

**1119 Ashton Old Road,
Manchester**

Supplementary Ground Investigation Report



Report for:

Stor 104 Ltd

Reference:

P0755/CS-1625

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1 INTRODUCTION

1.1 Contract Details

Following instruction from Stor 104 Ltd (the 'client'), this report presents the results of a Supplementary Ground Investigation undertaken for a proposed development at 1119 Ashton Old Road, Manchester (the 'site').

1.2 Proposed Development

Information presented to T&P Regeneration Ltd (T&P) indicates that the proposed development is intended to comprise the construction of containerised engines to form a small-scale gas fired Energy Reserve Facility involving flues to roof, associated outbuildings, plant, hardstanding and boundary treatment. A development layout plan is included in Appendix A.

1.3 Objectives

The purpose of the assessment is to establish the environmental conditions of the site to support future development. This report also considers requirements for any related ground improvement works and/or remediation considered necessary to mitigate potentially unacceptable risks resulting from current and/or or historical land uses.

1.4 Previous Reports

A desk study and preliminary risk assessment was previously completed for the site by a third party¹. A ground investigation was subsequently completed for the site by T&P². Pertinent information from these reports has been considered within this assessment and is summarised where relevant. Where possible, copies of these reports should be made available to the reader.

1.5 Scope of Works

The scope of works to fulfil the purpose of the assessment has included the following:

- Review of previous reports;
- Presentation of a preliminary site conceptual model and environmental risk assessment based on previous desk study information;
- Intrusive ground investigation comprising cable percussive drilling;
- Collection of soil samples for chemical analysis;
- Groundwater monitoring visits;
- Assessment of chemical test results; and,
- Interrogation of preliminary conceptual site model and update to environmental risk assessment.

1.6 Report Limitations

The recommendations, interpretations and conclusions of this report are based on the historical and current site conditions reported by database and mapping sources as supplemented with information gathered during on-site visits. No responsibility can be accepted for the accuracy of third party information including reference data contained within site specific database reports. Due to the inherent variability of the ground conditions between exploratory hole positions interpretations are accurate only for the date of the investigation works.

¹ Desk Study and Preliminary Risk Assessment. RPS. Ref JER6922. September 2016.

² Ground Investigation Report. T&P. Ref 2017Sep_ASH1867_GI Report_Issue2 September 2017.

2 SITE INFORMATION AND SETTING

2.1 Site Location

Site location information is summarised in Table 2.1. A Site Location Plan is presented within Appendix A.

Table 2.1 Site Location Information

Information	Description
Full postal address	1119 Ashton Old Road, Manchester M11 1AA
National Grid Reference (NGR)	388635, 397445

2.2 Site Description

A summary of pertinent site information is provided in Table 2.2 with reference to information in previous reports.

Table 2.2 Summary of Site Information

Information	Description
Site access	The site is accessed via a double vehicular gate located on the northern end of the eastern site boundary.
Site description including current site use and dimensions/area (ha)	The site comprises a roughly rectangular shaped parcel of disused land measuring approximately 35m north to south by 46m east to west, with a total area of approximately 0.22ha.
Site elevation and topography	The site is predominantly level (76-78mAOD) with a slight fall from east to west and a raised berm running adjacent to the south boundary, elevated approximately 1m above the rest of the site.
Ground cover (%)	The site ground cover comprises: • Soft landscaping (grass/planting) - 80% • Dense vegetation - 20%
Site boundaries	North: Metal palisade fencing approximately 2m high in good condition.
	South: Adjacent commercial businesses
	East: Adjacent commercial businesses
	West: Metal palisade fencing approximately 2m high in good condition.
Surrounding land uses	North: A recycling centre is present adjacent to the northern site boundary.
	South: A motorbike accessories store is present adjacent to the southern boundary, beyond which is Ashton Old Road.
	East: A car repair shop is present adjacent to the eastern boundary beyond which is an industrial building and residential properties.
	West: A public footpath is present adjacent to the western boundary beyond which are industrial buildings.

2.3 Environmental Setting

Pertinent environmental information within the available third-party Desk Study report has been reviewed and is summarised in Table 2.3.

Table 2.3 Summary of Site Setting from Desk Study Information

Information	Description
Site history	The site has been previously associated with a number of industrial land uses including a cotton mill, delivery forecourt and works (iron foundry, dye and print works). A tank is identified in the west of the site circa 1922. By 1974, historical mapping indicates previous buildings and associated structures have largely been demolished. Aerial imagery from 2009 shows the site to be stripped with only the perimeter pathway recorded. The third-party report indicates that surrounding land uses have comprised a variety of industrial activities, including former oil, steel, engineering, carriage/wagon and chemical works. The Manchester and Stockport canal was located to the west of the site between 1797 and 1970. Furthermore, a refuse pit was located 98m to the north-east of the site between 1890 and 1915.
Geology	The site is indicated to be entirely underlain by Devensian Superficial Till Deposits comprising clay to sandy clay, unsorted with common pebbles, cobbles and some boulders. The Chester Formation (Lower Triassic) is recorded to underlie the Till deposits and consists of a reddish brown and pinkish red medium grained sandstone with common quartzite pebbles towards the base.
Hydrology and hydrogeology	The underlying Superficial Till Deposits are recorded as a Secondary – Undifferentiated Aquifer with the underlying Chester Formation being recorded as a Principal Aquifer by the Environment Agency. The site is not located within a groundwater Source Protection Zone. There are no licensed surface water or groundwater abstractions within 500m of the site. No surface water features are recorded to be present within 500m of the site.
Environmental designations	There are no sensitive environmental designations on or near the site.
Radon	No radon protection measures are required.

2.4 Summary of Previous T&P Ground Investigation Report

2.4.1 Scope and Ground Conditions

An intrusive ground investigation was undertaken by T&P in April 2017. A total of 7No dynamic soil sampling boreholes were progressed across the site, 3No of which were installed with environmental monitoring wells. Ground conditions were found to comprise made ground of gravelly sand and sandy clay to a maximum depth of 1.2mbgl. The gravel was angular fine to coarse of red brick, concrete, ceramics, plastic, glass and wood. The made ground was found to be underlain by dark orangish brown mottled grey clay (till) underlain by orangish brown occasionally clayey sand (till). A slight hydrocarbon odour was detected within WS02 between 1.0 – 1.2mbgl and WS07 between 0.5 – 0.7mbgl. Evidence of surface spillage was noted in the north of the site at exploratory hole reference SS01.

Groundwater was encountered within WS01, WS04, WS06 and WS07 at 3mbgl during the ground investigation.

2.4.2 Human Health Risk Assessment

Soil concentrations were evaluated directly against adopted screening levels for a 'commercial' end use.

A single elevated soil concentration of lead was encountered within WS04 (0.5-0.8mbgl) with a concentration of 4030mg/kg recorded above the screening level of 2300mg/kg. Statistical analysis identified this result to be a statistical outlier, indicative of a contamination hotspot. Based on the future development proposals, where the site will comprise approximately 90% hard standing, it was considered that this will serve to sever direct contact/ingestion pathways with future site users and the locally lead impacted material. As such, it was considered that on-site soils do not present an unacceptable risk to future site users within the proposed development.

2.4.3 Controlled Waters Risk Assessment

Soil analysis of made ground and deeper natural soils indicated that concentrations decrease with depth, indicating that the vertical leaching pathway is unlikely to be significantly active and the risks to Controlled Waters was therefore considered to be low.

However, hydrocarbon contamination was identified in the vicinity of SS01, which was inferred to be the result of surface spillage of oils/solvents observed to be stored on-site. It was recommended that this is removed during construction, under a watching brief to further reduce the risks to Controlled Waters in accordance with best practice.

2.4.4 Gas/Vapour Risk Assessment

Six ground gas monitoring visits were undertaken over a six-week period throughout May and June 2017 utilising all three monitoring installations (WS01, WS03 and WS07).

The calculated Gas Screening Values (GSV) indicated there to be no significant gas risk at the site suggesting it is suitable to characterise the site as Characteristic Situation 1 in accordance with BS8485³ and CIRIA 665⁴, where no protection measures are required

2.5 Uncertainties/Data Gaps

Following a review of the report outlined in Section 2.4, the following uncertainties/considerations were subsequently identified, which this report is intended to address.

- During the previous phase of investigation testing did not extend to volatile organic compounds (VOCs), which have subsequently been included within this assessment for robustness.
- Due to samples exceeding holding times by 24 hours, samples tested for TPH were noted to have deviated. Additional testing has therefore been undertaken to assess the validity of the original results.
- As the base of the sand was not identified during the ground investigation the potential for Dense Non-Aqueous Phase Liquid (DNAPL) contamination to be present at the interface between granular and underlying cohesive soils was considered possible.

³ BS8485: Code of Practice for the characterization and remediation from ground gas in affected development – 2015.

⁴ Assessing risks posed by hazardous ground gases for buildings – CIRIA665 (2007.)

3 PRELIMINARY CONCEPTUAL SITE MODEL

3.1 Background

A risk assessment has been carried out under the governing terms set by Part 2A of the Environmental Protection Act 1990, statutory guidance entitled 'Contaminated Land Statutory Guidance (April 2012)' and in accordance with UK's risk assessment framework⁵.

The conceptual site model for the site has been developed with consideration of national guidance⁶ which provides a framework for risk estimation and evaluation of plausible source-pathway-receptor linkages identified in the context of a proposed residential development. Although the proposed development is not residential, the guidance assists in establishing an estimate of risk in relation to each plausible pollutant pathway identified.

3.2 Potential Contamination Sources

Following the review of previous reports as summarised in Section 2.4, potential on- and off-site sources of contamination which have been considered further are listed in Table 3.1.

Table 3.1 Summary of Potential Contamination Sources

Areas of potential concern (APC No)		Source/hazard description	Source contaminants
On-site sources/hazards	1	Made ground associated with previous site development	Metals, hydrocarbons, VOCs

3.3 Potential Receptors

With regard to the site setting and future proposed development, the following receptors have been considered further in the context of uncertainties identified in Section 2.5:

- Future maintenance workers (including intrusive workers).
- Off-site residents/workers.
- Groundwater – The underlying Superficial Till Deposits are recorded as a Secondary – Undifferentiated Aquifer with the underlying Chester Formation being recorded as a Principal Aquifer. The site is not recorded to lie within a SPZ and no potable water or groundwater abstraction points are recorded within a 500m radius. With reference to national guidance⁷, the sensitivity of groundwater as a potential receptor to contaminant impact beneath the site is considered to be Moderate (M2).

3.4 Exposure and Migration Pathways

With consideration of the site setting and proposed development, the following exposure pathways have been considered further in the context of uncertainties identified in Section 2.5:

- Direct contact with contaminated soils/water;
- Dust migration with inhalation;
- Leaching/dissolution with vertical migration to groundwater;

⁵ Land contamination risk management - <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

⁶ Annex 4 - Guidance for the Safe Development of Housing on land Affected by Contamination R&D66. NHBC. 2008

⁷ Annex 2 - Guidance for the Safe Development of Housing on land Affected by Contamination R&D66. NHBC. 2008

3.5 Preliminary Qualitative Risk Assessment

Table 3.2 highlights the source-pathway-receptor relationships or “contaminant linkages” that may potentially be active in consideration of both the site’s current use and proposed future use. Those contaminant linkages assessed as low or very low risk at this stage will not be considered further.

Table 3.2 Summary of Source-Pathway-Receptor Relationships

APC N°	Source	Pathway (s)	Receptor	Consequence	Probability	Risk*	Comment
1	On-site Made ground associated with previous development.	Dermal contact	Future residents and maintenance workers	Medium	Low likelihood	Moderate/Low	Additional TPH and VOC testing proposed to address uncertainty
		Dust migration/inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Low likelihood	Moderate/Low	
		Leaching/dissolution with vertical migration to groundwater	Groundwater	Medium	Low likelihood	Moderate/Low	Potential for DNAPL to be present at the interface between granular and underlying cohesive soils was considered possible

***Where multiple receptors exist the risk classification is based on most sensitive receptor for conservatism.**

4 SCOPE OF WORK

4.1 Summary of Fieldwork

An intrusive ground investigation was undertaken by T&P across the site on 6th September 2022, comprising the following:

- Drilling of 1N^o cable percussive borehole;
- Installation of the borehole as an environmental monitoring well;
- Excavation of 3N^o hand pits;
- Logging of ground conditions in accordance with BS5930⁸, and,
- Soil and groundwater sampling.

An exploratory hole location plan is presented within Appendix A and the exploratory hole logs are presented as Appendix C.

4.2 Exploratory Locations and Access Restrictions

A summary of exploratory locations with supporting rationale is provided in Table 4.1.

Table 4.1 Rationale for Exploratory Locations

Exploratory location(s)	Rationale/justification
BH101	Targeting base of the sand
HP101 – HP103	Targeting previously noted contamination

4.3 Hand Dug Inspection Pits

T&P excavated 3N^o inspection pits using hand tools (HP101 – HP103) to a depth of 0.4mbgl, to target areas of previously noted contamination, particularly where TPH testing was previously undertaken.

4.4 Cable Percussion Borehole

T&P supervised the drilling of 1N^o cable percussive borehole (BH101) which was terminated at a depth of 8.3mbgl.

4.5 Environmental Monitoring

A monitoring well was installed in BH101 to assess whether groundwater contamination was present at the base of the sand (till). Groundwater samples were collected from BH101 on 2N^o occasions between September 2022 and October 2022. Samples were collected via low flow micropurging using a peristaltic pump. Water quality parameters were recorded during purging. Groundwater samples were collected after water quality parameters had stabilised to within acceptable ranges (10%). A summary of fieldwork records is presented in Appendix F. Complete field records can be supplied upon request. Chemical results are discussed in Section 8.

⁸ BS5930. Code of Practice for Ground Investigations. 2015.

5 SUMMARY OF GROUND CONDITIONS

5.1 Encountered Strata

The geological sequence encountered during the ground investigation is summarised in Table 5.1 and described further in the following sub-sections. Ground conditions were found to broadly correspond with published geological information. Exploratory logs are included in Appendix C.

Table 5.1 Summary of Ground Conditions

Stratum	Top depth range (mbgl)	Base depth range (mbgl)	Exploratory holes	Area of site	General description/ comments
Made Ground	0.00	1.00	All holes	General	Slightly clayey gravelly SAND.
Superficial Till	1.00	2.00	BH101	General	Stiff orangish brown CLAY.
	2.00	7.10	BH101	General	Orangish brown SAND.
	7.10	8.30	BH101	General	Stiff brown CLAY.

5.1.1 Made ground

Made ground was encountered across all areas of the site to a maximum depth of 1.00mbgl within BH101. The made ground consisted of slightly clayey gravelly sand. The gravel was angular to subrounded fine to coarse of red brick, concrete, glass, ceramics, plastic and locally of suspected asbestos cement.

5.1.2 Superficial Geology – Till Deposits

Beneath the made ground a stiff orangish brown clay was encountered to a depth of 2.00mbgl. Underlying the clay, an orangish brown sand was encountered to 7.10mbgl, underlain by a stiff brown clay to 8.30mbgl which was the termination depth of the borehole.

5.2 Evidence of Contamination

With the exception of made ground, no significant visible or olfactory evidence of any contamination was noted during this supplementary ground investigation.

5.3 Below Ground Structures and Obstructions

No below ground structures or obstructions were encountered during the ground investigation.

5.4 Groundwater

Groundwater was encountered within BH101 at a depth of 6.0mbgl during the intrusive works and at a depth of between 3.26 – 3.37mbgl during the subsequent sampling visits.

6 SUMMARY OF LABORATORY ANALYSES

The soil and groundwater testing undertaken to address outstanding areas of uncertainty from a contamination perspective in the context of the conceptual site model and proposed development is summarised in Table 6.1.

Samples from the investigation were forwarded to a UKAS and MCERTS accredited laboratory. Complete chemical results are provided in Appendix D.

Table 6.1 Summary of Chemical Testing

Test type	Quantity
<i>Soils</i>	
TPH CWG including benzene, toluene, ethylbenzene and xylenes (BTEX)	3 soil samples
VOC + TIC – GCMS (Mcerts)	3 soil samples
sVOC + TIC – GCMS	3 soil samples
<i>Groundwater</i>	
Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel, Copper, Zinc, Selenium, Soil Organic Matter and Speciated Polyaromatic Hydrocarbons.	2 water samples
TPH CWG including benzene, toluene, ethylbenzene and xylenes (BTEX)	2 water samples
VOC TIC interp - GCMS	2 water samples
sVOC TIC interp - GCMS	2 water samples

7 HUMAN HEALTH RISK ASSESSMENT

7.1 Introduction

A human health generic quantitative risk assessment (GQRA) has been undertaken in accordance with the UK regulatory framework and current guidance on assessment of risks presented by land affected by contamination⁹.

7.2 Human Health Screening Assessment

The analytical data has been evaluated directly against adopted screening levels¹⁰ for a 'commercial' end use. A copy of the screening assessment is included in Appendix D.

Table 7.1 summarises the results of the screening assessment for site wide made ground where soil exceedances against adopted screening levels have been identified.

Table 7.1 Summary of Human Health Soil Screening – Made Ground

Determinant	Screening level (mg/kg)	Screening level source ¹	Min (mg/kg)	Max (mg/kg)	No of exceedances
Dibenzo(ah)anthracene	3.5	S4UL	2.75	6.48	1 of 3

7.3 Discussion

A single elevated concentration of dibenzo(a,h)anthracene of 6.48mg/kg was detected within the made ground in HP101 (0.3 – 0.4mbgl) above the adopted screening level of 3.5mg/kg.

In accordance with HPA guidance¹¹ and as detailed in SP1010¹², PAH profiling has been undertaken to determine the suitability of the Benzo(a)pyrene (BaP) surrogate marker approach in assessing the significance of the elevated dibenzo(a,h)anthracene in HP101. A copy of the PAH profiling is provided in Appendix E. Ratios of relevant PAHs are consistent with the Culp Study and as such, it is considered appropriate to apply the BaP surrogate marker approach. In consideration of the BaP concentration in the soil sample from 0.3-0.4mbgl in HP101, which is below the adopted screening level, it is concluded that the concentration of dibenzo(a,h)anthracene does not present an unacceptable risk to human health.

TPH concentrations were found to be consistent with the findings of the previous investigation and below the adopted screening criteria. In addition, all VOC concentrations were recorded below the laboratory limit of detection. As such, soil TPH and VOC concentrations are not considered to pose a risk to the proposed development and no residual uncertainty is considered to remain with regard to these contaminants.

Furthermore, given the commercial end use of the site, proposed ground cover will serve to sever direct contact/ingestion pathways with future site users. As such, it is considered that on-site soils do not present an unacceptable risk to future site users associated with the proposed development. However, it is recommended that on-site controls are implemented to prevent unauthorised access to the site and that the use of personal protective equipment (PPE)/hygiene practices is implemented to minimise risks to current site users/visitors.

⁹ Environmental Protection Act 1990.

Contaminated Land Statutory Guidance (April 2012).

Land contamination risk management - <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

¹⁰ The LQM/CIEH S4ULs for Human Health Risk Assessment. 2015.

SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. CL:AIRE. 2013.

¹¹ Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons (PAHs). HPA Contaminated Land Information Sheet. 2010.

¹² SP1010. Appendix E. Development of Category 4 Screening Levels. Defra. 2014.

8 CONTROLLED WATERS RISK ASSESSMENT

8.1 Overview of Hydrogeological Setting

The underlying Superficial Till Deposits are recorded as a Secondary – Undifferentiated Aquifer with the underlying Chester Formation being recorded as a Principal Aquifer. The site is not recorded to lie within an SPZ and nor are there any licensed abstraction points recorded within a 500m radius.

There are no recorded surface water features within a 500m radius of the site.

Concerns have been raised by the Environment Agency that the granular superficial till deposits may act as a pathway for potentially contaminated shallow groundwater to migrate to the principal aquifer.

On the basis of the above, the sensitive Controlled Waters receptors which have been considered further within this assessment are:

- Groundwater in Chester Formation (Principal Aquifer).

8.2 Selection of Water Quality Standards (WQS)

Assessment criteria for the screening of groundwater analytical results have been selected in line with the EA 'Remedial Targets Methodology'. A GQRA has been conducted to screen groundwater data against adopted criteria.

Generic screening criteria have been selected from publicly available sources. In the context of the conceptual site model, it is considered appropriate to assess available leachate/groundwater data against Drinking Water Standards (England & Wales) (DWS)¹³.

8.3 Groundwater Assessment

Groundwater results have been assessed against the selected water quality standards, as summarised in Section 8.2. Identified exceedances are summarised in Table 8.1.

¹³ Water Supply (Water Quality) (England and Wales) Regulations 2000 (As amended 2010).

Table 8.1 Summary of Elevated Groundwater Results

Determinant	Determination ¹	WQS (µg/L)	Source ²	Maximum Concentration (µg/L)
VISIT 1				
Chromium VI	Hazardous	50 ²	DWS	100
Benzo(a)pyrene	Hazardous	0.01	DWS	0.02
VISIT 2				
Chromium VI	Hazardous	50 ²	DWS	100
Benzo(a)pyrene	Hazardous	0.01	DWS	0.02

1. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. /Water Supply (Water Quality) (England and Wales) Regulations 2000 (As amended 2010).
2. Laboratory Limit of Detection exceeded screening criterion.

8.4 Discussion

As summarised in Table 8.3, exceedances of Chromium VI and Benzo(a)pyrene were revealed within the samples tested. However, it is noted that the results for Chromium VI were below the laboratory limit of detection (LOD) which exceeded the adopted screening criterion and in this case, it is considered that the risk posed is acceptably low.

An elevated concentration of Benzo(a)pyrene above the LOD and adopted screening criterion was revealed. However, this was noted to only marginally exceed the screening criterion by 0.1µg/L). Given this, the lack of any observed NAPL contamination across the full borehole depth and absence of a significant vertical leaching pathway detailed within the previous T&P report, it is considered that this marginal exceedance poses an acceptably low risk to controlled waters.

On the basis of the above and previous investigation findings, no significant site-wide risk to Controlled Waters has been identified. However, where gross soil contamination was previously identified in the vicinity of SS01, it is recommended that this is excavated and removed under a watching brief to further reduce the risks to Controlled Waters in accordance with best practice.

9 REFINED CONCEPTUAL SITE MODEL

9.1 Overview

Following completion of the ground investigation, collection and interrogation of site data with consideration of the outcome of generic quantitative risk assessment discussed in preceding sections of this report, the conceptual site model has been revised.

9.2 Sources

Further to completion of the ground investigation, the sources identified within the preliminary conceptual model which have been considered further:

- On-site made ground associated with previous development.

No further potential sources of impact were identified during the subsequent ground investigation works.

9.3 Risk Evaluation

Those SPRs identified within Table 3.2 as presenting a moderate/low or moderate risk have been further interrogated in accordance with UK national guidance and regulatory framework¹⁴ following completion of ground investigation and risk assessment. Table 9.1 presents the revised SPRs with associated classification of risk as appropriate following re-evaluation of risks.

¹⁴ Annex 4 - Guidance for the Safe Development of Housing on land Affected by Contamination R&D66: 2008.

Land contamination risk management - <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>.

Table 9.1 Revised Source-Pathway-Receptor Relationships

Area of potential concern N°	Source	Pathway (s)	Receptor	Consequence	Probability	Risk classification*	Comment
1	On-site Made ground associated with existing trackways /access	Dermal contact	Future residents, maintenance workers and fauna	Medium	Unlikely	Low	Low contaminant concentrations and proposed ground cover will break the pathway between source and receptor.
		Dust migration/inhalation	Future residents, maintenance workers and off-site residents/workers	Medium	Unlikely	Low	
		Leaching/dissolution with vertical migration to groundwater	Groundwater	Medium	Unlikely	Low	Concentrations of contaminants considered to present an acceptably low risk to controlled waters. However, grossly impacted soils near SS01 should be excavated and removed from site.

**Where multiple receptors exist the risk classification is based on most sensitive receptor for conservatism*

10 PRELIMINARY WASTE ASSESSMENT

10.1 Waste Hierarchy

In line with the requirements of the Waste Framework Directive, the principles of the “waste hierarchy” should be applied to management options for on-site generated wastes, giving priority to the prevention of waste in the first instance, before considering re-use, recycling, recovery and lastly disposal. Principal considerations are set out in subsequent sections, although it is recommended that advice of a geo-environmental/waste specialist is sought at an early stage in the development process to ensure opportunities for minimisation of waste volumes are maximised.

10.2 On-site Re-Use of Materials

It may be possible to demonstrate through application of the CL:AIRE Definition of Waste Code of Practice (DoW CoP) that site won excavated soils are not classified as waste, and in doing so, permit this material to be re-used as part of proposed site redevelopment works. The DoW CoP may also apply to source segregated material arising from demolition activities. In determining the suitability of this approach, early consideration should be given to being able to demonstrate a specific planning requirement for the re-use of the excavated material. It is noted this approach cannot be applied retrospectively.

It should be noted that on-site re-use of “uncontaminated soil or other naturally occurring material” excavated as part of construction works for the purposes of construction is excluded from waste regulation.

Alternative mechanisms for on-site re-use of soils or aggregate may also be appropriate, on a site-specific basis, depending on the volume/nature of the materials, and their intended use, such as:

- Waste exemptions under the Environmental Permitting (England and Wales) Regulations 2010, which are operations which are exempt from requiring permits, providing certain conditions are met. This typically applies to small volumes of non-hazardous soils although may also apply to other material types.
- Environmental permit under the Environmental Permitting (England and Wales) Regulations 2010 (standard or bespoke depending on the material and the activity).
- WRAP Aggregates Quality protocol¹⁵ for the production and use of aggregates from inert waste, providing certain criteria are met.

10.3 Waste Disposal to Landfill

When waste is intended for disposal at a suitably licensed landfill site it is necessary for the waste producer (i.e. the developer or consultant on their behalf) to have completed a basic waste characterisation assessment, including:

- Description of the waste;
- List of Waste (LoW) code or codes if mixed waste;
- Determine the chemical composition to identify if waste has hazardous properties or Persistent Organic Pollutants (POPs) are present;
- Determination of hazardous properties;
- Waste Acceptance Criteria (WAC) testing (if required) to determine landfill acceptance.

¹⁵ Aggregates from inert waste. End of waste criteria for the production of aggregates from inert waste. WRAP.

Relevant information on the above can be found in WM3¹⁶ and is discussed further in the context of ground investigation findings in subsequent sections.

It should be noted that alternative off-site disposal routes may be available, such as recycling/treatment facilities and that in these instances, waste classification would not be appropriate. Instead, it will be necessary to confirm with the destination facility that the material complies with their permit criteria. Further testing in addition to the available ground investigation data may be required by them.

10.3.1 Waste Classification

A preliminary waste classification exercise was carried out during the previous T&P ground investigation. Hazardous properties of the soils were assessed using the HazWaste program. A copy of the HazWaste report is included in Appendix G. The results are summarised in Table 10.1, which highlights where results indicated hazardous soils to have been identified. All other results were assessed as non-hazardous.

Table 10.1 Summary of Soils Classified as Hazardous Waste

Exploratory Location	Sample Depth (mbgl)	Soil type	Hazardous Property
WS02	1.0 – 1.2	Made ground	HP3, HP7, HP11
WS03	0.0 – 1.2	Made ground	HP14
WS04	0.5 – 0.8	Made ground	HP3, HP7, HP10, HP11, HP14
SS01	0.0 – 0.3	Made ground	HP3, HP7, HP11, HP14
<u>Notes</u> HP3 - Flammable HP7 - Carcinogenic HP10 - Toxic for reproduction HP11 - Mutagenic HP14 - Ecotoxic			

10.3.2 Landfill Waste Acceptance

If a waste classification assessment determines that disposal to landfill is the appropriate option for the waste then WAC testing must be undertaken for wastes destined for inert, stable non-reactive hazardous or hazardous classes of landfill. WAC testing may not be required if the material falls into the list of waste material identified in The Landfill Directive assumed to fulfil the criteria for inert waste, as detailed in Article 2(e) of the Landfill Directive. This includes soils and stone with an EWC code 17 05 04 but excludes topsoil, peat and soil from contaminated sites. Additionally, if waste has been classified as non-hazardous and is going to be disposed of to a non-hazardous landfill rather than an inert non-hazardous landfill then WAC testing may not be required. In all cases consultation with the receiving facility to confirm testing and acceptance of waste classification prior to disposal is advised.

WAC testing has been completed on 4N^o samples in the vicinity of SS01 where soils will likely be excavated and removed from site to assess potential landfill acceptability, the results of which are presented in Table 10.2.

¹⁶ Guidance on the classification and assessment of waste - Technical Guidance WM3. Environment Agency 2015.

Table 10.2 Summary of WAC Test Results

Exploratory Location	Sample Depth (mbgl)	Soil type	Classification	WAC Result
HP102	0.30 - 0.40	Made ground	Hazardous	Stable Non-Reactive - Pass
HP102a	0.10 - 0.20	Made ground	Hazardous	Stable Non-Reactive - Pass
HP102b	0.10 - 0.20	Made ground	Hazardous	Stable Non-Reactive - Pass
HP102c	0.10 - 0.20	Made ground	Hazardous	Stable Non-Reactive - Pass

The results of the WAC testing indicate that the made ground in the vicinity of SS01, while classified as hazardous, will likely be accepted as stable non-reactive hazardous waste at a non-hazardous landfill.

10.3.3 Landfill Tax

Unless specifically exempt, landfill tax applies to disposal of material at a landfill that's covered by a permit under specific environmental legislation and at any unauthorised waste site. Currently this tax rate is set at £98.60/tonne (2022/2023).

There are some circumstances where material placed within a landfill cell is exempted from the charge to Landfill Tax, including use of material for creation of capping, drainage or otherwise meets conditions of other Landfill Tax exemptions e.g. dredgings, mining and quarrying materials.

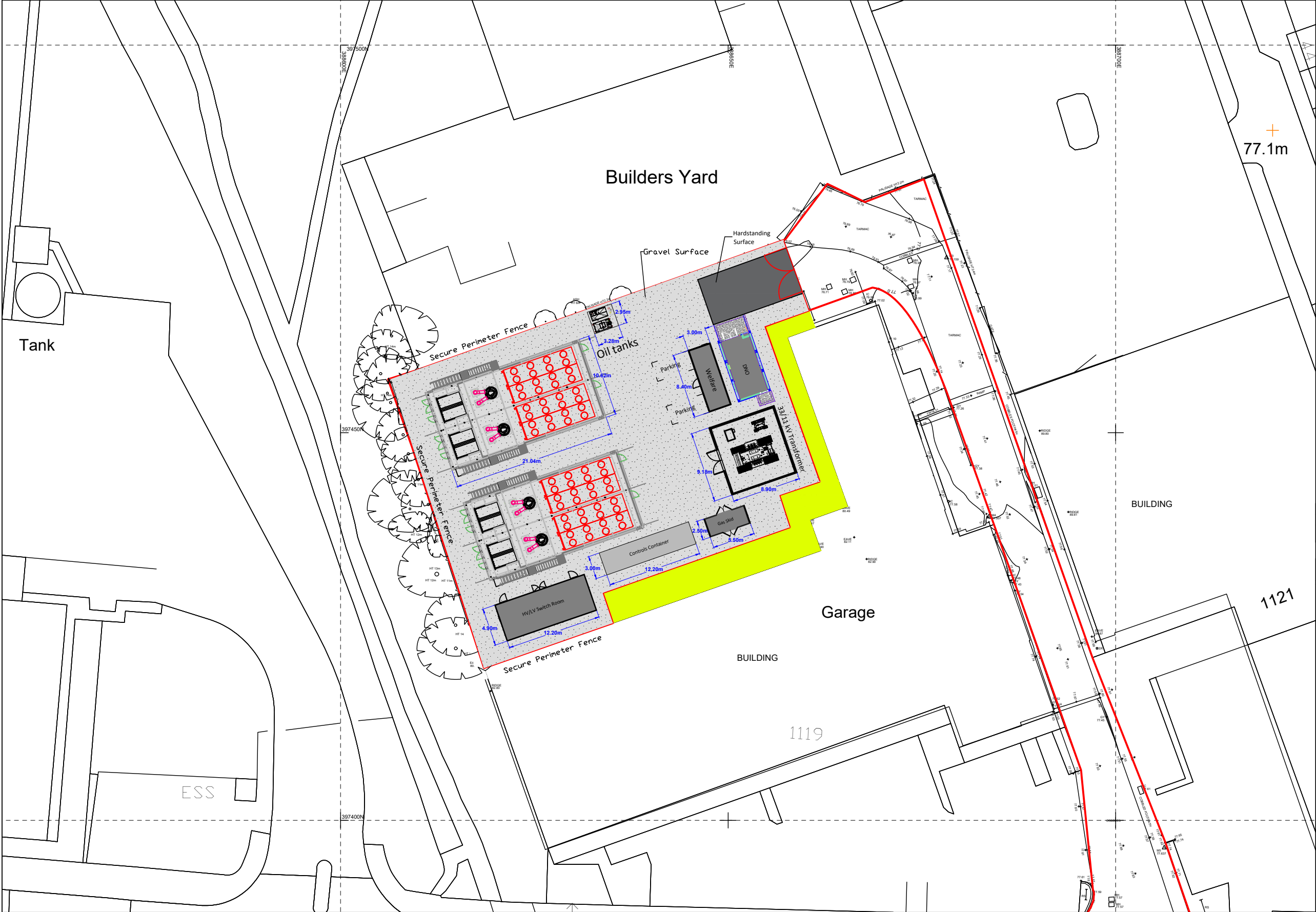
A lower rate of landfill tax set at £3.15/tonne does apply to less polluting material listed in the landfill tax (qualifying material) order 2011¹⁷, including naturally occurring rocks and soils, excluding topsoil (group 1) and ceramic or concrete (group 2).

¹⁷ Landfill Tax (Qualifying Material) Order 2011 can be found at <http://www.legislation.gov.uk/uksi/2011/1017/contents/made>

11 GENERAL RECOMMENDATIONS

- Discussions should be held with local landfill/soil waste treatment facilities to agree material classification/pre-treatment required for any soils to be disposed off-site as a result of proposed construction works.
- On-site monitoring wells should be protected from damage until such time as conclusions/recommendations within this report are agreed with the regulators. Monitoring installations should then be decommissioned in accordance with Environment Agency guidelines.
- A site-specific health and safety plan should be prepared to inform on risks posed from the previous site use and mitigations for ground workers developing the site e.g. requirements for appropriate PPE, hygiene practices, environmental monitoring and requirements for mitigation measures during construction works.
- A copy of this report should be provided to the relevant regulatory authorities to confirm that they are in agreement with the report findings

Appendix A – Drawings



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Notes

1. This drawing has been prepared in accordance with the scope of STOR Power Ltd appointment with its client and is subject to the terms and conditions of that appointment. STOR Power accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.

2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.

Legend

Site Boundary

Note: -

This drawing is for illustrative purposes only and must not be scaled from.

Indicative site layout only - final plan subject to surveys and planning consultation.

Location of ancillary plant will be subject to location of incoming gas and electricity connections.

Rev	Description	Date	Initial	Checked

--	--

STOR Ltd.

18 Polden Business Centre, Bristol Road, Bridgwater, Somerset, TA6 4AW
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Client STOR 128 Ltd.

Project Ashton STOR

Title Site Layout
Ashton STOR

Status	Drawn By	PM/Checked by
-	MC	JK
Job Ref	Scale @ A3	Date Created
-	1:500	Nov-18
Drawing Number		Rev
005f_STOR128LAY		.

— Site Boundary

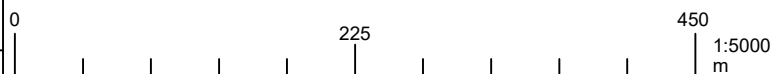


Base Map
Company: - Autodesk License
DWG Title: -
DWG Number: -
Date: -

Drawn	Checked	Amendment	Date	Rev.	Client
Stor Power					
Ashton Old Road					
Site Location Plan					
Scale	Date	Drawn by	Check by	Rev.	Drawing No.
1:5000@A3	03/10/22	AW	JSB	-	P0755-01-001



Unit 4 Brunel Lock Development, Smeaton
Road, Bristol, BS1 6SE
Tel: 0117 927 7756
Email: Info@TP-regen.co.uk



— Site Boundary

T&P Investigation

- Cable Percussive Locations (BH101)
- Hand Dig Locations (HP101 - HP103)



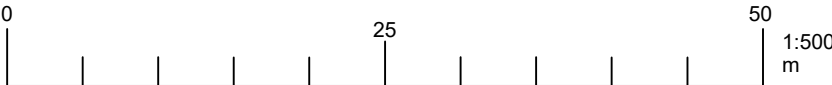
Base Map
Company: - Autodesk License
DWG Title: -
DWG Number: -
Date: -

Drawn	Checked	Amendment	Date	Rev.
				Client
Stor Power				
Ashton Old Road				
Exploratory Hole Location Plan				
Scale	Date	Drawn by	Check by	Rev.
1:500@A3	03/10/22	AW	JSB	-



Unit 4 Brunel Lock Development, Smeaton Road, Bristol, BS1 6SE
Tel: 0117 927 7756
Email: Info@TP-regen.co.uk

Drawing No. P0755-01-002



Appendix B – Photographs



PLATE 01 – Site Entrance – Looking East.



PLATE 02 – Site Overview – Looking East.



PLATE 03 – Site Overview – Looking West.



PLATE 04 – Site Overview – Looking South.



PLATE 05 – Mesh basket with chemical containers.



PLATE 06 – Hand Pit Excavation – HP101.



PLATE 07 –Hand Pit Excavation – HP102.



PLATE 08 – Hand Pit Excavation – HP103.

Appendix C – Exploratory Logs

T&P Regen www.tandpregeneration.co.uk	Contract Name: 1119 Ashton Old Road			Client: Stor 104 Ltd			Borehole ID: BH101							
	Contract Number: CS-1625		Date Started: 06/09/2022		Logged By: JSB		Checked By: JA		Status: FINAL					
	Easting: 388635.00		Northing: 397454.00		Ground Level: 77.00mOD		Plant Used: Dando 2500		Scale: 1:50					
Cable Percussion Borehole Log			Weather: Rain			Termination: Engineers Instruction								
Samples & In Situ Testing			Strata Details						Groundwater					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill / Installation				
7.75	EW		76.00	(1.00)		MADE GROUND: Brown slightly clayey gravelly SAND. Gravel is angular to subrounded fine to coarse of red brick, concrete, glass, ceramics and plastic.			1					
				1.00		Stiff orangish brown CLAY. (DEVENSIAN TILL)								
			75.00	(1.00)					2					
				2.00		Orangish brown SAND. (DEVENSIAN TILL)								
			(5.10)				3							
								4						
									5					
			69.90	7.10	(1.20)		Stiff brown CLAY. (DEVENSIAN TILL)				7			
68.70	8.30	End of Borehole at 8.30m			8									
						9								
						10								
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth	Dia (mm)	Groundwater encountered at ~6.0m. In situ testing not required.					
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	2.00	PLAIN	50	6.00			20	6.00	
					2.00	8.30	SLOTTED	50						
T&P Regeneration CP Template Issue Number: 1 Issue Date: June 2016														

T&P Regen www.tandpregeneration.co.uk	Contract Name: 1119 Ashton Old Road		Client: Stor 104 Ltd			Trial Pit ID: HP101		
	Contract Number: CS-1625	Date Started: 06/09/2022	Logged By: JSB	Checked By: JA	Status: FINAL	Sheet 1 of 1		
	Easting: 388651.00	Northing: 397445.00	Ground Level: 78.00mOD	Plant Used: Hand Tools		Scale: 1:25		
Trial Pit Log								
Weather: Rain		Termination: Specified depth			Stability:			
Samples & In Situ Testing			Strata Details				Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		
0.30	ES1		77.60	(0.40) 0.40		MADE GROUND: Brown slightly clayey gravelly SAND. Gravel is angular to subrounded fine to coarse of red brick, concrete, glass, ceramics and plastic.		
						End of Trial Pit at 0.40m		
							1	
							2	
							3	
							4	
							5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water								
Remarks: Groundwater not encountered.						Dimensions:		
						Length:	Orientation: °	
						Width:		
						Groundwater Details		
						Depth encountered (m)	Remarks	
T&P Regeneration TP Template						Issue Number: 1		Issue Date: June 2016

T&P Regen www.tandpregeneration.co.uk	Contract Name: 1119 Ashton Old Road			Client: Stor 104 Ltd			Trial Pit ID: HP102				
	Contract Number: CS-1625		Date Started: 06/09/2022		Logged By: JSB		Checked By: JA		Status: FINAL		
	Easting: 388642.00		Northing: 397469.00		Ground Level: 77.00mOD		Plant Used: Hand Tools		Scale: 1:25		
Trial Pit Log											
Weather: Rain				Termination: Specified depth				Stability:			
Samples & In Situ Testing			Strata Details							Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					
0.30 0.30	ES1 ES2		76.60	(0.40) 0.40		MADE GROUND: Brown slightly clayey gravelly SAND with 1No cobble of concrete. Gravel is angular to subrounded fine to coarse of red brick, concrete, glass, ceramics, plastic and asbestos cement.					
						End of Trial Pit at 0.40m					
										1	
										2	
										3	
										4	
										5	
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water											
Remarks: Groundwater not encountered.						Dimensions:					
						Length:		Orientation: °			
						Width:					
						Groundwater Details					
						Depth encountered (m)		Remarks			
						T&P Regeneration TP Template Issue Number: 1 Issue Date: June 2016					



Weather: Rain

Termination: Specified depth

Stability:

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Dimensions:

Orientation: °

Width:

Groundwater Details

Depth encountered (m)

Remarks

T&P Regeneration TP Template

Issue Number: 1

Issue Date: June 2016

Appendix D – Chemical Results and Screening Assessment



Unit A2
Windmill Road
Ponswood Industrial Estate
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TN38 9BY
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info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-43167

Issue: 1

Date of Issue: 16/09/2022

Contact: Jessica Stokes-Bowler

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol
BS1 6SE

Quotation No: Q22-02650

Order No: 8878-CS-J-1625

Customer Reference: CS-1625

Date Received: 09/09/2022

Date Approved: 16/09/2022

Details: Ashton Old Road

Approved by:

Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-43167, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
292963	HP01 1 0.30 - 0.40	08/09/2022	09/09/2022	Sandy silty loam	
292964	HP02 1 0.30 - 0.40	08/09/2022	09/09/2022	Sandy loam	
292965	HP02 2 0.30 - 0.40	08/09/2022	09/09/2022	Sandy loam	
292966	HP02a 1 0.10 - 0.20	08/09/2022	09/09/2022	Sandy loam	
292967	HP02b 1 0.10 - 0.20	08/09/2022	09/09/2022	Sandy silty loam	
292968	HP02c 1 0.10 - 0.20	08/09/2022	09/09/2022	Sandy loam	
292969	HP03 1 0.30 - 0.40	08/09/2022	09/09/2022	Sandy silty loam	



Results Summary

2683

Report No.: 22-43167, issue number 1

ELAB Reference	292963	292964	292965	292966	292967	292968	292969
Customer Reference	1	1	2	1	1	1	1
Sample ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	HP01	HP02	HP02	HP02a	HP02b	HP02c	HP03
Sample Depth (m)	0.30 - 0.40	0.30 - 0.40	0.30 - 0.40	0.10 - 0.20	0.10 - 0.20	0.10 - 0.20	0.30 - 0.40
Sampling Date	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022

Determinand	Codes	Units	LOD							
Soil sample preparation parameters										
Moisture Content	N	%	0.1	8.1	17.6	18.8	18.9	16.5	13.9	11.2
Material removed	N	%	0.1	n/t	n/t	12.1	20.8	14.1	15.4	n/t
Description of Inert material removed	N		0	n/t	n/t	Stones	Stones/Brick	Stones/Brick	Stones/Brick	n/t
Miscellaneous										
Acid Neutralisation Capacity	N	mol/kg	0.1	n/t	n/t	< 0.1	< 0.1	< 0.1	< 0.1	n/t
Loss on Ignition	M	%	0.01	n/t	n/t	6.23	7.03	5.87	6.56	n/t
pH	M	pH units	0.1	n/t	n/t	7.8	8.4	8.4	8.4	n/t
Total Organic Carbon	N	%	0.01	n/t	n/t	2.6	3.1	2.9	3.0	n/t
Polyaromatic hydrocarbons										
Total (of 17) PAHs	N	mg/kg	2	n/t	n/t	162	123	41	56	n/t
BTEX										
Benzene	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
Toluene	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
Ethylbenzene	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
Xylenes	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
MTBE	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
Total BTEX	N	mg/kg	0.01	n/t	n/t	< 0.01	< 0.01	< 0.01	< 0.01	n/t



2683



Results Summary

Report No.: 22-43167, issue number 1

ELAB Reference	292963	292964	292965	292966	292967	292968	292969
Customer Reference	1	1	2	1	1	1	1
Sample ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	HP01	HP02	HP02	HP02a	HP02b	HP02c	HP03
Sample Depth (m)	0.30 - 0.40	0.30 - 0.40	0.30 - 0.40	0.10 - 0.20	0.10 - 0.20	0.10 - 0.20	0.30 - 0.40
Sampling Date	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022

Determinand	Codes	Units	LOD							
TPH CWG										
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	1.3	< 1.0	n/t	n/t	n/t	n/t	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	1.4	< 1.0	n/t	n/t	n/t	n/t	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	5.6	< 1.0	n/t	n/t	n/t	n/t	2.3
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	19.6	1.5	n/t	n/t	n/t	n/t	3.6
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	463	22.4	n/t	n/t	n/t	n/t	32.7
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	27.4	1.4	n/t	n/t	n/t	n/t	3.1
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	518	26.6	n/t	n/t	n/t	n/t	42.6
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t	n/t	n/t	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	1.4	< 1.0	n/t	n/t	n/t	n/t	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	3.1	< 1.0	n/t	n/t	n/t	n/t	3.6
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	28.7	4.2	n/t	n/t	n/t	n/t	15.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	159	7.1	n/t	n/t	n/t	n/t	71.7
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	3120	170	n/t	n/t	n/t	n/t	391
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	935	62.8	n/t	n/t	n/t	n/t	110
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	4250	245	n/t	n/t	n/t	n/t	593
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	4770	272	n/t	n/t	n/t	n/t	635
Total Petroleum Hydrocarbons										
Mineral Oil w Florisil (EH_CU_1D_Total)	N	mg/kg	5	n/t	n/t	73	46	422	97	n/t
PCB (ICES 7 congeners)										
Total PCBs (7 congeners)	M	mg/kg	0.03	n/t	n/t	< 0.03	< 0.03	< 0.03	0.08	n/t

Results Summary

2683

Report No.: 22-43167, issue number 1

ELAB Reference	292963	292964	292969
Customer Reference	1	1	1
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	HP01	HP02	HP03
Sample Depth (m)	0.30 - 0.40	0.30 - 0.40	0.30 - 0.40
Sampling Date	08/09/2022	08/09/2022	08/09/2022

Determinand	Codes	Units	LOD			
VOC						
Heptane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Octane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Nonane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Benzene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Toluene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
m+p-xylene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
o-xylene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
cis-1,2-dichloroethene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1-Dichloroethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Chloroform	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Tetrachloromethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1,1-Trichloroethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-Tetrachloroethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1,2,2-Tetrachloroetha	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Methylethylbenzene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1-Dichloro-1-propene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Trans - 1-2 -dichloroethylene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
2,2-Dichloropropane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Bromochloromethane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,2-Dichloroethane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Dibromomethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,2-Dichloropropane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
cis-1,3-Dichloro-1-propene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
trans-1,3-Dichloro-1-propene	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,1,2-Trichloroethane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Dibromochloromethane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,3-Dichloropropane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,2-dibromoethane	M	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Styrene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Propylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
2-Chlorotoluene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,2,4-Trimethylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
4-Chlorotoluene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
t-butylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,3,5-Trimethylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1-methylpropylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
o-cymene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,3-Dichlorobenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Butylbenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,2-Dibromo-3-chloropropane	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Hexachlorobutadiene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1-2-3 - Trichlorobenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Naphthalene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ 0.07
1-2-4 - Trichlorobenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,4-Dichlorobenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
1,2-Dichlorobenzene	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01
Bromoform	M	mg/kg	0.01	^ < 0.01	^ < 0.01	^ < 0.01

Results Summary

Report No.: 22-43167, issue number 1

ELAB Reference				292963	292964	292969
Customer Reference				1	1	1
Sample ID						
Sample Type				SOIL	SOIL	SOIL
Sample Location				HP01	HP02	HP03
Sample Depth (m)				0.30 - 0.40	0.30 - 0.40	0.30 - 0.40
Sampling Date				08/09/2022	08/09/2022	08/09/2022
Determinand	Codes	Units	LOD			
SVOC						
Phenol	N	mg/kg	0.01	2.05	0.41	0.05
Aniline	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Bis(2-chloroethyl)ether	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-Chlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,3-Dichlorobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,4-Dichlorobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Benzyl Alcohol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,2-Dichlorobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-Methylphenol	N	mg/kg	0.01	0.06	0.07	0.07
Bis(2-chloroisopropyl)ether	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
3 and 4-methylphenol	N	mg/kg	0.01	0.24	0.30	0.12
N-Nitrosodi-n-propylamine	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Hexachloroethane	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Nitrobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Isophorone	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-Nitrophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2,4-Dimethylphenol	N	mg/kg	0.01	0.15	0.05	0.14
Bis(2-chloroethoxy)methane	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,3,5-Trichlorobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Naphthalene	N	mg/kg	0.01	1.33	1.05	5.54
3-Chloroaniline	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Hexachloro-1,3-butadiene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
4-Chloro-3-methylphenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-Methylnaphthalene	N	mg/kg	0.01	0.98	0.35	2.17
1-Methylnaphthalene	N	mg/kg	0.01	0.75	0.20	1.46
Hexachlorocyclopentadiene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2,4,6-Trichlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2,4,5-Trichlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1-Chloronaphthalene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-Nitroaniline	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1,4-Dinitrobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Dimethyl phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1-3-dinitrobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2-6-dinitrotoluene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	N	mg/kg	0.01	0.57	1.40	0.35
1,2-Dinitrobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
3-Nitroaniline	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	N	mg/kg	0.01	2.31	0.19	2.78
4-nitrophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Dibenzofuran	N	mg/kg	0.01	1.28	0.57	1.53
2,3,5,6-Tetrachlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
2,3,4,6-Tetrachlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Diethyl phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1-chloro-4-phenoxybenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Fluorene	N	mg/kg	0.01	1.73	0.73	2.16
4-Nitroaniline	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Dinitro-o-cresol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Diphenylamine	N	mg/kg	0.01	0.10	0.02	0.09
Azobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
1-bromo-4-phenoxybenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Hexachlorobenzene	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01

Tests marked N are not UKAS accredited.



Results Summary

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Report No.: 22-43167, issue number 1

ELAB Reference	292963	292964	292969
Customer Reference	1	1	1
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	HP01	HP02	HP03
Sample Depth (m)	0.30 - 0.40	0.30 - 0.40	0.30 - 0.40
Sampling Date	08/09/2022	08/09/2022	08/09/2022

Determinand	Codes	Units	LOD			
SVOC						
Phenanthrene	N	mg/kg	0.01	15.6	12.2	22.4
Anthracene	N	mg/kg	0.01	3.76	2.86	4.07
Carbazole	N	mg/kg	0.01	1.57	1.25	2.79
Dibutyl phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	N	mg/kg	0.01	24.2	17.1	27.8
Pyrene	N	mg/kg	0.01	23.6	14.3	26.2
Butyl benzyl phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Bis-2-ethylhexyladipate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Diisooctyl phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	N	mg/kg	0.01	12.0	7.75	11.3
Chrysene	N	mg/kg	0.01	13.0	6.20	12.2
Bis(2-ethylhexyl)phthalate	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	N	mg/kg	0.01	13.4	5.83	9.76
Benzo(k)fluoranthene	N	mg/kg	0.01	12.8	7.61	9.00
Benzo(a)pyrene	N	mg/kg	0.01	18.3	8.48	11.9
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.01	15.9	6.82	8.35
Dibenzo(a,h)anthracene	N	mg/kg	0.01	6.48	2.75	3.44
Benzo[g,h,i]perylene	N	mg/kg	0.01	21.1	8.27	11.2

Results Summary

Report No.: 22-43167, issue number 1

WAC Analysis

Elab Ref:	292968					Landfill Waste Acceptance Criteria Limits*		
Sample Date:	08/09/2022					Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP02c 1							
Depth (m)	0.10 - 0.20							
Site:	Ashton Old Road							
Determinand		Code	Units					
Total Organic Carbon		N	%		3.00	3	5	6
Loss on Ignition		M	%		6.6	--	--	10
Total BTEX		M	mg/kg		< 0.01	6	--	--
Total PCBs (7 congeners)		M	mg/kg		0.08	1	--	--
TPH Total WAC (EH_CU_1D_Total)		N	mg/kg		97	500	--	--
Total (of 17) PAHs		N	mg/kg		56.0	100	--	--
pH		M			8.4	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate

Eluate Analysis

			10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
			mg/l	mg/kg			
Arsenic		N	< 0.005	< 0.05	0.5	2	25
Barium		N	0.096	0.96	20	100	300
Cadmium		N	< 0.001	< 0.01	0.04	1	5
Chromium		N	< 0.005	< 0.05	0.5	10	70
Copper		N	0.011	0.11	2	50	100
Mercury		N	< 0.005	< 0.01	0.01	0.2	2
Molybdenum		N	0.018	0.18	0.5	10	30
Nickel		N	0.001	< 0.05	0.4	10	40
Lead		N	0.013	0.13	0.5	10	50
Antimony		N	< 0.005	< 0.05	0.06	0.7	5
Selenium		N	< 0.005	< 0.05	0.1	0.5	7
Zinc		N	0.017	0.17	4	50	200
Chloride		N	< 5	< 50	800	15000	25000
Fluoride		N	< 5	< 10	10	150	500
Sulphate		N	2	21.50	1000	20000	50000
Total Dissolved Solids		N	75	752.00	4000	60000	100000
Phenol Index		N	< 0.01	< 0.10	1	-	-
Dissolved Organic Carbon		N	4.520	45.00	500	800	1000

Leach Test Information

pH		N	7.4				
Conductivity (uS/cm)		N	112				
Dry mass of test portion (g)			100.000				
Dry Matter (%)			88				
Moisture (%)			14				
Eluent Volume (ml)			975				

Results are expressed on a dry weight basis, after correction for moisture content where applicable

* Stated limits are for guidance only, and not for conformity assessment.

Results Summary

Report No.: 22-43167, issue number 1

WAC Analysis

Elab Ref:	292967					Landfill Waste Acceptance Criteria Limits*		
Sample Date:	08/09/2022					Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP02b 1							
Depth (m)	0.10 - 0.20							
Site:	Ashton Old Road							
Determinand		Code	Units					
Total Organic Carbon		N	%		2.90	3	5	6
Loss on Ignition		M	%		5.9	--	--	10
Total BTEX		M	mg/kg		< 0.01	6	--	--
Total PCBs (7 congeners)		M	mg/kg		< 0.03	1	--	--
TPH Total WAC (EH_CU_1D_Total)		N	mg/kg		422	500	--	--
Total (of 17) PAHs		N	mg/kg		41.0	100	--	--
pH		M			8.4	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate

Eluate Analysis

			10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
			mg/l	mg/kg			
Arsenic		N	< 0.005	< 0.05	0.5	2	25
Barium		N	0.100	1.00	20	100	300
Cadmium		N	< 0.001	< 0.01	0.04	1	5
Chromium		N	< 0.005	< 0.05	0.5	10	70
Copper		N	0.015	0.15	2	50	100
Mercury		N	< 0.005	< 0.01	0.01	0.2	2
Molybdenum		N	0.024	0.24	0.5	10	30
Nickel		N	0.002	< 0.05	0.4	10	40
Lead		N	0.019	0.19	0.5	10	50
Antimony		N	0.005	0.05	0.06	0.7	5
Selenium		N	< 0.005	< 0.05	0.1	0.5	7
Zinc		N	0.030	0.30	4	50	200
Chloride		N	< 5	< 50	800	15000	25000
Fluoride		N	< 5	< 10	10	150	500
Sulphate		N	4	35.40	1000	20000	50000
Total Dissolved Solids		N	74	744.00	4000	60000	100000
Phenol Index		N	< 0.01	< 0.10	1	-	-
Dissolved Organic Carbon		N	5.600	56.00	500	800	1000

Leach Test Information

pH		N	7.7				
Conductivity (uS/cm)		N	111				
Dry mass of test portion (g)			101.000				
Dry Matter (%)			86				
Moisture (%)			16				
Eluent Volume (ml)			980				

Results are expressed on a dry weight basis, after correction for moisture content where applicable

* Stated limits are for guidance only, and not for conformity assessment.

Results Summary

Report No.: 22-43167, issue number 1

WAC Analysis

Elab Ref:	292966					Landfill Waste Acceptance Criteria Limits*		
Sample Date:	08/09/2022					Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP02a 1							
Depth (m)	0.10 - 0.20							
Site:	Ashton Old Road							
Determinand		Code	Units					
Total Organic Carbon		N	%		3.10	3	5	6
Loss on Ignition		M	%		7.0	--	--	10
Total BTEX		M	mg/kg		< 0.01	6	--	--
Total PCBs (7 congeners)		M	mg/kg		< 0.03	1	--	--
TPH Total WAC (EH_CU_1D_Total)		N	mg/kg		46	500	--	--
Total (of 17) PAHs		N	mg/kg		123.0	100	--	--
pH		M			8.4	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate

Eluate Analysis

			10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
			mg/l	mg/kg			
Arsenic		N	< 0.005	< 0.05	0.5	2	25
Barium		N	0.127	1.27	20	100	300
Cadmium		N	< 0.001	< 0.01	0.04	1	5
Chromium		N	< 0.005	< 0.05	0.5	10	70
Copper		N	0.010	0.10	2	50	100
Mercury		N	< 0.005	< 0.01	0.01	0.2	2
Molybdenum		N	< 0.005	< 0.05	0.5	10	30
Nickel		N	0.002	< 0.05	0.4	10	40
Lead		N	0.019	0.19	0.5	10	50
Antimony		N	0.006	0.06	0.06	0.7	5
Selenium		N	< 0.005	< 0.05	0.1	0.5	7
Zinc		N	0.023	0.23	4	50	200
Chloride		N	< 5	< 50	800	15000	25000
Fluoride		N	< 5	< 10	10	150	500
Sulphate		N	3	31.10	1000	20000	50000
Total Dissolved Solids		N	119	1200.00	4000	60000	100000
Phenol Index		N	< 0.01	< 0.10	1	-	-
Dissolved Organic Carbon		N	6.960	70.00	500	800	1000

Leach Test Information

pH		N	7.5				
Conductivity (uS/cm)		N	178				
Dry mass of test portion (g)			97.000				
Dry Matter (%)			84				
Moisture (%)			19				
Eluent Volume (ml)			940				

Results are expressed on a dry weight basis, after correction for moisture content where applicable

* Stated limits are for guidance only, and not for conformity assessment.

Results Summary

Report No.: 22-43167, issue number 1

WAC Analysis

Elab Ref:	292965					Landfill Waste Acceptance Criteria Limits*		
Sample Date:	08/09/2022					Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP02 2							
Depth (m)	0.30 - 0.40							
Site:	Ashton Old Road							
Determinand		Code	Units					
Total Organic Carbon		N	%		2.60	3	5	6
Loss on Ignition		M	%		6.2	--	--	10
Total BTEX		M	mg/kg		< 0.01	6	--	--
Total PCBs (7 congeners)		M	mg/kg		< 0.03	1	--	--
TPH Total WAC (EH_CU_1D_Total)		N	mg/kg		73	500	--	--
Total (of 17) PAHs		N	mg/kg		162.0	100	--	--
pH		M			7.8	--	>6	--
Acid Neutralisation Capacity		N	mol/kg		< 0.1	--	To evaluate	To evaluate

Eluate Analysis

			10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
			mg/l	mg/kg			
Arsenic		N	< 0.005	< 0.05	0.5	2	25
Barium		N	0.095	0.95	20	100	300
Cadmium		N	< 0.001	< 0.01	0.04	1	5
Chromium		N	< 0.005	< 0.05	0.5	10	70
Copper		N	0.010	0.10	2	50	100
Mercury		N	< 0.005	< 0.01	0.01	0.2	2
Molybdenum		N	0.020	0.20	0.5	10	30
Nickel		N	0.001	< 0.05	0.4	10	40
Lead		N	0.012	0.12	0.5	10	50
Antimony		N	< 0.005	< 0.05	0.06	0.7	5
Selenium		N	< 0.005	< 0.05	0.1	0.5	7
Zinc		N	0.027	0.27	4	50	200
Chloride		N	< 5	< 50	800	15000	25000
Fluoride		N	< 5	< 10	10	150	500
Sulphate		N	4	40.00	1000	20000	50000
Total Dissolved Solids		N	74	740.00	4000	60000	100000
Phenol Index		N	< 0.01	< 0.10	1	-	-
Dissolved Organic Carbon		N	6.610	66.00	500	800	1000

Leach Test Information

pH		N	7.3				
Conductivity (uS/cm)		N	111				
Dry mass of test portion (g)			97.000				
Dry Matter (%)			83				
Moisture (%)			21				
Eluent Volume (ml)			930				

Results are expressed on a dry weight basis, after correction for moisture content where applicable

* Stated limits are for guidance only, and not for conformity assessment.

Method Summary

Report No.: 22-43167, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
SVOC in solids	N	As submitted sample	12/09/2022	167	GC-MS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	13/09/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	13/09/2022	181	GC-MS
VOC in solids	M	As submitted sample	13/09/2022	181	GC-MS
TPH CWG soil by gc-gc	M	As submitted sample	12/09/2022	271	
Leachate					
Arsenic	N		14/09/2022	301	ICPMS
Cadmium	N		14/09/2022	301	ICPMS
Chromium	N		14/09/2022	301	ICPMS
Lead	N		14/09/2022	301	ICPMS
Nickel	N		14/09/2022	301	ICPMS
Copper	N		14/09/2022	301	ICPMS
Zinc	N		14/09/2022	301	ICPMS
Mercury	N		14/09/2022	301	ICPMS
Selenium	N		14/09/2022	301	ICPMS
Antimony	N		14/09/2022	301	ICPMS
Barium	N		14/09/2022	301	ICPMS
Molybdenum	N		14/09/2022	301	ICPMS
pH Value	N		14/09/2022	113	Electrometric
Electrical Conductivity	N		14/09/2022	136	Probe
Dissolved Organic Carbon	N		14/09/2022	102	TOC analyser
Chloride	N		14/09/2022	131	Ion Chromatography
Fluoride	N		14/09/2022	131	Ion Chromatography
Sulphate	N		14/09/2022	131	Ion Chromatography
Total Dissolved Solids	N		14/09/2022	144	Gravimetric
Phenol index	N		14/09/2022	121	HPLC
WAC Solids analysis					
pH	M	Air dried sample	13/09/2022	113	Electrometric
Total Organic Carbon	N	Air dried sample	13/09/2022	210	IR
Loss on Ignition	M	Air dried sample	13/09/2022	129	Gravimetric
Acid Neutralisation Capacity	N	Air dried sample	13/09/2022	NEN 737	Electrometric
Total BTEX	N	As submitted sample	13/09/2022	181	GCMS
Mineral Oil (EH_CU_1D_Total)	N	As submitted sample	12/09/2022	117	GCFID
Total PCBs (7 congeners)	M	Air dried sample	12/09/2022	120	GCMS
Total (of 17) PAHs	N	As submitted sample	14/09/2022	133	GCFID

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-43167, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

End Use Scenario	SOM	Code	(All)
Commercial	1.0%	Code2	(All)
		St. Ref	(All)

**CS-1625
HUMAN HEALTH
ASSESSMENT**



Min	Max	Count	No. of	Screen	Location ID			HP101	HP102	HP103	
Value	Value	Values	Exceed	Level	Depth Top and Base (m)			0.3	0.3	0.3	
(mg/kg)	(mg/kg)		-	ances	(mg/kg)	Ref.	Group	Contaminant	0.4	0.4	0.4
1.06	5.61	3	-	190	5.01	PAHs	Naphthalene	1.34	1.06	5.61	
0.35	1.40	3	-	83000	5.02	PAHs	Acenaphthylene	0.57	1.40	0.35	
0.19	2.78	3	-	84000	5.03	PAHs	Acenaphthene	2.31	0.19	2.78	
0.73	2.16	3	-	63000	5.04	PAHs	Fluorene	1.73	0.73	2.16	
12.20	22.40	3	-	22000	5.05	PAHs	Phenanthrene	15.60	12.20	22.40	
2.86	4.07	3	-	520000	5.06	PAHs	Anthracene	3.76	2.86	4.07	
17.10	27.80	3	-	23000	5.07	PAHs	Fluoranthene	24.20	17.10	27.80	
7.75	12.00	3	-	170	5.09	PAHs	Benzo(a)anthracene	12.00	7.75	11.30	
6.20	13.00	3	-	350	5.10	PAHs	Chrysene	13.00	6.20	12.20	
5.83	13.40	3	-	44	5.11	PAHs	Benzo(b)fluoranthene	13.40	5.83	9.76	
7.61	12.80	3	-	1200	5.12	PAHs	Benzo(k)fluoranthene	12.80	7.61	9.00	
8.48	18.30	3	-	77	5.13	PAHs	Benzo(a)pyrene	18.30	8.48	11.90	
6.82	15.90	3	-	500	5.14	PAHs	Indeno(1,2,3-cd)pyrene	15.90	6.82	8.35	
2.75	6.48	3	1	3.5	5.15	PAHs	Dibenzo(a,h)anthracene	6.48	2.75	3.44	
8.27	21.10	3	-	3900	5.16	PAHs	Benzo[g,h,i]perylene	21.10	8.27	11.20	
0.01	0.01	3	-	3200	6.01	Fuel Range Hydrocarbons	>C5-C6 Aliphatic	0.01	0.01	0.01	
0.01	0.01	3	-	7800	6.02	Fuel Range Hydrocarbons	>C6-C8 Aliphatic	0.01	0.01	0.01	
1.00	1.30	3	-	2000	6.03	Fuel Range Hydrocarbons	>C8-C10 Aliphatic	1.30	1.00	1.00	
1.00	1.40	3	-	9700	6.04	Fuel Range Hydrocarbons	>C10-C12 Aliphatic	1.40	1.00	1.00	
1.00	5.60	3	-	59000	6.05	Fuel Range Hydrocarbons	>C12-C16 Aliphatic	5.60	1.00	2.30	
1.50	19.60	3	-	1600000	6.06	Fuel Range Hydrocarbons	>C16-C21 Aliphatic	19.60	1.50	3.60	
22.40	463.00	3	-	1600000	6.07	Fuel Range Hydrocarbons	>C21-C35 Aliphatic	463.00	22.40	32.70	
1.40	27.40	3	-	1600000	6.08	Fuel Range Hydrocarbons	>C35-C40 Aliphatic	27.40	1.40	3.10	
0.01	0.01	3	-	26000	6.09	Fuel Range Hydrocarbons	>C5-C7 Aromatic	0.01	0.01	0.01	
0.01	0.01	3	-	56000	6.1	Fuel Range Hydrocarbons	>C7-C8 Aromatic	0.01	0.01	0.01	
1.00	1.40	3	-	3500	6.11	Fuel Range Hydrocarbons	>C8-C10 Aromatic	1.40	1.00	1.00	
1.00	3.60	3	-	16000	6.12	Fuel Range Hydrocarbons	>C10-C12 Aromatic	3.10	1.00	3.60	
4.20	28.70	3	-	36000	6.13	Fuel Range Hydrocarbons	>C12-C16 Aromatic	28.70	4.20	15.00	
7.10	159.00	3	-	28000	6.14	Fuel Range Hydrocarbons	>C16-C21 Aromatic	159.00	7.10	71.70	
170.00	3,120.00	3	-	28000	6.15	Fuel Range Hydrocarbons	>C21-C35 Aromatic	3,120.00	170.00	391.00	
62.80	935.00	3	-	28000	6.16	Fuel Range Hydrocarbons	>C35-C40 Aromatic	935.00	62.80	110.00	
0.02	0.02	3	-	98	6.17	Fuel Range Hydrocarbons	Benzene	0.02	0.02	0.02	
0.02	0.02	3	-	5700	6.19	Fuel Range Hydrocarbons	Ethylbenzene	0.02	0.02	0.02	



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-43580

Issue: 1

Date of Issue: 06/10/2022

Contact: Matthew Carr

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol
BS1 6SE

Quotation No: Q22-02650

Order No: 8910-CS-1625

Customer Reference: CS-1625

Date Received: 29/09/2022

Date Approved: 06/10/2022

Details: CS-1625

Approved by:

Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-43580, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
295463	BH101 7.75	27/09/2022	29/09/2022		

Results Summary

Report No.: 22-43580, issue number 1

ELAB Reference	295463
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	27/09/2022

Determinand	Codes	Units	LOD	
Dissolved Metals				
Arsenic	U	ug/l	5	< 5
Boron	N	ug/l	5	25
Cadmium	U	ug/l	1	< 1
Chromium	U	ug/l	5	< 5
Copper	U	ug/l	5	< 5.0
Mercury	U	ug/l	0.1	< 0.1
Nickel	U	ug/l	5	< 5
Lead	U	ug/l	1	< 1
Selenium	U	ug/l	5	< 5
Zinc	U	ug/l	5	< 5
Anions				
Sulphate	N	mg/l	0.5	149
Inorganics				
Hexavalent Chromium	U	ug/l	100	< 100
Miscellaneous				
pH	U	pH units	0.1	7.3
Phenols				
Phenol	N	ug/l	1	< 1
M,P-Cresol	N	ug/l	1	< 1
O-Cresol	N	ug/l	1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1
Polyaromatic hydrocarbons				
Naphthalene GCMS	N	ug/l	0.01	0.01
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	0.02
Anthracene GCMS	N	ug/l	0.01	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	< 0.01
Pyrene GCMS	N	ug/l	0.01	0.01
Benzo (a) anthracene GCMS	N	ug/l	0.01	< 0.01
Chrysene GCMS	N	ug/l	0.01	0.01
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	< 0.01
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	< 0.01
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.02
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.02
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	0.02
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.03
Total PAH(16) GCMS	N	ug/l	0.01	0.19



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Results Summary

Report No.: 22-43580, issue number 1

ELAB Reference	295463
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	27/09/2022

Determinand	Codes	Units	LOD	
BTEX				
Benzene	U	ug/l	1	< 1.00
Toluene	U	ug/l	1	< 1.00
Ethylbenzene	U	ug/l	1	< 1.00
Xylenes	U	ug/l	1	< 1.00
MTBE	U	ug/l	1	< 1.00
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C6-C8 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	11.7
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	10.7
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	ug/l	5	22.5
>C5-C7 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C7-C8 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C8-C10 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	ug/l	5	8.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	ug/l	5	8.8
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	ug/l	5	31.3



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Results Summary

Report No.: 22-43580, issue number 1

ELAB Reference	295463
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	27/09/2022

Determinand	Codes	Units	LOD	
VOC				
MTBE	N	ug/l	1	< 1
Heptane	N	ug/l	1	< 1
Octane	N	ug/l	1	< 1
Nonane	N	ug/l	1	< 1
Benzene	N	ug/l	1	< 1
Toluene	N	ug/l	1	< 1
Ethylbenzene	N	ug/l	1	< 1
m+p-xylene	N	ug/l	1	< 1
o-xylene	N	ug/l	1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1
Chloroform	N	ug/l	1	< 1
Tetrachloromethane	N	ug/l	1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1
Trichloroethylene	N	ug/l	1	< 1
Tetrachloroethylene	N	ug/l	1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1
Chlorobenzene	N	ug/l	1	< 1
Bromobenzene	N	ug/l	1	< 1
Bromodichloromethane	N	ug/l	1	< 1
Methylethylbenzene	N	ug/l	1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1
Bromochloromethane	N	ug/l	1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1
Dibromomethane	N	ug/l	1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1
Dibromochloromethane	N	ug/l	1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1
Dibromoethane	N	ug/l	1	< 1
Styrene	N	ug/l	1	< 1
Propylbenzene	N	ug/l	1	< 1
2-Chlorotoluene	N	ug/l	1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1
4-Chlorotoluene	N	ug/l	1	< 1
t-butylbenzene	N	ug/l	1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1
p-cymene	N	ug/l	1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1
Butylbenzene	N	ug/l	1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1
Naphthalene	N	ug/l	1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1
Bromoform	N	ug/l	1	< 1
VOC TIC				
Various	N	ug/l	1	None Detected

Results Summary

Report No.: 22-43580, issue number 1

ELAB Reference	295463
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	27/09/2022

Determinand	Codes	Units	LOD	
SVOC				
Phenol	N	ug/l	1	< 1.00
Aniline	N	ug/l	1	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00
Isophorone	N	ug/l	1	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00
Naphthalene	N	ug/l	0.01	0.03
3-Chloroaniline	N	ug/l	1	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00
2-Methylnaphthalene	N	ug/l	1	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00
Fluorene	N	ug/l	0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00
Diphenylamine	N	ug/l	1	< 1.00
Azobenzene	N	ug/l	1	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00

Results Summary

Report No.: 22-43580, issue number 1

ELAB Reference	295463
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	27/09/2022

Determinand	Codes	Units	LOD	
SVOC				
Phenanthrene	N	ug/l	0.01	0.02
Anthracene	N	ug/l	0.01	0.02
Carbazole	N	ug/l	1	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00
Fluoranthene	N	ug/l	0.01	0.01
Pyrene	N	ug/l	0.01	0.01
Butyl benzyl phthalate	N	ug/l	1	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00
Diisooctyl phthalate	N	ug/l	1	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	0.01
Chrysene	N	ug/l	0.01	0.02
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	0.02
Benzo(k)fluoranthene	N	ug/l	0.01	0.03
Benzo(a)pyrene	N	ug/l	0.01	0.02
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	0.03
Dibenzo(a,h)anthracene	N	ug/l	0.01	0.03
Benzo(ghi)perylene	N	ug/l	0.01	0.04
SVOCTIC				
Various	N	ug/l	1	Y
1,2-Diphenylcyclopropane	N	ug/l	1	< 1
2,4,6-Trimethyl-3-heptene	N	ug/l	1	15.33
2H-Pyranmethanol, tetrahydro-2,5-dimethyl-	N	ug/l	1	1.06
3-Hexene, 2,3-dimethyl-	N	ug/l	1	2.29
Cyclobutane, butyl-	N	ug/l	1	< 1
Cyclopentane, 1,1,2-trimethyl-	N	ug/l	1	< 1
Decane, 3,8-dimethyl-	N	ug/l	1	< 1
Ethylbenzene	N	ug/l	1	< 1
Heptane, 2,2,4,6,6-pentamethyl-	N	ug/l	1	< 1
Hexane, 3,3-dimethyl-	N	ug/l	1	< 1
p-Xylene	N	ug/l	1	< 1

Method Summary

Report No.: 22-43580, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		05/10/2022		GC-FID
Phenols in waters	N		30/09/2022		HPLC
VOC in waters	N		03/10/2022		GC-MS
Dissolved metals by ICP in waters	U		30/09/2022	101	ICPMS
pH of waters	U		30/09/2022	113	Electromeric
Chromium Hexavalent in waters	U		05/10/2022	123	Colorimetry
PAHs and/or PCBs in waters	N		05/10/2022	135	GC-MS
SVOC in waters	N		06/10/2022	167	GC-MS
BTEX in waters	U		05/10/2022	200	GC-MS
Low range Aliphatic hydrocarbons water	N		05/10/2022	200	GC-MS
Low range Aromatic hydrocarbons water	N		05/10/2022	200	GC-MS
VOC in waters	N		03/10/2022	200	GC-MS
Aliphatic hydrocarbons in water	N		03/10/2022	215	GC-FID
Aromatic hydrocarbons in water	N		03/10/2022	215	GC-FID
Anions	N		30/09/2022	305	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-43580, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-43927

Issue: 1

Date of Issue: 18/10/2022

Contact: Jessica Stokes-Bowler

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol
BS1 6SE

Quotation No: Q22-02650

Order No: 8938-CS-J-1625

Customer Reference: CS-1625

Date Received: 12/10/2022

Date Approved: 18/10/2022

Details: Ashton Old Road

Approved by:

Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-43927, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
297402	BH101 7.75	07/10/2022	12/10/2022		

Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
Dissolved Metals				
Arsenic	U	ug/l	5	< 5
Boron	N	ug/l	5	88
Cadmium	U	ug/l	1	< 1
Chromium	U	ug/l	5	< 5
Copper	U	ug/l	5	< 5.0
Mercury	U	ug/l	0.1	< 0.1
Nickel	U	ug/l	5	< 5
Lead	U	ug/l	1	< 1
Selenium	U	ug/l	5	< 5
Zinc	U	ug/l	5	5
Anions				
Sulphate	N	mg/l	0.5	106
Inorganics				
Hexavalent Chromium	U	ug/l	100	< 100
Miscellaneous				
pH	U	pH units	0.1	8.2
Phenols				
Phenol	N	ug/l	1	< 1
M,P-Cresol	N	ug/l	1	< 1
O-Cresol	N	ug/l	1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1
Polyaromatic hydrocarbons				
Naphthalene GCMS	N	ug/l	0.01	0.02
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	0.02
Anthracene GCMS	N	ug/l	0.01	< 0.01
Fluoranthene GCMS	N	ug/l	0.01	0.02
Pyrene GCMS	N	ug/l	0.01	0.02
Benzo (a) anthracene GCMS	N	ug/l	0.01	0.02
Chrysene GCMS	N	ug/l	0.01	0.03
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	0.02
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	0.03
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.02
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.01
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	0.01
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.02
Total PAH(16) GCMS	N	ug/l	0.01	0.25



Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
BTEX				
Benzene	U	ug/l	1	< 1.00
Toluene	U	ug/l	1	< 1.00
Ethylbenzene	U	ug/l	1	< 1.00
Xylenes	U	ug/l	1	< 1.00
MTBE	U	ug/l	1	< 1.00
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C6-C8 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	ug/l	5	< 5.0
>C5-C7 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C7-C8 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0
>C8-C10 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
>C35-C40 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	ug/l	5	< 5.0
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	ug/l	5	< 5.0

Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
VOC				
MTBE	N	ug/l	1	< 1
Heptane	N	ug/l	1	< 1
Octane	N	ug/l	1	< 1
Nonane	N	ug/l	1	< 1
Benzene	N	ug/l	1	< 1
Toluene	N	ug/l	1	< 1
Ethylbenzene	N	ug/l	1	< 1
m+p-xylene	N	ug/l	1	< 1
o-xylene	N	ug/l	1	< 1
cis-1,2-dichloroethene	N	ug/l	1	< 1
1,1-Dichloroethane	N	ug/l	1	< 1
Chloroform	N	ug/l	1	< 1
Tetrachloromethane	N	ug/l	1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1
Trichloroethylene	N	ug/l	1	< 1
Tetrachloroethylene	N	ug/l	1	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1
1,1,2,2-Tetrachloroetha	N	ug/l	1	< 1
Chlorobenzene	N	ug/l	1	< 1
Bromobenzene	N	ug/l	1	< 1
Bromodichloromethane	N	ug/l	1	< 1
Methylethylbenzene	N	ug/l	1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1
Bromochloromethane	N	ug/l	1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1
Dibromomethane	N	ug/l	1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1
Dibromochloromethane	N	ug/l	1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1
Dibromoethane	N	ug/l	1	< 1
Styrene	N	ug/l	1	< 1
Propylbenzene	N	ug/l	1	< 1
2-Chlorotoluene	N	ug/l	1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1
4-Chlorotoluene	N	ug/l	1	< 1
t-butylbenzene	N	ug/l	1	< 1

Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
VOC				
1,3,5-Trimethylbenzene	N	ug/l	1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1
p-cymene	N	ug/l	1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1
Butylbenzene	N	ug/l	1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1
Naphthalene	N	ug/l	1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1
Bromoform	N	ug/l	1	< 1
VOC TIC				
Various	N	ug/l	1	None Detected
TIC				

Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
SVOC				
Phenol	N	ug/l	1	< 1.00
Aniline	N	ug/l	1	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00
Isophorone	N	ug/l	1	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00
Naphthalene	N	ug/l	0.01	0.01
3-Chloroaniline	N	ug/l	1	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00
2-Methylnaphthalene	N	ug/l	1	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00

Results Summary

Report No.: 22-43927, issue number 1

ELAB Reference	297402
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	BH101
Sample Depth (m)	7.75
Sampling Date	07/10/2022

Determinand	Codes	Units	LOD	
SVOC				
Dibenzofuran	N	ug/l	1	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00
Fluorene	N	ug/l	0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00
Diphenylamine	N	ug/l	1	< 1.00
Azobenzene	N	ug/l	1	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00
Phenanthrene	N	ug/l	0.01	< 0.01
Anthracene	N	ug/l	0.01	< 0.01
Carbazole	N	ug/l	1	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00
Fluoranthene	N	ug/l	0.01	< 0.01
Pyrene	N	ug/l	0.01	< 0.01
Butyl benzyl phthalate	N	ug/l	1	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00
Diisooctyl phthalate	N	ug/l	1	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	< 0.01
Chrysene	N	ug/l	0.01	< 0.01
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	< 0.01
Benzo(k)fluoranthene	N	ug/l	0.01	< 0.01
Benzo(a)pyrene	N	ug/l	0.01	< 0.01
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	< 0.01
Dibenzo(a,h)anthracene	N	ug/l	0.01	< 0.01
Benzo(ghi)perylene	N	ug/l	0.01	< 0.01
SVOCTIC				
Various	N	ug/l	1	Y
TIC				
3-Hexene, 2,2-dimethyl-, (Z)-	N	ug/l	1	2.85
4-Methyl-2-heptene	N	ug/l	1	1.76
Cyclohexane, 1-bromo-4-methyl-	N	ug/l	1	4.07

Method Summary

Report No.: 22-43927, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		17/10/2022		GC-FID
Phenols in waters	N		13/10/2022		HPLC
VOC in waters	N		14/10/2022		GC-MS
Dissolved metals by ICP in waters	U		13/10/2022	101	ICPMS
pH of waters	U		14/10/2022	113	Electromeric
Chromium Hexavalent in waters	U		17/10/2022	123	Colorimetry
PAHs and/or PCBs in waters	N		13/10/2022	135	GC-MS
SVOC in waters	N		13/10/2022	167	GC-MS
BTEX in waters	U		17/10/2022	200	GC-MS
Low range Aliphatic hydrocarbons water	N		17/10/2022	200	GC-MS
Low range Aromatic hydrocarbons water	N		17/10/2022	200	GC-MS
VOC in waters	N		14/10/2022	200	GC-MS
Aliphatic hydrocarbons in water	N		13/10/2022	215	GC-FID
Aromatic hydrocarbons in water	N		13/10/2022	215	GC-FID
Anions	N		13/10/2022	305	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-43927, issue number 1

Key

U	hold UKAS accreditation
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N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
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I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

Appendix E – Surrogate Marker Assessment



Polycyclic Aromatic Hydrocarbon (PAH) Profiling to Determine Suitability of Benzo(a)pyrene (BaP) Surrogate Marker Approach

Project Name:

1119 Ashton Old Road

Project ID:

CS-1625

Client:

Stor 104 Ltd

Sample Reference		Benzo (a) pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Dibenzo (a,h) anthracene	Indeno (1,2,3- cd) pyrene	Benzo (ghi) perylene
Culp Study Ratio to BaP	Upper Limit	-	12.43	11.61	10.85	3.72	1.38	7.27	8.22
	Mean	-	1.24	1.16	1.08	0.37	0.14	0.73	0.82
	Lower Limit	-	0.12	0.12	0.11	0.04	0.01	0.07	0.08
HP01	Results	18.30	12.00	13.00	13.40	12.80	6.48	15.90	21.10
	Ratio to BaP	-	0.66	0.71	0.73	0.70	0.35	0.87	1.15

Notes

- Where sample PAH ratio to BaP is outside the Culp Study mean ± 5 , results are highlighted orange.
- Where sample PAH ratio to BaP is outside the Culp Study upper or lower limits, results are highlighted red.

Project Name:

1119 Ashton Old Road

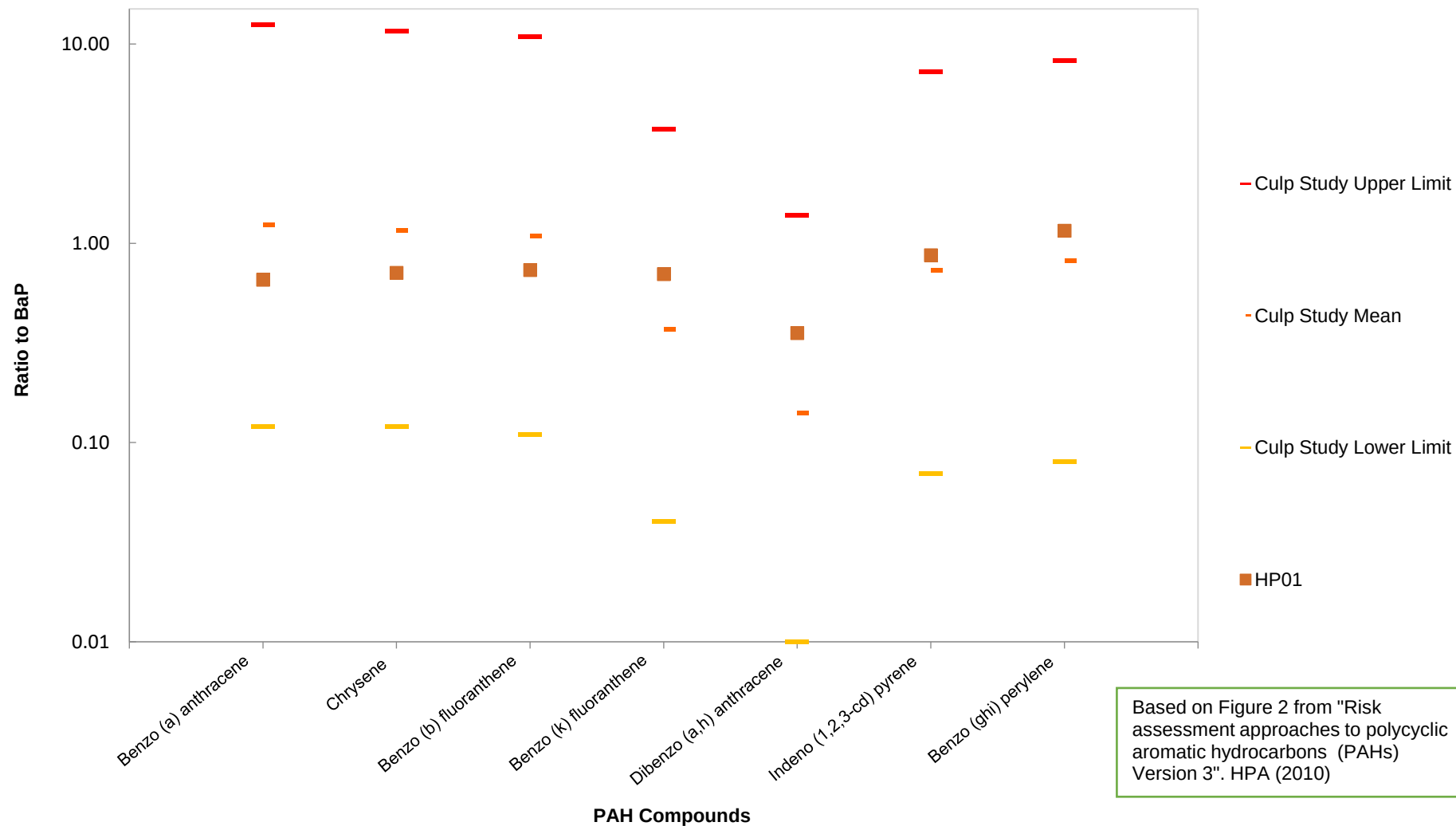
Project ID:

CS-1625

Client:

Stor 104 Ltd

Profile of PAHs in selected soil samples expressed as a ratio to benzo(a)pyrene compared with Culp Study results (Culp, S.J., et al., 1998)



Appendix F – Water Monitoring Records

LOW FLOW GROUNDWATER SAMPLING FIELD RECORD



Project Reference:	P0755/CS-1625
Site Name:	1119 Aston Old Road, Manchester
Date:	27/09/2022
Sampled by:	MC

Well I.D	Well Diameter mm	Ground Level mAOD	Top of Casing mAOD	Water Level mbgl	Water Level mAOD	LNAPL/DNAPL (if present)* mbgl	LNAPL/DNAPL (if present)* mAOD	Depth to Base of Well mbgl	Comments
BH101				3.37		ND		8.13	Top hat cover 0.40m.

Time (min)	Temp (°C)	DO (%)	DO (mg/l)	SPC (µS/cm)	pH	ORP (mV)	Comments	
0	13	320.3	32.67	944	6.97	63.8	Colour and turbidity	Orangish brown colour and opaque. No settled sediment at point of sampling. Small black specs of installation pipe fragments.
1	12.8	245.9	25.4	927	6.86	44.7		
2	12.7	174.3	18.16	920	6.84	37.8		
3	12.7	138.1	14.51	915	6.83	33.1	Odour	No odour.
4	12.7	115.2	12.03	909	6.82	29.1		
5	12.7	93.9	9.92	901	6.82	24.5		
6	12.6	85.8	8.99	893	6.81	22.3	Sample Depth	7.75mbgl
7	12.7	77	8.12	886	6.81	20.3	Other relevant observations or comments	Water level stable throughout sampling.
8	12.7	77.3	8.16	883	6.81	19.2		
9	12.7	75.5	7.99	879	6.81	18.3		
10	12.6	73	7.73	875	6.81	17.4		
11	12.6	69.2	7.48	871	6.81	16.7		
12	12.6	62.2	6.92	866	6.81	15.8		
13	12.6	56.7	6	858	6.81	14.3		
14	12.7	51.4	5.41	851	6.81	13.5		
15	12.6	49.1	5.16	848	6.81	13.1		
16	12.7	46	4.87	844	6.81	12.7		
17	12.6	43.7	4.61	838	6.81	12.4		

18	12.6	41.7	4.41	833	6.8	12.2				
19	12.7	38.7	4.07	828	6.8	11.7				
20	12.6	36.5	3.87	821	6.8	11.4				
21	12.7	35.5	3.75	819	6.8	11.2				
22	12.7	34.5	3.65	817	6.8	11.1				
23	12.6	33.9	3.58	815	6.8	11				
Min	12.6	33.9	3.58	815	6.8	11				
Max	13	320.3	375	944	6.97	63.8				

mbgl

mAOD

mbtoc (casing)

mbtoc (cover)

* enter ND if none detected

NOVOC

metres below ground level

metres Above Ordnance Datum

metres below top of casing

metres below top of borehole flush cover/top hat

No visual or olfactory evidence of contamination

LOW FLOW GROUNDWATER SAMPLING FIELD RECORD



Project Reference:	P0755/CS-1625
Site Name:	1119 Aston Old Road, Manchester
Date:	07/10/2022
Sampled by:	JSB

Well I.D	Well Diameter mm	Ground Level mAOD	Top of Casing mAOD	Water Level mbgl	Water Level mAOD	LNAPL/DNAPL (if present)* mbgl	LNAPL/DNAPL (if present)* mAOD	Depth to Base of Well mbgl	Comments
BH01				3.26		ND		8.08	Top hat cover 0.40m.

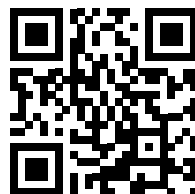
Time (min)	Temp (°C)	DO (%)	DO (mg/l)	SPC (µS/cm)	pH	ORP (mV)	Comments	
0	12.8	83.4	8.75	1019	6.85	-76.5	Colour and turbidity	Orangish brown colour and opaque. No settled sediment at point of sampling.
1	12.8	67.4	7.12	1014	6.85	-82.3		
2	12.8	57	5.95	1010	6.85	-87.3		
3	12.8	47.2	4.98	1008	6.85	-92	Odour	No odour.
4	12.7	33.7	3.52	1006	6.85	-93.6		
5	12.7	24.4	2.54	1005	6.85	-95.4		
6	12.7	19.7	2.08	1005	6.85	-97.7	Sample Depth	7.75mbgl
7	12.6	18.4	1.94	1005	6.85	-97.5	Other relevant observations or comments	Water level stable throughout sampling.
8	12.6	16.8	1.78	1005	6.85	-97.7		
9	12.7	16.1	1.7	1004	6.85	-97		
10	12.7	16.1	1.69	1003	6.85	-95.6		
11	12.8	16	1.67	1001	6.85	-93.8		
12	12.8	15.8	1.66	1000	6.85	-91.9		
13	12.8	15.8	1.68	999	6.86	-90.2		
14	12.8	15.8	1.66	997	6.86	-89		
15	12.9	15.1	1.59	993	6.86	-86.8		
16	12.8	14.4	1.51	972	6.86	-85		
17	12.9	13.8	1.45	969	6.86	-84.6		

18	12.8	13.4	1.4	966	6.85	-83.5				
19	12.9	12.7	1.33	963	6.85	-83.4				
20	12.9	12.4	1.29	964	6.85	-82.6				
21	12.8	12	1.26	963	6.85	-81.3				
22	12.8	11.7	1.22	960	6.85	-79				
23	12.9	11.2	1.16	944	6.85	-75.8				
24	12.9	10.8	1.13	912	6.85	-70.9				
25	12.9	10.7	1.11	900	6.85	-68.2				
26	12.9	10.6	1.11	888	6.84	-65.6				
27	12.9	10.3	1.08	872	6.84	-62.1				
28	13	10.3	1.08	847	6.83	-59.9				
29	12.9	10	1.05	843	6.83	-59.1				
30	12.9	9.7	1.02	838	6.82	-58.6				
31	12.9	9.4	0.99	834	6.82	-57.5				
32	12.8	9.4	0.98	831	6.82	-57.2				
33	12.8	9.1	0.96	828	6.82	-57.3				
34	12.9	8.9	0.94	826	6.82	-57.1				
35	12.9	8.7	0.92	823	6.81	-56.9				
Min	12.6	8.7	0.92	823	6.85	-97.7				
Max	12.9	83.4	8.75	1019	6.86	-56.9				

mbgl metres below ground level
mAOD metres Above Ordnance Datum
mbtoc (casing) metres below top of casing
mbtoc (cover) metres below top of borehole flush cover/top hat
* enter ND if none detected
NOVOC No visual or olfactory evidence of contamination

Appendix G – HazWaste Report

Waste Classification Report



WBEHJ-48LT7-6JU2Z

Job name

Ashton Old Road

Description/Comments

Project

ASH1867

Site

Waste Stream Template

T&P Waste Stream

Classified by

Name:

Samuel Butcher

Date:

30/06/2017 13:45:07 UTC

Telephone:

01179 277 756

Company:

T&P Regeneration Ltd
Unit 4
Brunel Lock Development, Smeaton Road
Bristol
BS1 6SE

Report

Created by: Samuel Butcher

Created date: 30/06/2017 13:45 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS02	1.00 - 1.20	Hazardous	HP 3(i), HP 7, HP 11	2
2	WS02[1]	1.50 - 1.80	Non Hazardous		5
3	WS03	0.00 - 1.20	Hazardous	HP 14	6
4	WS04	0.50 - 0.80	Hazardous	HP 3(i), HP 7, HP 10, HP 11, HP 14	8
5	WS04[1]	1.50 - 1.70	Non Hazardous		11
6	WS06	0.30 - 0.70	Non Hazardous		13
7	WS07	0.50 - 0.70	Non Hazardous		15
8	WS07[1]	0.70 - 1.00	Non Hazardous		17
9	SS01	0.00 - 0.30	Hazardous	HP 3(i), HP 7, HP 11, HP 14	19
10	WS05	0.30 - 0.60	Non Hazardous		22

Appendices

Appendix A: Classifier defined and non CLP determinands

Appendix B: Rationale for selection of metal species

Appendix C: Version

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Classification of sample: WS02

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 - 1.20 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. 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.: 0.161%)

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.: 0.161%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.161%)

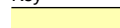
Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				26.9 mg/kg	1.32	35.517 mg/kg	0.00355 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		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								
3		chromium { chromium(III) oxide }				56.5 mg/kg	1.462	82.578 mg/kg	0.00826 %	✓		
			215-160-9	1308-38-9								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
4		copper {  dicopper oxide; copper (I) oxide }			1	119	mg/kg	1.126	133.981	mg/kg	0.0134 %		✓	
	029-002-00-X	215-270-7	1317-39-1											
5		lead { lead chromate }			1	345	mg/kg	1.56	538.136	mg/kg	0.0345 %		✓	
	082-004-00-2	231-846-0	7758-97-6											
6		mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD	
	080-010-00-X	231-299-8	7487-94-7											
7		nickel { nickel dihydroxide }				34.1	mg/kg	1.579	53.861	mg/kg	0.00539 %		✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]											
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.3	mg/kg	2.554	3.32	mg/kg	0.000332 %		✓	
	034-002-00-8													
9		zinc { zinc oxide }				309	mg/kg	1.245	384.617	mg/kg	0.0385 %		✓	
	030-013-00-7	215-222-5	1314-13-2											
10		boron {  boron tribromide/trichloride/trifluoride (combined) }				1.3	mg/kg	13.43	17.459	mg/kg	0.00175 %		✓	
			10294-33-4, 10294-34-5, 7637-07-2											
11		pH				7	pH		7	pH	7pH			
			PH											
12		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD	
	604-001-00-2	203-632-7	108-95-2											
13		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
	601-052-00-2	202-049-5	91-20-3											
14						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		205-917-1	208-96-8											
15						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		201-469-6	83-32-9											
16						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		201-695-5	86-73-7											
17						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		201-581-5	85-01-8											
18						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		204-371-1	120-12-7											
19						0.3	mg/kg		0.3	mg/kg	0.00003 %	✓		
		205-912-4	206-44-0											
20						0.3	mg/kg		0.3	mg/kg	0.00003 %	✓		
		204-927-3	129-00-0											
21		benzo[a]anthracene				0.2	mg/kg		0.2	mg/kg	0.00002 %	✓		
	601-033-00-9	200-280-6	56-55-3											
22		chrysene				0.1	mg/kg		0.1	mg/kg	0.00001 %	✓		
	601-048-00-0	205-923-4	218-01-9											
23		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
	601-034-00-4	205-911-9	205-99-2											
24		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
	601-036-00-5	205-916-6	207-08-9											
25		benzo[a]pyrene; benzo[def]chrysene				0.3	mg/kg		0.3	mg/kg	0.00003 %	✓		
	601-032-00-3	200-028-5	50-32-8											
26						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		205-893-2	193-39-5											
27		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
	601-041-00-2	200-181-8	53-70-3											
28						<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		205-883-8	191-24-2											
29		TPH (C6 to C40) petroleum group				1610	mg/kg		1610	mg/kg	0.161 %	✓		
			TPH											
Total:												0.267 %		

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 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

Classification of sample: WS02[1]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS02[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.50 - 1.80 m		

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	•	TPH (C6 to C40) petroleum group			<5 mg/kg		<5	mg/kg	<0.0005 %		<LOD
			TPH								
Total:									0.0005 %		

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

Classification of sample: WS03

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.00 - 1.20 m	Entry:
	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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 Acute 1; H400 "Very toxic to aquatic life."

Because of determinands:

chromium(III) oxide: (compound conc.: 0.119%)
zinc oxide: (compound conc.: 0.279%)

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

chromium(III) oxide: (compound conc.: 0.119%)
zinc oxide: (compound conc.: 0.279%)

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				66	mg/kg	1.32	87.141	mg/kg	0.00871 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	20	mg/kg	1.285	25.705	mg/kg	0.002 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium {  chromium(III) oxide }				811	mg/kg	1.462	1185.322	mg/kg	0.119 %	✓	
			215-160-9	1308-38-9									
4		copper {  dicopper oxide; copper (I) oxide }				301	mg/kg	1.126	338.892	mg/kg	0.0339 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead chromate }			1	721	mg/kg	1.56	1124.627	mg/kg	0.0721 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
6		mercury { mercury dichloride }				0.5	mg/kg	1.353	0.677	mg/kg	0.0000677 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				71.1	mg/kg	1.579	112.302	mg/kg	0.0112 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.2	mg/kg	2.554	8.172	mg/kg	0.000817 %	✓	
		034-002-00-8											
9		zinc { zinc oxide }				2240	mg/kg	1.245	2788.159	mg/kg	0.279 %	✓	
		030-013-00-7	215-222-5	1314-13-2									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
10	boron { boron tribromide/trichloride/trifluoride (combined) }				1.1 mg/kg	13.43	14.773 mg/kg	0.00148 %	✓	
			10294-33-4, 10294-34-5, 7637-07-2							
11	pH				7.2 pH		7.2 pH	7.2 pH		
			PH							
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
13	naphthalene				1.2 mg/kg		1.2 mg/kg	0.00012 %	✓	
	601-052-00-2	202-049-5	91-20-3							
14	acenaphthylene				0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
		205-917-1	208-96-8							
15	acenaphthene				0.6 mg/kg		0.6 mg/kg	0.00006 %	✓	
		201-469-6	83-32-9							
16	fluorene				0.3 mg/kg		0.3 mg/kg	0.00003 %	✓	
		201-695-5	86-73-7							
17	phenanthrene				3.1 mg/kg		3.1 mg/kg	0.00031 %	✓	
		201-581-5	85-01-8							
18	anthracene				0.6 mg/kg		0.6 mg/kg	0.00006 %	✓	
		204-371-1	120-12-7							
19	fluoranthene				5.3 mg/kg		5.3 mg/kg	0.00053 %	✓	
		205-912-4	206-44-0							
20	pyrene				5.2 mg/kg		5.2 mg/kg	0.00052 %	✓	
		204-927-3	129-00-0							
21	benzo[a]anthracene				2.9 mg/kg		2.9 mg/kg	0.00029 %	✓	
	601-033-00-9	200-280-6	56-55-3							
22	chrysene				3.8 mg/kg		3.8 mg/kg	0.00038 %	✓	
	601-048-00-0	205-923-4	218-01-9							
23	benzo[b]fluoranthene				2.9 mg/kg		2.9 mg/kg	0.00029 %	✓	
	601-034-00-4	205-911-9	205-99-2							
24	benzo[k]fluoranthene				2.6 mg/kg		2.6 mg/kg	0.00026 %	✓	
	601-036-00-5	205-916-6	207-08-9							
25	benzo[a]pyrene; benzo[def]chrysene				2.9 mg/kg		2.9 mg/kg	0.00029 %	✓	
	601-032-00-3	200-028-5	50-32-8							
26	indeno[123-cd]pyrene				2.2 mg/kg		2.2 mg/kg	0.00022 %	✓	
		205-893-2	193-39-5							
27	dibenz[a,h]anthracene				0.5 mg/kg		0.5 mg/kg	0.00005 %	✓	
	601-041-00-2	200-181-8	53-70-3							
28	benzo[ghi]perylene				2.4 mg/kg		2.4 mg/kg	0.00024 %	✓	
		205-883-8	191-24-2							
Total:								0.531 %		

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 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

Classification of sample: WS04

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.50 - 0.80 m	

Hazard properties

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 determinands:

lead chromate: (Note 1 conc.: 0.403%)

TPH (C6 to C40) petroleum group: (conc.: 0.299%)

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 chromate: (Note 1 conc.: 0.403%)

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.: 0.299%)

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 Acute 1; H400 "Very toxic to aquatic life."

Because of determinands:

lead chromate: (Note 1 conc.: 0.403%)

zinc oxide: (compound conc.: 0.306%)

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

lead chromate: (Note 1 conc.: 0.403%)

zinc oxide: (compound conc.: 0.306%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.299%)

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	23.8	mg/kg	1.32	31.424	mg/kg	0.00314 %	✓	
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	21.8	mg/kg	1.285	28.018	mg/kg	0.00218 %	✓	
3	chromium { chromium(III) oxide }	215-160-9	1308-38-9		84.7	mg/kg	1.462	123.794	mg/kg	0.0124 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	355	mg/kg	1.126	399.69	mg/kg	0.04 %	✓	
5	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	4030	mg/kg	1.56	6286.055	mg/kg	0.403 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	76.9	mg/kg	1.579	121.464	mg/kg	0.0121 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			1.9	mg/kg	2.554	4.852	mg/kg	0.000485 %	✓	
9	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	2460	mg/kg	1.245	3061.996	mg/kg	0.306 %	✓	
10	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		1.1	mg/kg	13.43	14.773	mg/kg	0.00148 %	✓	
11	pH		PH		7.2	pH		7.2	pH	7.2 pH		
12	phenol	604-001-00-2	203-632-7	108-95-2	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
13	naphthalene	601-052-00-2	202-049-5	91-20-3	0.5	mg/kg		0.5	mg/kg	0.00005 %	✓	
14	acenaphthylene	205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	acenaphthene	201-469-6	83-32-9		0.5	mg/kg		0.5	mg/kg	0.00005 %	✓	
16	fluorene	201-695-5	86-73-7		0.4	mg/kg		0.4	mg/kg	0.00004 %	✓	
17	phenanthrene	201-581-5	85-01-8		2.9	mg/kg		2.9	mg/kg	0.00029 %	✓	
18	anthracene	204-371-1	120-12-7		0.7	mg/kg		0.7	mg/kg	0.00007 %	✓	
19	fluoranthene	205-912-4	206-44-0		4	mg/kg		4	mg/kg	0.0004 %	✓	

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
20	pyrene	204-927-3	129-00-0		5.2 mg/kg		5.2 mg/kg	0.00052 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	2.8 mg/kg		2.8 mg/kg	0.00028 %	✓	
22	chrysene	601-048-00-0	205-923-4	218-01-9	4.2 mg/kg		4.2 mg/kg	0.00042 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	5.1 mg/kg		5.1 mg/kg	0.00051 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	4.1 mg/kg		4.1 mg/kg	0.00041 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	6.1 mg/kg		6.1 mg/kg	0.00061 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		5.1 mg/kg		5.1 mg/kg	0.00051 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	2.4 mg/kg		2.4 mg/kg	0.00024 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		5 mg/kg		5 mg/kg	0.0005 %	✓	
29	TPH (C6 to C40) petroleum group		TPH		2990 mg/kg		2990 mg/kg	0.299 %	✓	
Total:								1.085 %		

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 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

Classification of sample: WS04[1]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS04[1]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 - 1.70 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
1		arsenic { arsenic trioxide }				9.6	mg/kg	1.32	12.675	mg/kg	0.00127 %	✓		
	033-003-00-0	215-481-4	1327-53-3											
2		cadmium { cadmium sulfide }			1	0.5	mg/kg	1.285	0.643	mg/kg	0.00005 %	✓		
	048-010-00-4	215-147-8	1306-23-6											
3		chromium { chromium(III) oxide }				48.5	mg/kg	1.462	70.885	mg/kg	0.00709 %	✓		
		215-160-9	1308-38-9											
4		copper { dicopper oxide; copper (I) oxide }				35.2	mg/kg	1.126	39.631	mg/kg	0.00396 %	✓		
	029-002-00-X	215-270-7	1317-39-1											
5		lead { lead chromate }			1	26.7	mg/kg	1.56	41.647	mg/kg	0.00267 %	✓		
	082-004-00-2	231-846-0	7758-97-6											
6		mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD	
	080-010-00-X	231-299-8	7487-94-7											
7		nickel { nickel dihydroxide }				46.9	mg/kg	1.579	74.079	mg/kg	0.00741 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]											
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD	
	034-002-00-8													
9		zinc { zinc oxide }				107	mg/kg	1.245	133.184	mg/kg	0.0133 %	✓		
	030-013-00-7	215-222-5	1314-13-2											
10		boron { boron tribromide/trichloride/trifluoride (combined) }				0.6	mg/kg	13.43	8.058	mg/kg	0.000806 %	✓		
			10294-33-4, 10294-34-5, 7637-07-2											
11		pH				7.6	pH		7.6	pH	7.6 pH			
			PH											
12		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD	
	604-001-00-2	203-632-7	108-95-2											
13		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
	601-052-00-2	202-049-5	91-20-3											
14		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		205-917-1	208-96-8											

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<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	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0372 %		

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

Classification of sample: WS06

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS06	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 - 0.70 m		

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				7 mg/kg	1.32	9.242 mg/kg	0.000924 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium sulfide }			1	1.1 mg/kg	1.285	1.414 mg/kg	0.00011 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
3	chromium { chromium(III) oxide }				22.1 mg/kg	1.462	32.3 mg/kg	0.00323 %	✓	
		215-160-9	1308-38-9							
4	copper { dicopper oxide; copper (I) oxide }				67.3 mg/kg	1.126	75.772 mg/kg	0.00758 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	352 mg/kg	1.56	549.055 mg/kg	0.0352 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel dihydroxide }				17.8 mg/kg	1.579	28.115 mg/kg	0.00281 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	034-002-00-8									
9	zinc { zinc oxide }				283 mg/kg	1.245	352.254 mg/kg	0.0352 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
10	boron { boron tribromide/trichloride/trifluoride (combined) }				0.5 mg/kg	13.43	6.715 mg/kg	0.000672 %	✓	
			10294-33-4, 10294-34-5, 7637-07-2							
11	pH				9 pH		9 pH	9pH		
			PH							
12	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
13	naphthalene				0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
	601-052-00-2	202-049-5	91-20-3							
14	acenaphthylene				0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
		205-917-1	208-96-8							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
15	acenaphthene	201-469-6	83-32-9		0.2 mg/kg		0.2	mg/kg	0.00002 %	✓	
16	fluorene	201-695-5	86-73-7		0.3 mg/kg		0.3	mg/kg	0.00003 %	✓	
17	phenanthrene	201-581-5	85-01-8		1.2 mg/kg		1.2	mg/kg	0.00012 %	✓	
18	anthracene	204-371-1	120-12-7		0.3 mg/kg		0.3	mg/kg	0.00003 %	✓	
19	fluoranthene	205-912-4	206-44-0		3.1 mg/kg		3.1	mg/kg	0.00031 %	✓	
20	pyrene	204-927-3	129-00-0		5 mg/kg		5	mg/kg	0.0005 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		1.4 mg/kg		1.4	mg/kg	0.00014 %	✓	
22	chrysene	601-048-00-0	205-923-4		3.9 mg/kg		3.9	mg/kg	0.00039 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.7 mg/kg		1.7	mg/kg	0.00017 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		3.1 mg/kg		3.1	mg/kg	0.00031 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		2.5 mg/kg		2.5	mg/kg	0.00025 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		3.2 mg/kg		3.2	mg/kg	0.00032 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1.7 mg/kg		1.7	mg/kg	0.00017 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		2.7 mg/kg		2.7	mg/kg	0.00027 %	✓	
Total:									0.0892 %		

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

Classification of sample: WS07

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS07	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 - 0.70 m		

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }			1	8.7	mg/kg	1.32	11.487	mg/kg	0.00115 %	✓	
	033-003-00-0	215-481-4	1327-53-3										
2		cadmium { cadmium sulfide }			1	<0.5	mg/kg	1.285	<0.643	mg/kg	<0.00005 %		<LOD
	048-010-00-4	215-147-8	1306-23-6										
3		chromium { chromium(III) oxide }			1	21.4	mg/kg	1.462	31.277	mg/kg	0.00313 %	✓	
		215-160-9	1308-38-9										
4		copper { dicopper oxide; copper (I) oxide }			1	26.2	mg/kg	1.126	29.498	mg/kg	0.00295 %	✓	
	029-002-00-X	215-270-7	1317-39-1										
5		lead { lead chromate }			1	142	mg/kg	1.56	221.494	mg/kg	0.0142 %	✓	
	082-004-00-2	231-846-0	7758-97-6										
6		mercury { mercury dichloride }			1	<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7										
7		nickel { nickel dihydroxide }			1	12.8	mg/kg	1.579	20.218	mg/kg	0.00202 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]										
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }			1	<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8												
9		zinc { zinc oxide }			1	68.3	mg/kg	1.245	85.014	mg/kg	0.0085 %	✓	
	030-013-00-7	215-222-5	1314-13-2										
10		boron { boron tribromide/trichloride/trifluoride (combined) }			1	1.2	mg/kg	13.43	16.116	mg/kg	0.00161 %	✓	
			10294-33-4, 10294-34-5, 7637-07-2										
11		pH			1	8.3	pH		8.3	pH	8.3 pH		
			PH										
12		phenol			1	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2										
13		naphthalene			1	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3										
14		acenaphthylene			1	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8										

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-581-5	85-01-8		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
18	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
19	fluoranthene	205-912-4	206-44-0		0.3 mg/kg		0.3 mg/kg	0.00003 %		✓	
20	pyrene	204-927-3	129-00-0		0.4 mg/kg		0.4 mg/kg	0.00004 %		✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		0.3 mg/kg		0.3 mg/kg	0.00003 %		✓	
22	chrysene	601-048-00-0	205-923-4		0.3 mg/kg		0.3 mg/kg	0.00003 %		✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.3 mg/kg		0.3 mg/kg	0.00003 %		✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.5 mg/kg		0.5 mg/kg	0.00005 %		✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.4 mg/kg		0.4 mg/kg	0.00004 %		✓	
Total:									0.0344 %		

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

Classification of sample: WS07[1]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS07[1]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.70 - 1.00 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number					
1	arsenic { arsenic trioxide }							
	033-003-00-0	215-481-4	1327-53-3		9.9 mg/kg	1.32	13.071 mg/kg	0.00131 %
2	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 %
3	chromium { chromium(III) oxide }							
		215-160-9	1308-38-9		42.3 mg/kg	1.462	61.824 mg/kg	0.00618 %
4	copper { dicopper oxide; copper (I) oxide }							
	029-002-00-X	215-270-7	1317-39-1		36.4 mg/kg	1.126	40.982 mg/kg	0.0041 %
5	lead { lead chromate }							
	082-004-00-2	231-846-0	7758-97-6	1	23.5 mg/kg	1.56	36.656 mg/kg	0.00235 %
6	mercury { mercury dichloride }							
	080-010-00-X	231-299-8	7487-94-7		<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %
7	nickel { nickel dihydroxide }							
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		36.8 mg/kg	1.579	58.126 mg/kg	0.00581 %
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }							
	034-002-00-8				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %
9	zinc { zinc oxide }							
	030-013-00-7	215-222-5	1314-13-2		78.1 mg/kg	1.245	97.212 mg/kg	0.00972 %
10	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 %
11	pH							
			PH		7.6 pH		7.6 pH	7.6 pH
12	phenol							
	604-001-00-2	203-632-7	108-95-2		<1 mg/kg		<1 mg/kg	<0.0001 %
13	naphthalene							
	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %
14	acenaphthylene							
		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
15	acenaphthene	201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
16	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
17	phenanthrene	201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
18	anthracene	204-371-1	120-12-7		<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	pyrene	204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	chrysene	601-048-00-0	205-923-4		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %		✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.6 mg/kg		0.6 mg/kg	0.00006 %		✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		0.3 mg/kg		0.3 mg/kg	0.00003 %		✓	
Total:									0.0315 %		

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

Classification of sample: SS01

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:	
SS01	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.00 - 0.30 m		

Hazard properties

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.: 2.44%)

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.: 2.44%)

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 Acute 1; H400 "Very toxic to aquatic life."

Because of determinand:

zinc oxide: (compound conc.: 0.122%)

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

zinc oxide: (compound conc.: 0.122%)

Aquatic Chronic 2; H411 "Toxic to aquatic life with long lasting effects."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 2.44%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 2.44%)

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	49.2	mg/kg	1.32	64.96	mg/kg	0.0065 %	✓	
2	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6								
3	chromium { chromium(III) oxide }	215-160-9	1308-38-9		69.4	mg/kg	1.462	101.432	mg/kg	0.0101 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	499	mg/kg	1.126	561.818	mg/kg	0.0562 %	✓	
5	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	348	mg/kg	1.56	542.816	mg/kg	0.0348 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
7	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	100	mg/kg	1.579	157.95	mg/kg	0.0158 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
9	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	983	mg/kg	1.245	1223.554	mg/kg	0.122 %	✓	
10	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.7	mg/kg	13.43	9.401	mg/kg	0.00094 %	✓	
11	pH		pH		7.5	pH		7.5	pH	7.5 pH		
12	phenol	604-001-00-2	203-632-7	108-95-2	<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
13	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthylene	205-917-1	208-96-8		0.1	mg/kg		0.1	mg/kg	0.00001 %	✓	
15	acenaphthene	201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17	phenanthrene	201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18	anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
19	fluoranthene	205-912-4	206-44-0		1.2	mg/kg		1.2	mg/kg	0.00012 %	✓	
20	pyrene	204-927-3	129-00-0		1.9	mg/kg		1.9	mg/kg	0.00019 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22	chrysene	601-048-00-0	205-923-4	218-01-9	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<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
		CLP index number	EC Number	CAS Number								
25		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								
26	■	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			205-893-2	193-39-5								
27		dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
		601-041-00-2	200-181-8	53-70-3								
28	■	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			205-883-8	191-24-2								
29	■	TPH (C6 to C40) petroleum group				24400 mg/kg		24400 mg/kg	2.44 %	✓		
				TPH								
Total:									2.688 %			

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 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

Classification of sample: WS05

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS05	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 - 0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				22.6	mg/kg	1.32	29.839	mg/kg	0.00298 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium sulfide }			1	1	mg/kg	1.285	1.285	mg/kg	0.0001 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
3		chromium { chromium(III) oxide }				34	mg/kg	1.462	49.693	mg/kg	0.00497 %	✓	
			215-160-9	1308-38-9									
4		copper { dicopper oxide; copper (I) oxide }				160	mg/kg	1.126	180.142	mg/kg	0.018 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
5		lead { lead chromate }			1	392	mg/kg	1.56	611.448	mg/kg	0.0392 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
6		mercury { mercury dichloride }				<0.5	mg/kg	1.353	<0.677	mg/kg	<0.0000677 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
7		nickel { nickel dihydroxide }				27.3	mg/kg	1.579	43.12	mg/kg	0.00431 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
8		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.1	mg/kg	2.554	2.809	mg/kg	0.000281 %	✓	
		034-002-00-8											
9		zinc { zinc oxide }				314	mg/kg	1.245	390.84	mg/kg	0.0391 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
10		boron { boron tribromide/trichloride/trifluoride (combined) }				1.1	mg/kg	13.43	14.773	mg/kg	0.00148 %	✓	
				10294-33-4, 10294-34-5, 7637-07-2									
11		pH				9.2	pH		9.2	pH	9.2 pH		
				pH									
12		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
13		naphthalene				0.5	mg/kg		0.5	mg/kg	0.00005 %	✓	
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				0.2	mg/kg		0.2	mg/kg	0.00002 %	✓	
			205-917-1	208-96-8									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	acenaphthene	201-469-6	83-32-9		0.7 mg/kg		0.7 mg/kg	0.00007 %	✓	
16	fluorene	201-695-5	86-73-7		0.5 mg/kg		0.5 mg/kg	0.00005 %	✓	
17	phenanthrene	201-581-5	85-01-8		6.6 mg/kg		6.6 mg/kg	0.00066 %	✓	
18	anthracene	204-371-1	120-12-7		1.9 mg/kg		1.9 mg/kg	0.00019 %	✓	
19	fluoranthene	205-912-4	206-44-0		10.5 mg/kg		10.5 mg/kg	0.00105 %	✓	
20	pyrene	204-927-3	129-00-0		9.3 mg/kg		9.3 mg/kg	0.00093 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		5 mg/kg		5 mg/kg	0.0005 %	✓	
22	chrysene	601-048-00-0	205-923-4		6.1 mg/kg		6.1 mg/kg	0.00061 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		4.6 mg/kg		4.6 mg/kg	0.00046 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		5.1 mg/kg		5.1 mg/kg	0.00051 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		5 mg/kg		5 mg/kg	0.0005 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		3.5 mg/kg		3.5 mg/kg	0.00035 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1 mg/kg		1 mg/kg	0.0001 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		3.7 mg/kg		3.7 mg/kg	0.00037 %	✓	
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 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

Appendix A: Classifier defined and non CLP determinands

■ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462

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: 17/07/2015

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

■ **dicopper oxide; copper (I) oxide** (EC Number: 215-270-7, CAS Number: 1317-39-1)

CLP index number: 029-002-00-X

Data source: Regulation (EU) 2016/1179 of 19 July 2016 (ATP9)

Additional Hazard Statement(s): None.

Reason for additional Hazards Statement(s)/Risk Phrase(s):

10/10/2016 - N R50/53 risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

10/10/2016 - N R50/53 >= 0.25 % risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

■ **boron tribromide/trichloride/trifluoride (combined)** (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Conversion factor: 13.43

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: 06/08/2015

Hazard Statements: EUH014 , Acute Tox. 2 H330 , Acute Tox. 2 H300 , Skin Corr. 1A H314 , Skin Corr. 1B H314

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Hazard Statements: None.

■ **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: 17/07/2015

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

■ **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: 17/07/2015

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

■ **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: 06/08/2015

Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **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: 06/08/2015

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

■ **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: 17/07/2015

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

▪ **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: 21/08/2015
Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

▪ **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: 21/08/2015
Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , 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: 06/08/2015
Hazard Statements: Carc. 2 H351

▪ **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: 23/07/2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

▪ **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: 25/05/2015
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 risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

chromium {chromium(III) oxide}

Concentrations of CH not high enough for the creation of CH(VI)

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead chromate}

Worst case species based on risk phrases

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on risk phrases

zinc {zinc oxide}

Concentration of chromium not high enough for creation of zinc chromate.

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on risk phrases

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition, May 2015, HP14 using CLP**

HazWasteOnline Classification Engine Version: 2017.180.3351.6750 (29 Jun 2017)

HazWasteOnline Database: 2017.180.3351.6750 (29 Jun 2017)

This classification utilises the following guidance and legislation:

WM3 - Waste Classification - May 2015

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 Wastes 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

POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010