-EC16	3	30	2.99	26.00	5.10	3.00	5.15	0	142	90000	Hydrock Derived	-	2.999	26		2.999	2.999	2.999	2.999	2.999	2.999		11			
TPH ali >EC16-EC35	10	30	9.99	83.00	21.60	10.00	22.62	0	51	1800000	Hydrock Derived	-	9.999	9.999		9.999	9.999	9.999	9.999	9.999	9.999		9.999			
TPH ali >EC35-EC44	10	30	9.99	20.00	10.50	10.00	2.01	0	51	1800000	Hydrock Derived	-	9.999	9.999		9.999	9.999	9.999	9.999	9.999	9.999		9.999			
TPH ali >EC5-EC44	30	30	29.99	491.00	58.43	29.99	85.69			-		-	29.99	491		29.99	29.99	29.99	29.99	29.99	29.99		29.99			
TPH aro EC05-EC07	0.01	30	0.01	12.60	0.53	0.02	2.29	0	4708	86000	Hydrock Derived	-	0.0099	0.0099		0.93	0.04	0.0099	0.16	0.01	0.0099		0.04			
TPH aro >EC07-EC08	0.05	30	0.05	0.39	0.08	0.05	0.08	0	4357	180000	Hydrock Derived	-	0.0499	0.0499		0.39	0.0499	0.0499	0.13	0.0499	0.0499		0.0499			

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	29/09/23	29/09/23	29/09/23	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP07	TP07	TP07	BH01	BH01	BH01	BH02	BH02	BH02	TP08	TP08	TP08	TP08	TP08
												Results of Significance Test	2.6	3	3	1.1	3	5.5	1	2.8	3.7	0.1	1	1	1.5	1.5
													TFD	AFD	AFD	MG	AFD	AFD	MG	TFD	AFD	MG	MG	MG	MG	MG
TPH aro >EC08-EC10	2	30	1.99	416.00	18.76	2.00	75.53	0	3578	17000	Hydrock Derived	-	1.999	416		1.999	1.999	1.999	1.999	1.999	1.999		1.999			
TPH aro >EC10-EC12	2	30	1.99	843.00	34.50	2.00	153.26	0	2149	34000	Hydrock Derived	-	1.999	843		6	1.999	1.999	5	1.999	1.999		1.999			
TPH aro >EC12-EC16	2	30	1.99	115.00	7.57	2.00	20.48	0	1004	38000	Hydrock Derived	-	1.999	115		5	1.999	1.999	4	1.999	1.999		5			
TPH aro >EC16-EC21	3	30	2.99	78.00	12.03	8.00	15.53	0	321	28000	Hydrock Derived	-	2.999	21		10	2.999	2.999	8	2.999	2.999		15			
TPH aro >EC21-EC35	10	30	9.99	165.00	31.00	10.00	36.55	0	29	28000	Hydrock Derived	-	9.999	9.999		35	9.999	9.999	9.999	9.999	9.999		47			
TPH aro >EC35-EC44	10	30	9.99	18.00	10.26	10.00	1.46	0	29	28000	Hydrock Derived	-	9.999	9.999		9.999	9.999	9.999	9.999	9.999	9.999		9.999			
TPH aro >EC5-EC44	30	30	29.90	1395.00	106.79	38.00	249.61			-		-	29.99	1395		57	29.99	29.99	29.99	29.99	29.99		67			
Total TPH >EC5-EC44	60	30	59.90	1886.00	159.92	60.00	334.35			-		-	59.999	1886		59.999	59.999	59.999	59.999	59.999	59.999		78			
VOCs - BTEX & MTBE																										
Benzene	2	30	0.00	12.59	0.53	0.02	2.29	0	4708	98	C4SL - CL:AIRE 2014	-	0.001999	0.001999		0.93	0.045	0.007	0.157	0.015	0.001999		0.039			
Toluene	5	30	0.00	0.39	0.05	0.00	0.09	0	4357	180000	Hydrock Derived	-	0.004999	0.004999		0.387	0.049	0.004999	0.13	0.004999	0.004999		0.024			
Ethylbenzene	2	30	0.00	17.16	0.62	0.00	3.13	0	2844	27000	Hydrock Derived	-	0.018	17.161		0.059	0.013	0.001999	0.025	0.001999	0.001999		0.003			
Xylene, o-	2	30	0.00	9.78	0.35	0.00	1.78	0	2618	33000	Hydrock Derived	-	0.001999	9.78		0.063	0.012	0.001999	0.026	0.001999	0.001999		0.003			
Xylene, p- (or combined m & p)	2	30	0.00	58.53	2.05	0.01	10.67	0	3167	30000	Hydrock Derived	-	0.021	58.528		0.341	0.047	0.005	0.108	0.001999	0.001999		0.011			
MTBE	5	30	0.00	0.00	0.00	0.00	0.00	0	62749	22000	Hydrock Derived	-	0.004999	0.004999		0.004999	0.004999	0.004999	0.004999	0.004999	0.004999		0.004999			
VOCs - other benzenes																										
Iso-propylbenzene	5	20	0.00	0.01	0.01	0.00	0.00	0	2255	54000	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Propylbenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	2332	100000	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.2.4-Trimethylbenzene	5	20	0.00	0.15	0.02	0.00	0.04	0	3245	9.5	Hydrock Derived	-	0.004999			0.034			0.027	0.004999			0.004999			
1.3.5-Trimethylbenzene	5	20	0.00	0.16	0.02	0.00	0.04	0	1304	9.5	Hydrock Derived	-	0.009			0.037			0.043	0.004999			0.004999			
VOCs - chlorobenzenes																										
Bromobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	4579	490	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Chlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3494	290	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.2-Dichlorobenzene	5	7	0.00	0.00	0.00	0.00	0.00	0	3239	11000	Hydrock Derived	-														
1.3-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3011	170	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.4-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	1275	21000	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Hexachlorobenzene	0.1	20	0.09	0.09	0.09	0.09	0.00	0	1.19	120	Hydrock Derived	-	0.09			0.09			0.09	0.09			0.09			
1.2.4-trichlorobenzene	0.1	20	0.00	0.00	0.00	0.00	0.00	0	1876	1300	Hydrock Derived	-	0.00009			0.00009			0.00009	0.00009			0.00009			
VOCs - chloroalkanes & alkanes																										
Bromodichloromethane	5	20	0.00	0.00	0.00	0.00	0.00	0	6571	7.1	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Chloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5709	2000	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Chloroethene (aka vinyl chloride)	5	20	0.00	0.00	0.00	0.00	0.00	0	2688	2.2	C4SL - CL:AIRE 2021	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Chloromethane	10	20	0.01	0.01	0.01	0.01	0.00	0	2987	1.5	Hydrock Derived	-	0.00999			0.00999			0.00999	0.00999			0.00999			
1.1-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5605	800	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.2-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	7361	29	C4SL - CL:AIRE 2021	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.1-Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7944	87	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Cis 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12856	44	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Trans 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12594	76	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.1.1.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	14017	560	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.1.2.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	11983	1100	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Trichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7138	3.4	C4SL - CL:AIRE 2021	-	0.004999			0.004999			0.004999	0.004999			0.004999			
1.1.1-Trichloroethane	5	18	0.00	0.00	0.00	0.00	0.00	0	6392	3000	Hydrock Derived	-	0.004999			0.004999			0.004999	0.004999			0.004999			
Other phenols & chlorophenols																										
Phenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	70308	1300	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
2-Chlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	306526	4300	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
2.4-Dichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	23348	4200	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
2.4-Dimethylphenol	0.15	20	0.15	0.15	0.15	0.15	0.00	0	7238	30000	Hydrock Derived	-	0.149999			0.149999			0.149999	0.149999			0.149999			
2.4.6-Trichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	4679	4300	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
Phthalates																										
Diethyl Phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	65	280000	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
Di-n-octyl phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	196	89000	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
Other organics																										
2.4-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	3800	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	29/09/23	29/09/23	29/09/23	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP07	TP07	TP07	BH01	BH01	BH01	BH02	BH02	BH02	TP08	TP08	TP08	TP08	TP08
													2.6	3	3	1.1	3	5.5	1	2.8	3.7	0.1	1	1	1.5	1.5
												Results of Significance Test	TFD	AFD	AFD	MG	AFD	AFD	MG	TFD	AFD	MG	MG	MG	MG	MG
2,6-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	1403	1900	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
Styrene	5	20	0.00	0.00	0.00	0.00	0.00	0	3347	23000	Hydrock Derived	-	0.00499			0.00499			0.00499	0.00499			0.00499			
2-Chloronaphthalene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	2100	Hydrock Derived	-	0.0999			0.0999			0.0999	0.0999			0.0999			
Other VOC Suite Substances which do not have a GAC																										
Bromomethane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999			0.00999			0.00999	0.00999			0.00999			
Trichlorofluoromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
2,2-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
1,1-Dichloropropene	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999			0.00999			0.00999	0.00999			0.00999			
Dibromomethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
Cis-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
Trans-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
1,3-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
Dibromochloromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
1,2-Dibromoethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
2-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
4-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
tert butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
sec butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
Isopropyltoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
n butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499			0.00499			0.00499	0.00499			0.00499			
1,2-Dibromo-3-chloropropane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999			0.00999			0.00999	0.00999			0.00999			
Other SVOC Suite Substances which do not have a GAC																										
Bis(2-chloroethyl)ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Nitrobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Isophorone	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
2-Nitrophenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Bis(2-chloroethoxy)methane	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
4-Chloro-3-methylphenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
2,4,5-Trichlorophenol	0.15	20	0.15	0.15	0.15	0.15	0.00			-		-	0.149			0.149			0.149	0.149			0.149			
2-Methylnaphthalene	0.1	20	0.09	1.20	0.29	0.10	0.34			-		-	0.2			1.1			0.3	0.0999			0.4			
Dimethyl phthalate	0.1	20	0.09	0.20	0.10	0.10	0.02			-		-	0.0999			0.0999			0.2	0.0999			0.0999			
Dibenzofuran	0.1	20	0.09	0.50	0.15	0.10	0.12			-		-	0.0999			0.0999			0.1	0.0999			0.0999			
4-Chlorophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
4-Nitroaniline	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Azobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Bromophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999			0.0999			0.0999	0.0999			0.0999			
Carbazole	0.1	20	0.09	0.50	0.17	0.10	0.12			-		-	0.0999			0.0999			0.2	0.0999			0.0999			
TPH Additivity Check		**HAZARD QUOTIENTS FOR EACH FRACTION**																								
												Aliph	0.000000825	0.000000825		0.000000825	0.000000825	0.000000825	0.000000825	0.000000825	0.000000825		0.000000825			
												Aliph	1.2475E-06	1.2475E-06		1.2475E-06	1.2475E-06	1.2475E-06	1.2475E-06	1.2475E-06	1.2475E-06		1.2475E-06			
											Considered additive	Alipha	0.000181727	0.031272727		0.000181727	0.000181727	0.000181727	0.000181727	0.000181727	0.000181727		0.000181727			
												Alipha	4.25319E-05	0.002595745		4.25319E-05	4.25319E-05	4.25319E-05	4.25319E-05	4.25319E-05	4.25319E-05		4.25319E-05			
												Alipha	3.33222E-05	0.000288889		3.33222E-05	3.33222E-05	3.33222E-05	3.33222E-05	3.33222E-05	3.33222E-05		0.000122222			
												Aliphat	0.000005555	0.000005555		0.000005555	0.000005555	0.000005555	0.000005555	0.000005555	0.000005555		0.000005555			
												Aliphat	0.000005555	0.000005555		0.000005555	0.000005555	0.000005555	0.000005555	0.000005555	0.000005555		0.000005555			
												Aro	1.15116E-07	1.15116E-07		1.0814E-05	4.65116E-07	1.15116E-07	1.86047E-06	1.16279E-07	1.15116E-07		4.65116E-07			
												Arom	2.77222E-07	2.77222E-07		2.16667E-06	2.77222E-07	2.77222E-07	7.22222E-07	2.77222E-07	2.77222E-07		2.77222E-07			
											Considered additive	Arom	0.000117588	0.024470588		0.000117588	0.000117588	0.000117588	0.000117588	0.000117588	0.000117588		0.000117588			
												Arom	5.87941E-05	0.024794118		0.000176471	5.87941E-05	5.87941E-05	0.000147059	5.87941E-05	5.87941E-05		5.87941E-05			
												Arom	5.26053E-05	0.003026316		0.000131579	5.26053E-05	5.26053E-05	0.000105263	5.26053E-05	5.26053E-05		0.000131579			
											Considered additive	Arom	0.000107107	0.00075		0.000357143	0.000107107	0.000107107	0.000285714	0.000107107	0.000107107		0.000535714			
												Arom	0.000357107	0.000357107		0.00125	0.000357107	0.000357107	0.000357107	0.000357107	0.000357107		0.001678571			
												Aromat	0.000357107	0.000357107		0.000357107	0.000357107	0.000357107	0.000357107	0.000357107	0.000357107		0.000357107			
												Hazard Index	**0.000257581**	**0.034157361**		**0.000257581**	**0.000257581**	**0.000257581**	**0.000257581**	**0.000257581**	**0.000257581**		**0.000346481**			
											Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.	**Hazard Index**	**0.000228988**	**0.052291022**		**0.000425638**	**0.000228988**	**0.000228988**	**0.00036991**	**0.000228988**	**0.000228988**		**0.000307961**			

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:	**Default - Human Health - commercial (6%SOM)**
Client:	
Site:	
Job no.:	
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**All**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Dataset mean SOM% **6.16**

Scenario SOM% **6**

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source															
												Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	27/09/23	27/09/23	27/09/23	29/09/23	29/09/23	29/09/23	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP07	TP07	TP07	BH01	BH01	BH01	BH02	BH02	BH02	TP08	TP08	TP08	TP08	TP08
												Results of Significance Test	2.6	3	3	1.1	3	5.5	1	2.8	3.7	0.1	1	1	1.5	1.5
													TFD	AFD	AFD	MG	AFD	AFD	MG	TFD	AFD	MG	MG	MG	MG	MG
												Hazard Index f	**0.000464214**	**0.001107107**		**0.001607143**	**0.000464214**	**0.000464214**	**0.000642821**	**0.000464214**	**0.000464214**		**0.002214286**			

Legend:

Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Tidal Flat Deposits		
Alluvial Fan Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
	<10	Value excluded from statistical analysis
	Y	Text result
n:	**-**	Represents a determinand that was not tested.
	+	represents a data point that is not included in the current filter settings

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

Hydrock

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	Results of Significance Test	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
														TP09	TP09	TP09	TP09	TP10	TP10	TP10	TP10	TP10	TP10
														1	3	2	3	0.2	0.5	0.85	1	2.1	2.6
														MG	AFD	MG	AFD	MG	MG	MG	MG	MG	AFD
Asbestos																							
Asbestos Identified	Y/N	64	-	-	-	-	No. of detects:	3	-	-	-	-		N	Y	N	N	N	N	N	N	N	N
Asbestos Screen Name		3	-	-	-	-	-		-	-	-	-			Chrysotile								
Asbestos Quant. Total	0.001	3	0.001	0.005	0.003	0.002	No. > LOD:	3	-	-	-	-			0.001								
Hydrock Default Suite - FOC / SOM / pH									-														
FOC (dimensionless)	0.001	35	0.001	0.090	0.036	0.032	0.02		-	-	-	-		0.048	0.014			0.044	0.032		0.05		0.013
SOM (calculated)	0.1724	35	0.16	15.52	6.16	5.52	4.11		-	-	-	-		8.2752	2.4136			7.5856	5.5168		8.62		2.2412
pH (su)	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	-	-		10.5	8.9	8.9	10.4	10.2	10.9	9.2	9.4		7.4
Hydrock Default Suite - Metals & PAH																							
Arsenic	2	35	1.99	58.00	14.00	12.00	9.68	0	NR	640	C4SL - CL:AIRE 2014	Potentially Suitable for Use		17	8			11	23		21		13
Beryllium	0.5	35	0.49	2.30	0.88	0.80	0.43	0	NR	12	Hydrock Derived	Potentially Suitable for Use		0.9	0.49			0.5	1		0.8		1
Boron	1	35	0.99	2.20	1.08	0.99	0.29	0	NR	240000	Hydrock Derived	Potentially Suitable for Use		0.99	0.99			0.99	0.99		0.99		1.9
Cadmium	0.2	35	0.19	1.30	0.38	0.30	0.25	0	NR	410	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.3	0.19			0.4	0.6		0.8		0.19
Chromium (III)	2	35	5.00	715.00	145.23	74.00	168.99	0	NR	8400	Hydrock Derived	Potentially Suitable for Use		435	91			24	31		74		18
Chromium (VI)	2	35	1.90	1.99	1.99	1.99	0.02	0	NR	49	C4SL - CL:AIRE 2014	Potentially Suitable for Use		1.99	1.99			1.99	1.99		1.99		1.99
Copper	4	35	3.99	503.00	59.26	38.00	86.16	0	NR	68000	Hydrock Derived	Potentially Suitable for Use		73	19			27	56		83		11
Lead	3	35	2.99	48000.00	1570.97	98.00	8088.89	1	NR	2300	C4SL - CL:AIRE 2014	Further Assessment Required		126	36			46	238		196		15
Mercury, inorganic	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	1100	Hydrock Derived	Potentially Suitable for Use		0.99	0.99			0.99	0.99		0.99		0.99
Nickel	3	35	6.00	43.00	15.89	15.00	8.13	0	NR	980	Hydrock Derived	Potentially Suitable for Use		20	14			9	20		39		18
Selenium	2	35	1.99	7.20	2.15	1.99	0.88	0	NR	12000	Hydrock Derived	Potentially Suitable for Use		1.99	1.99			1.99	1.99		1.99		1.99
Vanadium	1	35	5.00	797.00	200.60	109.00	218.03	0	NR	9000	Hydrock Derived	Potentially Suitable for Use		617	111			38	42		102		26
Zinc	3	35	15.00	537.00	160.11	119.00	128.67	0	NR	730000	Hydrock Derived	Potentially Suitable for Use		217	109			132	310		440		116
Cyanide (free)	1	35	0.99	0.99	0.99	0.99	0.00	0	NR	24	Acute Risk - SoBRA 2020	Potentially Suitable for Use		0.99	0.99			0.99	0.99		0.99		0.99
Total Phenols (Monohydric)	2	35	1.99	2.00	1.99	1.99	0.00	0	70308	1300	Hydrock Derived	Potentially Suitable for Use		1.99	1.99			1.99	1.99		1.99		1.99
Acenaphthene	0.1	35	0.09	3.36	0.21	0.09	0.56	0	336	110000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09			0.09	0.09		0.09		0.09
Acenaphthylene	0.1	35	0.09	0.18	0.09	0.09	0.02	0	506	110000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09			0.09	0.09		0.09		0.09
Anthracene	0.1	35	0.09	1.18	0.26	0.11	0.28	0	6.96	540000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09			0.3	0.42		0.26		0.09
Benz(a)anthracene	0.1	35	0.09	4.81	0.90	0.58	1.05	0	10.27	180	Hydrock Derived	Potentially Suitable for Use		0.51	0.44			1.14	1.91		2.06		0.09
Benzo(a)pyrene	0.1	35	0.09	3.17	0.69	0.52	0.75	0	5.46	77	C4SL - CL:AIRE 2014	Potentially Suitable for Use		0.46	0.26			0.88	1.81		2.08		0.09
Benzo(b)fluoranthene	0.1	35	0.09	5.16	0.95	0.70	1.10	0	7.29	45	Hydrock Derived	Potentially Suitable for Use		0.64	0.43			1.15	2.33		2.63		0.09
Benzo(ghi)perylene	0.1	35	0.09	1.43	0.33	0.09	0.41	0	0.09	4000	Hydrock Derived	Potentially Suitable for Use		0.34	0.16			0.09	1.03		1.41		0.09
Benzo(k)fluoranthene	0.1	35	0.09	1.35	0.35	0.26	0.33	0	4.12	1200	Hydrock Derived	Potentially Suitable for Use		0.21	0.13			0.42	0.54		1.22		0.09
Chrysene	0.1	35	0.09	5.38	0.92	0.62	1.10	0	2.64	360	Hydrock Derived	Potentially Suitable for Use		0.49	0.46			1.12	1.97		2.44		0.09
Dibenz(ah)anthracene	0.1	35	0.09	0.79	0.14	0.09	0.15	0	0.024	3.6	Hydrock Derived	Potentially Suitable for Use		0.09	0.09			0.09	0.09		0.52		0.09
Fluoranthene	0.1	35	0.09	8.64	1.42	0.86	1.86	0	113	23000	Hydrock Derived	Potentially Suitable for Use		0.75	0.73			1.48	2.94		2.94		0.09
Fluorene	0.1	35	0.09	1.07	0.15	0.09	0.23	0	183	72000	Hydrock Derived	Potentially Suitable for Use		0.09	0.09			0.09	0.09		0.09		0.09
Indeno(123cd)pyrene	0.1	35	0.09	2.10	0.43	0.09	0.53	0	0.37	510	Hydrock Derived	Potentially Suitable for Use		0.35	0.16			0.7	1.27		1.55		0.09
Naphthalene	0.1	35	0.09	19.80	1.43	0.27	3.67	0	432	7800	Hydrock Derived	Potentially Suitable for Use		0.56	0.25			0.09	0.56		0.39		0.09
Phenanthrene	0.1	35	0.09	5.81	0.89	0.52	1.24	0	214	23000	Hydrock Derived	Potentially Suitable for Use		0.49	0.48			0.78	1.78		1.8		0.09
Pyrene	0.1	35	0.09	5.83	1.10	0.71	1.30	0	13.2	55000	Hydrock Derived	Potentially Suitable for Use		0.63	0.52			1.24	2.3		2.02		0.09
PAH 16 Total	1.6	35	1.59	64.70	9.90	6.80	12.28			-		-		5.4	4			9.2	18.9		21.3		1.59
TPH fractions																							
TPH ali EC05-EC06	0.01	30	0.01	0.01	0.01	0.01	0.000	0	1150	12000	Hydrock Derived	-		0.0099	0.0099						0.0099		0.0099
TPH ali >EC06-EC08	0.05	30	0.05	0.05	0.05	0.05	0.000	0	736	40000	Hydrock Derived	-		0.0499	0.0499						0.0499		0.0499
TPH ali >EC08-EC10	2	30	1.99	344.00	15.03	2.00	62.340	0	451	11000	Hydrock Derived	-		1.999	1.999						1.999		1.999
TPH ali >EC10-EC12	2	30	1.99	122.00	8.33	2.00	22.86	0	283	47000	Hydrock Derived	-		1.999	1.999						1.999		1.999
TPH ali >EC12-EC16	3	30	2.99	26.00	5.10	3.00	5.15	0	142	90000	Hydrock Derived	-		2.999	2.999						2.999		2.999
TPH ali >EC16-EC35	10	30	9.99	83.00	21.60	10.00	22.62	0	51	1800000	Hydrock Derived	-		9.999	9.999						33		9.999
TPH ali >EC35-EC44	10	30	9.99	20.00	10.50	10.00	2.01	0	51	1800000	Hydrock Derived	-		9.999	9.999						9.999		9.999
TPH ali >EC5-EC44	30	30	29.99	491.00	58.43	29.99	85.69			-		-		29.99	29.99						33		29.99
TPH aro EC05-EC07	0.01	30	0.01	12.60	0.53	0.02	2.29	0	4708	86000	Hydrock Derived	-		0.01	0.0099						0.02		0.0099
TPH aro >EC07-EC08	0.05	30	0.05	0.39	0.08	0.05	0.08	0	4357	180000	Hydrock Derived	-		0.0499	0.0499						0.0499		0.0499

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP09	TP09	TP09	TP09	TP10	TP10	TP10	TP10	TP10	TP10
												Results of Significance Test	1	3	2	3	0.2	0.5	0.85	1	2.1	2.6
													MG	AFD	MG	AFD	MG	MG	MG	MG	MG	AFD
TPH aro >EC08-EC10	2	30	1.99	416.00	18.76	2.00	75.53	0	3578	17000	Hydrock Derived	-	1.999	1.999						1.999		1.999
TPH aro >EC10-EC12	2	30	1.99	843.00	34.50	2.00	153.26	0	2149	34000	Hydrock Derived	-	1.999	1.999						1.999		1.999
TPH aro >EC12-EC16	2	30	1.99	115.00	7.57	2.00	20.48	0	1004	38000	Hydrock Derived	-	1.999	1.999						3		1.999
TPH aro >EC16-EC21	3	30	2.99	78.00	12.03	8.00	15.53	0	321	28000	Hydrock Derived	-	8	4						15		2.999
TPH aro >EC21-EC35	10	30	9.99	165.00	31.00	10.00	36.55	0	29	28000	Hydrock Derived	-	34	9.999						66		9.999
TPH aro >EC35-EC44	10	30	9.99	18.00	10.26	10.00	1.46	0	29	28000	Hydrock Derived	-	9.999	9.999						9.999		9.999
TPH aro >EC5-EC44	30	30	29.90	1395.00	106.79	38.00	249.61			-		-	42	29.99						83		29.99
Total TPH >EC5-EC44	60	30	59.90	1886.00	159.92	60.00	334.35			-		-	59.999	59.999						116		59.999
VOCs - BTEX & MTBE																						
Benzene	2	30	0.00	12.59	0.53	0.02	2.29	0	4708	98	C4SL - CL:AIRE 2014	-	0.011	0.006						0.018		0.004
Toluene	5	30	0.00	0.39	0.05	0.00	0.09	0	4357	180000	Hydrock Derived	-	0.007	0.004999						0.015		0.004999
Ethylbenzene	2	30	0.00	17.16	0.62	0.00	3.13	0	2844	27000	Hydrock Derived	-	0.001999	0.001999						0.004		0.001999
Xylene, o-	2	30	0.00	9.78	0.35	0.00	1.78	0	2618	33000	Hydrock Derived	-	0.001999	0.001999						0.004		0.001999
Xylene, p- (or combined m & p)	2	30	0.00	58.53	2.05	0.01	10.67	0	3167	30000	Hydrock Derived	-	0.003	0.001999						0.014		0.001999
MTBE	5	30	0.00	0.00	0.00	0.00	0.00	0	62749	22000	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
VOCs - other benzenes																						
Iso-propylbenzene	5	20	0.00	0.01	0.01	0.00	0.00	0	2255	54000	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Propylbenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	2332	100000	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.2.4-Trimethylbenzene	5	20	0.00	0.15	0.02	0.00	0.04	0	3245	9.5	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.3.5-Trimethylbenzene	5	20	0.00	0.16	0.02	0.00	0.04	0	1304	9.5	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
VOCs - chlorobenzenes																						
Bromobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	4579	490	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Chlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3494	290	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.2-Dichlorobenzene	5	7	0.00	0.00	0.00	0.00	0.00	0	3239	11000	Hydrock Derived	-										
1.3-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	3011	170	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.4-Dichlorobenzene	5	20	0.00	0.00	0.00	0.00	0.00	0	1275	21000	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Hexachlorobenzene	0.1	20	0.09	0.09	0.09	0.09	0.00	0	1.19	120	Hydrock Derived	-	0.09	0.09						0.09		0.09
1.2.4-trichlorobenzene	0.1	20	0.00	0.00	0.00	0.00	0.00	0	1876	1300	Hydrock Derived	-	0.00009	0.00009						0.00009		0.00009
VOCs - chloroalkanes & alkanes																						
Bromodichloromethane	5	20	0.00	0.00	0.00	0.00	0.00	0	6571	7.1	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Chloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5709	2000	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Chloroethene (aka vinyl chloride)	5	20	0.00	0.00	0.00	0.00	0.00	0	2688	2.2	C4SL - CL:AIRE 2021	-	0.004999	0.004999						0.004999		0.004999
Chloromethane	10	20	0.01	0.01	0.01	0.01	0.00	0	2987	1.5	Hydrock Derived	-	0.00999	0.00999						0.00999		0.00999
1.1-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	5605	800	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.2-Dichloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	7361	29	C4SL - CL:AIRE 2021	-	0.004999	0.004999						0.004999		0.004999
1.1-Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7944	87	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Cis 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12856	44	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Trans 1.2 Dichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	12594	76	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.1.1.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	14017	560	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
1.1.2.2-Tetrachloroethane	5	20	0.00	0.00	0.00	0.00	0.00	0	11983	1100	Hydrock Derived	-	0.004999	0.004999						0.004999		0.004999
Trichloroethene	5	20	0.00	0.00	0.00	0.00	0.00	0	7138	3.4	C4SL - CL:AIRE 2021	-	0.004999	0.004999						0.004999		0.004999
1.1.1-Trichloroethane	5	18	0.00	0.00	0.00	0.00	0.00	0	6392	3000	Hydrock Derived	-	0.004999	0.004999								
Other phenols & chlorophenols																						
Phenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	70308	1300	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
2-Chlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	306526	4300	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
2.4-Dichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	23348	4200	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
2.4-Dimethylphenol	0.15	20	0.15	0.15	0.15	0.15	0.00	0	7238	30000	Hydrock Derived	-	0.149999	0.149999						0.149999		0.149999
2.4.6-Trichlorophenol	0.1	20	0.09	0.10	0.10	0.10	0.00	0	4679	4300	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
Phthalates																						
Diethyl Phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	65	280000	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
Di-n-octyl phthalate	0.1	20	0.09	0.10	0.10	0.10	0.00	0	196	89000	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
Other organics																						
2.4-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	3800	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Default - Human Health - commercial (6%SOM)
Client:
Site:
Job no.:
Lab. report no(s).: 23-12154 / 23-12382

Data Filters

Zone	All
Strata	All
Depth Min (m bgl)	0.1
Depth Max (m bgl)	5.5

Dataset mean SOM% 6.16
Scenario SOM% 6

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP09	TP09	TP09	TP09	TP10	TP10	TP10	TP10	TP10	TP10
													1	3	2	3	0.2	0.5	0.85	1	2.1	2.6
												Results of Significance Test	MG	AFD	MG	AFD	MG	MG	MG	MG	MG	AFD
2,6-Dinitrotoluene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	1403	1900	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
Styrene	5	20	0.00	0.00	0.00	0.00	0.00	0	3347	23000	Hydrock Derived	-	0.00499	0.00499						0.00499		0.00499
2-Chloronaphthalene	0.1	20	0.09	0.10	0.10	0.10	0.00	0	669	2100	Hydrock Derived	-	0.0999	0.0999						0.0999		0.0999
Other VOC Suite Substances which do not have a GAC																						
Bromomethane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999	0.00999						0.00999		0.00999
Trichlorofluoromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
2,2-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
1,1-Dichloropropene	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999	0.00999						0.00999		0.00999
Dibromomethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
Cis-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
Trans-1,3-dichloropropene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
1,3-Dichloropropane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
Dibromochloromethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
1,2-Dibromoethane	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
2-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
4-Chlorotoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
tert butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
sec butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
Isopropyltoluene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
n butylbenzene	5	20	0.00	0.00	0.00	0.00	0.00			-		-	0.00499	0.00499						0.00499		0.00499
1,2-Dibromo-3-chloropropane	10	20	0.01	0.01	0.01	0.01	0.00			-		-	0.00999	0.00999						0.00999		0.00999
Other SVOC Suite Substances which do not have a GAC																						
Bis(2-chloroethyl)ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Nitrobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Isophorone	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
2-Nitrophenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Bis(2-chloroethoxy)methane	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
4-Chloro-3-methylphenol	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
2,4,5-Trichlorophenol	0.15	20	0.15	0.15	0.15	0.15	0.00			-		-	0.149	0.149						0.149		0.149
2-Methylnaphthalene	0.1	20	0.09	1.20	0.29	0.10	0.34			-		-	0.1	0.0999						0.2		0.0999
Dimethyl phthalate	0.1	20	0.09	0.20	0.10	0.10	0.02			-		-	0.0999	0.0999						0.0999		0.0999
Dibenzofuran	0.1	20	0.09	0.50	0.15	0.10	0.12			-		-	0.0999	0.0999						0.1		0.0999
4-Chlorophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
4-Nitroaniline	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Azobenzene	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Bromophenyl phenyl ether	0.1	20	0.09	0.10	0.10	0.10	0.00			-		-	0.0999	0.0999						0.0999		0.0999
Carbazole	0.1	20	0.09	0.50	0.17	0.10	0.12			-		-	0.0999	0.3						0.3		0.0999
TPH Additivity Check		**HAZARD QUOTIENTS FOR EACH FRACTION**																				
												Aliph	0.000000825	0.000000825						0.000000825		0.000000825
												Aliph	1.2475E-06	1.2475E-06						1.2475E-06		1.2475E-06
											Considered additive	Alipha	0.000181727	0.000181727						0.000181727		0.000181727
												Alipha	4.25319E-05	4.25319E-05						4.25319E-05		4.25319E-05
												Alipha	3.33222E-05	3.33222E-05						3.33222E-05		3.33222E-05
												Aliphat	0.000005555	0.000005555						1.83333E-05		0.000005555
												Aliphat	0.000005555	0.000005555						0.000005555		0.000005555
												Aro	1.16279E-07	1.15116E-07						2.32558E-07		1.15116E-07
												Arom	2.77222E-07	2.77222E-07						2.77222E-07		2.77222E-07
											Considered additive	Aroma	0.000117588	0.000117588						0.000117588		0.000117588
												Aroma	5.87941E-05	5.87941E-05						5.87941E-05		5.87941E-05
												Aroma	5.26053E-05	5.26053E-05						7.89474E-05		5.26053E-05
											Considered additive	Aroma	0.000285714	0.000142857						0.000535714		0.000107107
												Aroma	0.001214286	0.000357107						0.002357143		0.000357107
												Aromat	0.000357107	0.000357107						0.000357107		0.000357107
												Hazard Index	**0.000257581**	**0.000257581**						**0.000257581**		**0.000257581**
											Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.	**Hazard Index**	**0.000228988**	**0.000228988**						**0.00025533**		**0.000228988**

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:	**Default - Human Health - commercial (6%SOM)**
Client:	
Site:	
Job no.:	
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**All**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Dataset mean SOM% **6.16**

Scenario SOM% **6**

/kg unless otherwise stated

Chemical of Potential Concern	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @6% SOM	GAC	GAC Source	Central Limit Theorem Statistical Assessment (after CL:AIRE 2020)										
													29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
													TP09	TP09	TP09	TP09	TP10	TP10	TP10	TP10	TP10	TP10
													1	3	2	3	0.2	0.5	0.85	1	2.1	2.6
												Results of Significance Test	MG	AFD	MG	AFD	MG	MG	MG	MG	MG	AFD
												Hazard Index f	0.0015	0.000499964						0.002892857		0.000464214

Legend:

Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Tidal Flat Deposits		
Alluvial Fan Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
	<10	Value excluded from statistical analysis
	Y	Text result
	-	Represents a determinand that was not tested.
	•	represents a data point that is not included in the current filter settings

n:

Phytotoxic GQRA

Assessment of Chemicals of Potential Concern to Plant Life

Risk parameter:	**Phytotoxic pH >7**
Client:	Morgan Sindall
Site:	SWITCH
Job no.:	26279
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**ALL**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Hydrock

Dataset mean pH	**9.41**
Scenario pH	**>7**

All values in mg/kg unless otherwise stated

CAS No / P Code	Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	GAC	GAC Source
0	**Hydrock Default Suite - FOC / SOM / pH**											
P1334	pH (su)	pH Units	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-
-	**Hydrock Default Suite - Metals & PAH**											
7440-38-2	Arsenic	mg/kg	2	35	1.99	58.00	14.00	12.00	9.68	0	250	MAFF 1998
7440-42-8	Boron	mg/kg	1	35	0.99	2.20	1.08	0.99	0.29	0	5	Nable, et al. 1997
16065-83-1	Chromium (III)	mg/kg	2	35	5.00	**715.00**	145.23	74.00	168.99	**3**	400	MAFF 1998 (Cr(T))
18540-29-9	Chromium (VI)	mg/kg	2	35	1.90	1.99	1.99	1.99	0.02	0	25	ICRCL 70/90 1990
7440-50-8	Copper	mg/kg	4	35	3.99	**503.00**	59.26	38.00	86.16	**1**	200	BS3882 2015
7440-02-0	Nickel	mg/kg	3	35	6.00	43.00	15.89	15.00	8.13	0	110	BS3882 2015
7440-66-6	Zinc	mg/kg	3	35	15.00	**537.00**	160.11	119.00	128.67	**5**	300	BS3882 2015

Date	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23
Zone																					
Location	TP01	TP01	TP01	TP01	TP01	TP02	TP02	TP02	TP02	TP02	TP03	TP03	TP03	TP03	TP04	TP04	TP04	TP04	TP04	TP04	TP04
Depth (m bgl)	0.3	0.65	1.2	1.7	1.7	0.15	1.6	2.5	2.5	2.9	0.4	1.4	2.4	2.55	0.2	0.3	1	1	1.2	1.2	1.2
Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG
0																					
P1334	10.7		8.6	9.1		10.2	9.5	9.8		7.7	7.7	9	7.3	6.9	11	10.7	9.9	9.9	9.7		9.9
-																					
7440-38-2	14		23				12			13	6	13	7	9	10		8				
7440-42-8	0.99		0.99				0.99			1.2	0.99	0.99	0.99	0.99	0.99		0.99				
16065-83-1	118		98				250			28	25	175	36	11	210		284				
18540-29-9	1.99		1.99				1.99			1.9	1.99	1.99	1.99	1.99	1.99		1.99				
7440-50-8	91		177				51			13	15	62	16	19	35		36				
7440-02-0	19		43				16			12	21	16	6	11	10		12				
7440-66-6	228		537				119			51	68	160	479	63	107		93				

Legend:

MG	Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
TFD	Tidal Flat Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
AFD	Alluvial Fan Deposits	**64.00**	Value exceed saturation limit and substance is liquid or solid at ambient temperature
		***<10**	Value excluded from statistical analysis
		Y	Text result
		-	Represents a determinand that was not tested.
		•	represents a data point that is not included in the current filter settings

Template Version:
1.06: 20/07/23

Assessment of Chemicals of Potential Concern to Plant Life

Risk parameter:	**Phytotoxic pH >7**
Client:	Morgan Sindall
Site:	SWITCH
Job no.:	26279
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**ALL**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Hydrock

Dataset mean pH **9.41**

ng/kg unless otherwise stated — Scenario pH **>7**

Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	GAC	GAC Source	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	27/09/23	29/09/23	29/09/23
												TP04	TP04	BH01	TP05	TP05	TP05	TP05	TP05	TP05	TP05	TP06	TP06	TP06	TP06	TP06	TP07	TP07	TP07	TP07	TP07	TP07	TP07	BH01	BH01
												1.8	2	0.2	0.2	0.3	1	1	2	2	2.8	0.3	0.5	1	1.5	2.5	0.2	0.5	1	2	2.6	3	3	1.1	3
												MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	MG	MG	MG	MG	MG	MG	MG	MG	MG	TFD	AFD	AFD	MG	AFD
Hydrock Default Suite - FOC / SOM / pH																																			
pH (su)	pH Units	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	8.7	9.4	10.6	10.6	10.4	11.9	10.6	9.2	8.8	7.5	11.3	9.6	10.1	9.8		10.4	8.3	10.4	10	7.4	7.4	7.6	10.3	8.2
Hydrock Default Suite - Metals & PAH																																			
Arsenic	mg/kg	2	35	1.99	58.00	14.00	12.00	9.68	0	250	MAFF 1998	21		9	17		14			19	6		24		11		11		13		58	7		22	1.99
Boron	mg/kg	1	35	0.99	2.20	1.08	0.99	0.29	0	5	Nable, et al. 1997	0.99		0.99	0.99		0.99			1.9	0.99		0.99		0.99		0.99		0.99		2.2	0.99		0.99	0.99
Chromium (III)	mg/kg	2	35	5.00	**715.00**	145.23	74.00	168.99	**3**	400	MAFF 1998 (Cr(T))	187		25	79		715			216	11		65		175		57		283		66	18		330	11
Chromium (VI)	mg/kg	2	35	1.90	1.99	1.99	1.99	0.02	0	25	ICRCL 70/90 1990	1.99		1.99	1.99		1.99			1.99	1.99		1.99		1.99		1.99		1.99		1.99	1.99		1.99	1.99
Copper	mg/kg	4	35	3.99	**503.00**	59.26	38.00	86.16	**1**	200	BS3882 2015	58		19	82		64			51	10		63		38		26		503		142	11		76	3.99
Nickel	mg/kg	3	35	6.00	43.00	15.89	15.00	8.13	0	110	BS3882 2015	15		7	12		20			16	12		17		13		9		14		17	6		29	7
Zinc	mg/kg	3	35	15.00	**537.00**	160.11	119.00	128.67	**5**	300	BS3882 2015	107		88	156		163			117	45		230		82		150		164		366	28		183	19

Legend:

MG	Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
TFD	Tidal Flat Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
AFD	Alluvial Fan Deposits	**64.00**	Value exceed saturation limit and substance is liquid or solid at ambient temperature
		<10	Value excluded from statistical analysis
		Y	Text result
		-	Represents a determinand that was not tested.
		+	represents a data point that is not included in the current filter settings

sion:

3

Assessment of Chemicals of Potential Concern to Plant Life

Risk parameter:	**Phytotoxic pH >7**
Client:	Morgan Sindall
Site:	SWITCH
Job no.:	26279
Lab. report no(s).:	23-12154 / 23-12382

Data Filters

Zone	**All**
Strata	**ALL**
Depth Min (m bgl)	**0.1**
Depth Max (m bgl)	**5.5**

Hydrock

Dataset mean pH	**9.41**
Scenario pH	**>7**

ng/kg unless otherwise stated

Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	GAC	GAC Source	29/09/23	28/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23	29/09/23
												BH01	BH02	BH02	BH02	TP08	TP08	TP08	TP08	TP08	TP09	TP09	TP09	TP09	TP10	TP10	TP10	TP10	TP10	TP10
												5.5	1	2.8	3.7	0.1	1	1	1.5	1.5	1	3	2	3	0.2	0.5	0.85	1	2.1	2.6
												AFD	MG	TFD	AFD	MG	MG	MG	MG	MG	MG	AFD	MG	AFD	MG	MG	MG	MG	MG	AFD
Hydrock Default Suite - FOC / SOM / pH																														
pH (su)	pH Units	0.1	57	6.90	11.90	9.41	9.70	1.23		-	-	7.4	11.1	7.9	10	8.4	10.2		10.3	9	10.5	8.9	8.9	10.4	10.2	10.9	9.2	9.4		7.4
Hydrock Default Suite - Metals & PAH																														
Arsenic	mg/kg	2	35	1.99	58.00	14.00	12.00	9.68	0	250	MAFF 1998	1.99	17	12	5		12				17	8			11	23		21		13
Boron	mg/kg	1	35	0.99	2.20	1.08	0.99	0.29	0	5	Nable, et al. 1997	0.99	0.99	0.99	0.99		0.99				0.99	0.99			0.99	0.99		0.99		1.9
Chromium (III)	mg/kg	2	35	5.00	**715.00**	145.23	74.00	168.99	**3**	400	MAFF 1998 (Cr(T))	5	580	27	24		301				435	91			24	31		74		18
Chromium (VI)	mg/kg	2	35	1.90	1.99	1.99	1.99	0.02	0	25	ICRCL 70/90 1990	1.99	1.99	1.99	1.99		1.99				1.99	1.99			1.99	1.99		1.99		1.99
Copper	mg/kg	4	35	3.99	**503.00**	59.26	38.00	86.16	**1**	200	BS3882 2015	3.99	59	19	8		53				73	19			27	56		83		11
Nickel	mg/kg	3	35	6.00	43.00	15.89	15.00	8.13	0	110	BS3882 2015	6	18	14	20		18				20	14			9	20		39		18
Zinc	mg/kg	3	35	15.00	**537.00**	160.11	119.00	128.67	**5**	300	BS3882 2015	15	123	47	56		236				217	109			132	310		440		116

Legend:

MG	MadeGround	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
TFD	Tidal Flat Deposits	0.02	Value greater than, or equal to, the generic assessment criterion (GAC).
AFD	Alluvial Fan Deposits	**64.00**	Value exceed saturation limit and substance is liquid or solid at ambient temperature
		<10	Value excluded from statistical analysis
		Y	Text result
		-	Represents a determinand that was not tested.
		+	represents a data point that is not included in the current filter settings

sion:

3

Controlled waters GQRA

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario C - EQS (other)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I	
P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					
7440-22-4	Silver (Ag) (dissolved)			2	2	0.13	0.19	0.191	0.19095	0.191		0.5		0		0	
7429-90-5	Aluminium (Al) (dissolved)			2	1	5	3	268	254.75	268		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	2	2	5	10.5	11.3	11.26	11.3		25		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	5	133	135	134.9	135		7000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	5	21.2	45.4	44.19	45.4		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.4	0.19	0.199	0.19855	0.199		0.2		0		0	
7440-48-4	Cobalt (Co) (dissolved)		NP	2	0	5	0.4	0.7	0.685	0.7		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.91	19.92	19.9195	19.92		0.6		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.93	19.95	19.949	19.95		n/a					
7440-47-3	Chromium (Cr) (total) (dissolved)			2	1	5	3.5	9.2	8.915	9.2		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	0	5	3.4	3.5	3.495	3.5		3.76		0		0	EQS (other) is a function of DOC and may exceed the stated value.
7439-89-6	Iron (Fe) (dissolved)	SP		2	1	5	4	192	182.6	192		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	2	0.05	2.2	3.99	3.9005	3.99		0.07		2		2	
P1286	Manganese (Mn) (dissolved)	SP		2	1	5	0.4	251	238.47	251		n/a					
7440-23-5	Sodium (Na) (dissolved)			2	2	0.2	21.4	45.8	44.58	45.8		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	0	5	2.7	3.1	3.08	3.1		8.6		0		0	
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	5	0.19	0.199	0.19855	0.199		1.3		0		0	
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	1.2	2.4	2.34	2.4		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	1.4	2.8	2.73	2.8		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	5	0.1	0.6	0.575	0.6		10		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	2	5	46.7	85.9	83.94	85.9		100		0		0	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	1	2	1	5	4.8	5		7.9		0		0	EQS (other) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.99	4.99	4.99	4.99		1		2		0	
57-12-5	Cyanide (total)			2	1	5	<5	391	371.7	391		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	1250	2230	2181	2230		n/a					
P1238	Ammoniacal Nitrogen (as N)		NP	2	2	50	1250	2230	2181	2230		n/a					
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	1250	2230	2181	2230		21		2		2	
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.798	0.799	0.79895	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	31	95	91.8	95		n/a					
16984-48-8	Fluoride (F^-)			2	0	0.5	0.498	0.499	0.49895	0.499		5000		0		0	
P1348	Nitrate (NO_3^-)			2	0	0.5	0.49	0.498	0.4976	0.498		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.498	0.499	0.49895	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	87	125	123.1	125		n/a					
P1134	pH (min.) (su)			2	0		7.7	8.3	8.27	8.3		6		0		0	
P1134	pH (max.) (su)			2	0		7.7	8.3	8.27	8.3		8.5		0		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	513	665	657.4	665		n/a					
120-12-7	Anthracene	**PH**	**H**	2	1	0.01	0.009	0.02	0.01945	0.02		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.0091	0.0091	0.0091	0.0091		0.00017		2		0	
206-44-0	Fluoranthene	***P***	**H**	2	1	0.01	0.009	0.04	0.03845	0.04		0.0063		2		1	
91-20-3	Naphthalene	***P***	NP	2	1	0.01	0.0099	0.02	0.019495	0.02		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	1	0.16	0.159	0.98	0.93895	0.98		n/a					
P1877	Phenol	SP	**NP**	0								7.7					
P1407	Ali EC5-EC6			2	0	10	9.99	9.99	9.99	9.99		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.98	9.98	9.98	9.98		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.97	9.97	9.97	9.97		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.96	9.96	9.96	9.96		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.95	9.95	9.95	9.95		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.94	9.94	9.94	9.94		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.93	9.93	9.93	9.93		10		0		0	
P1441	Aro EC5-EC7			2	1	10	9.99	133	126.8495	133		10		1		1	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	1	10	9.98	134	127.799	134		10		1		1	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	1	10	9.97	42	40.3985	42		10		1		1	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	1	10	9.96	23	22.348	23		10		1		1	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.95	9.99	9.988	9.99		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.94	9.98	9.978	9.98		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			2	0	10	9.93	9.97	9.968	9.97		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	2	10	69.99	331	317.9495	331		10		2		2	

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
71-43-2	Benzene	*P*	**H**	2	1	1	0.99	133	126.3995	133		8		1		1	
108-88-3	Toluene	SP	**H**	2	1	5	4.99	134	127.5495	134		74		1		1	
100-41-4	Ethylbenzene		**H**	2	0	5	4.98	4.99	4.9895	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	1	5	4.97	154	146.5485	154		30		1		1	EQS for total xylene
P1374	m,p-Xylene		**H**	2	1	10	9.99	395	375.7495	395		30		1		1	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.99	9.998	9.9976	9.998		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.98	4.99	4.9895	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		300		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.99	9.998	9.9976	9.998		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	2	0	10	9.988	9.988	9.988	9.988		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.98	4.98	4.98		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.98	4.999	4.99805	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.985	4.99	4.98975	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.97	4.991	4.98995	4.991		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.95	4.9991	4.996645	4.9991		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.97	4.999	4.99755	4.999		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.9	4.95	4.9475	4.95		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.97	4.999	4.99755	4.999		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.98	4.991	4.99045	4.991		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.98	4.99	4.9895	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.969	4.999	4.9975	4.999		n/a					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.98	9.999	9.99805	9.999		n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	2	0	0.1	0.0989	0.099	0.098995	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	*P*	**H**	2	0	5	4.997	4.999	4.9989	4.999		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.098	0.099	0.09895	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.0999	0.099805	0.0999		0.42		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	2	0	0.1	0.096	0.097	0.09695	0.097		40		0		0	
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.098	0.0979	0.098		0.75		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.092	0.099	0.09865	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.098	0.099	0.09895	0.099		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.01					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.0007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.014					
85535-84-8	Chloroalkanes C10-C13	**PH**	**H**	0								0.4					
25567-68-4	Chloronitrotoluenes		**H**	0								10					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	**PH**		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	**PH**	**H**	0								0.0008					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perflurooctane sulfonic acid (PFOS) & derivatives	**PH**	**H**	0								0.00013					
335-67-1	Perfluorooctanoic Acid (PFOA)	**PH**		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		**H**	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		**H**	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								10					
7782-50-5	Chlorine (total free available)	SP	**NP**	0								10					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		**H**	0								n/a					
569-64-2	Malachite green		**H**	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								3000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	**PH**	**H**	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								10					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								n/a					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		**H**	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.003					
74070-46-5	Aclinofen	***P***		0								0.012					
15972-60-8	Alachlor	***P***	**H**	0								0.3					
116-06-3	Aldicarb		**NP**	0								n/a					
309-00-2	Aldrin		**H**	0								n/a					
GRP07	Aldrin & dieldrin		**H**	0								n/a					
1912-24-9	Atrazine	***P***	**H**	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		**H**	0								n/a					
86-50-0	Azinphos-methyl		**H**	0								0.01					
25057-89-0	Bentazone		**NP**	0								500					
42576-02-3	Bifenox	***P***	**H**	0								0.0012					
1689-84-5	Bromoxynil		**H**	0								100					
10605-21-7	Carbendazim	SP	**H**	0								n/a					
1563-66-2	Carbofuran		**NP**	0								n/a					
57-74-9	Chlordane		**H**	0								n/a					
470-90-6	Chlorofenvinphos	***P***	**H**	0								0.1					
101-21-3	Chloropropham		**H**	0								10					
2921-88-2	Chloropyrifos	***P***	**H**	0								0.03					
1897-45-6	Chlorothalonil	SP	**H**	0								n/a					
15545-48-9	Chlorotoluron		**H**	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	**H**	0								0.005					
56-72-4	Coumaphos		**H**	0								0.03					
21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.000008					
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
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JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
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(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.00006					
115-32-2	Dicofol	PH	**H**	0								0.000032					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.005					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.0005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								n/a					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								1E-08					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								1E-08					
1024-57-3	Heptachlor epoxide			0								1E-08					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.002					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.02					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								80					
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								n/a					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								n/a					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								n/a					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								n/a					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.0002					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.015					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.0065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					
2303-17-5	Triallate		**H**	0								0.25					
24017-47-8	Triazaphos		**H**	0								0.005					
1582-09-8	Trifluralin	**PH**	**H**	0								0.03					
1262-21-1	Triphenyltin and derivatives		**H**	0								0.008					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario B - EQS (inland)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I	
P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data: No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value	Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red)	Inland Waters EQS	No. Samples Exceeding Water Quality Target	Inland Waters EQS	No. Samples above LoD Exceeding Water Quality	Inland Waters EQS	Notes
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			2	2	0.13	0.19	0.191	0.19095	0.191		0.05		2		2	
7429-90-5	Aluminium (Al) (dissolved)			2	1	5	3	268	254.75	268		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	2	2	5	10.5	11.3	11.26	11.3		50		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	5	133	135	134.9	135		2000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	5	21.2	45.4	44.19	45.4		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.4	0.19	0.199	0.19855	0.199		0.08		2		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	2	0	5	0.4	0.7	0.685	0.7		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.91	19.92	19.9195	19.92		3.4		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.93	19.95	19.949	19.95		4.7		2		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			2	1	5	3.5	9.2	8.915	9.2		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	0	5	3.4	3.5	3.495	3.5		1		2		0	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		2	1	5	4	192	182.6	192		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	2	0.05	2.2	3.99	3.9005	3.99		0.07		2		2	
P1286	Manganese (Mn) (dissolved)	SP		2	1	5	0.4	251	238.47	251		123		1		1	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			2	2	0.2	21.4	45.8	44.58	45.8		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	0	5	2.7	3.1	3.08	3.1		4		0		0	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	5	0.19	0.199	0.19855	0.199		1.2		0		0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	1.2	2.4	2.34	2.4		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	1.4	2.8	2.73	2.8		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	5	0.1	0.6	0.575	0.6		25		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	2	5	46.7	85.9	83.94	85.9		20		2		2	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	1	2	1	5	4.8	5		12.3		0		0	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.99	4.99	4.99	4.99		1		2		0	
57-12-5	Cyanide (total)			2	1	5	<5	391	371.7	391		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	1250	2230	2181	2230		n/a					
P1238	Ammnoniacal Nitrogen (as N)		NP	2	2	50	1250	2230	2181	2230		300		2		2	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	1250	2230	2181	2230		n/a					
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.798	0.799	0.79895	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	31	95	91.8	95		250000		0		0	
16984-48-8	Fluoride (F^-)			2	0	0.5	0.498	0.499	0.49895	0.499		1000		0		0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			2	0	0.5	0.49	0.498	0.4976	0.498		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.498	0.499	0.49895	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	87	125	123.1	125		400000		0		0	
P1134	pH (min.) (su)			2	0		7.7	8.3	8.27	8.3		6		0		0	
P1134	pH (max.) (su)			2	0		7.7	8.3	8.27	8.3		9		0		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	513	665	657.4	665		n/a					
120-12-7	Anthracene	**PH**	**H**	2	1	0.01	0.009	0.02	0.01945	0.02		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.0091	0.0091	0.0091	0.0091		0.00017		2		0	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	2	1	0.01	0.009	0.04	0.03845	0.04		0.0063		2		1	
91-20-3	Naphthalene	***P***	NP	2	1	0.01	0.0099	0.02	0.019495	0.02		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	1	0.16	0.159	0.98	0.93895	0.98		n/a					
P1877	Phenol	SP	**NP**	0								7.7					
P1407	Ali EC5-EC6			2	0	10	9.99	9.99	9.99	9.99		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.98	9.98	9.98	9.98		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.97	9.97	9.97	9.97		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.96	9.96	9.96	9.96		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.95	9.95	9.95	9.95		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.94	9.94	9.94	9.94		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.93	9.93	9.93	9.93		10		0		0	
P1441	Aro EC5-EC7			2	1	10	9.99	133	126.8495	133		10		1		1	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	1	10	9.98	134	127.799	134		10		1		1	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	1	10	9.97	42	40.3985	42		10		1		1	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	1	10	9.96	23	22.348	23		10		1		1	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.95	9.99	9.988	9.99		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.94	9.98	9.978	9.98		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			2	0	10	9.93	9.97	9.968	9.97		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	2	10	69.99	331	317.9495	331		10		2		2	

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
71-43-2	Benzene	*P*	**H**	2	1	1	0.99	133	126.3995	133		10		1		1	
108-88-3	Toluene	SP	**H**	2	1	5	4.99	134	127.5495	134		74		1		1	
100-41-4	Ethylbenzene		**H**	2	0	5	4.98	4.99	4.9895	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	1	5	4.97	154	146.5485	154		30		1		1	EQS for total xylene
P1374	m,p-Xylene		**H**	2	1	10	9.99	395	375.7495	395		30		1		1	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.99	9.998	9.9976	9.998		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.98	4.99	4.9895	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		400		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.99	9.998	9.9976	9.998		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	2	0	10	9.988	9.988	9.988	9.988		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.98	4.98	4.98		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.98	4.999	4.99805	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.985	4.99	4.98975	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.97	4.991	4.98995	4.991		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.95	4.9991	4.996645	4.9991		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.97	4.999	4.99755	4.999		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.9	4.95	4.9475	4.95		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.97	4.999	4.99755	4.999		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.98	4.991	4.99045	4.991		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.98	4.99	4.9895	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.969	4.999	4.9975	4.999		140		0		0	
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.98	9.999	9.99805	9.999		n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	2	0	0.1	0.0989	0.099	0.098995	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	*P*	**H**	2	0	5	4.997	4.999	4.9989	4.999		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.098	0.099	0.09895	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.0999	0.099805	0.0999		4.2		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	2	0	0.1	0.096	0.097	0.09695	0.097		40		0		0	
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.098	0.0979	0.098		7.5		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.092	0.099	0.09865	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.098	0.099	0.09895	0.099		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.1					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.14					
85535-84-8	Chloroalkanes C10-C13	**PH**	**H**	0								0.4					
25567-68-4	Chloronitrotoluenes		**H**	0								10					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	**PH**		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	**PH**	**H**	0								0.0016					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perflurooctane sulfonic acid (PFOS) & derivatives	**PH**	**H**	0								0.00065					
335-67-1	Perfluorooctanoic Acid (PFOA)	**PH**		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		**H**	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		**H**	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								2					
7782-50-5	Chlorine (total free available)	SP	**NP**	0								2					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		**H**	0								n/a					
569-64-2	Malachite green		**H**	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	**PH**	**H**	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								0.25					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		**H**	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.01					
74070-46-5	Aclinofen	***P***		0								0.12					
15972-60-8	Alachlor	***P***	**H**	0								0.3					
116-06-3	Aldicarb		**NP**	0								n/a					
309-00-2	Aldrin		**H**	0								n/a					
GRP07	Aldrin & dieldrin		**H**	0								n/a					
1912-24-9	Atrazine	***P***	**H**	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		**H**	0								n/a					
86-50-0	Azinphos-methyl		**H**	0								0.01					
25057-89-0	Bentazone		**NP**	0								500					
42576-02-3	Bifenox	***P***	**H**	0								0.012					
1689-84-5	Bromoxynil		**H**	0								100					
10605-21-7	Carbendazim	SP	**H**	0								0.15					
1563-66-2	Carbofuran		**NP**	0								n/a					
57-74-9	Chlordane		**H**	0								n/a					
470-90-6	Chlorofenvinphos	***P***	**H**	0								0.1					
101-21-3	Chloropropham		**H**	0								10					
2921-88-2	Chloropyrifos	***P***	**H**	0								0.03					
1897-45-6	Chlorothalonil	SP	**H**	0								0.035					
15545-48-9	Chlorotoluron		**H**	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	**H**	0								0.01					
56-72-4	Coumaphos		**H**	0								0.01					
21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.00008					
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan
Site: SWITCH,
Job no: C26279
Test Certificates(s): 23-13826
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
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JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.0006					
115-32-2	Dicofol	PH	**H**	0								0.0013					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.001					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								5					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								2E-07					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								2E-07					
1024-57-3	Heptachlor epoxide			0								2E-07					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.02					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.0001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.01					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								0.01					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								0.02					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								0.01					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								0.3					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.15					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					
2303-17-5	Triallate		**H**	0								0.25					
24017-47-8	Triazaphos		**H**	0								0.005					
1582-09-8	Trifluralin	**PH**	**H**	0								0.03					
1262-21-1	Triphenyltin and derivatives		**H**	0								0.02					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario B - EQS (inland)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I
P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			2	0	0.2	0.198	0.199	0.19895	0.199		0.05		2		0	
7429-90-5	Aluminium (Al) (dissolved)			2	0	1	0.99	<1	0.9995	<1		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	2	2	0.2	0.7	2.1	2.03	2.1		50		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	1	173	241	237.6	241		2000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	0.2	21	84	80.85	84		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.2	0.198	0.199	0.19895	0.199		0.08		2		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	2	1	0.2	0.197	2	1.90985	2		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.99	19.991	19.99095	19.991		3.4		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.992	19.992	19.992	19.992		4.7		2		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			2	0	0.2	0.19	0.198	0.1976	0.198		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	2	0.2	0.6	1.3	1.265	1.3		1		1		1	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		2	2	1	6	58	55.4	58		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	1	0.04	0.039	0.12	0.11595	0.12		0.07		1		1	
P1286	Manganese (Mn) (dissolved)	SP		2	2	0.2	492	2530	2428.1	2530		123		2		2	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			2	2	0.1	43.2	67.3	66.095	67.3		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	2	0.2	1.4	2.3	2.255	2.3		4		0		0	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	0.2	0.19	0.195	0.19475	0.195		1.2		0		0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	4.99	4.996	4.9957	4.996		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	4.981	4.989	4.9886	4.989		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	0.1	0.09	<0.1	0.0995	<0.1		25		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	0	0.2	0.198	0.199	0.19895	0.199		20		0		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	2	1	2	3	2.95	3		12.3		0		0	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.989	4.99	4.98995	4.99		1		2		0	
57-12-5	Cyanide (total)			2	1	5	4.97	53	50.5985	53		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	284	635	617.45	635		n/a					
P1238	Ammoniacal Nitrogen (as N)		NP	2	2	50	284	635	617.45	635		300		1		1	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	284	635	617.45	635		n/a					
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.798	0.799	0.79895	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	74	88	87.3	88		250000		0		0	
16984-48-8	Fluoride (F^-)			2	0	0.5	0.498	0.499	0.49895	0.499		1000		0		0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			2	0	0.5	0.49	0.491	0.49095	0.491		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.49	0.499	0.49855	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	86	93	92.65	93		400000		0		0	
P1134	pH (min.) (su)			2	0		7.6	7.6	7.6	7.6		6		0		0	
P1134	pH (max.) (su)			2	0		7.6	7.6	7.6	7.6		9		0		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	659	765	759.7	765		n/a					
120-12-7	Anthracene	**PH**	**H**	2	0	0.01	0.009	0.0098	0.00976	0.0098		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.009	0.0098	0.00976	0.0098		0.00017		2		0	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	2	0	0.01	0.0091	0.0099	0.00986	0.0099		0.0063		2		0	
91-20-3	Naphthalene	***P***	NP	2	0	0.01	0.009	0.0092	0.00919	0.0092		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	0	0.16	0.158	0.159	0.15895	0.159		n/a					
P1877	Phenol	SP	**NP**	2	0	0.1	0.09	0.096	0.0957	0.096		7.7		0		0	
P1407	Ali EC5-EC6			2	0	10	9.998	9.999	9.99895	9.999		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.998	9.9997	9.999615	9.9997		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.997	9.997	9.997	9.997		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.996	9.996	9.996	9.996		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.995	9.995	9.995	9.995		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.994	9.994	9.994	9.994		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.993	9.993	9.993	9.993		10		0		0	
P1441	Aro EC5-EC7			2	0	10	9.992	9.998	9.9977	9.998		10		0		0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	0	10	9.991	9.993	9.9929	9.993		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	0	10	9.988	9.99	9.9899	9.99		10		0		0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	0	10	9.983	9.989	9.9887	9.989		10		0		0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.988	9.988	9.988	9.988		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.987	9.987	9.987	9.987		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			2	0	10	9.986	9.986	9.986	9.986		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	***P***	**H**	2	0	1	0.98	0.99	0.9895	0.99		10		0		0	

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.
WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
108-88-3	Toluene	SP	**H**	2	0	5	4.99	4.998	4.9976	4.998		74		0		0	
100-41-4	Ethylbenzene		**H**	2	0	5	4.98	4.99	4.9895	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	0	5	4.996	4.999	4.99885	4.999		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	2	0	10	9.997	9.998	9.99795	9.998		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.98	9.99	9.9895	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.99	4.998	4.9976	4.998		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		400		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.98	9.997	9.99615	9.997		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.991	4.99095	4.991		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	***P***	**NP**	2	0	10	9.98	9.99	9.9895	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.99	4.9895	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.999	4.999	4.999	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.98	4.991	4.99045	4.991		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.998	4.999	4.99895	4.999		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.982	4.997	4.99625	4.997		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.974	4.996	4.9949	4.996		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.966	4.995	4.99355	4.995		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.958	4.994	4.9922	4.994		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	***P***	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.974	4.996	4.9949	4.996		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.994	4.998	4.9978	4.998		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.999	4.999	4.999	4.999		140		0		0	
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.977	9.997	9.996	9.997		n/a					
12002-48-1	Trichlorobenzenes	***P***	**NP**	2	0	0.1	0.098	0.099	0.09895	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	***P***	**H**	2	0	5	4.997	4.998	4.99795	4.998		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.09	0.099	0.09855	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.098	0.098	0.098		4.2		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	2	0	0.1	0.096	0.097	0.09695	0.097		40		0		0	
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.099	0.09885	0.099		7.5		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.09	0.099	0.09855	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.096	0.098	0.0979	0.098		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.1					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.14					
85535-84-8	Chloroalkanes C10-C13	**PH**	**H**	0								0.4					

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
25567-68-4	Chloronitrotoluenes		**H**	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	**PH**		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	**PH**	**H**	0								0.0016					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	**PH**	**H**	0								0.00065					
335-67-1	Perfluorooctanoic Acid (PFOA)	**PH**		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		**H**	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		**H**	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								2					
7782-50-5	Chlorine (total free available)	SP	**NP**	0								2					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		**H**	0								n/a					
569-64-2	Malachite green		**H**	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	**PH**	**H**	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								0.25					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		**H**	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.01					
74070-46-5	Aclinofen	***P***		0								0.12					
15972-60-8	Alachlor	***P***	**H**	0								0.3					
116-06-3	Aldicarb		**NP**	0								n/a					
309-00-2	Aldrin		**H**	0								n/a					
GRP07	Aldrin & dieldrin		**H**	0								n/a					
1912-24-9	Atrazine	***P***	**H**	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		**H**	0								n/a					
86-50-0	Azinphos-methyl		**H**	0								0.01					
25057-89-0	Bentazone		**NP**	0								500					
42576-02-3	Bifenox	***P***	**H**	0								0.012					
1689-84-5	Bromoxynil		**H**	0								100					
10605-21-7	Carbendazim	SP	**H**	0								0.15					
1563-66-2	Carbofuran		**NP**	0								n/a					
57-74-9	Chlordane		**H**	0								n/a					
470-90-6	Chlorofenvinphos	***P***	**H**	0								0.1					
101-21-3	Chloropropham		**H**	0								10					
2921-88-2	Chloropyrifos	***P***	**H**	0								0.03					
1897-45-6	Chlorothalonil	SP	**H**	0								0.035					
15545-48-9	Chlorotoluron		**H**	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	**H**	0								0.01					
56-72-4	Coumaphos		**H**	0								0.01					
21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.00008					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

PNEC calculated (inland EQS)

P = priority substance
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SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.0006					
115-32-2	Dicofol	PH	**H**	0								0.0013					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.001					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								5					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								2E-07					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								2E-07					
1024-57-3	Heptachlor epoxide			0								2E-07					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.02					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.0001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.01					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								0.01					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								0.02					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								0.01					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								0.3					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.15					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.065					
5915-41-3	Tertbutylazine		**H**	0								n/a					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

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NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
148-79-8	Thiabendazole		NP	0								5					
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.02					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario C - EQS (other)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I	
P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					
7440-22-4	Silver (Ag) (dissolved)			2	0	0.2	0.198	0.199	0.19895	0.199		0.5		0		0	
7429-90-5	Aluminium (Al) (dissolved)			2	0	1	0.99	<1	0.9995	<1		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	2	2	0.2	0.7	2.1	2.03	2.1		25		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	1	173	241	237.6	241		7000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	0.2	21	84	80.85	84		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.2	0.198	0.199	0.19895	0.199		0.2		0		0	
7440-48-4	Cobalt (Co) (dissolved)		NP	2	1	0.2	0.197	2	1.90985	2		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.99	19.991	19.99095	19.991		0.6		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.992	19.992	19.992	19.992		n/a					
7440-47-3	Chromium (Cr) (total) (dissolved)			2	0	0.2	0.19	0.198	0.1976	0.198		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	2	0.2	0.6	1.3	1.265	1.3		3.76		0		0	EQS (other) is a function of DOC and may exceed the stated value.
7439-89-6	Iron (Fe) (dissolved)	SP		2	2	1	6	58	55.4	58		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	1	0.04	0.039	0.12	0.11595	0.12		0.07		1		1	
P1286	Manganese (Mn) (dissolved)	SP		2	2	0.2	492	2530	2428.1	2530		n/a					
7440-23-5	Sodium (Na) (dissolved)			2	2	0.1	43.2	67.3	66.095	67.3		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	2	0.2	1.4	2.3	2.255	2.3		8.6		0		0	
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	0.2	0.19	0.195	0.19475	0.195		1.3		0		0	
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	4.99	4.996	4.9957	4.996		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	4.981	4.989	4.9886	4.989		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	0.1	0.09	<0.1	0.0995	<0.1		10		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	0	0.2	0.198	0.199	0.19895	0.199		100		0		0	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	2	1	2	3	2.95	3		7.9		0		0	EQS (other) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.989	4.99	4.98995	4.99		1		2		0	
57-12-5	Cyanide (total)			2	1	5	4.97	53	50.5985	53		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	284	635	617.45	635		n/a					
P1238	Ammoniacal Nitrogen (as N)		NP	2	2	50	284	635	617.45	635		n/a					
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	284	635	617.45	635		21		2		2	
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.798	0.799	0.79895	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	74	88	87.3	88		n/a					
16984-48-8	Fluoride (F^-)			2	0	0.5	0.498	0.499	0.49895	0.499		5000		0		0	
P1348	Nitrate (NO_3^-)			2	0	0.5	0.49	0.491	0.49095	0.491		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.49	0.499	0.49855	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	86	93	92.65	93		n/a					
P1134	pH (min.) (su)			2	0		7.6	7.6	7.6	7.6		6		0		0	
P1134	pH (max.) (su)			2	0		7.6	7.6	7.6	7.6		8.5		0		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	659	765	759.7	765		n/a					
120-12-7	Anthracene	**PH**	**H**	2	0	0.01	0.009	0.0098	0.00976	0.0098		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.009	0.0098	0.00976	0.0098		0.00017		2		0	
206-44-0	Fluoranthene	***P***	**H**	2	0	0.01	0.0091	0.0099	0.00986	0.0099		0.0063		2		0	
91-20-3	Naphthalene	***P***	NP	2	0	0.01	0.009	0.0092	0.00919	0.0092		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	0	0.16	0.158	0.159	0.15895	0.159		n/a					
P1877	Phenol	SP	**NP**	2	0	0.1	0.09	0.096	0.0957	0.096		7.7		0		0	
P1407	Ali EC5-EC6			2	0	10	9.998	9.999	9.99895	9.999		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.998	9.9997	9.999615	9.9997		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.997	9.997	9.997	9.997		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.996	9.996	9.996	9.996		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.995	9.995	9.995	9.995		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.994	9.994	9.994	9.994		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.993	9.993	9.993	9.993		10		0		0	
P1441	Aro EC5-EC7			2	0	10	9.992	9.998	9.9977	9.998		10		0		0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	0	10	9.991	9.993	9.9929	9.993		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	0	10	9.988	9.99	9.9899	9.99		10		0		0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	0	10	9.983	9.989	9.9887	9.989		10		0		0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.988	9.988	9.988	9.988		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.987	9.987	9.987	9.987		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			2	0	10	9.986	9.986	9.986	9.986		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	***P***	**H**	2	0	1	0.98	0.99	0.9895	0.99		8		0		0	

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
108-88-3	Toluene	SP	**H**	2	0	5	4.99	4.998	4.9976	4.998		74		0		0	
100-41-4	Ethylbenzene		**H**	2	0	5	4.98	4.99	4.9895	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	0	5	4.996	4.999	4.99885	4.999		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	2	0	10	9.997	9.998	9.99795	9.998		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.98	9.99	9.9895	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.99	4.998	4.9976	4.998		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		300		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.98	9.997	9.99615	9.997		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.991	4.99095	4.991		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	***P***	**NP**	2	0	10	9.98	9.99	9.9895	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.99	4.9895	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.999	4.999	4.999	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.98	4.991	4.99045	4.991		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.998	4.999	4.99895	4.999		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.982	4.997	4.99625	4.997		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.974	4.996	4.9949	4.996		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.966	4.995	4.99355	4.995		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.958	4.994	4.9922	4.994		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	***P***	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.974	4.996	4.9949	4.996		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.994	4.998	4.9978	4.998		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.999	4.999	4.999	4.999		n/a					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.977	9.997	9.996	9.997		n/a					
12002-48-1	Trichlorobenzenes	***P***	**NP**	2	0	0.1	0.098	0.099	0.09895	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	***P***	**H**	2	0	5	4.997	4.998	4.99795	4.998		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.09	0.099	0.09855	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.098	0.098	0.098		0.42		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	2	0	0.1	0.096	0.097	0.09695	0.097		40		0		0	
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.099	0.09885	0.099		0.75		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.09	0.099	0.09855	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.096	0.098	0.0979	0.098		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.01					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.0007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.014					
85535-84-8	Chloroalkanes C10-C13	**PH**	**H**	0								0.4					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
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Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

PNEC calculated (inland EQS)

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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
25567-68-4	Chloronitrotoluenes		**H**	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	**PH**		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	**PH**	**H**	0								0.0008					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	**PH**	**H**	0								0.00013					
335-67-1	Perfluorooctanoic Acid (PFOA)	**PH**		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		**H**	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		**H**	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								10					
7782-50-5	Chlorine (total free available)	SP	**NP**	0								10					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		**H**	0								n/a					
569-64-2	Malachite green		**H**	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								3000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	**PH**	**H**	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								10					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								n/a					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		**H**	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.003					
74070-46-5	Aclinofen	***P***		0								0.012					
15972-60-8	Alachlor	***P***	**H**	0								0.3					
116-06-3	Aldicarb		**NP**	0								n/a					
309-00-2	Aldrin		**H**	0								n/a					
GRP07	Aldrin & dieldrin		**H**	0								n/a					
1912-24-9	Atrazine	***P***	**H**	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		**H**	0								n/a					
86-50-0	Azinphos-methyl		**H**	0								0.01					
25057-89-0	Bentazone		**NP**	0								500					
42576-02-3	Bifenox	***P***	**H**	0								0.0012					
1689-84-5	Bromoxynil		**H**	0								100					
10605-21-7	Carbendazim	SP	**H**	0								n/a					
1563-66-2	Carbofuran		**NP**	0								n/a					
57-74-9	Chlordane		**H**	0								n/a					
470-90-6	Chlorofenvinphos	***P***	**H**	0								0.1					
101-21-3	Chloropropham		**H**	0								10					
2921-88-2	Chloropyrifos	***P***	**H**	0								0.03					
1897-45-6	Chlorothalonil	SP	**H**	0								n/a					
15545-48-9	Chlorotoluron		**H**	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	**H**	0								0.005					
56-72-4	Coumaphos		**H**	0								0.03					
21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.000008					

Summary of Remedial Targets Methodology Screening

Hydrock

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Data set: Groundwater
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Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.00006					
115-32-2	Dicofol	PH	**H**	0								0.000032					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.005					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.0005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								n/a					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								1E-08					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								1E-08					
1024-57-3	Heptachlor epoxide			0								1E-08					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.002					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.02					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								80					
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								n/a					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								n/a					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								n/a					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								n/a					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.0002					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.015					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.0065					
5915-41-3	Tertbutylazine		**H**	0								n/a					

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Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
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Data set: Groundwater
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Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-12620
Dataset ALL ZONES

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
148-79-8	Thiabendazole		NP	0								5					
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.008					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario C - EQS (other)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-13124
Dataset ALL ZONES

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					
7440-22-4	Silver (Ag) (dissolved)			2	0	0.13	0.1299	0.12999	0.129986	0.12999		0.5		0		0	
7429-90-5	Aluminium (Al) (dissolved)			2	1	5	4.99	264	251.0495	264		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	1	0	5						25		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	5	99	151	148.4	151		7000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	5	52.5	165	159.375	165		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.4	0.398	0.399	0.39895	0.399		0.2		2		0	
7440-48-4	Cobalt (Co) (dissolved)		NP	2	0	5	4.98	4.99	4.9895	4.99		3		2		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.97	19.99	19.989	19.99		0.6		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.98	19.999	19.99805	19.999		n/a					
7440-47-3	Chromium (Cr) (total) (dissolved)			2	0	5	4.99	4.999	4.99855	4.999		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	1	5	4.99	34.2	32.7395	34.2		3.76		2		1	EQS (other) is a function of DOC and may exceed the stated value.
7439-89-6	Iron (Fe) (dissolved)	SP		2	2	5	6	78	74.4	78		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	1	0.05	0.049	0.25	0.23995	0.25		0.07		1		1	
P1286	Manganese (Mn) (dissolved)	SP		2	1	5	4.999	1880	1786.25	1880		n/a					
7440-23-5	Sodium (Na) (dissolved)			2	2	0.2	39.2	71.6	69.98	71.6		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	1	5	4.99	5.9	5.8545	5.9		8.6		0		0	
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	5	4.997	4.998	4.99795	4.998		1.3		2		0	
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	4.998	4.999	4.99895	4.999		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	4.9979	4.9981	4.99809	4.9981		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	5	4.9972	4.9978	4.99777	4.9978		10		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	0	5	4.9977	4.9993	4.99922	4.9993		100		0		0	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	0	2	1.99	1.999	1.99855	1.999		7.9		0		0	EQS (other) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.98	4.99	4.9895	4.99		1		2		0	
57-12-5	Cyanide (total)			2	2	5	11	106	101.25	106		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	803	2210	2139.65	2210		n/a					
P1238	Ammoniacal Nitrogen (as N)		NP	2	2	50	803	2210	2139.65	2210		n/a					
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	803	2210	2139.65	2210		21		2		2	
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.79	0.799	0.79855	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	66	75	74.55	75		n/a					
16984-48-8	Fluoride (F^-)			2	0	0.5	0.497	0.499	0.4989	0.499		5000		0		0	
P1348	Nitrate (NO_3^-)			2	0	0.5	0.4979	0.498	0.497995	0.498		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.497	0.4988	0.49871	0.4988		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	46	73	71.65	73		n/a					
P1134	pH (min.) (su)			2	0		7.8	11.1	10.935	11.1		6		0		0	
P1134	pH (max.) (su)			2	0		7.8	11.1	10.935	11.1		8.5		1		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	610	775	766.75	775		n/a					
120-12-7	Anthracene	**PH**	**H**	2	0	0.01	0.009	0.0099	0.009855	0.0099		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.0094	0.00991	0.009885	0.00991		0.00017		2		0	
206-44-0	Fluoranthene	***P***	**H**	2	0	0.01	0.009	0.0095	0.009475	0.0095		0.0063		2		0	
91-20-3	Naphthalene	***P***	NP	2	2	0.01	0.02	82.45	78.3285	82.45		2		1		1	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	1	0.16	0.159	82.63	78.50645	82.63		n/a					
P1877	Phenol	SP	**NP**	2	0	0.1	0.09	0.097	0.09665	0.097		7.7		0		0	
P1407	Ali EC5-EC6			2	0	10	9.998	9.999	9.99895	9.999		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.998	9.9997	9.999615	9.9997		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.997	9.997	9.997	9.997		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.996	9.996	9.996	9.996		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.995	9.995	9.995	9.995		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.994	9.994	9.994	9.994		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.993	9.993	9.993	9.993		10		0		0	
P1441	Aro EC5-EC7			2	1	10	9.992	11	10.9496	11		10		1		1	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	0	10	9.991	9.993	9.9929	9.993		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	1	10	9.99	187	178.1495	187		10		1		1	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	1	10	9.989	168	160.0995	168		10		1		1	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.988	9.988	9.988	9.988		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.987	9.987	9.987	9.987		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range

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P1360	Aro >EC21-EC35			2	0	10	9.986	9.986	9.986	9.986		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	***P***	**H**	2	1	1	0.99	11	10.4995	11		8		1		1	
108-88-3	Toluene	SP	**H**	2	0	5	4.98	4.985	4.98475	4.985		74		0		0	
100-41-4	Ethylbenzene		**H**	2	1	5	4.99	55	52.4995	55		20		1		1	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	1	5	<5	29	27.8	29		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	2	1	10	9.998	64	61.2999	64		30		1		1	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.99	9.998	9.9976	9.998		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.99	4.998	4.9976	4.998		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		300		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.99	9.998	9.9976	9.998		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	***P***	**NP**	2	0	10	9.988	9.988	9.988	9.988		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.98	4.98	4.98		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.98	4.999	4.99805	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.985	4.99	4.98975	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.97	4.991	4.98995	4.991		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.95	4.9991	4.996645	4.9991		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.97	4.999	4.99755	4.999		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.9	4.95	4.9475	4.95		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.97	4.999	4.99755	4.999		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	***P***	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.98	4.991	4.99045	4.991		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.98	4.99	4.9895	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.969	4.999	4.9975	4.999		n/a					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.98	9.99	9.9895	9.99		n/a					
12002-48-1	Trichlorobenzenes	***P***	**NP**	2	0	0.1	0.098	0.099	0.09895	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	***P***	**H**	2	0	5	4.997	4.999	4.9989	4.999		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.098	0.099	0.09895	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.0999	0.099805	0.0999		0.42		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		2	0	0.1	0.096	0.097	0.09695	0.097		0.2		0		0	
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.098	0.0979	0.098		0.75		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.092	0.099	0.09865	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.098	0.099	0.09895	0.099		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.01					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.0007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	PH	H	0								0.014					
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0008					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00013					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								10					
7782-50-5	Chlorine (total free available)	SP	NP	0								10					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								3000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								10					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								n/a					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.003					
74070-46-5	Aclinofen	*P*		0								0.012					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.0012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								n/a					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								n/a					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.005					
56-72-4	Coumaphos		H	0								0.03					

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21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.000008					
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.00006					
115-32-2	Dicofol	PH	**H**	0								0.000032					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.005					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.0005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								n/a					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								1E-08					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								1E-08					
1024-57-3	Heptachlor epoxide			0								1E-08					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.002					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.02					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								80					
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								n/a					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								n/a					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								n/a					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								n/a					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.0002					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.015					
122-34-9	Simazine	***P***	**H**	0								1					

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JAGDAG Hazardous Substances Determination (UK)

H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	*P*	**NP**	0								0.0065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					
2303-17-5	Triallate		**H**	0								0.25					
24017-47-8	Triazaphos		**H**	0								0.005					
1582-09-8	Trifluralin	**PH**	**H**	0								0.03					
1262-21-1	Triphenyltin and derivatives		**H**	0								0.008					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario B - EQS (inland)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-13124
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I
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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			2	0	0.13	0.1299	0.12999	0.129986	0.12999		0.05		2		0	
7429-90-5	Aluminium (Al) (dissolved)			2	1	5	4.99	264	251.0495	264		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	1	0	5						50		0		0	
7440-42-8	Boron (B) (dissolved)		NP	2	2	5	99	151	148.4	151		2000		0		0	
7440-39-3	Barium (Ba) (dissolved)			2	2	5	52.5	165	159.375	165		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	2	0	0.4	0.398	0.399	0.39895	0.399		0.08		2		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	2	0	5	4.98	4.99	4.9895	4.99		3		2		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	2	0	20	19.97	19.99	19.989	19.99		3.4		2		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		2	0	20	19.98	19.999	19.99805	19.999		4.7		2		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			2	0	5	4.99	4.999	4.99855	4.999		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	2	1	5	4.99	34.2	32.7395	34.2		1		2		1	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		2	2	5	6	78	74.4	78		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	2	1	0.05	0.049	0.25	0.23995	0.25		0.07		1		1	
P1286	Manganese (Mn) (dissolved)	SP		2	1	5	4.999	1880	1786.25	1880		123		1		1	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			2	2	0.2	39.2	71.6	69.98	71.6		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	2	1	5	4.99	5.9	5.8545	5.9		4		2		1	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	2	0	5	4.997	4.998	4.99795	4.998		1.2		2		0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	2	0	5	4.998	4.999	4.99895	4.999		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	2	0	5	4.9979	4.9981	4.99809	4.9981		n/a					
7440-31-5	Tin (Sn) (dissolved)			2	0	5	4.9972	4.9978	4.99777	4.9978		25		0		0	
7440-62-2	Vanadium (V) (dissolved)			2	0	5	4.9977	4.9993	4.99922	4.9993		20		0		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	2	0	2	1.99	1.999	1.99855	1.999		12.3		0		0	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	2	0	5	4.98	4.99	4.9895	4.99		1		2		0	
57-12-5	Cyanide (total)			2	2	5	11	106	101.25	106		n/a					
P1140	Ammonium (NH_4^+)		NP	2	2	50	803	2210	2139.65	2210		n/a					
P1238	Ammoniacal Nitrogen (as N)		NP	2	2	50	803	2210	2139.65	2210		300		2		2	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	2	2	50	803	2210	2139.65	2210		n/a					
15541-45-4	Bromate (BrO_3)			2	0	0.8	0.79	0.799	0.79855	0.799		n/a					
16887-00-6	Chloride (Cl^-)			2	2	1	66	75	74.55	75		250000		0		0	
16984-48-8	Fluoride (F^-)			2	0	0.5	0.497	0.499	0.4989	0.499		1000		0		0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			2	0	0.5	0.4979	0.498	0.497995	0.498		n/a					
P1349	Nitrite (NO_2^-)			2	0	0.5	0.497	0.4988	0.49871	0.4988		n/a					
14808-79-8	Sulfate (SO_4^{2-})			2	2	1	46	73	71.65	73		400000		0		0	
P1134	pH (min.) (su)			2	0		7.8	11.1	10.935	11.1		6		0		0	
P1134	pH (max.) (su)			2	0		7.8	11.1	10.935	11.1		9		1		0	
P1287	Electrical conductivity (µS/cm)			2	2	5	610	775	766.75	775		n/a					
120-12-7	Anthracene	**PH**	**H**	2	0	0.01	0.009	0.0099	0.009855	0.0099		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	2	0	0.01	0.0094	0.00991	0.009885	0.00991		0.00017		2		0	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	2	0	0.01	0.009	0.0095	0.009475	0.0095		0.0063		2		0	
91-20-3	Naphthalene	***P***	NP	2	2	0.01	0.02	82.45	78.3285	82.45		2		1		1	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	2	1	0.16	0.159	82.63	78.50645	82.63		n/a					
P1877	Phenol	SP	**NP**	2	0	0.1	0.09	0.097	0.09665	0.097		7.7		0		0	
P1407	Ali EC5-EC6			2	0	10	9.998	9.999	9.99895	9.999		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			2	0	10	9.998	9.9997	9.999615	9.9997		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			2	0	10	9.997	9.997	9.997	9.997		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			2	0	10	9.996	9.996	9.996	9.996		10		0		0	
P1411	Ali >EC12-EC16			2	0	10	9.995	9.995	9.995	9.995		10		0		0	
P1938	Ali >EC16-EC35			2	0	10	9.994	9.994	9.994	9.994		10		0		0	
P1415	Ali >EC35-EC44			2	0	10	9.993	9.993	9.993	9.993		10		0		0	
P1441	Aro EC5-EC7			2	1	10	9.992	11	10.9496	11		10		1		1	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			2	0	10	9.991	9.993	9.9929	9.993		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			2	1	10	9.99	187	178.1495	187		10		1		1	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			2	1	10	9.989	168	160.0995	168		10		1		1	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			2	0	10	9.988	9.988	9.988	9.988		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			2	0	10	9.987	9.987	9.987	9.987		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range

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Hydrock

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Site: SWITCH, Port Talbot
Job no: C26279
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Dataset ALL ZONES

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1360	Aro >EC21-EC35			2	0	10	9.986	9.986	9.986	9.986		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			2	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	***P***	**H**	2	1	1	0.99	11	10.4995	11		10		1		1	
108-88-3	Toluene	SP	**H**	2	0	5	4.98	4.985	4.98475	4.985		74		0		0	
100-41-4	Ethylbenzene		**H**	2	1	5	4.99	55	52.4995	55		20		1		1	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	2	1	5	<5	29	27.8	29		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	2	1	10	9.998	64	61.2999	64		30		1		1	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	2	0	10	9.99	9.998	9.9976	9.998		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	2	0	5	4.99	4.998	4.9976	4.998		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	2	0	10	9.99	9.998	9.9976	9.998		400		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			2	0	10	9.99	9.998	9.9976	9.998		n/a					
106-93-4	1,2-Dibromoethane		**H**	2	0	5	4.99	4.998	4.9976	4.998		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	2	0	5	4.99	4.998	4.9976	4.998		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	***P***	**NP**	2	0	10	9.988	9.988	9.988	9.988		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	2	0	5	4.98	4.98	4.98	4.98		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	2	0	5	4.98	4.999	4.99805	4.999		n/a					
78-87-5	1,2-Dichloropropane		**H**	2	0	5	4.985	4.99	4.98975	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	2	0	5	4.97	4.991	4.98995	4.991		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	2	0	5	4.95	4.9991	4.996645	4.9991		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	2	0	5	4.97	4.999	4.99755	4.999		20		0		0	
75-27-4	Bromodichloromethane			2	0	5	4.9	4.95	4.9475	4.95		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	2	0	5	4.97	4.999	4.99755	4.999		n/a					
124-48-1	Dibromochloromethane			2	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0								20					
75-09-2	Dichloromethane	***P***	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	2	0	5	4.98	4.991	4.99045	4.991		0.6		2		0	
100-42-5	Styrene		**H**	2	0	5	4.98	4.99	4.9895	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		2	0	5	4.969	4.999	4.9975	4.999		140		0		0	
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	2	0	5	4.97	4.98	4.9795	4.98		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			2	0	10	9.98	9.99	9.9895	9.99		n/a					
12002-48-1	Trichlorobenzenes	***P***	**NP**	2	0	0.1	0.098	0.099	0.09895	0.099		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	2	0	5	4.98	4.99	4.9895	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	***P***	**H**	2	0	5	4.997	4.999	4.9989	4.999		2.5		2		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	2	0	0.1	0.098	0.099	0.09895	0.099		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	2	0	0.1	0.098	0.0999	0.099805	0.0999		4.2		0		0	
95-57-8	2-Chlorophenol		**H**	2	0	0.1	0.09	0.097	0.09665	0.097		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		2	0	0.1	0.096	0.097	0.09695	0.097		0.2		0		0	
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		2	0	0.1	0.096	0.098	0.0979	0.098		7.5		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	2	0	0.1	0.096	0.097	0.09695	0.097		8		0		0	
84-66-2	Diethyl phthalate (DEP)			2	0	0.1	0.098	0.099	0.09895	0.099		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			2	0	0.1	0.092	0.099	0.09865	0.099		800		0		0	
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	2	0	0.1	0.098	0.099	0.09895	0.099		0.05		2		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.1					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					

Summary of Remedial Targets Methodology Screening

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32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	PH	H	0								0.14					
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0016					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00065					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								2					
7782-50-5	Chlorine (total free available)	SP	NP	0								2					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								0.25					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.01					
74070-46-5	Aclinofen	*P*		0								0.12					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								0.15					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								0.035					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.01					
56-72-4	Coumaphos		H	0								0.01					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-13124
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
21725-46-2	Cyanazine		**H**	0								n/a					
28159-98-0	Cybutryne	***P***		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	***P***	**H**	0								0.00008					
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.0006					
115-32-2	Dicofol	PH	**H**	0								0.0013					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.001					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								5					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								2E-07					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								2E-07					
1024-57-3	Heptachlor epoxide			0								2E-07					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.02					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.0001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.01					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								0.01					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								0.02					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								0.01					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								0.3					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.15					
122-34-9	Simazine	***P***	**H**	0								1					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Groundwater
Client: Morgan Sindall
Site: SWITCH, Port Talbot
Job no: C26279
Test Certificates(s): 23-13124
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)

H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	*P*	**NP**	0								0.065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					
2303-17-5	Triallate		**H**	0								0.25					
24017-47-8	Triazaphos		**H**	0								0.005					
1582-09-8	Trifluralin	**PH**	**H**	0								0.03					
1262-21-1	Triphenyltin and derivatives		**H**	0								0.02					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario B - EQS (inland)
RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

2013/39/EU Annex I	
P = priority substance	
PH = priority hazardous substances.	
WFD Designation (2015 Directions)	
OP = Other substance identical to previous legislation	
SP = Specific Pollutant	
JAGDAG Hazardous Substances Determination (UK)	
H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data: No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value	Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red):	Inland Waters EQS	No. Samples Exceeding Water Quality Target:	Inland Waters EQS	No. Samples above LoD Exceeding Water Quality:	Inland Waters EQS	Notes
																	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			3	1	0.13	0.129	0.2	0.1929	0.2		0.05		3		1	
7429-90-5	Aluminium (Al) (dissolved)			3	3	5	100	686	638.7	686		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	3	2	5	4.999	10	9.6	10		50		0		0	
7440-42-8	Boron (B) (dissolved)		NP	3	3	5	50	71	69.8	71		2000		0		0	
7440-39-3	Barium (Ba) (dissolved)			3	2	5	4.99	26	24.9	26		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	3	0	0.4	0.399	0.399	0.399	0.399		0.08		3		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	3	3	0	1.99	1.99	1.99	1.99		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	3	0	20	19.99	19.99	19.99	19.99		3.4		3		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		3	0	20	19.99	19.99	19.99	19.99		4.7		3		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			3	2	5	4.99	7	7	7		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	3	1	5	4.99	18	16.6991	18		1		3		1	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		3	3	5	15	350	320	350		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	3	2	0.05	0.049	0.66	0.636	0.66		0.07		2		2	
P1286	Manganese (Mn) (dissolved)	SP		3	3	0	4.99	70	67	70		123		0		0	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			3	3	0.2	2.1	4.2	4.02	4.2		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	3	0	5	4.991	4.993	4.9929	4.993		4		3		0	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	3	0	5	4.994	4.996	4.9959	4.996		1.2		3		0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	3	0	5	4.997	4.999	4.9989	4.999		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	3	0	5	4.991	4.993	4.9929	4.993		n/a					
7440-31-5	Tin (Sn) (dissolved)			3	0	5	4.994	4.996	4.9959	4.996		25		0		0	
7440-62-2	Vanadium (V) (dissolved)			3	2	5	4.99	481	452	481		20		2		2	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	3	3	2	4	23	21.2	23		12.3		1		1	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	3	0	5	4.99	4.99	4.99	4.99		1		3		0	
57-12-5	Cyanide (total)			3	1	5	4.99	11	10.399	11		n/a					
P1140	Ammonium (NH_4^+)		NP	3	3	50	144	3010	2759	3010		n/a					
P1238	Ammnoniacal Nitrogen (as N)		NP	3	3	50	144	3010	2759	3010		300		2		2	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	3	0	0.5	0.49	0.49	0.49	0.49		n/a					
15541-45-4	Bromate (BrO_3)			3	0	0.8	0.799	0.799	0.799	0.799		n/a					
16887-00-6	Chloride (Cl^-)			3	2	1	0.999	2	2	2		250000		0		0	
16984-48-8	Fluoride (F^-)			3	0	0.5	0.499	0.499	0.499	0.499		1000		0		0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			3	0	0.5	0.499	<0.5	0.4999	<0.5		n/a					
P1349	Nitrite (NO_2^-)			3	0	0.5	0.499	0.499	0.499	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			3	3	1	3	13	12.7	13		400000		0		0	
P1134	pH (min.) (su)			3	0		7.5	9.7	9.67	9.7		6		0		0	
P1134	pH (max.) (su)			3	0		7.5	9.7	9.67	9.7		9		2		0	
P1287	Electrical conductivity (µS/cm)			3	3	5	63	185	183.1	185		n/a					
120-12-7	Anthracene	**PH**	**H**	3	0	0.1	0.099	0.099	0.099	0.099		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	3	0	0.1	0.099	0.099	0.099	0.099		0.00017		3		0	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	3	0	0.1	0.099	0.099	0.099	0.099		0.0063		3		0	
91-20-3	Naphthalene	***P***	NP	3	1	0.1	0.099	0.34	0.3159	0.34		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	3	1	0.16	0.159	0.46	0.4299	0.46		n/a					
P1877	Phenol	SP	**NP**	3	0	0.1	0.099	0.099	0.099	0.099		7.7		0		0	
P1407	Ali EC5-EC6			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1411	Ali >EC12-EC16			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1938	Ali >EC16-EC35			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1415	Ali >EC35-EC44			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1441	Aro EC5-EC7			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			3	0	10	9.99	9.99	9.99	9.99		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			3	0	10	9.99	9.99	9.99	9.99		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

PNEC calculated (inland EQS)

P = priority substance
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NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1362	Aro >EC35-EC44			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	*P*	**H**	3	0	1	0.99	0.99	0.99	0.99		10		0		0	
108-88-3	Toluene	SP	**H**	3	0	5	4.99	4.99	4.99	4.99		74		0		0	
100-41-4	Ethylbenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	3	0	5	4.99	4.99	4.99	4.99		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	3	0	10	9.99	9.99	9.99	9.99		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	3	0	10	9.99	9.99	9.99	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	3	0	5	4.99	4.99	4.99	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	3	0	10	9.99	9.99	9.99	9.99		400		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			3	0	10	9.99	9.99	9.99	9.99		n/a					
106-93-4	1,2-Dibromoethane		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	3	0	10	9.99	9.99	9.99	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	3	0	5	4.99	4.99	4.99	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	3	0	5	4.99	4.99	4.99	4.99		n/a					
78-87-5	1,2-Dichloropropane		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	
75-27-4	Bromodichloromethane			3	0	5	4.99	4.99	4.99	4.99		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
124-48-1	Dibromochloromethane			3	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			3	0	5	4.99	4.99	4.99	4.99		20		0		0	
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	3	0	5	4.99	4.99	4.99	4.99		0.6		3		0	
100-42-5	Styrene		**H**	3	0	5	4.99	4.99	4.99	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		3	0	5	4.99	4.99	4.99	4.99		140		0		0	
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	3	0	5	4.99	4.99	4.99	4.99		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			3	0	5	4.99	4.99	4.99	4.99		n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	3	0	5	4.99	4.99	4.99	4.99		12		0		0	
75-25-2	Tribromomethane (bromoform)			3	0	10	9.99	9.99	9.99	9.99		n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	3	0	0.1	0.09	0.09	0.09	0.09		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	3	0	5	4.99	4.99	4.99	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	*P*	**H**	3	0	5	4.99	4.99	4.99	4.99		2.5		3		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	3	0	0.1	0.09	0.09	0.09	0.09		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	3	0	0.1	0.09	0.09	0.09	0.09		4.2		0		0	
95-57-8	2-Chlorophenol		**H**	3	0	0.1	0.09	0.09	0.09	0.09		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		3	0	0.1	0.09	0.09	0.09	0.09		7.5		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	3	0	0.1	0.091	0.093	0.0929	0.093		1.3		0		0	
84-74-2	Dibutyl phthalate		**NP**	3	0	0.1	0.094	0.096	0.0959	0.096		8		0		0	
84-66-2	Diethyl phthalate (DEP)			3	0	0.1	0.09	0.098	0.0979	0.098		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			3	0	0.1	0.09	0.09	0.09	0.09		800		0		0	
117-84-0	Dioctyl phthalates			3	0	0.1	0.09	0.09	0.09	0.09		20		0		0	
118-74-1	Hexachlorobenzene	**PH**	**H**	3	0	0.1	0.09	0.09	0.09	0.09		0.05		3		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.1					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.14					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0016					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perflurooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00065					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								2					
7782-50-5	Chlorine (total free available)	SP	NP	0								2					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								0.25					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.01					
74070-46-5	Aclinofen	*P*		0								0.12					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								0.15					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								0.035					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.01					
56-72-4	Coumaphos		H	0								0.01					
21725-46-2	Cyanazine		H	0								n/a					
28159-98-0	Cybutryne	*P*		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	*P*	H	0								0.00008					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
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JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.0006					
115-32-2	Dicofol	PH	**H**	0								0.0013					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.001					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								5					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								2E-07					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								2E-07					
1024-57-3	Heptachlor epoxide			0								2E-07					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.02					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.0001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.01					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								0.01					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								0.02					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								0.01					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								0.3					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.15					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance	
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WFD Designation (2015 Directions)	
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JAGDAG Hazardous Substances Determination (UK)	
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NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.02					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario C - EQS (other)
RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

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SP = Specific Pollutant
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NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data: No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value	Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red):	Other Waters EQS	No. Samples Exceeding Water Quality Target:	Other Waters EQS	No. Samples above LoD Exceeding Water Quality:	Other Waters EQS	Notes: EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					
7440-22-4	Silver (Ag) (dissolved)			3	1	0.13	0.129	0.2	0.1929	0.2		0.5		0		0	
7429-90-5	Aluminium (Al) (dissolved)			3	3	5	100	686	638.7	686		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	3	2	5	4.999	10	9.6	10		25		0		0	
7440-42-8	Boron (B) (dissolved)		NP	3	3	5	50	71	69.8	71		7000		0		0	
7440-39-3	Barium (Ba) (dissolved)			3	2	5	4.99	26	24.9	26		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	3	0	0.4	0.399	0.399	0.399	0.399		0.2		3		0	
7440-48-4	Cobalt (Co) (dissolved)		NP	3	3	0	1.99	1.99	1.99	1.99		3		0		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	3	0	20	19.99	19.99	19.99	19.99		0.6		3		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		3	0	20	19.99	19.99	19.99	19.99		n/a					
7440-47-3	Chromium (Cr) (total) (dissolved)			3	2	5	4.99	7	7	7		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	3	1	5	4.99	18	16.6991	18		3.76		3		1	EQS (other) is a function of DOC and may exceed the stated value.
7439-89-6	Iron (Fe) (dissolved)	SP		3	3	5	15	350	320	350		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	3	2	0.05	0.049	0.66	0.636	0.66		0.07		2		2	
P1286	Manganese (Mn) (dissolved)	SP		3	3	0	4.99	70	67	70		n/a					
7440-23-5	Sodium (Na) (dissolved)			3	3	0.2	2.1	4.2	4.02	4.2		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	3	0	5	4.991	4.993	4.9929	4.993		8.6		0		0	
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	3	0	5	4.994	4.996	4.9959	4.996		1.3		3		0	
7440-36-0	Antimony (Sb) (dissolved)		NP	3	0	5	4.997	4.999	4.9989	4.999		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	3	0	5	4.991	4.993	4.9929	4.993		n/a					
7440-31-5	Tin (Sn) (dissolved)			3	0	5	4.994	4.996	4.9959	4.996		10		0		0	
7440-62-2	Vanadium (V) (dissolved)			3	2	5	4.99	481	452	481		100		2		2	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	3	3	2	4	23	21.2	23		7.9		1		1	EQS (other) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	3	0	5	4.99	4.99	4.99	4.99		1		3		0	
57-12-5	Cyanide (total)			3	1	5	4.99	11	10.399	11		n/a					
P1140	Ammonium (NH_4^+)		NP	3	3	50	144	3010	2759	3010		n/a					
P1238	Ammnoniacal Nitrogen (as N)		NP	3	3	50	144	3010	2759	3010		n/a					
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	3	0	0.5	0.49	0.49	0.49	0.49		21		0		0	
15541-45-4	Bromate (BrO_3)			3	0	0.8	0.799	0.799	0.799	0.799		n/a					
16887-00-6	Chloride (Cl^-)			3	2	1	0.999	2	2	2		n/a					
16984-48-8	Fluoride (F^-)			3	0	0.5	0.499	0.499	0.499	0.499		5000		0		0	
P1348	Nitrate (NO_3^-)			3	0	0.5	0.499	<0.5	0.4999	<0.5		n/a					
P1349	Nitrite (NO_2^-)			3	0	0.5	0.499	0.499	0.499	0.499		n/a					
14808-79-8	Sulfate (SO_4^{2-})			3	3	1	3	13	12.7	13		n/a					
P1134	pH (min.) (su)			3	0		7.5	9.7	9.67	9.7		6		0		0	
P1134	pH (max.) (su)			3	0		7.5	9.7	9.67	9.7		8.5		2		0	
P1287	Electrical conductivity (µS/cm)			3	3	5	63	185	183.1	185		n/a					
120-12-7	Anthracene	**PH**	**H**	3	0	0.1	0.099	0.099	0.099	0.099		0.1		0		0	
50-32-8	Benzo(a)pyrene	**PH**	H	3	0	0.1	0.099	0.099	0.099	0.099		0.00017		3		0	
206-44-0	Fluoranthene	***P***	**H**	3	0	0.1	0.099	0.099	0.099	0.099		0.0063		3		0	
91-20-3	Naphthalene	***P***	NP	3	1	0.1	0.099	0.34	0.3159	0.34		2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	3	1	0.16	0.159	0.46	0.4299	0.46		n/a					
P1877	Phenol	SP	**NP**	3	0	0.1	0.099	0.099	0.099	0.099		7.7		0		0	
P1407	Ali EC5-EC6			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-hexane fall within this fraction
P1408	Ali >EC6-EC8			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			3	0	10	9.99	9.99	9.99	9.99		10		0		0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1411	Ali >EC12-EC16			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1938	Ali >EC16-EC35			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1415	Ali >EC35-EC44			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
P1441	Aro EC5-EC7			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			3	0	10	9.99	9.99	9.99	9.99		10		0		0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			3	0	10	9.99	9.99	9.99	9.99		10		0		0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			3	0	10	9.99	9.99	9.99	9.99		10		0		0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction

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Hydrock

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Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1362	Aro >EC35-EC44			3	0	10	9.99	9.99	9.99	9.99		10		0		0	
71-43-2	Benzene	*P*	**H**	3	0	1	0.99	0.99	0.99	0.99		8		0		0	
108-88-3	Toluene	SP	**H**	3	0	5	4.99	4.99	4.99	4.99		74		0		0	
100-41-4	Ethylbenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	3	0	5	4.99	4.99	4.99	4.99		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	3	0	10	9.99	9.99	9.99	9.99		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	3	0	10	9.99	9.99	9.99	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	3	0	5	4.99	4.99	4.99	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	3	0	10	9.99	9.99	9.99	9.99		300		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			3	0	10	9.99	9.99	9.99	9.99		n/a					
106-93-4	1,2-Dibromoethane		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	3	0	10	9.99	9.99	9.99	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	3	0	5	4.99	4.99	4.99	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	3	0	5	4.99	4.99	4.99	4.99		n/a					
78-87-5	1,2-Dichloropropane		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	3	0	5	4.99	4.99	4.99	4.99		20		0		0	
75-27-4	Bromodichloromethane			3	0	5	4.99	4.99	4.99	4.99		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	3	0	5	4.99	4.99	4.99	4.99		n/a					
124-48-1	Dibromochloromethane			3	0	5	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			3	0	5	4.99	4.99	4.99	4.99		20		0		0	
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	3	0	5	4.99	4.99	4.99	4.99		0.6		3		0	
100-42-5	Styrene		**H**	3	0	5	4.99	4.99	4.99	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		3	0	5	4.99	4.99	4.99	4.99		n/a					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	3	0	5	4.99	4.99	4.99	4.99		10		0		0	
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			3	0	5	4.99	4.99	4.99	4.99		n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	3	0	5	4.99	4.99	4.99	4.99		12		0		0	
75-25-2	Tribromomethane (bromoform)			3	0	10	9.99	9.99	9.99	9.99		n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	3	0	0.1	0.09	0.09	0.09	0.09		0.4		0		0	
79-01-6	Trichloroethene	OP	**H**	3	0	5	4.99	4.99	4.99	4.99		10		0		0	
67-66-3	Trichloromethane (chloroform)	*P*	**H**	3	0	5	4.99	4.99	4.99	4.99		2.5		3		0	
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	3	0	0.1	0.09	0.09	0.09	0.09		n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	3	0	0.1	0.09	0.09	0.09	0.09		0.42		0		0	
95-57-8	2-Chlorophenol		**H**	3	0	0.1	0.09	0.09	0.09	0.09		50		0		0	
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		3	0	0.1	0.09	0.09	0.09	0.09		0.75		0		0	
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	3	0	0.1	0.091	0.093	0.0929	0.093		1.3		0		0	
84-74-2	Dibutyl phthalate		**NP**	3	0	0.1	0.094	0.096	0.0959	0.096		8		0		0	
84-66-2	Diethyl phthalate (DEP)			3	0	0.1	0.09	0.098	0.0979	0.098		200		0		0	
131-11-3	Dimethyl phthalate (DMP)			3	0	0.1	0.09	0.09	0.09	0.09		800		0		0	
117-84-0	Dioctyl phthalates			3	0	0.1	0.09	0.09	0.09	0.09		20		0		0	
118-74-1	Hexachlorobenzene	**PH**	**H**	3	0	0.1	0.09	0.09	0.09	0.09		0.05		3		0	
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.01					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.0007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.014					

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Hydrock

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Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

PNEC calculated (inland EQS)

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0008					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00013					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								10					
7782-50-5	Chlorine (total free available)	SP	NP	0								10					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								3000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								10					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								n/a					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.003					
74070-46-5	Aclinofen	*P*		0								0.012					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.0012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								n/a					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								n/a					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.005					
56-72-4	Coumaphos		H	0								0.03					
21725-46-2	Cyanazine		H	0								n/a					
28159-98-0	Cybutryne	*P*		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	*P*	H	0								0.000008					

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.00006					
115-32-2	Dicofol	PH	**H**	0								0.000032					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.005					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.0005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								n/a					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								1E-08					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								1E-08					
1024-57-3	Heptachlor epoxide			0								1E-08					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.002					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.02					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								80					
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								n/a					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								n/a					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								n/a					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								n/a					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.0002					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.015					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.0065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12382
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.008					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario B - EQS (inland)
RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

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2013/39/EU Annex I	
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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			3	0	0.13	0.129	0.129	0.129	0.129		0.05		3		0	
7429-90-5	Aluminium (Al) (dissolved)			3	3	5	215	446	438.3	446		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	3	3	5	6	28	26.3	28		50		0		0	
7440-42-8	Boron (B) (dissolved)		NP	3	3	5	63	68	68	68		2000		0		0	
7440-39-3	Barium (Ba) (dissolved)			3	3	5	11	26	24.6	26		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	3	0	0.4	0.397	0.399	0.3989	0.399		0.08		3		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	3	0	5	4.97	4.99	4.989	4.99		3		3		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	3	0	20	19.99	19.99	19.99	19.99		3.4		3		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		3	0	20	19.99	19.99	19.99	19.99		4.7		3		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			3	0	5	4.97	4.99	4.989	4.99		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	3	3	5	9	29	27	29		1		3		3	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		3	3	5	27	97	94.3	97		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	3	3	0.05	0.18	0.61	0.589	0.61		0.07		3		3	
P1286	Manganese (Mn) (dissolved)	SP		3	1	5	4.99	12	11.299	12		123		0		0	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			3	3	0.2	1.5	3.2	3.1	3.2		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	3	0	5	4.99	4.99	4.99	4.99		4		3		0	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	3	0	5	4.99	4.99	4.99	4.99		1.2		3		0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	3	0	5	4.99	4.99	4.99	4.99		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	3	0	5	4.99	4.99	4.99	4.99		n/a					
7440-31-5	Tin (Sn) (dissolved)			3	0	5	4.99	4.99	4.99	4.99		25		0		0	
7440-62-2	Vanadium (V) (dissolved)			3	3	5	199	594	559.6	594		20		3		3	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	3	3	2	4	7	6.9	7		12.3		0		0	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	3	0	5	4.99	4.99	4.99	4.99		1		3		0	
57-12-5	Cyanide (total)			3	1	5	<5	25	23	25		n/a					
P1140	Ammonium (NH_4^+)		NP	3	3	50	232	596	578	596		n/a					
P1238	Ammnoniacal Nitrogen (as N)		NP	3	3	50	232	596	578	596		300		2		2	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	3	3	50	232	596	578	596		n/a					
15541-45-4	Bromate (BrO_3)			3	0	0.8	0.79	0.79	0.79	0.79		n/a					
16887-00-6	Chloride (Cl^-)			3	3	0	2	3	2.9	3		250000		0		0	
16984-48-8	Fluoride (F^-)			3	3	0	0.49	0.49	0.49	0.49		1000		0		0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			3	3	0	0.49	0.49	0.49	0.49		n/a					
P1349	Nitrite (NO_2^-)			3	3	0	0.49	0.7	0.679	0.7		n/a					
14808-79-8	Sulfate (SO_4^{2-})			3	3	0	7	9	9	9		400000		0		0	
P1134	pH (min.) (su)			3	3	0	7	7.7	7.7	7.7		6		0		0	
P1134	pH (max.) (su)			3	3	0	7	7.7	7.7	7.7		9		0		0	
P1287	Electrical conductivity (µS/cm)			3	3	0	164	200	197.6	200		n/a					
120-12-7	Anthracene	**PH**	**H**	3	3	0	0.01	0.2	0.188	0.2		0.1		1		1	
50-32-8	Benzo(a)pyrene	**PH**	H	3	3	0	0.009	0.04	0.0369	0.04		0.00017		3		3	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	3	3	0	0.05	0.39	0.357	0.39		0.0063		3		3	
91-20-3	Naphthalene	***P***	NP	3	3	0	1.83	2.49	2.436	2.49		2		1		1	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	3	3	0	2.23	5.18	5.03	5.18		n/a					
P1877	Phenol	SP	**NP**	3	3	0	0.09	0.09	0.09	0.09		7.7		0		0	
P1407	Ali EC5-EC6			0								10					n-hexane fall within this fraction
P1408	Ali >EC6-EC8			0								10					n-heptane falls within this fraction
P1409	Ali >EC8-EC10			0								10					n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			0								10					
P1411	Ali >EC12-EC16			0								10					
P1938	Ali >EC16-EC35			0								10					
P1415	Ali >EC35-EC44			0								10					
P1441	Aro EC5-EC7			0								10					Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			0								10					Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			0								10					Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			0								10					Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			0								10					2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			0								10					fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			0								10					Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

PNEC calculated (inland EQS)

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NP Non-hazardous pollutant
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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1362	Aro >EC35-EC44			0								10					
71-43-2	Benzene	*P*	**H**	3	3	0	0.99	17	15.399	17		10		1		1	
108-88-3	Toluene	SP	**H**	3	3	0	4.99	4.99	4.99	4.99		74		0		0	
100-41-4	Ethylbenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	3	3	0	4.99	4.99	4.99	4.99		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	3	3	0	9.99	9.99	9.99	9.99		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	3	3	0	9.99	9.99	9.99	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	3	3	0	4.99	4.99	4.99	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	3	3	0	9.99	9.99	9.99	9.99		400		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			3	3	0	9.99	9.99	9.99	9.99		n/a					
106-93-4	1,2-Dibromoethane		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	3	3	0	9.99	9.99	9.99	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	3	3	0	4.99	4.99	4.99	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	3	3	0	4.99	4.99	4.99	4.99		n/a					
78-87-5	1,2-Dichloropropane		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	
75-27-4	Bromodichloromethane			3	3	0	4.99	4.99	4.99	4.99		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
124-48-1	Dibromochloromethane			3	3	0	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			3	3	0	4.99	4.99	4.99	4.99		20		0		0	
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	3	3	0	4.99	4.99	4.99	4.99		0.6		3		3	
100-42-5	Styrene		**H**	3	3	0	4.99	4.99	4.99	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		0								140					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	0								10					
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			0								n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	0								0.4					
79-01-6	Trichloroethene	OP	**H**	0								10					
67-66-3	Trichloromethane (chloroform)	*P*	**H**	0								2.5					
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	0								n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	0								4.2					
95-57-8	2-Chlorophenol		**H**	0								50					
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		0								7.5					
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	0								8					
84-66-2	Diethyl phthalate (DEP)			0								200					
131-11-3	Dimethyl phthalate (DMP)			0								800					
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	0								0.05					
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.1					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.14					

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0016					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00065					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								2					
7782-50-5	Chlorine (total free available)	SP	NP	0								2					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								0.25					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.01					
74070-46-5	Aclinofen	*P*		0								0.12					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								0.15					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								0.035					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.01					
56-72-4	Coumaphos		H	0								0.01					
21725-46-2	Cyanazine		H	0								n/a					
28159-98-0	Cybutryne	*P*		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	*P*	H	0								0.00008					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
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SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.0006					
115-32-2	Dicofol	PH	**H**	0								0.0013					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.001					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								5					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								2E-07					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								2E-07					
1024-57-3	Heptachlor epoxide			0								2E-07					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.02					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.0001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.01					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								0.01					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								0.02					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								0.01					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								0.3					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.15					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level:	RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s):	Groundwater
Secondary receptor(s):	
Data set:	Leachate
Client:	Morgan Sindall
Site:	SWITCH
Job no:	26279
Test Certificates(s):	23-12154.3
Dataset	ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
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JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Inland Waters EQS		Inland Waters EQS		Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.02					

Summary of Remedial Targets Methodology Screening

Hydrock

Hydrock Scenario: Scenario C - EQS (other)
RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

PNEC calculated (inland EQS)

2013/39/EU Annex I
P = priority substance
PH = priority hazardous substances.
WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant
JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data: No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value	Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red):	Other Waters EQS	No. Samples Exceeding Water Quality Target:	Other Waters EQS	No. Samples above LoD Exceeding Water Quality:	Other Waters EQS	Notes: EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-		-					
7440-22-4	Silver (Ag) (dissolved)			3	0	0.13	0.129	0.129	0.129	0.129		0.5		0		0	
7429-90-5	Aluminium (Al) (dissolved)			3	3	5	215	446	438.3	446		n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	3	3	5	6	28	26.3	28		25		1		1	
7440-42-8	Boron (B) (dissolved)		NP	3	3	5	63	68	68	68		7000		0		0	
7440-39-3	Barium (Ba) (dissolved)			3	3	5	11	26	24.6	26		n/a					
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	3	0	0.4	0.397	0.399	0.3989	0.399		0.2		3		0	
7440-48-4	Cobalt (Co) (dissolved)		NP	3	0	5	4.97	4.99	4.989	4.99		3		3		0	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	3	0	20	19.99	19.99	19.99	19.99		0.6		3		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		3	0	20	19.99	19.99	19.99	19.99		n/a					
7440-47-3	Chromium (Cr) (total) (dissolved)			3	0	5	4.97	4.99	4.989	4.99		n/a					
7440-50-8	Copper (Cu) (dissolved)	SP	NP	3	3	5	9	29	27	29		3.76		3		3	EQS (other) is a function of DOC and may exceed the stated value.
7439-89-6	Iron (Fe) (dissolved)	SP		3	3	5	27	97	94.3	97		1000		0		0	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	3	3	0.05	0.18	0.61	0.589	0.61		0.07		3		3	
P1286	Manganese (Mn) (dissolved)	SP		3	1	5	4.99	12	11.299	12		n/a					
7440-23-5	Sodium (Na) (dissolved)			3	3	0.2	1.5	3.2	3.1	3.2		n/a					
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	3	0	5	4.99	4.99	4.99	4.99		8.6		0		0	
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	3	0	5	4.99	4.99	4.99	4.99		1.3		3		0	
7440-36-0	Antimony (Sb) (dissolved)		NP	3	0	5	4.99	4.99	4.99	4.99		n/a					
7782-49-2	Selenium (Se) (dissolved)		NP	3	0	5	4.99	4.99	4.99	4.99		n/a					
7440-31-5	Tin (Sn) (dissolved)			3	0	5	4.99	4.99	4.99	4.99		10		0		0	
7440-62-2	Vanadium (V) (dissolved)			3	3	5	199	594	559.6	594		100		3		3	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	3	3	2	4	7	6.9	7		7.9		0		0	EQS (other) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	3	0	5	4.99	4.99	4.99	4.99		1		3		0	
57-12-5	Cyanide (total)			3	1	5	<5	25	23	25		n/a					
P1140	Ammonium (NH_4^+)		NP	3	3	50	232	596	578	596		n/a					
P1238	Ammnoniacal Nitrogen (as N)		NP	3	3	50	232	596	578	596		n/a					
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	3	3	50	232	596	578	596		21		3		3	
15541-45-4	Bromate (BrO_3)			3	0	0.8	0.79	0.79	0.79	0.79		n/a					
16887-00-6	Chloride (Cl^-)			3	3	0	2	3	2.9	3		n/a					
16984-48-8	Fluoride (F^-)			3	3	0	0.49	0.49	0.49	0.49		5000		0		0	
P1348	Nitrate (NO_3^-)			3	3	0	0.49	0.49	0.49	0.49		n/a					
P1349	Nitrite (NO_2^-)			3	3	0	0.49	0.7	0.679	0.7		n/a					
14808-79-8	Sulfate (SO_4^{2-})			3	3	0	7	9	9	9		n/a					
P1134	pH (min.) (su)			3	3	0	7	7.7	7.7	7.7		6		0		0	
P1134	pH (max.) (su)			3	3	0	7	7.7	7.7	7.7		8.5		0		0	
P1287	Electrical conductivity (µS/cm)			3	3	0	164	200	197.6	200		n/a					
120-12-7	Anthracene	**PH**	**H**	3	3	0	0.01	0.2	0.188	0.2		0.1		1		1	
50-32-8	Benzo(a)pyrene	**PH**	H	3	3	0	0.009	0.04	0.0369	0.04		0.00017		3		3	
206-44-0	Fluoranthene	***P***	**H**	3	3	0	0.05	0.39	0.357	0.39		0.0063		3		3	
91-20-3	Naphthalene	***P***	NP	3	3	0	1.83	2.49	2.436	2.49		2		1		1	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	3	3	0	2.23	5.18	5.03	5.18		n/a					
P1877	Phenol	SP	**NP**	3	3	0	0.09	0.09	0.09	0.09		7.7		0		0	
P1407	Ali EC5-EC6			0								10					n-hexane fall within this fraction
P1408	Ali >EC6-EC8			0								10					n-heptane falls within this fraction
P1409	Ali >EC8-EC10			0								10					n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			0								10					
P1411	Ali >EC12-EC16			0								10					
P1938	Ali >EC16-EC35			0								10					
P1415	Ali >EC35-EC44			0								10					
P1441	Aro EC5-EC7			0								10					Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			0								10					Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			0								10					Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			0								10					Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			0								10					2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			0								10					fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			0								10					Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

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				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1362	Aro >EC35-EC44			0								10					
71-43-2	Benzene	*P*	**H**	3	3	0	0.99	17	15.399	17		8		1		1	
108-88-3	Toluene	SP	**H**	3	3	0	4.99	4.99	4.99	4.99		74		0		0	
100-41-4	Ethylbenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
95-47-6	o-Xylene		**H**	3	3	0	4.99	4.99	4.99	4.99		30		0		0	EQS for total xylene
P1374	m,p-Xylene		**H**	3	3	0	9.99	9.99	9.99	9.99		30		0		0	EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		**NP**	3	3	0	9.99	9.99	9.99	9.99		n/a					
71-55-6	1,1,1-Trichloroethane		**NP**	3	3	0	4.99	4.99	4.99	4.99		100		0		0	
79-00-5	1,1,2-Trichloroethane		**NP**	3	3	0	9.99	9.99	9.99	9.99		300		0		0	
96-12-8	1,2-Dibromo-3-chloropropane			3	3	0	9.99	9.99	9.99	9.99		n/a					
106-93-4	1,2-Dibromoethane		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
95-50-1	1,2-Dichlorobenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	
107-06-2	1,2-Dichloroethane (EDC)	*P*	**NP**	3	3	0	9.99	9.99	9.99	9.99		10		0		0	
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		**NP**	3	3	0	4.99	4.99	4.99	4.99		n/a					
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		**NP**	3	3	0	4.99	4.99	4.99	4.99		n/a					
78-87-5	1,2-Dichloropropane		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
10061-01-5	cis 1,3-Dichloropropene		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
10061-02-6	trans 1,3-Dichloropropene		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
106-46-7	1,4-Dichlorobenzene		**H**	3	3	0	4.99	4.99	4.99	4.99		20		0		0	
75-27-4	Bromodichloromethane			3	3	0	4.99	4.99	4.99	4.99		n/a					
75-01-4	Chloroethene (vinyl chloride)		**H**	3	3	0	4.99	4.99	4.99	4.99		n/a					
124-48-1	Dibromochloromethane			3	3	0	4.99	4.99	4.99	4.99		n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			3	3	0	4.99	4.99	4.99	4.99		20		0		0	
75-09-2	Dichloromethane	*P*	**NP**	0								20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	**H**	3	3	0	4.99	4.99	4.99	4.99		0.6		3		3	
100-42-5	Styrene		**H**	3	3	0	4.99	4.99	4.99	4.99		50		0		0	
25322-20-7	Tetrachloroethane (PCA)	SP		0								n/a					
127-18-4	Tetrachloroethene (PCE)	OP	**NP**	0								10					
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0								n/a					
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	**H**	0								12					
75-25-2	Tribromomethane (bromoform)			0								n/a					
12002-48-1	Trichlorobenzenes	*P*	**NP**	0								0.4					
79-01-6	Trichloroethene	OP	**H**	0								10					
67-66-3	Trichloromethane (chloroform)	*P*	**H**	0								2.5					
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromchloromethane & bromodichloromethane			0								n/a					
88-06-2	2,4,6-Trichlorophenol		**H**	0								n/a					
120-83-2	2,4-Dichlorophenol	SP	**H**	0								0.42					
95-57-8	2-Chlorophenol		**H**	0								50					
554-00-7	3,4-Dichloroaniline	SP		0								0.2					
108-43-0	3-Chlorophenol		**H**	0								50					
59-50-7	4-Chloro, 3-methylphenol		**H**	0								40					
106-48-9	4-Chlorophenol		**H**	0								50					
85-68-7	Benzyl butyl phthalate	SP		0								0.75					
117-81-7	Di(2-ethylhexylphthalate) (DEHP)	**PH**	**NP**	0								1.3					
84-74-2	Dibutyl phthalate		**NP**	0								8					
84-66-2	Diethyl phthalate (DEP)			0								200					
131-11-3	Dimethyl phthalate (DMP)			0								800					
117-84-0	Dioctyl phthalates			0								20					
118-74-1	Hexachlorobenzene	**PH**	**H**	0								0.05					
104-40-5	Nonylphenol (4-Nonylphenol)	**PH**		0								0.3					
140-66-9	Octylphenol ((4-(1,1′, 3,3′-tetramethylbutyl) -phenol))	P		0								0.01					
608-93-5	Pentachlorobenzene	**PH**	**H**	0								0.0007					
123-91-1	1,4-dioxane			0								n/a					
79-06-1	Acrylamide		**H**	0								n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)			0								25					
32534-81-9	Brominated diphenylethers (Sum congeners 28,47,99,100,153,154)	**PH**	**H**	0								0.014					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

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H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
85535-84-8	Chloroalkanes C10-C13	PH	H	0								0.4					
25567-68-4	Chloronitrotoluenes		H	0								10					
3252-43-5	Dibromoacetonitrile			0								n/a					
13425-80-4	Dichloroacetate			0								n/a					
3018-12-0	Dichloroacetonitrile			0								n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0								n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0								0.0008					
2163-68-0	Hydroxyatrazine			0								n/a					
101043-37-2	Microcystin-LR			0								n/a					
62-75-9	N-nitrosodimethylamine			0								n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0								0.00013					
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0								n/a					
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0								n/a					
2893-78-9	Sodium dichloroisoxyanurate			0								n/a					
126-73-8	Tributyl phosphate		H	0								50					
3380-34-5	Triclosan	SP		0								0.1					
7726-95-6	Bromine (Br)			0								10					
7782-50-5	Chlorine (total free available)	SP	NP	0								10					
14866-68-3	Chlorate			0								n/a					
14998-27-7	Chlorite			0								n/a					
60-00-4	EDTA (edetic acid)			0								400					
106-89-8	Epichlorohydrin		H	0								n/a					
569-64-2	Malachite green		H	0								0.5					
10599-90-3	Monochloramine			0								n/a					
79-11-8	Mononchloroacetate (Chloroacetic Acid)			0								n/a					
139-13-9	NTA (nitrilotriacetic acid)			0								3000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0								n/a					
7440-61-1	U (dissolved)			0								n/a					
36643-28-4	Tributyl tin compounds	PH	H	0								0.0002					
7783-06-4	Hydrogen Sulphide			0								10					
14797-73-0	Perchlorate			0								n/a					
GRP06	Total anions			0								n/a					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0								n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0								0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy butyric acid)			0								n/a					
71751-41-2	Abamectin			0								0.003					
74070-46-5	Aclinofen	*P*		0								0.012					
15972-60-8	Alachlor	*P*	H	0								0.3					
116-06-3	Aldicarb		NP	0								n/a					
309-00-2	Aldrin		H	0								n/a					
GRP07	Aldrin & dieldrin		H	0								n/a					
1912-24-9	Atrazine	*P*	H	0								0.6					
35575-96-3	Azamethiphos			0								n/a					
2642-71-9	Azinphos ethyl		H	0								n/a					
86-50-0	Azinphos-methyl		H	0								0.01					
25057-89-0	Bentazone		NP	0								500					
42576-02-3	Bifenox	*P*	H	0								0.0012					
1689-84-5	Bromoxynil		H	0								100					
10605-21-7	Carbendazim	SP	H	0								n/a					
1563-66-2	Carbofuran		NP	0								n/a					
57-74-9	Chlordane		H	0								n/a					
470-90-6	Chlorofenvinphos	*P*	H	0								0.1					
101-21-3	Chloropropham		H	0								10					
2921-88-2	Chloropyrifos	*P*	H	0								0.03					
1897-45-6	Chlorothalonil	SP	H	0								n/a					
15545-48-9	Chlorotoluron		H	0								2					
GRP08	Clyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0								0.005					
56-72-4	Coumaphos		H	0								0.03					
21725-46-2	Cyanazine		H	0								n/a					
28159-98-0	Cybutryne	*P*		0								0.0025					
68359-37-5	Cyfluthrin			0								0.001					
52315-07-8	Cypermethrin	*P*	H	0								0.000008					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

WFD Designation (2015 Directions)
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SP = Specific Pollutant

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(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
GRP09	DDT total (dichlorodiphenylthrichloroethane)	OP	**H**	0								0.025					
8065-48-3	Demeton		**H**	0								0.5					
333-41-5	Diazinon (sheep dip)	SP	**H**	0								0.01					
120-36-5	Dichloroprop		**H**	0								n/a					
62-73-7	Dichlorvos	***P***	**H**	0								0.00006					
115-32-2	Dicofol	PH	**H**	0								0.000032					
60-57-1	Dieldrin		**H**	0								n/a					
35367-38-5	Diflubenzuron		**H**	0								0.005					
60-51-5	Dimethoate	SP	**H**	0								0.48					
330-54-1	Diuron	***P***	**H**	0								0.2					
117704-25- 3	Doramectin			0								0.001					
115-29-7	Endosulfan	**PH**	**H**	0								0.0005					
72-20-8	Endrin		**H**	0								n/a					
299-84-3	Fenchlorphos		**H**	0								0.03					
122-14-5	Fenitrothion		**H**	0								0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		**H**	0								n/a					
55-38-9	Fenthion		**H**	0								n/a					
370-50-3	Flucofuron			0								1					
50-00-0	Formaldehyde (methanal)		**NP**	0								n/a					
38641-94-0	Glyphosate	SP		0								196					
76-44-8	Heptachlor		**H**	0								1E-08					
GRP10	Heptachlor & Heptachlor epoxide	**PH**	**H**	0								1E-08					
1024-57-3	Heptachlor epoxide			0								1E-08					
608-73-1	Hexachlorocyclohexane (inlcudes lindane)	**PH**	**H**	0								0.002					
1689-83-4	Ioxynil		**H**	0								10					
465-73-6	Isodrin		**H**	0								n/a					
34123-69-6	Isoproturon	***P***	**NP**	0								0.3					
70288-86-7	Ivermectin			0								0.001					
330-55-2	Linuron	SP	**H**	0								0.5					
121-75-5	Malathion		**H**	0								0.02					
8018-01-07	Mancozeb		**NP**	0								2					
12427-38-2	Maneb		**NP**	0								3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0								80					
93-65-2	Mecoprop	SP	**NP**	0								18					
2032-65-7	Methiocarb	SP	**NP**	0								n/a					
72-43-5	Methoxychlor			0								n/a					
51218-45-2	Metolachlor			0								n/a					
7786-34-7	Mevinphos		**H**	0								n/a					
2212-67-1	Molinate			0								n/a					
1113-02-6	Omethoate		**H**	0								n/a					
50-29-3	para-para-DDT	OP	**H**	0								0.01					
56-38-2	Parathion		**H**	0								n/a					
298-00-0	Parathion-methyl		**H**	0								n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucofuron and permethrin)			0								0.05					
40487-42-1	Pendimethalin	SP	**NP**	0								n/a					
87-86-5	Pentachlorophenol	***P***	**H**	0								0.4					
52645-53-1	Permethrin	SP	**H**	0								0.0002					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0								n/a					
GRP13	Pesticides (total)			0								n/a					
23103-98-2	Pirimicarb		**NP**	0								1					
29232-93-7	Pirimiphos - methyl		**H**	0								0.015					
67747-09-5	Prochloraz		**H**	0								4					
31218-83-4	Propetamphos		**H**	0								0.03					
23950-58-5	Propyzamide		**H**	0								100					
95737-68-1	Pyriproxyfen			0								n/a					
124495-18-7	Quinoxyfen	**PH**		0								0.015					
122-34-9	Simazine	***P***	**H**	0								1					
3567-25-7	Sulcofuron			0								25					
117-18-0	Tecnazene (total)			0								1					
886-50-0	Tertbutryn	***P***	**NP**	0								0.0065					
5915-41-3	Tertbutylazine		**H**	0								n/a					
148-79-8	Thiabendazole		**NP**	0								5					

Summary of Remedial Targets Methodology Screening

Hydrock

RTM Level: RTM Level 1 - Soil Zone Assessment - leachate samples
Water body receptor(s): Groundwater
Secondary receptor(s):
Data set: Leachate
Client: Morgan Sindall
Site: SWITCH
Job no: 26279
Test Certificates(s): 23-12154.3
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.

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H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water Quality		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value			Other Waters EQS		Other Waters EQS		Other Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
2303-17-5	Triallate		H	0								0.25					
24017-47-8	Triazaphos		H	0								0.005					
1582-09-8	Trifluralin	PH	H	0								0.03					
1262-21-1	Triphenyltin and derivatives		H	0								0.008					

Appendix I Waste assessment

HazWasteOnline™ assessment

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

HX47J-WZRAS-0QRQF

Job name

Untitled 95851

Description/Comments

Dets Lab Cert

Project

26279

Site

SWITCH

Classified by

Name:
Nathan Thompson
Date:
29 Nov 2023 11:21 GMT
Telephone:
07557 345 513

Company:
Hydrock Consultants Ltd
Hawthorn Park
Holdenby Road, Spratton
Northampton
NN6 8LD

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: **CERTIFIED**

Course	Date
Hazardous Waste Classification	22 Apr 2021

Next 3 year Refresher due by Apr 2024

Purpose of classification

2 - Material Characterisation

Address of the waste

South Wales Industrial Transition from Carbon Hub (SWITCH Building), Oakwood Road, Port Talbot, **Post Code** SA13 1DE.

SIC for the process giving rise to the waste

41201 Construction of commercial buildings

Description of industry/producer giving rise to the waste

Former tank farm and location of gasholder for steelworks to the west of the site. The site has previously undergone remedial works circa 2021

Description of the specific process, sub-process and/or activity that created the waste

The site is covered by Made Ground which includes slag, likely to be generated by industrial practices at the former steelworks just west of the site, which have since been demolished along with historical tanks.

Description of the waste

Made Ground comprising sandy gravels of limestone sandstone, asphalt, concrete, brick and slag. The Made Ground overlays the Tidal Flat Deposits in all locations except the south-east and north-west corners of the site, and consists of slightly silty clay. Alluvial Fan Deposits underlay Made Ground/Tidal Flat Deposits, which comprise slightly sandy gravel of sandstone with a low sandstone cobble content

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP01	0.3	Non Hazardous		4
2	TP01[2]	0.65	Unknown. Chemistry data not provided.		6
3	TP01[3]	1.2	Non Hazardous		7
4	TP01[4]	1.7	Non Hazardous		10
5	TP01[5]	1.7	Unknown. Chemistry data not provided.		12
6	TP02	0.15	Non Hazardous		13
7	TP02[2]	1.6	Hazardous	HP 3(i)	14
8	TP02[3]	2.5	Hazardous	HP 3(i)	17
9	TP02[4]	2.5	Unknown. Chemistry data not provided.		18
10	TP02[5]	2.9	Hazardous	HP 3(i), HP 5, HP 7, HP 11	19
11	TP03	0.4	Non Hazardous		22
12	TP03[2]	1.4	Non Hazardous		24
13	TP03[3]	2.4	Hazardous	HP 7, HP 10, HP 14	27
14	TP03[4]	2.55	Non Hazardous		30
15	TP04	0.2	Non Hazardous		33
16	TP04[2]	0.3	Non Hazardous		35
17	TP04[3]	1	Non Hazardous		36
18	TP04[4]	1	Non Hazardous		39
19	TP04[5]	1.2	Non Hazardous		40
20	TP04[6]	1.2	Unknown. Chemistry data not provided.		42
21	TP04[7]	1.2	Non Hazardous		43
22	TP04[8]	1.8	Non Hazardous		44
23	TP04[9]	2	Non Hazardous		47
24	BH01	0.2	Non Hazardous		48
25	TP05	0.2	Non Hazardous		50
26	TP05[2]	0.3	Non Hazardous		52
27	TP05[3]	1	Hazardous	HP 8	53
28	TP05[4]	1	Non Hazardous		56
29	TP05[5]	2	Non Hazardous		57
30	TP05[6]	2	Non Hazardous		58
31	TP05[7]	2.8	Non Hazardous		61
32	TP06	0.3	Non Hazardous		64
33	TP06[2]	0.5	Non Hazardous		65
34	TP06[3]	1	Non Hazardous		68
35	TP06[4]	1.5	Non Hazardous		69
36	TP06[5]	2.5	Unknown. Chemistry data not provided.		72
37	TP07	0.2	Non Hazardous		73
38	TP07[2]	0.5	Non Hazardous		76
39	TP07[3]	1	Non Hazardous		77
40	TP07[4]	2	Non Hazardous		80
41	TP07[5]	2.6	Non Hazardous		81
42	TP07[6]	3	Hazardous	HP 3(i), HP 7, HP 11	84
43	TP07[7]	3	Non Hazardous		87
44	BH01[2]	1.1	Non Hazardous		88
45	BH01[3]	3	Non Hazardous		91
46	BH01[4]	5.5	Non Hazardous		94
47	BH02	1	Non Hazardous		97
48	BH02[2]	2.8	Non Hazardous		100
49	BH02[3]	3.7	Non Hazardous		103
50	TP08	0.1	Non Hazardous		106
51	TP08[2]	1	Non Hazardous		107
52	TP08[3]	1	Unknown. Chemistry data not provided.		110
53	TP08[4]	1.5	Non Hazardous		111
54	TP08[5]	1.5	Non Hazardous		112
55	TP09	1	Hazardous	HP 2	113
56	TP09[2]	3	Hazardous	HP 2	116
57	TP09[3]	2	Non Hazardous		119
58	TP09[4]	3	Non Hazardous		120

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
59	TP10	0.2	Hazardous	HP 2	121
60	TP10[2]	0.5	Hazardous	HP 2	123
61	TP10[3]	0.85	Non Hazardous		125
62	TP10[4]	1	Hazardous	HP 2	126
63	TP10[5]	2.1	Non Hazardous		129
64	TP10[6]	2.6	Hazardous	HP 2	130

Related documents

#	Name	Description
1	Hydrock Standard plus Cresol (ammended Lead)	waste stream template used to create this Job

Report

Created by: Nathan Thompson

Created date: 29 Nov 2023 11:21 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	133
Appendix B: Rationale for selection of metal species	134
Appendix C: Version	135

Classification of sample: TP01

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP01
Sample Depth:
0.3 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.26	mg/kg		0.26	mg/kg	0.000026 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14	mg/kg	1.32	18.485	mg/kg	0.00185 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.13	mg/kg		1.13	mg/kg	0.000113 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.81	mg/kg		0.81	mg/kg	0.000081 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.21	mg/kg		1.21	mg/kg	0.000121 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		0.57	mg/kg		0.57	mg/kg	0.000057 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.33	mg/kg		0.33	mg/kg	0.000033 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.2	mg/kg	2.775	3.33	mg/kg	0.000333 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		118	mg/kg	1.462	172.464	mg/kg	0.0172 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9		1.24	mg/kg		1.24	mg/kg	0.000124 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		91	mg/kg	1.126	102.456	mg/kg	0.0102 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		1.69	mg/kg		1.69	mg/kg	0.000169 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		0.55	mg/kg		0.55	mg/kg	0.000055 %		
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	141	mg/kg		141	mg/kg	0.0141 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.45	mg/kg		0.45	mg/kg	0.000045 %		
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		19	mg/kg	1.579	30.01	mg/kg	0.003 %		
26		pH			PH		10.7	pH		10.7	pH	10.7 pH		
27		phenanthrene		201-581-5	85-01-8		0.77	mg/kg		0.77	mg/kg	0.000077 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.047	mg/kg	1.405	0.066	mg/kg	0.0000066 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		228	mg/kg	1.245	283.795	mg/kg	0.0284 %		
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		50	mg/kg		50	mg/kg	0.005 %		
											Total:	0.0836 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP01[2]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP01[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.65 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP01[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP01[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene				0.39	mg/kg		0.39	mg/kg	0.000039 %		
			201-469-6	83-32-9									
2		acenaphthylene				0.18	mg/kg		0.18	mg/kg	0.000018 %		
			205-917-1	208-96-8									
3		anthracene				1.18	mg/kg		1.18	mg/kg	0.000118 %		
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				23	mg/kg	1.32	30.367	mg/kg	0.00304 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzene				20	mg/kg		20	mg/kg	0.002 %		
		601-020-00-8	200-753-7	71-43-2									
6		benzo[a]anthracene				2.72	mg/kg		2.72	mg/kg	0.000272 %		
		601-033-00-9	200-280-6	56-55-3									
7		benzo[a]pyrene; benzo[def]chrysene				1.82	mg/kg		1.82	mg/kg	0.000182 %		
		601-032-00-3	200-028-5	50-32-8									
8		benzo[b]fluoranthene				2.44	mg/kg		2.44	mg/kg	0.000244 %		
		601-034-00-4	205-911-9	205-99-2									
9		benzo[ghi]perylene				0.82	mg/kg		0.82	mg/kg	0.000082 %		
			205-883-8	191-24-2									
10		benzo[k]fluoranthene				0.92	mg/kg		0.92	mg/kg	0.000092 %		
		601-036-00-5	205-916-6	207-08-9									
11		beryllium { beryllium oxide }				1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %		
		004-003-00-8	215-133-1	1304-56-9									
12		boron { boron tribromide/trichloride/trifluoride (combined) }				<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
				10294-33-4, 10294-34-5, 7637-07-2									
13		cadmium { cadmium sulfide }			1	1.3	mg/kg	1.285	1.671	mg/kg	0.00013 %		
		048-010-00-4	215-147-8	1306-23-6									
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				98	mg/kg	1.462	143.232	mg/kg	0.0143 %		
			215-160-9	1308-38-9									
15		chromium in chromium(VI) compounds { chromium(VI) oxide }				<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
		024-001-00-0	215-607-8	1333-82-0									

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		2.57	mg/kg		2.57	mg/kg	0.000257 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		177	mg/kg	1.126	199.282	mg/kg	0.0199 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.35	mg/kg		0.35	mg/kg	0.000035 %		
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
21		fluoranthene		205-912-4	206-44-0		5.8	mg/kg		5.8	mg/kg	0.00058 %		
22		fluorene		201-695-5	86-73-7		1.07	mg/kg		1.07	mg/kg	0.000107 %		
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.98	mg/kg		0.98	mg/kg	0.000098 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	167	mg/kg		167	mg/kg	0.0167 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.61	mg/kg		0.61	mg/kg	0.000061 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		43	mg/kg	1.579	67.918	mg/kg	0.00679 %		
28		pH			PH		8.6	pH		8.6	pH	8.6 pH		
29		phenanthrene		201-581-5	85-01-8		5.81	mg/kg		5.81	mg/kg	0.000581 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.056	mg/kg	1.405	0.0787	mg/kg	0.00000787 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		184.13	mg/kg		184.13	mg/kg	0.0184 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		537	mg/kg	1.245	668.411	mg/kg	0.0668 %		
37		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		20	mg/kg		20	mg/kg	0.002 %		
											Total:	0.157 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

benzene: (conc.: 0.002%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0184%)

Classification of sample: TP01[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP01[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.7 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		benzene				100	mg/kg		100	mg/kg	0.01 %		
		601-020-00-8	200-753-7	71-43-2									
2	•	ethylbenzene				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
		601-023-00-4	202-849-4	100-41-4									
3	•	pH				9.1	pH		9.1	pH	9.1 pH		
				PH									
4		toluene				<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
		601-021-00-3	203-625-9	108-88-3									
5	•	TPH (C6 to C40) petroleum group				330.21	mg/kg		330.21	mg/kg	0.033 %		
				TPH									
6		xylene				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
										Total:	0.0439 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

benzene: (conc.: 0.01%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.033%)

Classification of sample: TP01[5]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP01[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.7 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP02

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP02		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.15 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.2 pH		10.2 pH	10.2 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP02[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP02[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.6 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0714%)
ethylbenzene: (conc.: 0.0055%)
toluene: (conc.: 0.0229%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0189%)
xylene: (conc.: 0.0174%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			201-469-6	83-32-9									
2		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-917-1	208-96-8									
3		anthracene				0.32	mg/kg		0.32	mg/kg	0.000032 %		
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzene				714	mg/kg		714	mg/kg	0.0714 %		
		601-020-00-8	200-753-7	71-43-2									
6		benzo[a]anthracene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
		601-033-00-9	200-280-6	56-55-3									
7		benzo[a]pyrene; benzo[def]chrysene				0.67	mg/kg		0.67	mg/kg	0.000067 %		
		601-032-00-3	200-028-5	50-32-8									
8		benzo[b]fluoranthene				1.04	mg/kg		1.04	mg/kg	0.000104 %		
		601-034-00-4	205-911-9	205-99-2									
9		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-883-8	191-24-2									
10		benzo[k]fluoranthene				0.34	mg/kg		0.34	mg/kg	0.000034 %		
		601-036-00-5	205-916-6	207-08-9									

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8	mg/kg	2.775	2.22	mg/kg	0.000222 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.5	mg/kg	1.285	0.643	mg/kg	0.00005 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		250	mg/kg	1.462	365.389	mg/kg	0.0365 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
16		chrysene	601-048-00-0	205-923-4	218-01-9		1.01	mg/kg		1.01	mg/kg	0.000101 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		51	mg/kg	1.126	57.42	mg/kg	0.00574 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		55	mg/kg		55	mg/kg	0.0055 %		
21		fluoranthene		205-912-4	206-44-0		1.67	mg/kg		1.67	mg/kg	0.000167 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.09	mg/kg		0.09	mg/kg	0.000009 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	76	mg/kg		76	mg/kg	0.0076 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		9.62	mg/kg		9.62	mg/kg	0.000962 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		16	mg/kg	1.579	25.272	mg/kg	0.00253 %		
28		pH			PH		9.5	pH		9.5	pH	9.5 pH		
29		phenanthrene		201-581-5	85-01-8		1.03	mg/kg		1.03	mg/kg	0.000103 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.049	mg/kg	1.405	0.0688	mg/kg	0.00000688 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		229	mg/kg		229	mg/kg	0.0229 %		
34		TPH (C6 to C40) petroleum group			TPH		189	mg/kg		189	mg/kg	0.0189 %		

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
35		xylene									
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		174 mg/kg		174 mg/kg	0.0174 %		
36		zinc { zinc oxide }									
		030-013-00-7	215-222-5	1314-13-2		119 mg/kg	1.245	148.121 mg/kg	0.0148 %		
								Total:	0.209 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP02[3]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
TP02[3]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
2.5 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0546%)
ethylbenzene: (conc.: 0.0062%)
toluene: (conc.: 0.0234%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0151%)
xylene: (conc.: 0.0142%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		benzene	601-020-00-8	200-753-7	71-43-2		546	mg/kg		546	mg/kg	0.0546 %		
2	•	ethylbenzene	601-023-00-4	202-849-4	100-41-4		62	mg/kg		62	mg/kg	0.0062 %		
3	•	pH			PH		9.8	pH		9.8	pH	9.8 pH		
4		toluene	601-021-00-3	203-625-9	108-88-3		234	mg/kg		234	mg/kg	0.0234 %		
5	•	TPH (C6 to C40) petroleum group			TPH		150.84	mg/kg		150.84	mg/kg	0.0151 %		
6		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		142	mg/kg		142	mg/kg	0.0142 %		
											Total:	0.113 %		

Key

	User supplied data
	Hazardous result
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP02[4]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP02[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP02[5]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
TP02[5]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
2.9 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 1.259%)
ethylbenzene: (conc.: 0.0681%)
toluene: (conc.: 0.0074%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0107%)
xylene: (conc.: 0.0191%)

HP 5: Specific Target Organ Toxicity (STOT)/Aspiration Toxicity "waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration"

Hazard Statements hit:

STOT RE 1; H372 "Causes damage to organs [or state all organs affected, if known] through prolonged or repeated exposure [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

benzene: (conc.: 1.259%)

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

benzene: (conc.: 1.259%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

benzene: (conc.: 1.259%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
5		benzene	601-020-00-8	200-753-7	71-43-2		12591	mg/kg		12591	mg/kg	1.259 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<LOD
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.2	mg/kg	13.43	16.116	mg/kg	0.00161 %		
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		28	mg/kg	1.462	40.924	mg/kg	0.00409 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		<LOD
16		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		13	mg/kg	1.126	14.637	mg/kg	0.00146 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		681	mg/kg		681	mg/kg	0.0681 %		
21		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	35	mg/kg		35	mg/kg	0.0035 %		
		082-001-00-6											
25		mercury { mercury dichloride }				<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
		080-010-00-X	231-299-8	7487-94-7									
26		naphthalene				2.2	mg/kg		2.2	mg/kg	0.00022 %		
		601-052-00-2	202-049-5	91-20-3									
27		nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
28		pH				7.7	pH		7.7	pH	7.7 pH		
				PH									
29		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			201-581-5	85-01-8									
30		phenol				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
		604-001-00-2	203-632-7	108-95-2									
31		pyrene				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
			204-927-3	129-00-0									
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.025	mg/kg	1.405	0.0351	mg/kg	0.00000351 %		
		034-002-00-8											
33		toluene				74	mg/kg		74	mg/kg	0.0074 %		
		601-021-00-3	203-625-9	108-88-3									
34		TPH (C6 to C40) petroleum group				106.73	mg/kg		106.73	mg/kg	0.0107 %		
				TPH									
35		xylene				191	mg/kg		191	mg/kg	0.0191 %		
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
36		zinc { zinc oxide }				51	mg/kg	1.245	63.48	mg/kg	0.00635 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	1.387 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP03

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP03
Sample Depth:
0.4 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6	mg/kg	1.32	7.922	mg/kg	0.000792 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1	mg/kg	2.775	2.775	mg/kg	0.000278 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		<LOD
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	36.539	mg/kg	0.00365 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		<LOD
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15	mg/kg	1.126	16.888	mg/kg	0.00169 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	21	mg/kg		21	mg/kg	0.0021 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		21	mg/kg	1.579	33.169	mg/kg	0.00332 %		
26		pH			PH		7.7	pH		7.7	pH	7.7 pH		
27		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.011	mg/kg	1.405	0.0155	mg/kg	0.00000155 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		68	mg/kg	1.245	84.641	mg/kg	0.00846 %		
											Total:	0.0229 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP03[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP03[2]
Sample Depth:
1.4 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			201-469-6	83-32-9									
2		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-917-1	208-96-8									
3		anthracene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzene				61	mg/kg		61	mg/kg	0.0061 %		
		601-020-00-8	200-753-7	71-43-2									
6		benzo[a]anthracene				0.57	mg/kg		0.57	mg/kg	0.000057 %		
		601-033-00-9	200-280-6	56-55-3									
7		benzo[a]pyrene; benzo[def]chrysene				0.52	mg/kg		0.52	mg/kg	0.000052 %		
		601-032-00-3	200-028-5	50-32-8									
8		benzo[b]fluoranthene				0.7	mg/kg		0.7	mg/kg	0.00007 %		
		601-034-00-4	205-911-9	205-99-2									
9		benzo[ghi]perylene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
			205-883-8	191-24-2									
10		benzo[k]fluoranthene				0.24	mg/kg		0.24	mg/kg	0.000024 %		
		601-036-00-5	205-916-6	207-08-9									
11		beryllium { beryllium oxide }				2	mg/kg	2.775	5.551	mg/kg	0.000555 %		
		004-003-00-8	215-133-1	1304-56-9									
12		boron { boron tribromide/trichloride/trifluoride (combined) }				<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
				10294-33-4, 10294-34-5, 7637-07-2									
13		cadmium { cadmium sulfide }			1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %		
		048-010-00-4	215-147-8	1306-23-6									
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				175	mg/kg	1.462	255.772	mg/kg	0.0256 %		
			215-160-9	1308-38-9									
15		chromium in chromium(VI) compounds { chromium(VI) oxide }				<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
		024-001-00-0	215-607-8	1333-82-0									

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.62	mg/kg		0.62	mg/kg	0.000062 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		62	mg/kg	1.126	69.805	mg/kg	0.00698 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
21		fluoranthene		205-912-4	206-44-0		0.88	mg/kg		0.88	mg/kg	0.000088 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.37	mg/kg		0.37	mg/kg	0.000037 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1880	mg/kg		1880	mg/kg	0.188 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.14	mg/kg		0.14	mg/kg	0.000014 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		16	mg/kg	1.579	25.272	mg/kg	0.00253 %		
28		pH			PH		9	pH		9	pH	9pH		
29		phenanthrene		201-581-5	85-01-8		0.45	mg/kg		0.45	mg/kg	0.000045 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.052	mg/kg	1.405	0.0731	mg/kg	0.00000731 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		10	mg/kg		10	mg/kg	0.001 %		
34		TPH (C6 to C40) petroleum group			TPH		56.17	mg/kg		56.17	mg/kg	0.00562 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		160	mg/kg	1.245	199.154	mg/kg	0.0199 %		
											Total:	0.261 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0061%)
toluene: (conc.: 0.001%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00562%)

Classification of sample: TP03[3]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
TP03[3]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
2.4 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 2; H351 "Suspected of causing cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 4.8%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 4.8%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 4.8%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			201-469-6	83-32-9									
2		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-917-1	208-96-8									
3		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				7	mg/kg	1.32	9.242	mg/kg	0.000924 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
		601-033-00-9	200-280-6	56-55-3									
6		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
		601-032-00-3	200-028-5	50-32-8									
7		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
		601-034-00-4	205-911-9	205-99-2									

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		36	mg/kg	1.462	52.616	mg/kg	0.00526 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16	mg/kg	1.126	18.014	mg/kg	0.0018 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	48000	mg/kg		48000	mg/kg	4.8 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		6	mg/kg	1.579	9.477	mg/kg	0.000948 %		
26		pH			PH		7.3	pH		7.3	pH	7.3 pH		
27		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.08	mg/kg	1.405	0.112	mg/kg	0.0000112 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		479	mg/kg	1.245	596.218	mg/kg	0.0596 %		
											Total:	4.871 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP03[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP03[4]
Sample Depth:
2.55 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9	mg/kg	1.32	11.883	mg/kg	0.00119 %		
5		benzene	601-020-00-8	200-753-7	71-43-2		6	mg/kg		6	mg/kg	0.0006 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7	mg/kg	2.775	1.943	mg/kg	0.000194 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		<LOD
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		11	mg/kg	1.462	16.077	mg/kg	0.00161 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19	mg/kg	1.126	21.392	mg/kg	0.00214 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
21		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1630	mg/kg		1630	mg/kg	0.163 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		11	mg/kg	1.579	17.374	mg/kg	0.00174 %		
28		pH			PH		6.9	pH		6.9	pH	6.9 pH		
29		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.014	mg/kg	1.405	0.0197	mg/kg	0.00000197 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		63	mg/kg	1.245	78.417	mg/kg	0.00784 %		
											Total:	0.187 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

benzene: (conc.: 0.0006%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: TP04

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		**<LOD**
4		arsenic { arsenic trioxide } 033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	13.203	mg/kg	0.00132 %		
5		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		0.81	mg/kg		0.81	mg/kg	0.000081 %		
6		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		0.69	mg/kg		0.69	mg/kg	0.000069 %		
7		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		0.79	mg/kg		0.79	mg/kg	0.000079 %		
8		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		0.26	mg/kg		0.26	mg/kg	0.000026 %		
10		beryllium { beryllium oxide } 004-003-00-8	215-133-1	1304-56-9		1.1	mg/kg	2.775	3.053	mg/kg	0.000305 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide } 048-010-00-4	215-147-8	1306-23-6	1	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		210	mg/kg	1.462	306.927	mg/kg	0.0307 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide } 024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene 601-048-00-0	205-923-4	218-01-9		0.92	mg/kg		0.92	mg/kg	0.000092 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		35	mg/kg	1.126	39.406	mg/kg	0.00394 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		1.35	mg/kg		1.35	mg/kg	0.000135 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	622	mg/kg		622	mg/kg	0.0622 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.27	mg/kg		0.27	mg/kg	0.000027 %		
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		10	mg/kg	1.579	15.795	mg/kg	0.00158 %		
26		pH			PH		11	pH		11	pH	11pH		
27		phenanthrene		201-581-5	85-01-8		0.52	mg/kg		0.52	mg/kg	0.000052 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.03	mg/kg	1.405	0.0422	mg/kg	0.00000422 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		107	mg/kg	1.245	133.184	mg/kg	0.0133 %		
											Total:	0.116 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP04[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.7 pH		10.7 pH	10.7 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP04[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP04[3]
Sample Depth:
1 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.61	mg/kg		0.61	mg/kg	0.000061 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8	mg/kg	1.32	10.563	mg/kg	0.00106 %		
5		benzene	601-020-00-8	200-753-7	71-43-2		11	mg/kg		11	mg/kg	0.0011 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.98	mg/kg		2.98	mg/kg	0.000298 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		2.11	mg/kg		2.11	mg/kg	0.000211 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		2.92	mg/kg		2.92	mg/kg	0.000292 %		
9		benzo[ghi]perylene		205-883-8	191-24-2		1.05	mg/kg		1.05	mg/kg	0.000105 %		
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.8	mg/kg		0.8	mg/kg	0.00008 %		
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		284	mg/kg	1.462	415.082	mg/kg	0.0415 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		2.82	mg/kg		2.82	mg/kg	0.000282 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		36	mg/kg	1.126	40.532	mg/kg	0.00405 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.49	mg/kg		0.49	mg/kg	0.000049 %		
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
21		fluoranthene		205-912-4	206-44-0		4.93	mg/kg		4.93	mg/kg	0.000493 %		
22		fluorene		201-695-5	86-73-7		0.14	mg/kg		0.14	mg/kg	0.000014 %		
23		indeno[123-cd]pyrene		205-893-2	193-39-5		1.41	mg/kg		1.41	mg/kg	0.000141 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	109	mg/kg		109	mg/kg	0.0109 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.16	mg/kg		0.16	mg/kg	0.000016 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		12	mg/kg	1.579	18.954	mg/kg	0.0019 %		
28		pH			PH		9.9	pH		9.9	pH	9.9 pH		
29		phenanthrene		201-581-5	85-01-8		1.66	mg/kg		1.66	mg/kg	0.000166 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.02	mg/kg	1.405	0.0281	mg/kg	0.00000281 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		92.12	mg/kg		92.12	mg/kg	0.00921 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		93	mg/kg	1.245	115.758	mg/kg	0.0116 %		
											Total:	0.0871 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

benzene: (conc.: 0.0011%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00921%)

Classification of sample: TP04[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9.9 pH		9.9 pH	9.9 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP04[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		benzene				9	mg/kg		9	mg/kg	0.0009 %		
		601-020-00-8	200-753-7	71-43-2									
2	•	ethylbenzene				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
		601-023-00-4	202-849-4	100-41-4									
3	•	pH				9.7	pH		9.7	pH	9.7 pH		
				PH									
4		toluene				<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
		601-021-00-3	203-625-9	108-88-3									
5	•	TPH (C6 to C40) petroleum group				144.12	mg/kg		144.12	mg/kg	0.0144 %		
				TPH									
6		xylene				<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
										Total:	0.0162 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

benzene: (conc.: 0.0009%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0144%)

Classification of sample: TP04[6]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[6]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP04[7]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[7]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9.9 pH		9.9 pH	9.9 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP04[8]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP04[8]
Sample Depth:
1.8 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		0.35	mg/kg		0.35	mg/kg	0.000035 %		
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.87	mg/kg		0.87	mg/kg	0.000087 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		21	mg/kg	1.32	27.727	mg/kg	0.00277 %		
5		benzene	601-020-00-8	200-753-7	71-43-2		119	mg/kg		119	mg/kg	0.0119 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.81	mg/kg		4.81	mg/kg	0.000481 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.17	mg/kg		3.17	mg/kg	0.000317 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		5.16	mg/kg		5.16	mg/kg	0.000516 %		
9		benzo[ghi]perylene		205-883-8	191-24-2		1.43	mg/kg		1.43	mg/kg	0.000143 %		
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.35	mg/kg		1.35	mg/kg	0.000135 %		
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.5	mg/kg	1.285	0.643	mg/kg	0.00005 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		187	mg/kg	1.462	273.311	mg/kg	0.0273 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		5.38	mg/kg		5.38	mg/kg	0.000538 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		58	mg/kg	1.126	65.302	mg/kg	0.00653 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.79	mg/kg		0.79	mg/kg	0.000079 %		
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		71	mg/kg		71	mg/kg	0.0071 %		
21		fluoranthene		205-912-4	206-44-0		8.64	mg/kg		8.64	mg/kg	0.000864 %		
22		fluorene		201-695-5	86-73-7		0.32	mg/kg		0.32	mg/kg	0.000032 %		
23		indeno[123-cd]pyrene		205-893-2	193-39-5		2.1	mg/kg		2.1	mg/kg	0.00021 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	255	mg/kg		255	mg/kg	0.0255 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		19.8	mg/kg		19.8	mg/kg	0.00198 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		15	mg/kg	1.579	23.692	mg/kg	0.00237 %		
28		pH			PH		8.7	pH		8.7	pH	8.7 pH		
29		phenanthrene		201-581-5	85-01-8		4.75	mg/kg		4.75	mg/kg	0.000475 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.079	mg/kg	1.405	0.111	mg/kg	0.0000111 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		36	mg/kg		36	mg/kg	0.0036 %		
34		TPH (C6 to C40) petroleum group			TPH		342.23	mg/kg		342.23	mg/kg	0.0342 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		35	mg/kg		35	mg/kg	0.0035 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		107	mg/kg	1.245	133.184	mg/kg	0.0133 %		
											Total:	0.147 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0119%)
ethylbenzene: (conc.: 0.0071%)
toluene: (conc.: 0.0036%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0342%)
xylene: (conc.: 0.0035%)

Classification of sample: TP04[9]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP04[9]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9.4 pH		9.4 pH	9.4 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: BH01

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01
Sample Depth:
0.2 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9	mg/kg	1.32	11.883	mg/kg	0.00119 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.71	mg/kg		0.71	mg/kg	0.000071 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.7	mg/kg		0.7	mg/kg	0.00007 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.67	mg/kg		0.67	mg/kg	0.000067 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.36	mg/kg		0.36	mg/kg	0.000036 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	36.539	mg/kg	0.00365 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.66	mg/kg		0.66	mg/kg	0.000066 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19	mg/kg	1.126	21.392	mg/kg	0.00214 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		0.86	mg/kg		0.86	mg/kg	0.000086 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	83	mg/kg		83	mg/kg	0.0083 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		7	mg/kg	1.579	11.056	mg/kg	0.00111 %		
26		pH			PH		10.6	pH		10.6	pH	10.6 pH		
27		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.032	mg/kg	1.405	0.045	mg/kg	0.0000045 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		88	mg/kg	1.245	109.535	mg/kg	0.011 %		
											Total:	0.0307 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP05

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP05
Sample Depth:
0.2 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.56	mg/kg		0.56	mg/kg	0.000056 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17	mg/kg	1.32	22.446	mg/kg	0.00224 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.61	mg/kg		1.61	mg/kg	0.000161 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.13	mg/kg		1.13	mg/kg	0.000113 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.45	mg/kg		1.45	mg/kg	0.000145 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.54	mg/kg		0.54	mg/kg	0.000054 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		79	mg/kg	1.462	115.463	mg/kg	0.0115 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9		1.42	mg/kg		1.42	mg/kg	0.000142 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		82	mg/kg	1.126	92.323	mg/kg	0.00923 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		2.33	mg/kg		2.33	mg/kg	0.000233 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	98	mg/kg		98	mg/kg	0.0098 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.25	mg/kg		0.25	mg/kg	0.000025 %		
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		12	mg/kg	1.579	18.954	mg/kg	0.0019 %		
26		pH			PH		10.6	pH		10.6	pH	10.6 pH		
27		phenanthrene		201-581-5	85-01-8		1.6	mg/kg		1.6	mg/kg	0.00016 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
29		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.037	mg/kg	1.405	0.052	mg/kg	0.0000052 %		
31		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		156	mg/kg	1.245	194.175	mg/kg	0.0194 %		
											Total:	0.0582 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP05[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP05[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.4 pH		10.4 pH	10.4 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP05[3]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP05[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.9 pH)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			201-469-6	83-32-9									
2		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-917-1	208-96-8									
3		anthracene				0.46	mg/kg		0.46	mg/kg	0.000046 %		
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				14	mg/kg	1.32	18.485	mg/kg	0.00185 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzene				109	mg/kg		109	mg/kg	0.0109 %		
		601-020-00-8	200-753-7	71-43-2									
6		benzo[a]anthracene				1.03	mg/kg		1.03	mg/kg	0.000103 %		
		601-033-00-9	200-280-6	56-55-3									
7		benzo[a]pyrene; benzo[def]chrysene				0.81	mg/kg		0.81	mg/kg	0.000081 %		
		601-032-00-3	200-028-5	50-32-8									
8		benzo[b]fluoranthene				0.83	mg/kg		0.83	mg/kg	0.000083 %		
		601-034-00-4	205-911-9	205-99-2									
9		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
			205-883-8	191-24-2									
10		benzo[k]fluoranthene				0.61	mg/kg		0.61	mg/kg	0.000061 %		
		601-036-00-5	205-916-6	207-08-9									
11		beryllium { beryllium oxide }				0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %		
		004-003-00-8	215-133-1	1304-56-9									
12		boron { boron tribromide/trichloride/trifluoride (combined) }				<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
				10294-33-4, 10294-34-5, 7637-07-2									
13		cadmium { cadmium sulfide }			1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
		048-010-00-4	215-147-8	1306-23-6									

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		715	mg/kg	1.462	1045.012	mg/kg	0.105 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.97	mg/kg		0.97	mg/kg	0.000097 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		64	mg/kg	1.126	72.057	mg/kg	0.00721 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.09	mg/kg		0.09	mg/kg	0.000009 %		
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		5	mg/kg		5	mg/kg	0.0005 %		
21		fluoranthene		205-912-4	206-44-0		1.41	mg/kg		1.41	mg/kg	0.000141 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	97	mg/kg		97	mg/kg	0.0097 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.74	mg/kg		0.74	mg/kg	0.000074 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		20	mg/kg	1.579	31.59	mg/kg	0.00316 %		
28		pH			PH		11.9	pH		11.9	pH	11.9 pH		
29		phenanthrene		201-581-5	85-01-8		0.86	mg/kg		0.86	mg/kg	0.000086 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		7.2	mg/kg		7.2	mg/kg	0.00072 %		
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.049	mg/kg	1.405	0.0688	mg/kg	0.00000688 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		18	mg/kg		18	mg/kg	0.0018 %		
34		TPH (C6 to C40) petroleum group			TPH		56.22	mg/kg		56.22	mg/kg	0.00562 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		4	mg/kg		4	mg/kg	0.0004 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		163	mg/kg	1.245	202.888	mg/kg	0.0203 %		
											Total:	0.17 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0109%)
ethylbenzene: (conc.: 0.0005%)
toluene: (conc.: 0.0018%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.00562%)
xylene: (conc.: 0.0004%)

Classification of sample: TP05[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP05[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.6 pH		10.6 pH	10.6 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP05[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP05[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9.2 pH		9.2 pH	9.2 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP05[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP05[6]
Sample Depth:
2 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		19	mg/kg	1.32	25.086	mg/kg	0.00251 %		
5		benzene	601-020-00-8	200-753-7	71-43-2		162	mg/kg		162	mg/kg	0.0162 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.25	mg/kg		0.25	mg/kg	0.000025 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.14	mg/kg		0.14	mg/kg	0.000014 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.2	mg/kg		0.2	mg/kg	0.00002 %		
9		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.3	mg/kg	2.775	6.383	mg/kg	0.000638 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.9	mg/kg	13.43	25.517	mg/kg	0.00255 %		
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		216	mg/kg	1.462	315.696	mg/kg	0.0316 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.23	mg/kg		0.23	mg/kg	0.000023 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		51	mg/kg	1.126	57.42	mg/kg	0.00574 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		180	mg/kg		180	mg/kg	0.018 %		
21		fluoranthene		205-912-4	206-44-0		0.34	mg/kg		0.34	mg/kg	0.000034 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.13	mg/kg		0.13	mg/kg	0.000013 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	46	mg/kg		46	mg/kg	0.0046 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		16	mg/kg	1.579	25.272	mg/kg	0.00253 %		
28		pH			PH		8.8	pH		8.8	pH	8.8 pH		
29		phenanthrene		201-581-5	85-01-8		0.27	mg/kg		0.27	mg/kg	0.000027 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.081	mg/kg	1.405	0.114	mg/kg	0.0000114 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		56.27	mg/kg		56.27	mg/kg	0.00563 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		40	mg/kg		40	mg/kg	0.004 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		117	mg/kg	1.245	145.632	mg/kg	0.0146 %		
											Total:	0.11 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0162%)
ethylbenzene: (conc.: 0.018%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.00563%)
xylene: (conc.: 0.004%)

Classification of sample: TP05[7]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP05[7]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.8 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	6	mg/kg	1.32	7.922	mg/kg	0.000792 %		
5		benzene	601-020-00-8	200-753-7	71-43-2	<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[ghi]perylene		205-883-8	191-24-2	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.7	mg/kg	2.775	1.943	mg/kg	0.000194 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	11	mg/kg	1.462	16.077	mg/kg	0.00161 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10	mg/kg	1.126	11.259	mg/kg	0.00113 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		6	mg/kg		6	mg/kg	0.0006 %		
21		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	6	mg/kg		6	mg/kg	0.0006 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		12	mg/kg	1.579	18.954	mg/kg	0.0019 %		
28		pH			PH		7.5	pH		7.5	pH	7.5 pH		
29		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.012	mg/kg	1.405	0.0169	mg/kg	0.00000169 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		45	mg/kg	1.245	56.012	mg/kg	0.0056 %		
											Total:	0.0216 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0006%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: TP06

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP06		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				11.3 pH		11.3 pH	11.3 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP06[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP06[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.21	mg/kg		0.21	mg/kg	0.000021 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	24	mg/kg	1.32	31.688	mg/kg	0.00317 %		
5		benzene	601-020-00-8	200-753-7	71-43-2	92	mg/kg		92	mg/kg	0.0092 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	1.34	mg/kg		1.34	mg/kg	0.000134 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	1.05	mg/kg		1.05	mg/kg	0.000105 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	1.49	mg/kg		1.49	mg/kg	0.000149 %		
9		benzo[ghi]perylene		205-883-8	191-24-2	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.52	mg/kg		0.52	mg/kg	0.000052 %		
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	1	mg/kg	2.775	2.775	mg/kg	0.000278 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	65	mg/kg	1.462	95.001	mg/kg	0.0095 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		1.21	mg/kg		1.21	mg/kg	0.000121 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		63	mg/kg	1.126	70.931	mg/kg	0.00709 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		160	mg/kg		160	mg/kg	0.016 %		
21		fluoranthene		205-912-4	206-44-0		1.77	mg/kg		1.77	mg/kg	0.000177 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		1.2	mg/kg		1.2	mg/kg	0.00012 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	158	mg/kg		158	mg/kg	0.0158 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		2.12	mg/kg		2.12	mg/kg	0.000212 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		17	mg/kg	1.579	26.851	mg/kg	0.00269 %		
28		pH			PH		9.6	pH		9.6	pH	9.6 pH		
29		phenanthrene		201-581-5	85-01-8		0.96	mg/kg		0.96	mg/kg	0.000096 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.026	mg/kg	1.405	0.0365	mg/kg	0.00000365 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		82	mg/kg		82	mg/kg	0.0082 %		
34		TPH (C6 to C40) petroleum group			TPH		112.23	mg/kg		112.23	mg/kg	0.0112 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		51	mg/kg		51	mg/kg	0.0051 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		230	mg/kg	1.245	286.284	mg/kg	0.0286 %		
											Total:	0.121 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0092%)
ethylbenzene: (conc.: 0.016%)
toluene: (conc.: 0.0082%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0112%)
xylene: (conc.: 0.0051%)

Classification of sample: TP06[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP06[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.1 pH		10.1 pH	10.1 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP06[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP06[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		0.56	mg/kg		0.56	mg/kg	0.000056 %		
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
5		benzene	601-020-00-8	200-753-7	71-43-2	44	mg/kg		44	mg/kg	0.0044 %		
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.34	mg/kg		0.34	mg/kg	0.000034 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.34	mg/kg		0.34	mg/kg	0.000034 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.47	mg/kg		0.47	mg/kg	0.000047 %		
9		benzo[ghi]perylene		205-883-8	191-24-2	0.31	mg/kg		0.31	mg/kg	0.000031 %		
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.15	mg/kg		0.15	mg/kg	0.000015 %		
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		175	mg/kg	1.462	255.772	mg/kg	0.0256 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.35	mg/kg		0.35	mg/kg	0.000035 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		38	mg/kg	1.126	42.784	mg/kg	0.00428 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		12	mg/kg		12	mg/kg	0.0012 %		
21		fluoranthene		205-912-4	206-44-0		0.47	mg/kg		0.47	mg/kg	0.000047 %		
22		fluorene		201-695-5	86-73-7		0.17	mg/kg		0.17	mg/kg	0.000017 %		
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.29	mg/kg		0.29	mg/kg	0.000029 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	65	mg/kg		65	mg/kg	0.0065 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		3.7	mg/kg		3.7	mg/kg	0.00037 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		13	mg/kg	1.579	20.533	mg/kg	0.00205 %		
28		pH			PH		9.8	pH		9.8	pH	9.8 pH		
29		phenanthrene		201-581-5	85-01-8		0.32	mg/kg		0.32	mg/kg	0.000032 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.021	mg/kg	1.405	0.0295	mg/kg	0.00000295 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		24	mg/kg		24	mg/kg	0.0024 %		
34		TPH (C6 to C40) petroleum group			TPH		83.15	mg/kg		83.15	mg/kg	0.00832 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		6	mg/kg		6	mg/kg	0.0006 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		82	mg/kg	1.245	102.067	mg/kg	0.0102 %		
											Total:	0.0704 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 0.0044%)
ethylbenzene: (conc.: 0.0012%)
toluene: (conc.: 0.0024%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.00832%)
xylene: (conc.: 0.0006%)

Classification of sample: TP06[5]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP06[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP07

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.11	mg/kg		0.11	mg/kg	0.000011 %		
4		arsenic { arsenic trioxide }	215-481-4	1327-53-3		11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
5		benzene	200-753-7	71-43-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
6		benzo[a]anthracene	200-280-6	56-55-3		0.62	mg/kg		0.62	mg/kg	0.000062 %		
7		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
8		benzo[b]fluoranthene	205-911-9	205-99-2		0.81	mg/kg		0.81	mg/kg	0.000081 %		
9		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		benzo[k]fluoranthene	205-916-6	207-08-9		0.31	mg/kg		0.31	mg/kg	0.000031 %		
11		beryllium { beryllium oxide }	215-133-1	1304-56-9		0.8	mg/kg	2.775	2.22	mg/kg	0.000222 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		57	mg/kg	1.462	83.309	mg/kg	0.00833 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.8	mg/kg		0.8	mg/kg	0.00008 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		26	mg/kg	1.126	29.273	mg/kg	0.00293 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		85	mg/kg		85	mg/kg	0.0085 %		
21		fluoranthene		205-912-4	206-44-0		0.9	mg/kg		0.9	mg/kg	0.00009 %		
22		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	102	mg/kg		102	mg/kg	0.0102 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.38	mg/kg		0.38	mg/kg	0.000038 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		9	mg/kg	1.579	14.215	mg/kg	0.00142 %		
28		pH			PH		10.4	pH		10.4	pH	10.4 pH		
29		phenanthrene		201-581-5	85-01-8		0.55	mg/kg		0.55	mg/kg	0.000055 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.021	mg/kg	1.405	0.0295	mg/kg	0.00000295 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		294.12	mg/kg		294.12	mg/kg	0.0294 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		24	mg/kg		24	mg/kg	0.0024 %		
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		150	mg/kg	1.245	186.707	mg/kg	0.0187 %		
											Total:	0.0872 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0085%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0294%)
xylene: (conc.: 0.0024%)

Classification of sample: TP07[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				8.3 pH		8.3 pH	8.3 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP07[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.17	mg/kg		0.17	mg/kg	0.000017 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
5		benzene	601-020-00-8	200-753-7	71-43-2	<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
6		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.66	mg/kg		0.66	mg/kg	0.000066 %		
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.59	mg/kg		0.59	mg/kg	0.000059 %		
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.84	mg/kg		0.84	mg/kg	0.000084 %		
9		benzo[ghi]perylene		205-883-8	191-24-2	0.4	mg/kg		0.4	mg/kg	0.00004 %		
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.27	mg/kg		0.27	mg/kg	0.000027 %		
11		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %		
12		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
13		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
14		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	283	mg/kg	1.462	413.62	mg/kg	0.0414 %		
15		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		chrysene	601-048-00-0	205-923-4	218-01-9		0.68	mg/kg		0.68	mg/kg	0.000068 %		
17		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		503	mg/kg	1.126	566.322	mg/kg	0.0566 %		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
19		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.13	mg/kg		0.13	mg/kg	0.000013 %		
20		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
21		fluoranthene		205-912-4	206-44-0		1	mg/kg		1	mg/kg	0.0001 %		
22		fluorene		201-695-5	86-73-7		0.09	mg/kg		0.09	mg/kg	0.000009 %		
23		indeno[123-cd]pyrene		205-893-2	193-39-5		0.43	mg/kg		0.43	mg/kg	0.000043 %		
24		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	139	mg/kg		139	mg/kg	0.0139 %		
25		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
26		naphthalene	601-052-00-2	202-049-5	91-20-3		0.33	mg/kg		0.33	mg/kg	0.000033 %		
27		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		14	mg/kg	1.579	22.113	mg/kg	0.00221 %		
28		pH			PH		10.4	pH		10.4	pH	10.4 pH		
29		phenanthrene		201-581-5	85-01-8		0.54	mg/kg		0.54	mg/kg	0.000054 %		
30		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
31		pyrene		204-927-3	129-00-0		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
32		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.045	mg/kg	1.405	0.0632	mg/kg	0.00000632 %		
33		toluene	601-021-00-3	203-625-9	108-88-3		<5	mg/kg		<5	mg/kg	<0.0005 %		**<LOD**
34		TPH (C6 to C40) petroleum group			TPH		117.12	mg/kg		117.12	mg/kg	0.0117 %		
35		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
36		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		164	mg/kg	1.245	204.133	mg/kg	0.0204 %		
											Total:	0.153 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0117%)

Classification of sample: TP07[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10 pH		10 pH	10pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP07[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.6 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	58	mg/kg	1.32	76.579	mg/kg	0.00766 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.17	mg/kg		0.17	mg/kg	0.000017 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.23	mg/kg		0.23	mg/kg	0.000023 %		
8		benzo[ghi]perylene		205-883-8	191-24-2	0.26	mg/kg		0.26	mg/kg	0.000026 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	2.2	mg/kg	13.43	29.546	mg/kg	0.00295 %		
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	66	mg/kg	1.462	96.463	mg/kg	0.00965 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9	0.17	mg/kg		0.17	mg/kg	0.000017 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		142	mg/kg	1.126	159.876	mg/kg	0.016 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		18	mg/kg		18	mg/kg	0.0018 %		
20		fluoranthene		205-912-4	206-44-0		0.23	mg/kg		0.23	mg/kg	0.000023 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.22	mg/kg		0.22	mg/kg	0.000022 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	233	mg/kg		233	mg/kg	0.0233 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		17	mg/kg	1.579	26.851	mg/kg	0.00269 %		
27		pH			PH		7.4	pH		7.4	pH	7.4 pH		
28		phenanthrene		201-581-5	85-01-8		0.18	mg/kg		0.18	mg/kg	0.000018 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		0.2	mg/kg		0.2	mg/kg	0.00002 %		
31		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		366	mg/kg	1.245	455.565	mg/kg	0.0456 %		
											Total:	0.117 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0018%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: TP07[6]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
TP07[6]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
3 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 1.716%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.193%)

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.193%)

Carc. 2; H351 "Suspected of causing cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

ethylbenzene: (conc.: 1.716%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.193%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		3.36	mg/kg		3.36	mg/kg	0.000336 %		
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.27	mg/kg		0.27	mg/kg	0.000027 %		
4		arsenic { arsenic trioxide }	215-481-4	1327-53-3		7	mg/kg	1.32	9.242	mg/kg	0.000924 %		
5		benzo[a]anthracene	200-280-6	56-55-3		0.2	mg/kg		0.2	mg/kg	0.00002 %		
6		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		0.14	mg/kg		0.14	mg/kg	0.000014 %		
7		benzo[b]fluoranthene	205-911-9	205-99-2		0.17	mg/kg		0.17	mg/kg	0.000017 %		
8		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide }	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		18	mg/kg	1.462	26.308	mg/kg	0.00263 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	205-923-4	218-01-9		0.19	mg/kg		0.19	mg/kg	0.000019 %		
16		copper { dicopper oxide; copper (I) oxide }	215-270-7	1317-39-1		11	mg/kg	1.126	12.385	mg/kg	0.00124 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	202-849-4	100-41-4		17161	mg/kg		17161	mg/kg	1.716 %		
20		fluoranthene	205-912-4	206-44-0		0.46	mg/kg		0.46	mg/kg	0.000046 %		
21		fluorene	201-695-5	86-73-7		1.02	mg/kg		1.02	mg/kg	0.000102 %		
22		indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	13	mg/kg		13	mg/kg	0.0013 %		
24		mercury { mercury dichloride }	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
26		nickel { nickel dihydroxide }											
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		6	mg/kg	1.579	9.477	mg/kg	0.000948 %		
27		pH											
				PH		7.4	pH		7.4	pH	7.4 pH		
28		phenanthrene											
			201-581-5	85-01-8		1.21	mg/kg		1.21	mg/kg	0.000121 %		
29		phenol											
		604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene											
			204-927-3	129-00-0		0.36	mg/kg		0.36	mg/kg	0.000036 %		
31		TPH (C6 to C40) petroleum group											
				TPH		1927.12	mg/kg		1927.12	mg/kg	0.193 %		
32		zinc { zinc oxide }											
		030-013-00-7	215-222-5	1314-13-2		28	mg/kg	1.245	34.852	mg/kg	0.00349 %		
										Total:	1.923 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP07[7]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP07[7]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				7.6 pH		7.6 pH	7.6 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: BH01[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01[2]
Sample Depth:
1.1 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.15	mg/kg		0.15	mg/kg	0.000015 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		22	mg/kg	1.32	29.047	mg/kg	0.0029 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.58	mg/kg		0.58	mg/kg	0.000058 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.54	mg/kg		0.54	mg/kg	0.000054 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.7	mg/kg		0.7	mg/kg	0.00007 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		0.09	mg/kg		0.09	mg/kg	0.000009 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.27	mg/kg		0.27	mg/kg	0.000027 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1	mg/kg	2.775	3.053	mg/kg	0.000305 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		330	mg/kg	1.462	482.313	mg/kg	0.0482 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.63	mg/kg		0.63	mg/kg	0.000063 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		76	mg/kg	1.126	85.568	mg/kg	0.00856 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		59	mg/kg		59	mg/kg	0.0059 %		
20		fluoranthene		205-912-4	206-44-0		0.82	mg/kg		0.82	mg/kg	0.000082 %		
21		fluorene		201-695-5	86-73-7		0.09	mg/kg		0.09	mg/kg	0.000009 %		
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.09	mg/kg		0.09	mg/kg	0.000009 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	121	mg/kg		121	mg/kg	0.0121 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		4.06	mg/kg		4.06	mg/kg	0.000406 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		29	mg/kg	1.579	45.805	mg/kg	0.00458 %		
27		pH			PH		10.3	pH		10.3	pH	10.3 pH		
28		phenanthrene		201-581-5	85-01-8		0.67	mg/kg		0.67	mg/kg	0.000067 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		0.62	mg/kg		0.62	mg/kg	0.000062 %		
31		TPH (C6 to C40) petroleum group			TPH		96.379	mg/kg		96.379	mg/kg	0.00964 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		183	mg/kg	1.245	227.783	mg/kg	0.0228 %		
											Total:	0.118 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0059%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00964%)

Classification of sample: BH01[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
BH01[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		0.12	mg/kg		0.12	mg/kg	0.000012 %		
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	215-481-4	1327-53-3		1.99	mg/kg	1.32	2.627	mg/kg	0.000263 %		
5		benzo[a]anthracene	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
6		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
7		benzo[b]fluoranthene	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
8		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide }	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		11	mg/kg	1.462	16.077	mg/kg	0.00161 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		3.99	mg/kg	1.126	4.492	mg/kg	0.000449 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		13	mg/kg		13	mg/kg	0.0013 %		
20		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	3	mg/kg		3	mg/kg	0.0003 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		1.24	mg/kg		1.24	mg/kg	0.000124 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		7	mg/kg	1.579	11.056	mg/kg	0.00111 %		
27		pH			PH		8.2	pH		8.2	pH	8.2 pH		
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
31		TPH (C6 to C40) petroleum group			TPH		56.15	mg/kg		56.15	mg/kg	0.00562 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		19	mg/kg	1.245	23.65	mg/kg	0.00236 %		
											Total:	0.0157 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0013%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00562%)

Classification of sample: BH01[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH01[4]
Sample Depth:
5.5 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		1.99	mg/kg	1.32	2.627	mg/kg	0.000263 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<LOD
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		<LOD
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		5	mg/kg	1.462	7.308	mg/kg	0.000731 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		<LOD
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		3.99	mg/kg	1.126	4.492	mg/kg	0.000449 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	2.99	mg/kg		2.99	mg/kg	0.000299 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		6	mg/kg	1.579	9.477	mg/kg	0.000948 %		
27		pH			PH		7.4	pH		7.4	pH	7.4 pH		
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
31		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		15	mg/kg	1.245	18.671	mg/kg	0.00187 %		
											Total:	0.0129 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: BH02

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
BH02		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		0.12	mg/kg		0.12	mg/kg	0.000012 %		
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.18	mg/kg		0.18	mg/kg	0.000018 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	17	mg/kg	1.32	22.446	mg/kg	0.00224 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.64	mg/kg		0.64	mg/kg	0.000064 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.54	mg/kg		0.54	mg/kg	0.000054 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.71	mg/kg		0.71	mg/kg	0.000071 %		
8		benzo[ghi]perylene		205-883-8	191-24-2	0.35	mg/kg		0.35	mg/kg	0.000035 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.26	mg/kg		0.26	mg/kg	0.000026 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.7	mg/kg	2.775	1.943	mg/kg	0.000194 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	580	mg/kg	1.462	847.702	mg/kg	0.0848 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	601-048-00-0	205-923-4	218-01-9	0.6	mg/kg		0.6	mg/kg	0.00006 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		59	mg/kg	1.126	66.427	mg/kg	0.00664 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		25	mg/kg		25	mg/kg	0.0025 %		
20		fluoranthene		205-912-4	206-44-0		1.03	mg/kg		1.03	mg/kg	0.000103 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.37	mg/kg		0.37	mg/kg	0.000037 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	74	mg/kg		74	mg/kg	0.0074 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.62	mg/kg		0.62	mg/kg	0.000062 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		18	mg/kg	1.579	28.431	mg/kg	0.00284 %		
27		pH			PH		11.1	pH		11.1	pH	11.1 pH		
28		phenanthrene		201-581-5	85-01-8		0.77	mg/kg		0.77	mg/kg	0.000077 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		0.85	mg/kg		0.85	mg/kg	0.000085 %		
31		TPH (C6 to C40) petroleum group			TPH		66.35	mg/kg		66.35	mg/kg	0.00664 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		123	mg/kg	1.245	153.1	mg/kg	0.0153 %		
											Total:	0.132 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0025%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00664%)

Classification of sample: BH02[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH02[2]
Sample Depth:
2.8 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		<LOD
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		27	mg/kg	1.462	39.462	mg/kg	0.00395 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		<LOD
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19	mg/kg	1.126	21.392	mg/kg	0.00214 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	13	mg/kg		13	mg/kg	0.0013 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		14	mg/kg	1.579	22.113	mg/kg	0.00221 %		
27		pH			PH		7.9	pH		7.9	pH	7.9 pH		
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
31		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		47	mg/kg	1.245	58.502	mg/kg	0.00585 %		
											Total:	0.0254 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: BH02[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
BH02[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
3.7 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide } 033-003-00-0	215-481-4	1327-53-3		5	mg/kg	1.32	6.602	mg/kg	0.00066 %		
5		benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
6		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
7		benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
8		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide } 004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide } 048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		**<LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		24	mg/kg	1.462	35.077	mg/kg	0.00351 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide } 024-001-00-0	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene 601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8	mg/kg	1.126	9.007	mg/kg	0.000901 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	9	mg/kg		9	mg/kg	0.0009 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		20	mg/kg	1.579	31.59	mg/kg	0.00316 %		
27		pH			PH		10	pH		10	pH	10pH		
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
31		TPH (C6 to C40) petroleum group			TPH		56.12	mg/kg		56.12	mg/kg	0.00561 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		56	mg/kg	1.245	69.704	mg/kg	0.00697 %		
											Total:	0.0245 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Classification of sample: TP08

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP08		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				8.4 pH		8.4 pH	8.4 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP08[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP08[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		1	mg/kg		1	mg/kg	0.0001 %		
4		arsenic { arsenic trioxide }	215-481-4	1327-53-3		12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
5		benzo[a]anthracene	200-280-6	56-55-3		2.41	mg/kg		2.41	mg/kg	0.000241 %		
6		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		1.64	mg/kg		1.64	mg/kg	0.000164 %		
7		benzo[b]fluoranthene	205-911-9	205-99-2		2.3	mg/kg		2.3	mg/kg	0.00023 %		
8		benzo[ghi]perylene	205-883-8	191-24-2		1.18	mg/kg		1.18	mg/kg	0.000118 %		
9		benzo[k]fluoranthene	205-916-6	207-08-9		0.87	mg/kg		0.87	mg/kg	0.000087 %		
10		beryllium { beryllium oxide }	215-133-1	1304-56-9		1.2	mg/kg	2.775	3.33	mg/kg	0.000333 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		301	mg/kg	1.462	439.928	mg/kg	0.044 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		<2	mg/kg	1.923	<3.846	mg/kg	<0.000385 %		**<LOD**
15		chrysene	205-923-4	218-01-9		2.23	mg/kg		2.23	mg/kg	0.000223 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		53	mg/kg	1.126	59.672	mg/kg	0.00597 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		3	mg/kg		3	mg/kg	0.0003 %		
20		fluoranthene		205-912-4	206-44-0		3.48	mg/kg		3.48	mg/kg	0.000348 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		1.19	mg/kg		1.19	mg/kg	0.000119 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	128	mg/kg		128	mg/kg	0.0128 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.43	mg/kg		0.43	mg/kg	0.000043 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		18	mg/kg	1.579	28.431	mg/kg	0.00284 %		
27		pH			PH		10.2	pH		10.2	pH	10.2 pH		
28		phenanthrene		201-581-5	85-01-8		1.81	mg/kg		1.81	mg/kg	0.000181 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
30		pyrene		204-927-3	129-00-0		2.54	mg/kg		2.54	mg/kg	0.000254 %		
31		TPH (C6 to C40) petroleum group			TPH		116.15	mg/kg		116.15	mg/kg	0.0116 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		236	mg/kg	1.245	293.752	mg/kg	0.0294 %		
											Total:	0.113 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0003%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0116%)

Classification of sample: TP08[3]

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP08[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	**User entered data**	Conv. Factor	Compound conc.	**Classification value**	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0%		

Key

	User supplied data

Classification of sample: TP08[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP08[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.3 pH		10.3 pH	10.3 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP08[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP08[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.5 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9 pH		9 pH	9pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP09

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP09		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17	mg/kg	1.32	22.446	mg/kg	0.00224 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.51	mg/kg		0.51	mg/kg	0.000051 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.46	mg/kg		0.46	mg/kg	0.000046 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.64	mg/kg		0.64	mg/kg	0.000064 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		0.34	mg/kg		0.34	mg/kg	0.000034 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.21	mg/kg		0.21	mg/kg	0.000021 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.9	mg/kg	2.775	2.498	mg/kg	0.00025 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		435	mg/kg	1.462	635.777	mg/kg	0.0636 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.49	mg/kg		0.49	mg/kg	0.000049 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		73	mg/kg	1.126	82.19	mg/kg	0.00822 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		0.75	mg/kg		0.75	mg/kg	0.000075 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.35	mg/kg		0.35	mg/kg	0.000035 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	126	mg/kg		126	mg/kg	0.0126 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.56	mg/kg		0.56	mg/kg	0.000056 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		20	mg/kg	1.579	31.59	mg/kg	0.00316 %		
27		pH			PH		10.5	pH		10.5	pH	10.5 pH		
28		phenanthrene		201-581-5	85-01-8		0.49	mg/kg		0.49	mg/kg	0.000049 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
30		pyrene		204-927-3	129-00-0		0.63	mg/kg		0.63	mg/kg	0.000063 %		
31		TPH (C6 to C40) petroleum group			TPH		85.12	mg/kg		85.12	mg/kg	0.00851 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		217	mg/kg	1.245	270.103	mg/kg	0.027 %		
											Total:	0.129 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00851%)

Classification of sample: TP09[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
TP09[2]
Sample Depth:
3 m

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	8	mg/kg	1.32	10.563	mg/kg	0.00106 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.44	mg/kg		0.44	mg/kg	0.000044 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.26	mg/kg		0.26	mg/kg	0.000026 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.43	mg/kg		0.43	mg/kg	0.000043 %		
8		benzo[ghi]perylene		205-883-8	191-24-2	0.16	mg/kg		0.16	mg/kg	0.000016 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.13	mg/kg		0.13	mg/kg	0.000013 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.19	mg/kg	1.285	0.244	mg/kg	0.000019 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		91	mg/kg	1.462	133.002	mg/kg	0.0133 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.46	mg/kg		0.46	mg/kg	0.000046 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19	mg/kg	1.126	21.392	mg/kg	0.00214 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		0.73	mg/kg		0.73	mg/kg	0.000073 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.16	mg/kg		0.16	mg/kg	0.000016 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	36	mg/kg		36	mg/kg	0.0036 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.25	mg/kg		0.25	mg/kg	0.000025 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		14	mg/kg	1.579	22.113	mg/kg	0.00221 %		
27		pH			PH		8.9	pH		8.9	pH	8.9 pH		
28		phenanthrene		201-581-5	85-01-8		0.48	mg/kg		0.48	mg/kg	0.000048 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
30		pyrene		204-927-3	129-00-0		0.52	mg/kg		0.52	mg/kg	0.000052 %		
31		TPH (C6 to C40) petroleum group			TPH		57.12	mg/kg		57.12	mg/kg	0.00571 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		109	mg/kg	1.245	135.674	mg/kg	0.0136 %		
33		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		10	mg/kg		10	mg/kg	0.001 %		
											Total:	0.0456 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00571%)

Classification of sample: TP09[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP09[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				8.9 pH		8.9 pH	8.9 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP09[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP09[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
3 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				10.4 pH		10.4 pH	10.4 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP10

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.2 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene		204-371-1	120-12-7		0.3	mg/kg		0.3	mg/kg	0.00003 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.14	mg/kg		1.14	mg/kg	0.000114 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.88	mg/kg		0.88	mg/kg	0.000088 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.15	mg/kg		1.15	mg/kg	0.000115 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.42	mg/kg		0.42	mg/kg	0.000042 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		**<LOD**
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24	mg/kg	1.462	35.077	mg/kg	0.00351 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		1.12	mg/kg		1.12	mg/kg	0.000112 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		27	mg/kg	1.126	30.399	mg/kg	0.00304 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		1.48	mg/kg		1.48	mg/kg	0.000148 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		0.7	mg/kg		0.7	mg/kg	0.00007 %		
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	46	mg/kg		46	mg/kg	0.0046 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.09	mg/kg		0.09	mg/kg	0.000009 %		
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		9	mg/kg	1.579	14.215	mg/kg	0.00142 %		
26		pH			PH		10.2	pH		10.2	pH	10.2 pH		
27		phenanthrene		201-581-5	85-01-8		0.78	mg/kg		0.78	mg/kg	0.000078 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
29		pyrene		204-927-3	129-00-0		1.24	mg/kg		1.24	mg/kg	0.000124 %		
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		132	mg/kg	1.245	164.302	mg/kg	0.0164 %		
											Total:	0.0339 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP10[2]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10[2]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.5 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.42	mg/kg		0.42	mg/kg	0.000042 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	23	mg/kg	1.32	30.367	mg/kg	0.00304 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	1.91	mg/kg		1.91	mg/kg	0.000191 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	1.81	mg/kg		1.81	mg/kg	0.000181 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	2.33	mg/kg		2.33	mg/kg	0.000233 %		
8		benzo[ghi]perylene	205-883-8	191-24-2		1.03	mg/kg		1.03	mg/kg	0.000103 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.54	mg/kg		0.54	mg/kg	0.000054 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	1	mg/kg	2.775	2.775	mg/kg	0.000278 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2	<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.6	mg/kg	1.285	0.771	mg/kg	0.00006 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	31	mg/kg	1.462	45.308	mg/kg	0.00453 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		1.97	mg/kg		1.97	mg/kg	0.000197 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		56	mg/kg	1.126	63.05	mg/kg	0.0063 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		fluoranthene		205-912-4	206-44-0		2.94	mg/kg		2.94	mg/kg	0.000294 %		
20		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		indeno[123-cd]pyrene		205-893-2	193-39-5		1.27	mg/kg		1.27	mg/kg	0.000127 %		
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	238	mg/kg		238	mg/kg	0.0238 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
24		naphthalene	601-052-00-2	202-049-5	91-20-3		0.56	mg/kg		0.56	mg/kg	0.000056 %		
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		20	mg/kg	1.579	31.59	mg/kg	0.00316 %		
26		pH			PH		10.9	pH		10.9	pH	10.9 pH		
27		phenanthrene		201-581-5	85-01-8		1.78	mg/kg		1.78	mg/kg	0.000178 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
29		pyrene		204-927-3	129-00-0		2.3	mg/kg		2.3	mg/kg	0.00023 %		
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		310	mg/kg	1.245	385.861	mg/kg	0.0386 %		
											Total:	0.0839 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP10[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10[3]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.85 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH				9.2 pH		9.2 pH	9.2 pH		
				PH							
								Total:	0%		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP10[4]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10[4]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		0.26	mg/kg		0.26	mg/kg	0.000026 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		21	mg/kg	1.32	27.727	mg/kg	0.00277 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.06	mg/kg		2.06	mg/kg	0.000206 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		2.08	mg/kg		2.08	mg/kg	0.000208 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		2.63	mg/kg		2.63	mg/kg	0.000263 %		
8		benzo[ghi]perylene	205-883-8	191-24-2			1.41	mg/kg		1.41	mg/kg	0.000141 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.22	mg/kg		1.22	mg/kg	0.000122 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8	mg/kg	2.775	2.22	mg/kg	0.000222 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		<1	mg/kg	13.43	<13.43	mg/kg	<0.00134 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.8	mg/kg	1.285	1.028	mg/kg	0.00008 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		74	mg/kg	1.462	108.155	mg/kg	0.0108 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		2.44	mg/kg		2.44	mg/kg	0.000244 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		83	mg/kg	1.126	93.449	mg/kg	0.00934 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.52	mg/kg		0.52	mg/kg	0.000052 %		
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		4	mg/kg		4	mg/kg	0.0004 %		
20		fluoranthene		205-912-4	206-44-0		2.94	mg/kg		2.94	mg/kg	0.000294 %		
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		1.55	mg/kg		1.55	mg/kg	0.000155 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	196	mg/kg		196	mg/kg	0.0196 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		0.39	mg/kg		0.39	mg/kg	0.000039 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		39	mg/kg	1.579	61.6	mg/kg	0.00616 %		
27		pH			PH		9.4	pH		9.4	pH	9.4 pH		
28		phenanthrene		201-581-5	85-01-8		1.8	mg/kg		1.8	mg/kg	0.00018 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
30		pyrene		204-927-3	129-00-0		2.02	mg/kg		2.02	mg/kg	0.000202 %		
31		TPH (C6 to C40) petroleum group			TPH		148.11	mg/kg		148.11	mg/kg	0.0148 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		440	mg/kg	1.245	547.674	mg/kg	0.0548 %		
											Total:	0.123 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0004%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0148%)

Classification of sample: TP10[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10[5]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.1 m		Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	TPH (C6 to C40) petroleum group				4.11 mg/kg		4.11 mg/kg	0.000411 %		
				TPH							
								Total:	0.00041 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00041%)

Classification of sample: TP10[6]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:		LoW Code:	
TP10[6]		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
2.6 m		Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to hazardous because Results at limit of detection from the lab. None above limit identified.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00038%)

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
2		acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
3		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0 215-481-4	1327-53-3		13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
5		benzo[a]anthracene	601-033-00-9 200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3 200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
7		benzo[b]fluoranthene	601-034-00-4 205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
8		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
9		benzo[k]fluoranthene	601-036-00-5 205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
10		beryllium { beryllium oxide }	004-003-00-8 215-133-1	1304-56-9		1	mg/kg	2.775	2.775	mg/kg	0.000278 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		1.9	mg/kg	13.43	25.517	mg/kg	0.00255 %		
12		cadmium { cadmium sulfide }	048-010-00-4 215-147-8	1306-23-6	1	0.19	mg/kg	1.285	0.244	mg/kg	0.000019 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		18	mg/kg	1.462	26.308	mg/kg	0.00263 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.99	mg/kg	1.923	3.827	mg/kg	0.000383 %		
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11	mg/kg	1.126	12.385	mg/kg	0.00124 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<2	mg/kg		<2	mg/kg	<0.0002 %		**<LOD**
20		fluoranthene		205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
22		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	15	mg/kg		15	mg/kg	0.0015 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		**<LOD**
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		18	mg/kg	1.579	28.431	mg/kg	0.00284 %		
27		pH			PH		7.4	pH		7.4	pH	7.4 pH		
28		phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
29		phenol	604-001-00-2	203-632-7	108-95-2		1.99	mg/kg		1.99	mg/kg	0.000199 %		
30		pyrene		204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		**<LOD**
31		TPH (C6 to C40) petroleum group			TPH		56.11	mg/kg		56.11	mg/kg	0.00561 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		116	mg/kg	1.245	144.387	mg/kg	0.0144 %		
											Total:	0.0341 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evidence of free phase hydrocarbon on site and remedial works would have removed these if present. Unlikely to be hazardous.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00561%)

Appendix A: Classifier defined and non GB MCL determinands

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **boron tribromide/trichloride/trifluoride (combined)** (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride
Data source: N/A
Data source date: 06 Aug 2015
Hazard Statements: EUH014 , Acute Tox. 2; H330 , Acute Tox. 2; H300 , Skin Corr. 1A; H314 , Skin Corr. 1B; H314

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

lead compounds with the exception of those specified elsewhere in this Annex

GB MCL index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

beryllium {beryllium oxide}

Worst case species based on hazard statements

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Most likely common species

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst case species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on hazard statements

zinc {zinc oxide}

Worst case species based on hazard statements

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2023.332.5826.10798 (28 Nov 2023)
HazWasteOnline Database: 2023.332.5826.10798 (28 Nov 2023)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021
GB MCL List v2.0 - version 2.0 of 20th October 2023

Appendix J Preliminary geotechnical risk register

Geotechnical hazard identification – desk study stage

Potential geotechnical hazards have been assessed in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622. The following pages set out the identified geotechnical risks and hazards which are associated with the proposed development and establish the approach which is to be taken to manage the risks including the geotechnical input and analysis.

Table J.1 is a preliminary assessment of possible geotechnical hazards at the site at Desk Study stage. This information is used to assist with ground investigation design.

Table J.1: Possible geotechnical hazards

Hazard	Comment	Hazard status based on desk study	
		Could be present and / or affect site (i.e. Plausible)	Unlikely to be present and/or affect site
Uncontrolled Made Ground (variable strength and compressibility).	The entirety of the site is thought to be overlain by Landscaped Made Ground (BGS), and therefore rates of settlement are likely to vary across the site, reflecting variance in the thickness and composition of the Made Ground.	✔	-
Soft / loose compressible ground (low strength and high settlement potential).	The Landscaped Made Ground on the site is underlain by thick superficial deposits which will vary in composition spatially, resulting in variable rates of settlement across the ground profile.	✔	-
Shrink swell of the clay fraction of soils under the influence of vegetation.	The superficial deposits on the site are anticipated to be clay rich in composition, and therefore the ground profile is likely to be susceptible to shrink swell.	✔	-
Variable lateral and vertical changes in ground conditions.	The composition, thickness and spatial distribution of the Made Ground and superficial deposits on site are likely to be highly variable.	✔	-

High sulfates present in the soils.	High sulphates are anticipated to be present in the soils, associated with the site's industrial history.	✔	-
Adverse chemical ground conditions, (e.g. expansive slag).	Slag was encountered during field reconnaissance, associated with the industrial past of the site.	✔	-
Obstructions.	A review of previous investigations undertaken at the site by third parties unveiled images of steel obstructions, which are likely to remain buried below the ground surface.	✔	-
Shallow groundwater.	Groundwater is anticipated to be very shallow, and possibly saline, and lie at the same level as the water in the harbour, 50m to the south of the site.	✔	-
Changing groundwater conditions.	Groundwater is shallow, and likely to fluctuate.	✔	-
Risk from erosion.	The site is a sufficient distance from any major watercourses and the harbour, and therefore not considered to be at risk from erosion.	-	✔
Risk from flooding.	The site may be susceptible to flooding from shallow groundwater.	✔	-
Loose Made Ground, leading to difficulty with excavation and collapse of side walls.	The site is covered by Landscaped Made Ground, which may potentially cause destabilisation of excavations where loose Made Ground is encountered.	✔	-
Slope stability issues – general slopes.	There is one gentle 1.5m high slope in the south of the site, up to the level of Harbour Way (dual carriageway), which appeared to be stable during field reconnaissance. This slope may require a formal stability assessment prior to construction works, dependant on the building location.	✔	-
Slope stability issues – retaining walls.	A small 0.5m high brick retaining wall lies along the southern site boundary, below the level of Harbour Way and	✔	-

	is approximately 2m wide. The retaining wall was observed to be in good condition.		
Earthworks – settlement (due to placement of fill on soft / loose ground)/ unsuitability of site won material to be reused as fill/ poor bearing capacity of new fill.	Hydrock are not aware of any proposals for earthworks at this site.	-	✔
Solution features in Chalk.	Not present at this site.	-	✔
Cavities in the Superficial Deposits due to solution features.	Not present at this site.	-	✔
Dissolution (associated with "wet rock head").	Not present at this site.	-	✔
Brine extraction.	Not present at this site.	-	✔
Mining.	The site is not within an area of the South Wales Coalfield and is unlikely to be impacted by mining.	-	✔
Cambered ground with gulls possibly present.	Not anticipated at this site.	-	✔
Relict Slip Surfaces.	Not anticipated at this site.	-	✔
Solifluction.	Not anticipated at this site.	-	✔
Problematic soils (silts and rewetting etc.).	Not anticipated at this site.	-	✔

Geotechnical Hazard Identification – Following Ground Investigation

The preliminary Geotechnical Risk Register following Ground Investigation is set out in Table J.3.

The probability and impact of a hazard have been judged on a qualitative scale as set out in Table J.2. The degree of risk (R) is determined by combining tan assessment of the probability (P) of the hazard occurring with an assessment of the impact (I) of the hazard and associated mitigation it will require if it occurs (R = P x I).

Table J.2: Qualitative assessment of hazards and risks

P = Probability		I = Impact		R = Risk Rating (P x I)	
1	Very unlikely (VU)	1	Very Low	1 – 4	None / negligible
2	Unlikely (U)	2	Low	5 – 9	Minor
3	Plausible (P)	3	Medium	10 – 14	Moderate
4	Likely (Lk)	4	High	15 – 19	Substantial
5	Very Likely (VLk)	5	Very High	20 - 25	Severe

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Uncontrolled Made Ground (variable strength and compressibility).	There is Made Ground due to historical construction activity at the site, up to 2.8m thick.	Building foundations.	Bearing capacity failure, settlement (total and differential).	4	4	16	Design foundations to found below Made Ground or on Made Ground which has been improved.
			Floor slab failure.	4	4	16	Design floor slabs as suspended.
		Roads and Pavements.	Settlement (total and differential) of roads and pavements.	4	2	8	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate.
		Services.	Settlement (differential), causing damage to services.	4	2	8	Anticipated settlements are significant with regard to services. There is a requirement to improve the Made Ground prior to installation of services. It is also advisable to steepen falls in drainage to prevent back fall and use rocker boxes and flexible couplings.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	4	3	12	Where soft spots encountered, over-excavation and replacement with suitable fill. Outline design of working platform to include geo-grid.

							Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Shrinkage / swelling of the clay fraction of soils under the influence of vegetation.	The clays of the Tidal Flat Deposits have a low to heave potential. The Tidal Flat Deposits are limited in thickness on site and are underlain by granular Alluvial fan deposits.	Foundations.	Shrinkage or heave of soils and associated damage to foundations.	1	3	3	The site is due to be ground improved due to the thickness of Made Ground on site which precludes the use of shallow footings. The Tidal Flat deposits are located at circa 2m bgl and are limited in thickness. Any shallow footings on improved ground should be designed in accordance with NHBC standards. Ground bearing floor slab to only be utilised if the ground is improved sufficiently. Otherwise suspended floor slab due to thickness of Made Ground but no heave protection required.
		Floor slabs.	Floor slab failure.	1	4	4	
Variable lateral and vertical changes in ground conditions.	The Made Ground soils vary laterally and vertically, both in composition and strength.	Building foundations.	Foundation bearing capacity failure, settlement (total and differential).	4	4	16	Design foundations to found below Made Ground.
			Floor slab failure.	4	4	16	Design floor slab as suspended.
		Roads and Pavements.	Settlement (total and differential), of roads and pavements.	4	3	12	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate. If anticipated settlements are significant, and cannot be mitigated

							by design, over-excavate and replace unsuitable soils.
		Services.	Settlement (differential), causing damage to services.	1	3	3	Settlements are not anticipated to be significant with regard to services. No additional design requirements envisaged.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	3	3	9	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platform to suit the ground conditions. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Sulfates present in the soils.	The ground investigation has proven that there is the potential sulfate bearing soils to be present.	Attack of buried concrete.	Damage to concrete and reduction in strength.	3	4	12	Classify concrete in accordance with BRE SD1 and design concrete accordingly.
Adverse chemical ground conditions, (e.g. expansive slag).	The site history and the conditions proven during the ground investigation indicate that slag is present on site.	Concrete below ground.	Damage to concrete and reduction in strength.	1	4	4	Slag expansion tests undertaken following site works show that the maximum heave potential of soils resultant from slag expansion is 0.28mm. This is considered extremely low and should not pose a risk to the development.
Obstructions.	Obstructions have been proven by the investigation and there is a potential for additional obstructions to be	Construction staff, vehicles and plant operators.	Risk of collapse of excavation as obstructions are pulled out.	3	3	9	Allow for a breaker to be present during construction and remove obstructions where encountered during construction.

	present due to historical construction activity, or unknown fill in Made Ground.	Roads and Pavements.	Hard spots in externals and roads / pavements.	3	2	6	
		Building foundations.	Impact on piling / VSC, resulting in additional piles / columns and re-design of foundations.	3	3	9	
Shallow groundwater.	Monitoring during the ground investigations has proven a shallow groundwater table (at approximately 1.84m bgl), with relatively fast inflows of water seen during the ground investigation.	Construction staff, vehicles and plant operators.	Difficulty with excavation. Limit state failure, excessive deformation, trafficking of site plant, inability to place and compact fill.	4	2	8	Contractor to appoint competent Temporary Works Designer to design temporary works, in accordance with BS 5975:2008+A1:2011. Temporary Works Designer to consider in their analysis the impact of, and requirements for, de-watering of excavations. Any water that collects at the base of excavations to be removed as soon as practicable.
Changing groundwater conditions.	Monitoring during the ground investigations has proven that the groundwater table is highly variable (between 1.76 bgl and 2.14m), although this is likely to be resultant of the tidal regime, due to the proximity of the site to the coastline to the south.	Construction staff, vehicles and plant operators.	Difficulty with excavation. Limit state failure, excessive deformation, trafficking of site plant, inability to place and compact fill.	3	2	6	Contractor to appoint competent Temporary Works Designer to design temporary works as required, in accordance with BS 5975:2008+A1:2011. Temporary Works Designer to consider in their analysis the impact of a variable water table.

Loose Made Ground, leading to difficulty with excavation and collapse of side walls.	The ground investigation has indicated that there is a potential for loose soils and Made Ground to be present at the site.	Construction staff, vehicles and plant operators.	Ground failure, instability of plant and machinery.	2	4	8	As instability has been noted in 3 of the pits from surface, foundation options should be reviewed to ensure minimal excavation (e.g. piles). Contractor to appoint competent Temporary Works Designer to design temporary works, in accordance with BS 5975:2008+A1:2011. Temporary Works Design to include recommendations for inspection of excavations. No person entry to unsupported excavations.
			Risk of collapse of excavation.	3	3	9	
		Pavement construction and long-term durability highways and external areas.	Serviceability issues.	2	3	6	
Problematic soils (silts and rewetting etc.).		Building foundations.	Foundation bearing capacity failure, settlement (total and differential).	2	4	8	Design foundations to found below any problematic soils.
			Floor slab failure.	2	4	8	Design floor slab as suspended.
		Roads and Pavements.	Settlement (total and differential), of roads and pavements.	2	3	6	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate. If anticipated settlements are significant, and cannot be mitigated by design, over-excavate and replace soft soils or undertake ground improvement.

		Services.	Settlement (differential), causing damage to services.	2	3	6	Ground levels are remaining at approximately current levels. Settlements are not anticipated to be significant. No additional design requirements envisaged.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platform to suit the ground conditions. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Unforeseen ground conditions - risk associated with limited data.	Ground investigation has been undertaken. However, additional information will be obtained during construction. Ground conditions are only defined at exploratory hole locations.	All aspects of the development.		3	4	12	Designers to be contacted if conditions encountered are different to those identified during investigation. Regular inspections of excavations and earthworks for evidence of stability. Adequate investigation required to characterise the site and understand the potential risks.

Whilst the probability and impact of the hazard occurring can be reduced to a minimum by geotechnical design, the impact cannot be reduced below very low. The risk register will need to be up-dated, as necessary, to reflect design, additional information, data and experience as it is gained through the construction process.

Impacts of the design with regard to health and Safety considerations will need to be included by the designer at design stage.

Appendix K Plausible source-pathway-receptor contaminant linkages

Summary of potential contaminant linkages

Table K.2 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2019) and additional risk assessment is required.

Source – Pathway – Receptor Linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland *et al* 2001) but modified to add a 'no linkage' category and to remove low/moderate risk (See Table K.1).

It should be noted that whilst the risk assessment process undertaken in this report may identify potential risks to site demolition and redevelopment workers, consideration of occupational health and safety issues is beyond the scope of this report and need to be considered separately in the Construction Phase Health and Safety Plan.

Table K.1: Consequence versus probability assessment.

		Consequence			
Probability		Severe	Medium	Mild	Minor
	High Likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low Likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Very low risk
	No Linkage	No risk			

Table K.2: Exposure model – final source-pathway-receptor contaminant linkages

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Made Ground, associated with historical construction activities and imported fill, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S01).	Ingestion, inhalation or direct contact. (P01).	Site users (R01)	Likely.	Severe	High.	Made Ground was encountered during Hydrock's ground investigation at all locations and is thought to underlie the whole site. Asbestos has been identified in TP01, TP02 and TP09. There are also exceedances of the GAC for human health for lead.
	Surface water via overland flow (P04).	Surface water: on site drainage ditch, and harbour off-site 50m to the south (R04).	Low likelihood	Medium.	Low.	The risk assessment for controlled waters indicated exceedances of the EQS targets for metals, namely copper and mercury. The EQS has also been exceeded due to concentrations of petroleum hydrocarbons fluoranthene, naphthalene and benzo(a)pyrene.
	Surface water via drainage discharge (P05).		Low likelihood	Medium.	Low.	
	Surface water via base flow from groundwater (P06).	Groundwater: Secondary A aquifer status of the South Wales Middle Coal Measures (R03). Surface water: on site drainage ditch, and harbour off-site 50m to the south (R04).	Low likelihood	Medium.	Low.	Whilst there are concentrations of Chemicals of Potential Concern elevated above the water quality criteria, based on the investigation works undertaken to date and subject to agreement with Natural Resources Wales, Hydrock does not believe the site poses a significant risk to Controlled Waters.

	Root uptake (P07).	Landscaping (R02).	Likely.	Medium.	Moderate.	The results of laboratory testing show that soils within the Made Ground in TP01 and TP03 were phytotoxic due to exceedances of Hydrock's GAC for zinc, chromium (III) and copper.
Hydrocarbon fuels, lubricants, and solvents from the operation of the chemical works on the site including leakage from Underground Storage Tanks (USTs), Above Ground Storage Tanks (ASTs), the pipework between tanks and pumps, and general spillage, together with uncontrolled disposal and spillage from waste receptacles (S02).	Ingestion, inhalation or direct contact. (P01).	Site users (R01)	Low likelihood	Severe.	Moderate.	No exceedances of the GAC were recorded for human health associated with PAH, TPH, VOC or BTEX in soils on the site. Oxygen however was significantly depleted in the shallow installs in BH01 and BH02, which indicated that vapours, although not detected by PID, may be present.
	Surface water via overland flow (P04).	Surface water: on site drainage ditch, and harbour off-site 50m to the south (R04).	Low likelihood	Medium.	Low.	Whilst there are concentrations of Chemicals of Potential Concern elevated above the water quality criteria, based on the remediation and investigation works undertaken to date and subject to agreement with Natural Resources Wales, Hydrock does not believe the site poses a significant risk to Controlled Waters.
	Surface water via drainage discharge (P05).		Low likelihood	Medium.	Low.	
	Surface water via base flow from groundwater (P06).	Groundwater: Secondary A aquifer status of the South Wales Middle Coal Measures (R03). Surface water: on site drainage ditch, and harbour off-site	Low likelihood	Medium.	Low.	

		50m to the south (R04).				
Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / alluvial deposits (S03).	Inhalation (R01). Methane ingress via permeable soils and/or construction gaps (P02).	Site users (R01). Development end use (buildings, utilities and landscaping) (R02).	Likely.	Severe.	High.	The concentrations of methane recorded during the monitoring visits indicate CS2 conditions apply for the site. Oxygen was significantly depleted in the shallow installs in BH01 and BH02.
Hydrocarbon vapours from potential VOC and petroleum hydrocarbon (S04).	Inhalation (R01). VOC and petroleum hydrocarbon vapour ingress via permeable soils and/or construction gaps (P03).	Site users (R01). Development end use (buildings, utilities and landscaping) (R02).	Likely.	Severe.	High.	Post fieldwork monitoring with a PID indicated vapour concentrations in the range of 0-2.4ppm. Gas monitoring undertaken at the site recorded depleted oxygen in the shallow installs, which is likely to be due to the presence of vapours. The development will require a vapour membrane.