Phase 2 Site Investigation

Hayes Park - Hayes

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Non-Technical Summary

What is Proposed?	It is understood that proposals involve conversion of the two existing listed office buildings on site into a **residential** development comprising 124 apartments. External areas of the site mainly comprise grassed open space, which is to be retained and improved to provide open space and managed parkland for the new development.
What is the Problem?	The following contamination issues have been identified in this Phase 2 Site Investigation: ► Contamination Issue 1: Relatively widespread asbestos contamination and elevated concentrations of Lead and Arsenic above the recommended thresholds considered protective of human health for the given end use scenario (residential public open space) have been detected within the shallow Made Ground across the site. ► Contamination Issue 2: Elevated concentrations of TPH above the drinking water assessment criteria for PE pipes. ► Advisory Matters: Phytotoxic metals detected in shallow soils, but existing vegetation appeared unimpacted by this contamination. Preliminary waste classification assessment found Made Ground to exhibit both hazardous and non-hazardous properties.
What is the Result?	The contamination issues identified above have resulted in the following risk ratings: ► **Moderate risk** to future site users in areas of **soft landscaping most actively used** for recreation (e.g. playground and amenity lawns with designated seating areas). ► **Moderate risk** to maintenance workers/gardeners in areas of soft landscaping. ► **Moderate/Low risk** to future site users in areas of **passively used** soft landscaping (e.g. ecological conservation areas) ► **Moderate/Low risk** to ground / construction workers during groundworks ► **Acceptably low risk** to drinking water if PE pipe NOT used. ► **Acceptably low risk** to new and existing flora
What are the Next Steps?	This report should be submitted to the local planning authority to discharge planning condition 11 Part i. To mitigate the above identified risks, the following elements will need to be carried out to fully discharge condition 11 in its entirety: ► Preparation of a **Remediation Strategy** and **Verification Plan** to manage and mitigate the identified risks from soil contamination.

Report Record

Project Name	Hayes Park - Hayes
Client	Shall Do Developments C/O Marson Property Ltd
Report Type	Phase 2 Site Investigation
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1.0 Introduction

1.1 This report presents the findings of a Phase 2 Site Investigation (Environmental) – an intrusive contamination assessment that has been prepared in line with best practice guidance and planning policy.

What is a Phase 2 Site Investigation?

1.2 Phase 2 Site Investigation is the second stage of a phased contaminated land assessment that is often required to discharge planning conditions or remove objections once planning permission has been granted. A Phase 2 is usually required following a Phase 1 Desk Study, where potential sources of contamination have been identified, and the risks from which require further understanding.

1.3 The purpose of a Phase 2 Site Investigation is to physically inspect the condition of the soil, groundwater etc that may have been impacted by the sources of contamination identified in the Phase 1 Desk Study. The Phase 2 Site Investigation is site specific with the methods of investigation chosen being dependent on a number of factors, such as access, operational constraints, geology, potential contaminant sources and the receptors to be targeted.

1.4 Recommendations may include the preparation of a Remediation Strategy to detail how any identified risks can be mitigated/remediated, or possibly further investigation. If no unacceptable risks are identified, then typically no further environmental assessment is required other than a Watching Brief during the construction phase. Find out more about Phase 2 Site Investigations here.

The Subject Site

Table 1	Site Details
Address	Hayes Park, Hayes Site Road, in Hayes, near Hillingdon UB4 8FE
Eastings, Northings	508891, 182427
Area	3.16ha

1.5 The site currently comprises open grassland with two Grade II Listed buildings in the centre that formally comprised the research laboratories and headquarters of Heinz UK. The immediate area surrounding the site comprises commercial land uses (offices and a multistorey car park) to the north, with recreational green space (parkland and woodland) to the east and south and residential properties along the western boundary. The wider area surrounding the site predominantly comprises agricultural and

residential land uses. The site area is illustrated with the red line boundary in Figure 1, with the blue line representing the ownership boundary.

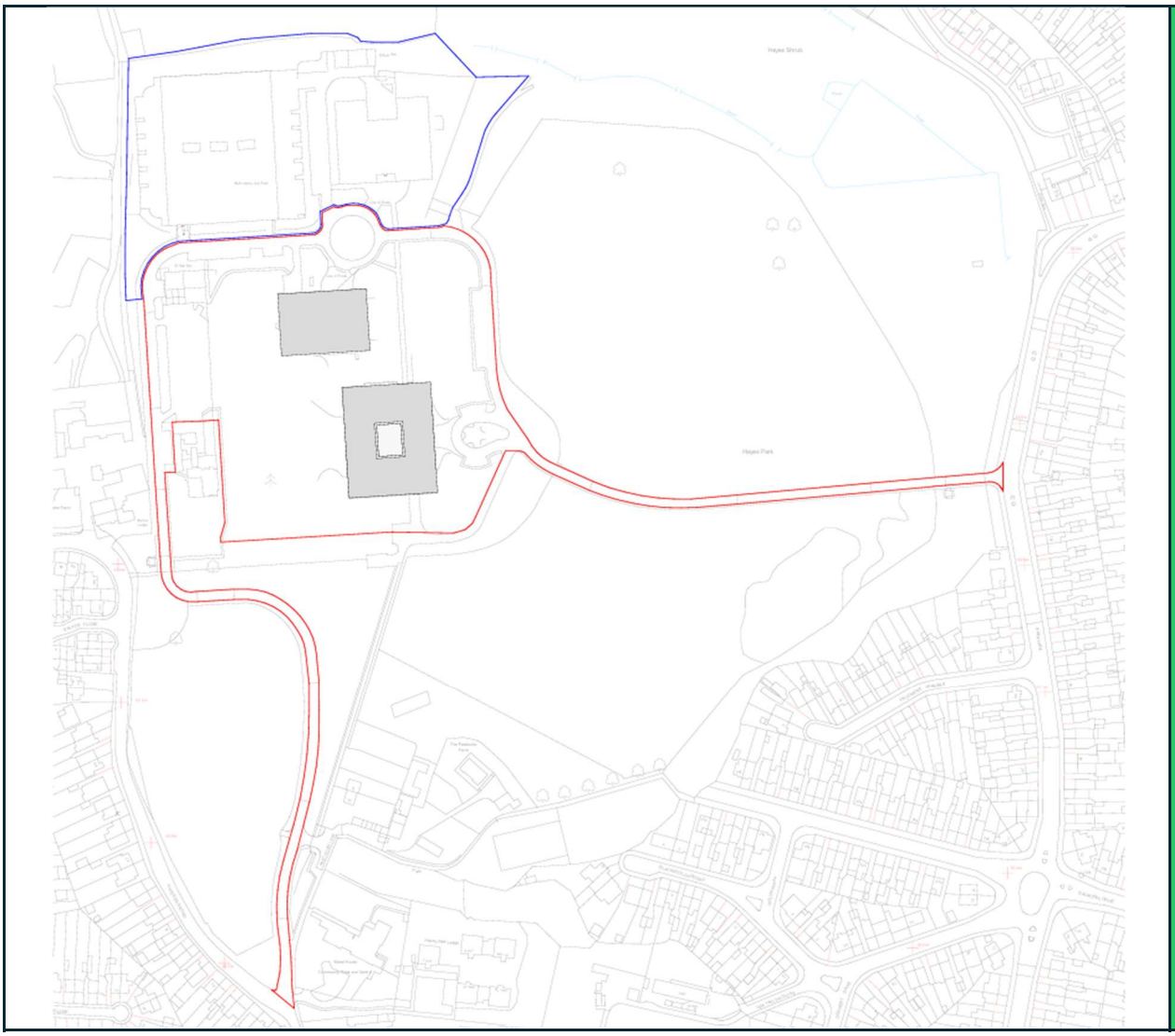


Figure 1 Site Location Plan

The Proposed Development

1.6 It is understood that the site has planning permission from the London Borough of Hillingdon (application ref: 12853/APP/2023/1492) for redevelopment of the existing vacant commercial buildings to provide a residential scheme, as illustrated in Figure 2.

1.7 It is understood that proposals involve conversion of the two existing three-storey Listed buildings into a residential development comprising 124 apartments. Each building will contain a communal courtyard garden in the centre and the ground floor apartments are proposed to have small private patio areas around the perimeter of the buildings. The change of use will include internal and external works to the

buildings, in addition to improvements to landscaping, parking, access and associated works. Currently, the external areas of the site mainly comprise grassed open space, which is to be retained and enhanced to form communal open space / parkland, including a playground, amenity space and pathways.

1.8 Existing partial basements associated with the two former office buildings are understood to be retained as part of the redevelopment and are proposed to comprise plant storage. There are no new basements, undercroft car parking or other underground structures anticipated with below ground features limited to foundations and buried services. It is understood that site levels will remain identical to that present.

Figure 2 Proposed Development Plan

The Stakes & Objectives

1.9 As noted above, this Phase 2 Site Investigation forms the second stage of an iterative contaminated land assessment, to further investigate the potential sources of contamination and unacceptable risks

identified during a Phase 1 Desk Study[1]. Key findings and stakes relating to this investigation are summarised below.

Current and Former Site Uses: Historically the site comprised a large residential mansion that was temporarily used as an Asylum and nursing home. The mansion remained until the 1960s when the site was cleared and the existing offices and research centre were established onsite, to form the headquarters of Heinz UK.

Geology, Hydrogeology and Hydrology: A thickness of Made Ground is anticipated over the London Clay bedrock. Superficial deposits of the Boyn Hill Member of the Maidenhead Formation (a Secondary A aquifer) are displayed as present on site on BGS maps, however previous site investigation suggests this stratum is absent from the site. Artificial Deposits are also mapped beneath the eastern access road which are associated with an infilled pond.

Potential Sources of Contamination: The potential for significant contamination to be present on site was deemed to be low, however it was acknowledged that limited hotspot areas of contamination may be present within the Made Ground. Above ground and underground fuel storage tanks were identified on site around the area of the plant compound in the north-west corner of the site. This was also the location of a former fuel filling point and electrical substation. An infilled pond is also noted within vicinity of the eastern access track to the site.

Initial Risk Ratings: Risks to all receptors were overall deemed low, however a moderate risk was identified to human receptors from ACM within the building fabric. Compliance with CAR 2012 and a Watching Brief during groundworks was recommended to ensure the safe removal of any ACM. Integrity testing of any fuel lines and tanks was recommended with subsequent decommissioning and remediation of contamination as necessary.

1.10 Full reference should be made to the desk study by Avison Young to understand the preliminary conceptual model and basis of this investigation. The methodology adopted in this site investigation is based on the source-pathway-receptor model as set out in the Land contamination risk management guidance (LCRM, October 2020).

[1] Phase 1 Environmental Report, Avison Young. Rev 00. June 2023

1.11 The main objective of this investigation is to reduce uncertainty and validate the findings of the Phase 1, associated with the preliminary conceptual site model and risk assessment. This investigation aims to determine the general presence or absence of contamination within the context of an Exploratory Investigation. It is noted that an Exploratory Investigation usually requires a lower density sample spacing than a Main Investigation, and that further works may be required in the future. Noting the likely acceptable levels of uncertainty, access restrictions, project constraints etc at this stage of the project, an Exploratory Investigation, as defined in BS 10175, has been adopted and is considered appropriate to assess the general suitability of the site for the proposed development.

Report Structure, Limitations & Changes

1.12 The investigation methodology is included in Chapter 2, with details on the ground conditions observed in Chapter 3. A summary of the generic risk assessments undertaken is presented in Chapter 4 and a wider discussion on the preliminary findings in the context of the CSM is provided in Chapter 5. Report conclusions and recommendations are set out in Chapter 6. Advisory items are detailed in Chapter 7.

1.13 This assessment has been undertaken in accordance with our Terms & Conditions. Full details on limitations and reliance are provided in those Terms. Third party information which has been reviewed and used to inform the assessments presented herein, including public records held by various regulatory authorities and environmental database data has been assumed to be true and accurate.

1.14 This assessment has been carried out to determine the potential risks posed to future end users, along with other key receptors, based on the current development. Should revisions in the development proposals result in a change to any assessment parameters detailed in this report, a re-assessment of the risk should be carried out.

2.0 Site Investigation Methodology

2.1 The intrusive site investigation works were undertaken on 01/04/25 to 03/04/25 under the direct co-ordination of a suitably trained and qualified consultant employed by Lustre. The intrusive works were carried out with due regard to existing standards and good practice guidelines including *BS10175: 2011+ A2:2017*[2], *BS5930: 2015*[3] and guidance produced by the *AGS*[4].

Enabling Works

2.2 Prior to commencing with the intrusive works, each exploratory location was checked for any readily detectable shallow services. The method employed to avoid buried services involved the checking for shallow services detectible by a Cable Avoidance Tool and Genny by a suitably qualified Lustre consultant and a review of the most recent service plans of the site, as provided by the Client. After a position had been scanned for services, insulated hand tools were used to excavate a hand pit to 1.2m bgl, in accordance with Lustre's Service Avoidance Procedure.

2.3 A detailed Ground Penetrating Raday (GPR) survey was conducted around the south of the plant station in order to locate an underground fuel storage tank that was identified in the Phase 1 Desk Study. Paint was used to mark out the location of the UST so exploratory holes could be positioned to target the tank but without penetrating it.

Site Investigation Rationale

2.4 Exploratory locations advanced in this investigation are summarised below comments on rationale, termination depth and monitoring installations.

Table 2 Exploratory Position Details

Hole ID	Base Depth (m bgl)	Objective	Monitoring Well
WS01	3.00	Target UST	Yes
WS02	2.00	General Coverage	No
WS03	2.00	General Coverage	No
WS04	3.00	General Coverage	Yes
WS05	2.00	General Coverage	No
WS06	2.00	General Coverage	Yes
WS07	2.00	General Coverage	Yes

[2] British Standard – Code of Practice for Investigation of potentially contaminated sites. BS 10175: 2011 + A2:2017.
[3] British Standard – Code of Practice for Site Investigation. BS 5930: 2015.
[4] Association of Geotechnical & Geoenvironmental Specialists, AGS Guide to Environmental Sampling, 2010.

Table 2 Exploratory Position Details			
Hole ID	Base Depth (m bgl)	Objective	Monitoring Well
WS08	4.00	General Coverage	No
WS09	4.00	General Coverage	Yes
WS10	2.00	General Coverage	No
WS11	2.80	General Coverage	Yes
WS12	2.00	General Coverage	No

2.5 Exploratory holes were located to obtain the required information to meet the project objectives, whilst avoiding services, access and egress routes. Drawing 5241-002 shows the positions of all exploratory locations.

Windowless Sampler Boreholes

2.6 12 windowless sample boreholes were advanced on site to depths between 1m and 4m bgl. The windowless sample boreholes advanced through the surface soils and into the underlying natural soils, using a conventional tracked WS drilling rig.

2.7 Upon completion of drilling, each exploratory location was either installed with a monitoring well or backfilled with the arisings and compacted.

In-Situ Field Tests

2.8 Headspace testing was carried out to determine the volatile content of soils (vapours) using a photo-ionisation detector (PID) with 10.6eV lamp.

Monitoring Installations

2.9 As noted above, selected boreholes were installed to enable subsequent return monitoring. Details on the monitoring installations, including well response zones and the general purpose of the wells, are provided in Table 3.

2.10 In summary, six monitoring wells were installed as part of the works, as summarised in the table below. The wells comprised plain 50mm pipe to a maximum depth of 0.5m bgl, with a slotted 50mm diameter pipe to a maximum depth of 1.00m bgl. The annulus surrounding the slotted pipe was filled with washed gravel, which was then plugged with a 0.5m bentonite seal surrounding the plain pipe. The monitoring wells were completed with a gas tap and a flush lockable cover and finished to match existing ground cover.

Table 3 Well Design Summary		
Hole ID	Response Zone	Monitoring Well Depth
WS01	Made Ground	1.14m bgl
WS04	Made Ground	1.15m bgl
WS06	Made Ground	1.15m bgl
WS07	Made Ground	1.13m bgl
WS09	Made Ground	1.17m bgl
WS11	Made Ground	1.15m bgl

Ground Gas Monitoring

2.11 Three rounds of ground gas monitoring were carried out as part of this investigation to gain an understanding of the ground gas regime at the site. A summary of the gas monitoring results is provided in the Environmental Assessment Appendix. The monitoring was undertaken at atmospheric pressures between of 1006mb and 1018mb.

Chemical Analysis (Environmental)

2.12 A total of 15 soil samples were scheduled for chemical testing. Samples were analysed for a range of determinands, which considers the potential contaminants associated with the current/historical site uses, as follows:

- Metals and inorganics: arsenic, boron, cadmium, chromium, chromium (hexavalent), copper, lead, mercury, nickel, selenium, zinc;
- pH;
- Water soluble sulphate;
- Total phenols (monohydric);
- Speciated Polycyclic Aromatic Hydrocarbons (PAHs, total and speciated EPA 16);
- Speciated Total Petroleum Hydrocarbons (TPH CWG);
- BTEX & MTBE;
- Volatile Organic Compounds (VOCs);
- Asbestos screen;
- Total Organic Carbon (TOC)

2.13 Generally, where PID results indicated the potential of presence volatile contaminants or visual / olfactory evidence of contamination was noted, appropriate testing was scheduled in preference of those samples.

3.0 Ground Conditions

3.1 This chapter collates all the factual information from the site investigation, including field observations and in-situ testing, to present a summary of the ground conditions encountered during the intrusive works. Exploratory holes logs are presented in Appendix B.

3.2 A brief interpretation of any visual /olfactory contamination is provided at the end of the chapter, in the context of the potential sources of contamination. Field observations on the physical composition of the shallow soils are also considered in determining the suitability of the soils for retention in the proposed development (presence of sharps or deleterious materials).

Table 4 Summary Ground Model

Strata	Min Depth (m bgl)	Max Depth (m bgl)	Min Thickness (m)	Max Thickness (m)	Exploratory Holes
Asphalt	0.0	0.1	0.1	0.1	WS01
Made Ground	0.0	2.3	0.7	2.3	All
London Clay	0.8	4.0	0.5	2.7	All but WS10

Asphalt

3.3 Hardstanding was only present at the surface of a single exploratory location (WS01), in the form of asphalt concrete, which was recorded as being 0.10m thick.

3.4 All of the other exploratory locations were located over grassed soft landscaping.

Made Ground

3.5 Made Ground was recorded at all twelve exploratory locations, typically from surface level to a maximum depth of 2.3m bgl. The average thickness was calculated at 1.43m, with a minimum thickness of 0.70m in WS01 and a maximum thickness of 2.30m in WS11.

Spatial Distribution and Extent

3.6 The Made Ground across the site was generally present as the following two cohesive material types:

- Topsoil comprising brown sandy slightly gravelly CLAY with frequent rootlets (WS02, WS03, WS04 WS05, WS06, WS07, WS09, WS10, WS11, WS12)

- General Made Ground comprising soft to firm light brown mottled dark brown slightly gravelly CLAY (WS02, WS03, WS04, WS05, WS06, WS07, WS08, WS09, WS10, WS11, WS12)

3.7 However, several other granular Made Ground materials were identified at sporadic locations:

- Sub-base like materials comprising sand and gravels were identified at two locations: WS01 between 0.10m bgl ad 0.30m bgl (underlying asphalt) and WS08 from surface level to 0.40m bgl (adjacent to central building).

- A black gravelly SAND was identified in WS01 between 0.30m bgl and 0.80m bgl, and similarly a black gravelly clayey SAND was identified in WS04 between 0.40m bgl to 0.90m bgl.

Anthropogenic Components & Evidence of Contamination

3.8 In terms of composition, natural and man-made components within the Made Ground generally included gravels of brick, asphalt, flint, glass, claystone, wood and tile. Occasionally gravels of clinker and cobbles of brick were recorded. Based on the soil arisings logged during the investigation, fragments of potentially asbestos containing material (ACM) were not observable or recorded.

3.9 In-situ headspace readings within the Made Ground ranged between 0.1ppm to 9.3ppm (at WS01) with an average headspace reading of 3.3ppm. Given the location of WS01 within the vicinity of the fuel fill point and UST, and the visual and olfactory observations of hydrocarbon contamination within the WS01 arisings, a second ppm average has been calculated for PID results for the wider site. The average headspace reading from all positions excluding WS01 is 2.84 ppm.

3.10 Generally, visual or olfactory evidence of hydrocarbon or solvent-type contamination was not noted within the general Made Ground during the investigation, however a distinct hydrocarbon odour arose from the black gravelly SAND from WS01 (between 0.30m and 0.80m bgl). The dark hue may also indicate staining from hydrocarbon contamination.

Granular Made Ground from WS01

Made Ground from WS12 with brick cobbles

London Clay

3.11 The London Clay Formation was identified in all exploratory locations except WS10. The average minimum depth was calculated as 1.27m bgl, however the minimum depth encountered ranged from 0.80m bgl to 2.30m bgl. The base of the London Clay was not proven during the investigation.

3.12 The London Clay was generally recorded as firm to stiff light brown mottled grey CLAY. Occasional claystone gravels and pyritic nodules were noted.

Core of London Clay from WS04

Core of London Clay from WS07

Made Ground and London Clay WS06

Arisings from WS02

Groundwater Summary

3.13 Groundwater was only encountered in WS01 during the investigation and subsequent monitoring. It is anticipated that this groundwater is perched within the Made Ground in that area of the site and as such is discontinuous and of low value.

Summary of Land Quality Field Observations

Table 5 Field Observations

	Consideration Needed?
Evidence of Contamination	
Generally, no visual or olfactory evidence of hydrocarbon or solvent-type contamination was noted within the Made Ground during the investigation. The exception to this was a distinct hydrocarbon odour that arose from the black gravelly SAND from WS01 (0.30m – 0.80m bgl). The dark hue may indicate evidence of staining from hydrocarbon contamination. In-situ headspace testing and olfactory observations indicate the presence of volatile-type contamination in WS01 that could be associated with the fill point and underground fuel storage tank. The selection of samples for chemical testing and determinants analysed for has been based on the above field observations in the context of the conceptual site model and proposed development layout. These results are discussed in Chapter 4.	**Yes**
Gas Generation Potential	
Field observations during the investigation did not identify any significant amounts of potential gas-generating materials (such as thick ashy soils, decayed organic matter, deleterious/putrescible wastes).	No
Physical Suitability	
Only limited quantities of deleterious materials such as excessive stones, sharps and waste materials were generally observed in the shallow soils. This would normally be considered physically suitable for retention within areas of proposed soft landscaping.	No
Permeability of Shallow Soils	
The presence of widespread **low permeability clayey soils** would act as an aquitard limiting the mobilisation and migration of any soil contamination present in the Made Ground.	No

4.0 Quantitative Risk Assessment

4.1 Factual information from the site investigation and subsequent analytical data has been subjected to several semi-quantitative risk assessments. The results of these assessments are presented in Appendix E and summarised in this Chapter. This stage of risk assessment considers all laboratory data against the respective risk criteria, regardless of factors such as location, depth and proposed layout/exposure pathways; Chapter 5 considers any identified risks in the context of the proposed site layout. The assessments undertaken include:

- Human health risk assessment (soils);
- Preliminary water pipeline suitability test;
- Phytotoxicity assessment;
- Soil Aggressivity (buried concrete);
- Preliminary ground gas assessment.

Human Health Risk Assessment (Soils)

4.2 The Environment Agency 'Model Procedures for the Management of Land Contamination, CLR 11' report provides a risk management methodology for identifying hazards and assessing risk associated with land affected by contamination. CLR 11 adopts a tiered approach to determining risk, with the first tier involving the evaluation of pollutant linkages using assessment criteria / screening levels for contamination – this is known as a Generic Quantitative Risk Assessment. We have adopted LQM/CIEH Suitable 4 Use Levels (S4ULs) where available. Lead has been assessed using the Category 4 Screening Level (C4SL).

4.3 SGVs, GACs, S4ULs & C4SLs for **Public Open Space - Residential (POSresi)** land use scenario have been adopted with a soil organic matter content parameter of 2.5% for the Made Ground, based on site-specific organic matter content data. The POSresi land use scenario is consistent with the proposed development plans set out in Chapter 1. Chemical analysis data has been compared to these risk thresholds, as presented in the Environmental Assessment Appendix; this screening process forms the generic quantitative risk assessment (GQRA).

Human Health GQRA – Made Ground

4.4 15 samples were recovered from the Made Ground and underwent chemical analysis for a range of general determinands, including asbestos, inorganics, metals, PAH and TPH.

4.5 **Asbestos** was analysed for in all 15 samples and was **detected** in five, as follows: WS04 at 0.6m bgl, WS06 at 0.6m bgl, WS09 at 0.4m bgl, WS10 at 0.5m bgl, WS11 at 0.3m bgl. The asbestos mainly comprised Chrysotile, however Amosite was also identified, predominantly in the form of **loose fibres**, as displayed in Table 6.

4.6 Two of the asbestos containing samples contained over 0.001% asbestos which is the hazardous (to human health) threshold for asbestos containing soils. As such the soils around WS04 and WS10 are considered to pose most risk, due to the high volumes of asbestos detected in the associated samples. However, it is noted that these samples were from depths of 0.50m – 0.6m bgl, which would normally be below the 'zone of contact' that future residents (and landscaping gardeners) will likely be exposed to day to day.

Table 6 Asbestos Quantification Results

Sample ID	Asbestos % within sample	ACM Type
WS04 at 0.60m bgl	0.003%	Amosite and Chrysotile loose fibres and loose fibrous debris.
WS06 at 0.6m bgl	<0.001%	Chrysotile loose fibres
WS09 at 0.40	<0.001%	Chrysotile loose fibres
WS10 at 0.50	0.327%	Chrysotile ACM cement
WS11 at 0.30m bgl	<0.001%	Chrysotile loose fibres

4.7 It is noted that if asbestos is identified in a single or a few sporadic locations, there is a reasonable likelihood that the presence of asbestos is not limited to these locations. **In these instances, the absence of asbestos in soils should only be considered valid for those discrete locations where asbestos has been tested for and not detected by the laboratory.** As such this investigation is not a definitive assessment on the presence or amount of asbestos within the ground across the entire site.

4.8 A range of determinands were found to be either below the limit of detection or below their respective screening criteria. These include most metals and inorganics tested, 11 PAH compounds, all TPH fractions, all BTEX compounds and phenols.

4.9 The following determinands were found to pose a potential risk to future site users as recorded concentrations of determinands were above their respective risk criteria, as displayed in Table 7. These include **arsenic, lead and 5 PAH compounds** (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenz(a,h)anthracene).

Table 7 Made Ground Threshold Exceedances

Borehole ID	Determinand	Assessment Criteria	Values
WS01 at 0.7m bgl	Benzo(a)anthracene	29mg/kg	120mg/kg
	Chrysene	57mg/kg	110mg/kg
	Benzo(b)fluoranthene	7.20mg/kg	110mg/kg
	Benzo(a)pyrene	5.70mg/kg	110mg/kg
	Dibenz(a,h)anthracene	0.57mg/kg	11mg/kg
WS02 at 0.2m bgl	Lead	630mg/kg	1100mg/kg
WS04 at 0.6m bgl	Arsenic	79mg/kg	90mg/kg
	Lead	630mg/kg	3100mg/kg
	Dibenz(a,h)anthracene	0.57mg/kg	0.59mg/kg
WS06 at 0.6m bgl	Lead	630mg/kg	1600mg/kg
WS09 at 0.4m bgl	Arsenic	79mg/kg	100mg/kg
	Lead	630mg/kg	4000mg/kg
WS11 at 0.3m bgl	Lead	630mg/kg	1900mg/kg

4.10 Other than WS01, all exploratory locations with exceedances were within the grassed open space onsite. The average concentrations across the site were calculated for both Lead and Arsenic. Whilst the average for Arsenic was below the risk criteria, the average for Lead was still elevated above the risk threshold. Significantly elevated PAH concentrations were identified in the Made Ground from WS01 however, this location was situated within the hardstanding car park in the north-western corner of the site and within direct vicinity of the underground fuel storage tank (UST) and former filling point. Given the hardstanding car park be retained during development, the localised contamination identified in relation to the UST and filling point is considered unlikely to pose a risk to identified receptors. Furthermore, the Dibenz(a,h)anthracene (a PAH compound) exceedance at WS04 was marginal and therefore the main risk to human health onsite is mainly from **Arsenic and Lead within the Made Ground**.

4.11 In summary, relatively widespread elevated concentrations of Lead and Arsenic above the recommended thresholds considered protective of human health for the given end use scenario (POS resi) have been detected within the shallow Made Ground across the site.

Preliminary Water Pipeline Suitability Test

4.12 The development is likely to require the installation of new potable water pipes. UK Water Industry Research (UKWIR) guidance[5] sets chemical concentration thresholds that are used to specify a pipe design that is considered safe. Water pipes will likely be placed at a minimum depth of 750mm as normally required by UK water authorities and therefore may extend through both the natural soils and the Made Ground, depending on location and depth.

4.13 The soil data from WS01 was assessed seperatly to the rest of the site data. WS01 was situated within the area of the fuel storage tank (UST) and former filling point, and was found to contain higher concentrations of TPH, phenols and BTEX than other exploratory locations. Based on the data from WS01 alone, soil data failed the tests for PE and PVC pipe due to these elevated concentrations of TPH (mineral oil) and BTEX. It is not anticipated that potable water pipes will be installed in the hardstanding area in which WS01 was located.

4.14 Based on the site wide data **excluding** WS01, soils failed the tests for PE pipe due to TPH (Mineral Oils C11 – C20). However soil data passed the tests for PVC pipes. PE pipes are consequently considered unsuitable for use in the redevelopment. However, **PVC pipes are considered to be suitable to use in the redevelopment,** so long as no potable water pipes are installed within the area of the fuel storage tank (UST) and former filling point (by WS01 in north-west corner of the site).

Phytotoxicity Assessment

4.15 The recorded concentrations of copper, nickel and zinc have been compared against the BS3882: 2015[6] thresholds for phytotoxic contaminants in soils to determine if a potential risk to healthy plant growth exists. As shown in the Environmental Assessment Appendix, from the Made Ground, both copper and zinc were noted above risk criteria considered protective of healthy plant growth:

[5] UK Water Industry Research (UKWIR). Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites. Ref. 10/WM/03/21. 2010
[6] British Standard BS 3882:2015 (Specification for topsoil and requirements for use)

- **Copper was recorded above criteria** (200mg/kg) **in five samples**: WS02 (0.2 m bgl) at 480mg/kg, WS04 (0.6 m bgl) at 1100mg/kg, WS06 (0.6 m bgl) at 630mg/kg, WS09 (0.4 m bgl) at 1200mg/kg and WS11 (0.3 m bgl) at 730mg/kg.

- **Zinc was recorded above criteria** (300mg/kg) **in six samples**: WS02 (0.2 m bgl) at 640mg/kg, WS04 (0.6 m bgl) at 1600mg/kg, WS06 (0.6 m bgl) at 900mg/kg, WS08 (0.8 m bgl) at 350mg/kg, WS09 (0.4 m bgl) at 1600mg/kg, WS11 (0.3 m bgl) at 970mg/kg.

4.16 **Phytotoxic metals within the shallow soils across the site may therefore potentially inhibit healthy plant growth.** Although concentrations of copper and zinc were elevated above the risk thresholds, there was **no evidence of vegetation dieback** observed on site during the ground investigation. The grassed lawn appeared healthy with no discoloration, or sparse patches that suggested dieback. The larger plants also appeared to be in good health.

Soil Aggressivity (Buried Concrete)

4.17 The analytical data for soil pH and water-soluble sulphate is summarised in the Environmental Assessment Appendix, along with the corresponding BRE classification[7]. The 'brownfield' scenario was applied to the results from the Made Ground. A static groundwater scenario has been selected for the buried concrete assessment given the recorded groundwater conditions on site (i.e. absence of a continuous body of groundwater within the Made Ground).

4.18 The characteristic values for the Made Ground for pH and water-soluble sulphate were determined as 5.8 and 378mg/l respectively, giving a Design Sulphate (DS) classification of **DS1** and an associated Aggressive Chemical Environment for Concrete (ACEC) classification of **AC-1s.**

4.19 **No additional protective measures** for any buried concrete are considered necessary.

Preliminary Ground Gas Assessment

4.20 Three rounds of ground gas monitoring were carried out as part of this investigation to gain an understanding of the ground gas regime at the site. A summary of the gas monitoring results is provided in the Environmental Assessment Appendix. The monitoring was undertaken over a range of atmospheric pressures between 1006mb and 1018mb.

[7]BRE Guidance Special Digest 1. Concrete in Aggressive Ground. 3rd Edition, 2005.

4.21 Methane was detected at a maximum concentration of 0.2% v/v (WS04, WS06, WS11). The maximum concentration of carbon dioxide peaked at 1.3% v/v (WS06). As such, concentrations of carbon dioxide were not recorded above the 5% v/v threshold. Recorded concentrations of oxygen did not indicate depleted or anoxic conditions with a minimum recorded concentration of 18.1% v/v (WS09). Maximum in-situ headspace (PID) readings peaked at 1.7ppm, with the maximum reading observed in WS01.

4.22 The maximum positive flow recorded was 0.1l/hr in WS04 on one occasion. WS01 was flooded on all three occasions (from suspected localized perched groundwater), which resulted in high flow rates of up to 11.4l/hr. Due to the inaccuracy of using data from a flooded well, the flow rates from WS01 have not been used to calculate a GSV, instead using the maximum flow from WS04 of 0.1l/hr.

4.23 Gas Screening Values (GSVs) for carbon dioxide and methane were calculated using the maximum recorded values (as discussed above), and the maximum flow reading. In accordance with BS8485 2018 + A1 2019, where positive flow/positive concentrations of ground gases are not recorded, the limit of detection should be used in the GSV calculations (i.e. 0.1% v/v or 0.1l/hr respectively). The GSV for carbon dioxide was calculated as 0.0013l/hr and the GSV for methane was calculated as 0.0002l/hr.

4.24 **Based on the calculated GSVs, the site has been classified as Characteristic Situation 1 (CS1), which indicates a negligible gas regime. Gas protection measures are therefore not considered necessary.**

Summary of Quantitative Risk Assessments

Table 8 Assessment Summary

	Possible Issue Identified?
Human Health Risk Assessment (soils)	**Yes**
Preliminary Water Pipeline Suitability Test	**Yes**
Phytotoxicity Assessment	**Yes**
Soil Aggressivity (buried concrete)	No
Preliminary Ground Gas Assessment	No

5.0 Phase 2 Conceptual Model & Risk Assessment

Introduction

5.1 A preliminary conceptual site model was included within the previous Desk Study report[1], which identified potential sources of contamination attributable to the historical and current site uses. This Phase 2 Site Investigation was subsequently designed to further assess the identified potential sources of contamination whilst also gathering information on the environmental setting and receptors (e.g. ground conditions, groundwater etc).

5.2 This chapter considers the results from the quantitative risk assessments in the context of the wider conceptual site model, particularly the proposed development layout, field observations and ground conditions recorded during the investigation, and any other relevant information such as groundwater flow etc, anticipated enabling work etc. Considering the quantitative risk assessment results alongside these factors provides an updated qualitative risk rating and represents a secondary more site-specific tier of assessment.

5.3 Where potential issues have been identified following the quantitative risk assessment in Chapter 4, these have been considered in this next phase of assessment, supplemented with the field observations set out in Chapter 3. Quantitative assessments which did not identify any issues (see Table 8) have not been considered further.

Identified Risks of Concern – Final Development Context

5.4 Any issues identified following the second phase of assessment have been grouped into relevant Contamination Issues. A Contamination Issue can either have a common source, contaminant or receptor, and either one or more risk ratings as a result. The following tables summarise the identified contamination issues.

CONTAMINATION ISSUE 1	
Area of Site	
Site-Wide Made Ground	
Contaminants of Concern	**Receptor Category at Risk**
Asbestos, Lead, Arsenic	Human Health (residents, visitors, maintenance workers/ gardeners, ground and construction workers)
Source Details (occurrence and distribution)	
Asbestos was detected in five of the 15 samples taken from the Made Ground across the site, mainly in the form of loose fibers, however fibrous debris and cement-based ACM was also identified by the laboratory. Given the highly sporadic	

nature of how asbestos contamination of soil occurs, there is a **reasonable likelihood that the presence of asbestos is not limited to these locations** but present site wide. The soils around WS04 and WS10 are considered to pose most risk, due to the high volumes of asbestos detected in the associated samples. However, it is noted that these samples were from depths of 0.50m – 0.6m bgl, which would normally be below the 'zone of contact' that future residents (and landscaping gardeners) will likely be exposed to day to day.

Furthermore, concentrations of **Lead and Arsenic** within the Made Ground were recorded above the risk criteria at five and two locations, respectively. The average concentrations across the site were calculated for both determinands. Whilst the average for Arsenic was below the risk criteria, the average for Lead was still elevated above the risk threshold. In summary, relatively widespread asbestos contamination and elevated concentrations of Lead and Arsenic above the recommended thresholds considered protective of human health for the given end use scenario (POS resi) have been detected within the shallow Made Ground across the site.

Context of Proposed Development and Layout

The existing layout of the site will be retained with the open grassland remaining largely untouched to serve as green open space and parkland for the proposed residential development. A majority of the existing green space will provide passively used Ecological Areas which will not be widely accessible and used for recreation. **In areas of soft landscaping that will be most actively used for recreational use and relaxation (such as playgrounds, designated seating and picnic areas) potential pollution pathways will be most active, and the resultant risk will require mitigation and ongoing management post-development.** Elsewhere, hardstanding will prevent direct contact with soil and contamination (including asbestos). Communal courtyard gardens are also proposed in the center of both buildings, and the ground floor apartments are proposed to have small private patio terraces around the perimeter of the buildings. These garden / terrace spaces are understood to comprise 100% hardstanding with raised beds of clean imported soils for decorative soft landscaping.

Risk Summary

Acknowledging the proposed building and hardstanding configuration, resultant risks to future residential users, visitors, maintenance workers/gardeners and construction workers are only present in all areas of proposed soft landscaping.

Receptor	Risk Rating	Justification Notes
Future residents and visitors - in soft landscaping **most actively used** for recreation / relaxation (e.g. playgrounds, amenity lawns, designated seating / picnic areas)	**Moderate**	In areas of soft landscaping that will be most actively used, potential pollution pathways will be most active, and the resultant risk will require mitigation & long-term management.
Future residents and visitors – in soft landscaping **used passively** (e.g. wild meadow / ecological areas)	**Moderate/Low**	In areas with restricted access or that are less used for recreation, the potential pollution pathways are less active.
Maintenance workers / gardeners	**Moderate**	Increased exposure to active pollution pathways through lifetime of development. Risk reduced through health and safety measures e.g. appropriate PPE & good hygiene practice.
Construction / ground workers	**Moderate/Low**	Risks will need to be considered in a construction method statement / CEMP, including presence of asbestos containing soils.

Impact to Development

Risk ratings could be readily mitigated and managed as part of the development through the implementation of sufficient and suitably robust measures that will either break the identified exposure pathways or **reduce the risk to an acceptably low level** (see Chapter 6).

CONTAMINATION ISSUE 2	
Area of Site	
Site Wide	
Contaminants of Concern	**Receptor Category at Risk**
TPH	Potable Water

Source Details (occurrence and distribution)

Based on the site data (excluding WS01), soils failed the tests for PE pipe due to elevated concetrations of TPH (Mineral Oils C11 – C20), however soil data passed the tests for PVC pipes. **PE pipes are consequently considered unsuitable for use in redevelopment; however, PVC pipes are considered to be suitable for use**. Based on the data from WS01 alone, soil data failed the tests for PE and PVC pipe due to these elevated concentrations of TPH (mineral oil) and BTEX.

Context of Proposed Development and Layout

It is anticipated that no potable water pipes will be installed within the area of the fuel storage tank (UST) and former filling point by WS01 in the north-west of the site, where neither PVC or PE was deemed suitable. Water pipes will likely be placed at a minimum depth of 750mm as normally required by UK water authorities and therefore may extend through both the natural soil and the Made Ground, depending on location and depth. The local water supplier is Thames Water who typically expect Barrier Pipe to be installed as standard on brownfield sites.

Risk Summary

Drinking water pipes will likely extend across site and through areas of minor TPH contamination. If PE is not used for the development, the risk will be acceptably low. PVC pipe would be considered suitable for use onsite but Thames Water will likely require barrier pipe anyway.

Receptor	Risk Rating	Justification Notes
Potable Water	**Acceptably Low**	If PVC or Barrier pipe used and not PE

Impact to Development

Risk rating could be mitigated though the placement of appropriate rated potable water pipes, breaking the exposure pathway (see Chapter 6).

CONTAMINATION ISSUE 3 – ADVISORY POINT	
Area of Site	
Site Wide	
Contaminants of Concern	**Receptor Category at Risk**
Copper and Zinc	Flora
Source Details (occurrence and distribution)	
Elevated concentrations of Copper and Zinc were recorded above the risk threshold considered protective of healthy plant growth, in shallow soil samples taken from across the site. Copper was found to exceed the risk threshold at 5 locations and Zinc at 6. Although concentrations of Copper and Zinc were elevated above the risk thresholds, there was absolutely **no evidence of vegetation dieback** observed on site during the ground investigation. The grassed lawn appeared healthy with no discoloration, or sparse patches that suggested dieback. The larger plants also appeared to be in good health and so the presence of phytotoxic metals within the soils does not seem to have significantly impacted the existing flora.	
Context of Proposed Development and Layout	
The existing layout of the site will be retained with the open grassland remaining largely untouched to serve as green open space, wild ecological areas and parkland for the proposed residential development. Despite the presence of phytotoxic metals within the soil, the existing flora does not seem significantly impacted and so the risk to new and existing flora is considered acceptably low. **As such, it is not considered necessary to remediate the entire existing grassland area.** This risk to flora should be considered more of an **advisory point** than a contamination risk that requires mitigation. Landscaping plans should opt for plants that are more tolerable of higher concentrations of copper and zinc. Additionally any new areas of planting such as the raised beds within the patio terraces or courtyard gardens should utilize clean imported soils and not site-won soils.	
Risk Summary	
Flora will be grown within the proposed open grassland on site, which is identical to the existing open grassed area, with improvements proposed through minor landscaping works. This contamination issue should be considered as an advisory point given the acceptably low risk rating.	

Receptor	Risk Rating	Justification Notes
Flora	**Acceptably low**	Despite elevated concentrations of phytotoxic metals detected, vegetation on site appeared healthy with no discoloration or dieback noted.

6.0 Conclusions & Next Steps

6.1 A Phase 2 Site Investigation has been undertaken to support the proposed redevelopment of a site located off Hayes End Road in Hayes, Hillingdon. The objective of the works was to provide information on the contaminative status of the site whilst obtaining information on the shallow ground conditions.

6.2 It is understood that proposals involve conversion of the two existing three-storey Listed buildings on site into a residential development comprising 124 apartments. The change of use will include internal and external works to the buildings, in addition to landscaping, parking, access and associated works. Currently, the external areas of the site mainly comprise grassed open space and parkland, which is to be retained and remain largely undisturbed to provide communal open space to serve the new residential redevelopment. The communal open space will largely comprise passive used Ecological Conservation Areas with designated spaces that will be more actively reserved for relaxation and recreation including a new playground and amenity lawns with seating /picnic areas.

Ground Condition Summary & Findings

6.3 Asphalt concrete was identified at one exploratory location (WS01) by the underground storage tank whilst all the other locations were over grassed landscaping. **Made Ground** was present at all 12 exploratory locations, typically from surface to a maximum depth of 2. 3m bgl, with an average thickness of 1.43m. The Made Ground mainly consisted of two cohesive material types: topsoil with brown slightly gravelly sandy clay and general Made Ground composed of light brown mottled dark brown slightly gravelly clay. Some areas also had granular Made Ground materials, including sub-base materials, as well as black gravelly sand and clayey sand at WS01 and WS04.

6.4 Man-made components in the Made Ground were common and included brick, asphalt, tile, wood, metal and occasionally clinker. Generally, no visual or olfactory evidence of hydrocarbon or solvent-type contamination was noted within the general Made Ground during the investigation, however in-situ headspace testing and olfactory observations indicate the presence of volatile-type contamination in WS01 likely associated with the fuel storage tank (UST) and former filling point to the north of the car park in the north-west of the site. Significantly elevated PAH concentrations were identified in the Made Ground from WS01 however, given the hardstanding car park will be retained during redevelopment, the localised contamination identified in relation to the UST and filling point is considered unlikely to pose a risk to identified receptors. Furthermore, the Dibenz(a,h)anthracene (a PAH compound) exceedance at WS04 was marginal and therefore the main risk to human health onsite is mainly from

the **relatively widespread asbestos contamination and elevated concentrations of Lead and Arsenic** above the recommended thresholds considered protective of human health for the given end use scenario (POS resi) have been detected within the shallow Made Ground across the site

4.25 Elevated concentrations of Copper and Zinc were detected in the Made Ground, however the presence of **phytotoxic metals** within the soils does not seem to have significantly impacted the existing flora. The risk to new and existing flora should be considered more of an advisory point than a contamination risk that requires mitigation. A preliminary water pipe assessment revealed that PE pipe is not suitable for the development however, PVC pipe would be considered suitable, and Thames Water will likely require **Barrier pipe** anyway. A buried concrete assessment determined a Design Sulphate (DS) classification of **DS1** and an associated Aggressive Chemical Environment for Concrete (ACEC) classification of **AC-1s.** As such no additional protective measures for any buried concrete are considered necessary. Ground gas monitoring was undertaken and the resultant GSVs led to the classification of the site as **Characteristic Situation 1 (CS1),** which indicates a negligible gas regime. Gas protection measures are therefore not considered necessary.

6.5 The **London Clay Formation** was identified in all locations except WS10, with an average minimum depth of 1. 27m bgl and a range of depths from 0. 80m to 2. 30m bgl. The London Clay was mainly firm to stiff light brown mottled grey clay, with occasional claystone gravels and pyritic nodules. The widespread presence of this low permeability clayey geology would act as an aquitard limiting the mobilisation and migration of the soil contamination present in the Made Ground.

Contamination Risk

6.6 This Phase 2 Site Investigation has demonstrated that **contamination is present** within the shallow Made Ground onsite that poses a risk to certain identified receptors.

6.7 As illustrated in Chapter 4, some of the contamination risks attributable to viable pollutant linkages were considered to be low and very low. However, elevated risks (moderate/low and above) have been found, and these will need remedial action to reduce the risks to identified receptors. In summary, the following risks require either further assessment or management to ensure that the site is safe and compliant:

- **CONTAMINATION ISSUE 1** – Relatively widespread asbestos contamination and elevated concentrations of Lead and Arsenic above the recommended thresholds considered protective of human health for the given end use scenario (POS resi) have been detected within the shallow Made Ground across the site. **Moderate** risk to future residents and visitors in areas of proposed soft landscaping most actively used for recreation and relaxation (e.g. playground and designated amenity lawns with seating/picnic areas). **Moderate** risk to maintenance workers & gardeners. **Moderate/Low** risk to construction / ground workers. **Moderate/Low** risk to future residents and visitors in areas of soft landscaping used passively (e.g. ecological conservation areas)

  SUGGESTED REMEDIAL MEASURE – Zoning of the site into most actively used areas (such as playground, pathways and designated seating areas) and passively used areas (wild meadow / ecological conservation areas), coupled with localised remedial measures to break pollution pathways such as: Clean Cover System in main actively used areas, encapsulation of soils with hardstanding for walkways / pathways, and a managed remediation approach for the passive ecological areas. This managed approach will include deterring site users from accessing the ecological areas through defensive planting and educational signage about ecological conservation. Furthermore, a landscape maintenance health and safety plan should be implemented to ensure maintenance workers / gardeners are suitably protected during any ground or landscaping works .
- **CONTAMINATION ISSUE 2** - Elevated concentrations of TPH above the drinking water assessment criteria for PE pipes. **Acceptably Low** risk to potable water pipes if PE not used.

  POTENTIAL REMEDIAL MEASURE – Placement of Protective Potable Water Pipes: Barrier pipe or PVC will need to be installed for the potable water supply, not PE pipes. The local water supplier is Thames Water who will likely request barrier pipe.

6.8 In addition to the contamination issues, an **advisory matter** has been identified in relation to the presence of **phytotoxic metals** within the Made Ground. Despite elevated concentrations of copper and zinc detected in in approximately a third of the soil samples, the existing vegetation appeared unimpacted with no evidence of vegetation dieback observed onsite and all plants appearing healthy. As such the risk to flora is considered **acceptably low**, however it is advised that landscaping plans opt for plants that can tolerate higher concentrations of copper and zinc. Furthermore, any new areas of planting such as the raised beds within the patio terraces or courtyard gardens should utilize clean imported soils and not site-won soils.

6.9 Given the contamination risks identified across the site, mitigation will be necessary. However, given the widespread risk and that large areas of existing soft landscaping will be retained during

development, it is not considered viable or sustainable to implement a typical 'Clean Cover System' across the entire site due to the costs of excavating, disposing and importing large volumes of soil. As such, other more localised remedial measures will need to be considered to suitably mitigate the identified risks as discussed briefly above.

6.10 The external areas of the site will be zoned into passively used ecological areas and actively used recreation area, and then **suitable localised remediation measures** can be implemented depending on the end use of the area, to manage the risks to an acceptably low level. In areas more actively used where there is more risk e.g. the playground where children will play or amenity lawns and designated seating areas, hotspots of contamination may need to be removed and/or a **localised formal clean cover system** implemented as part of the proposed landscaping plan. **A conscientious landscaping and management plan** will prevent exposure to contaminated shallow soils in the less sensitive passively used areas of the site, for example by deterring residents and visitors walking across ecological areas with defensive planting and signage about ecological conservation. Hardstanding walkways across the development will encapsulate the contaminated soils below, blocking the exposure pathway. The risk to gardeners and maintenance workers can be suitably mitigated through a **landscape maintenance health and safety plan**. The risk to ground and construction workers during redevelopment of the site can be mitigated though preparation of and adherence to an appropriately robust **CEMP (Construction Environment Management Plan) and/or Construction Method Statement.**

Planning Considerations & Next Steps

6.11 This Phase 2 report should be submitted to the local planning authority to work towards dischargement of planning condition 11. As noted above, additional works are required, in the form of **remediation and verification**, to discharge all parts of condition 11.

6.12 Planning condition 11 part i requires the preparations of a Remediation Strategy which will require approval by the council before remedial works commence. The **Remediation Strategy** would formulate in detail the proposed remedial works based on final formation levels, building construction method, site layout etc. In addition, the strategy would confirm the necessary testing and validation requirements for validating the satisfactory completion of these works. During the remedial works, verification would be needed to demonstrate that the remedial works have been completed and typically involves site inspections and testing. Records of any off-site disposal of excavated soils, with the conveyance and waste transfer notes would also be collected. A **Verification Report** is required under planning condition 11 Part iii.

Non-specialist Environmental Watching Brief

6.13 It is prudent to ensure a **full-time non-specialist watching brief** is maintained by a suitable person on-site throughout the works who is experienced and capable of identifying signs of potential contamination, including, but not limited to, staining, unfamiliar odours and visual evidence of potentially contaminated/ hazardous materials such as asbestos.

6.14 If any suspected ground contamination such as unusual odours, visually impacted soils/water, suspected asbestos or any potentially hazardous waste not recorded during this investigation is encountered during the works, further sampling and testing should be carried out under supervision by Lustre. This will allow the determination of the appropriate management and mitigation measures to address any potential risks as part of the development of the site.

6.15 A planning condition requiring the identification and reporting of any **unforeseen contamination** is included in the Decision Notice, under planning condition 11 part ii.

Unforeseen Ground Contamination

6.16 A reasonable amount of skill and care, as expected, has been used to deliver this investigation in accordance with the agreed scope of work and meet the required objectives. However, the potential for unforeseen contamination to be present, or encountered during future groundworks, maintenance works and/or site clearance/redevelopment works cannot be entirely eliminated. This will be particularly important when working within the vicinity of areas that were not investigated (e.g courtyards within buildings), or the method of investigation employed was limited due to safety (i.e. live underground services), access, financial, public relations, third party intervention and/or risk etc. which influenced the scope of the investigation. A site investigation can only provide a snapshot of the ground conditions encountered at the time covering a relatively small proportion of the site, with samples only representing discrete parcels of ground. Care and diligence are advised even if a site investigation records a low or very low risk of contamination. Lustre cannot be held responsible for unforeseen contamination that may be present or encountered in the future.

Statutory Designation

6.17 It is our opinion, based on the findings of this Phase 2 Site Investigation, that the site would not be designated as statutory contaminated land by the Local Authority in accordance with the published

Statutory Guidance. It is advisable however that any recommendations to reduce the risk ratings noted in the previous chapter are implemented fully, to ensure the site becomes safe and compliant.

7.0 Construction Phase Advisory Matters

7.1 Aside from land contamination issues that require consideration under the planning regime, the findings of this investigation impact other aspects of the construction phase. These items often require action to ensure that you continue to have a safe and compliant site and include matters such as waste soil classification, managing contamination during construction, drainage conditions, impacts of piling etc.

Waste Classification of Soils

7.2 The development will require soils to be removed from site as part of the groundworks and construction process. Guidance set out in the Waste Framework Directive and the Environment Agency's Technical Guidance WM3 Hazardous Waste, provides information and controls on how sites should manage and dispose of waste soils. Waste producers have a duty of care under the waste regulations which initially requires them to classify the waste they produce before it is collected, disposed of or recovered, to identify any controls that apply to the waste movement, to complete relevant documents and records, to identify suitably authorised waste management options and to prevent harm to people and the environment.

7.3 This section provides information on the preliminary waste classification of soils, which may require removal from site. It is important to note that the regulations require waste producers to classify any waste soils; however, the soils assessed as part of this investigation may not be representative of the soils being removed from site during redevelopment and therefore consideration should be given by the waste producer if further testing of waste soils is needed prior to disposal, to ensure the actual waste soils leaving the site is classified appropriately.

USEFUL INFORMATION ON WASTE, CODES AND DISPOSAL	
When do Soils Become a Waste?	Any man-made soils (such as Made Ground) or contaminated soils become a waste when excavated from the ground and must be disposed of off-site, unless suitable permits are granted to allow re-use. Uncontaminated natural soils which are excavated and have a certainty for re-use on site as part of redevelopment works are not considered a waste.
What are Mixed Soil Wastes?	Mixed wastes are soils which contain materials that could be classified differently. Mixed waste should be assessed separately and undergo a form of pre-treatment and/or segregation prior to disposal. Mixed wastes could include soils contaminated with ACM – in this case both the ACM fragments and soils would require separate assessment and disposal. Mixing of hazardous wastes and soils with different hazardous substances (hydrocarbons, asbestos etc) is prohibited under the Waste Framework Directive.
Do I Need to Segregate My Wastes?	Measures should be implemented on site to segregate waste streams with natural material stockpiled separately from any Made Ground. Any oversized and waste

USEFUL INFORMATION ON WASTE, CODES AND DISPOSAL	
	materials (such as construction waste, ACMs, plastics, metals etc), will require segregation from the soil (where practicable), and separate and appropriate disposal.
What are the Available Waste Classifications?	Waste soils must fall into one of two categories: Hazardous or Non-Hazardous. Each classification results in the following European Waste Codes (EWC codes): **Hazardous soils**: 17-05-03 (soil and stones containing hazardous substances) **Non-Hazardous soils**: 17-05-04 (soil and stones) The term 'inert' is not strictly a classification of waste. These codes relate to Chapter 17 in the List of Waste, as construction and demolition wastes (including excavated soil from contaminated sites). The case for hazardous waste is unrelated to soils that may have been identified as "hazardous" from a human health risk assessment.
What Makes a Waste Hazardous?	Concentrations of contaminants which exceed established hazardous properties (HP) and/or statements. This can include the presence of asbestos >0.1%, high concentrations of certain metals, significant hydrocarbon contamination etc. The Hazardous properties thresholds for waste classification are different to screening values for assessing risks to human health. A waste soil could be classified as hazardous based on the accumulative effect of contaminant concentrations, but not pose a risk to human health based individual contaminant concentrations.
What are the Landfill Options?	Waste soils can be disposed of at hazardous landfills, non-hazardous landfills and inert landfills. Some sites, which are not landfills such as recovery and restoration sites, often have similar but more stringent criteria for receiving inert soils. It is the responsibility of the waste producer to ensure that the chosen waste recovery or disposal site is able to accept the waste soils and that the EWC codes for waste soils from construction and demolition are included on the receiving sites Environmental Permit.
Soils Suitable for Disposal at an Inert Landfill	'Inert' is not a waste classification, but a category of waste recipient which can only accept waste that acts in an inert way when deposited. Soils suitable for disposal at an inert landfill must not undergo any significant physical, chemical or biological transformations (dissolve, burn, physically or chemically react, biodegrade etc) in a way likely to cause environmental pollution or harm to human health. **Practically it must be non-hazardous, not contain organic materials, plastics, metals, contamination etc, and meet the criteria for 'inert' disposal through Waste Acceptance Criteria (WAC) testing.** Given the variability of Made Ground and potential for this soil type to contain a significant amount of non-inert materials which cannot be readily segregated, Made Ground won't often be considered suitable for disposal at an inert landfill. However, if the soils contain an incidental amount of non-inert materials (following segregation), are relatively homogenous, non-hazardous and meet the inert WAC criteria then this material can be disposed of at an inert landfill. However, it is noted that certain wastes may be disposed of as inert without testing. Council Decision 20003/33/EC Annex, 2.1.1 lists those wastes that meet the definition of inert waste in Article 2(e) of the Landfill Directive. In the case of suspicion of contamination testing should be applied.
When do I Need a WAC Test?	WAC testing is only needed when soils are found to be hazardous or could be disposed of at an inert landfill. WAC testing is not required if the soils are non-hazardous and plan to be disposed of as a non-hazardous landfill. A WAC test does not classify the waste!

Preliminary Waste Assessment of Soils

7.4 Detailed information on the process adopted in this preliminary waste assessment is set out in Appendix A. The table below summaries the findings of the preliminary waste assessment based on the results of the chemical testing discussed earlier in this report.

Table 9 Preliminary Waste Assessment of Soils

Soil Type	Area	Waste Classification	Waste Code	Disposal Route	Comments
Black gravelly SAND (Made Ground)	WS01 & WS04	Hazardous	17 05 03*	Hazardous landfill	WAC test required
Brown sandy gravelly CLAY (Made Ground)	Site Wide	Non-hazardous	17 05 04	Non-hazardous landfill	WAC test required
Brown sandy gravelly CLAY (Made Ground)	WS09 & WS10	Hazardous	17 05 03*	Hazardous landfill	WAC test required
Light brown mottled dark brown gravelly CLAY (Made Ground)	Site Wide	Non-hazardous	17 05 04	Non-hazardous landfill	WAC test required

7.5 Copies of all HazWasteOnline results are provided in Appendix E.

Asbestos in Soils and Waste Classification

7.6 If asbestos contaminated soils are present on site, specific measures need to be put in place to safely manage these arisings. Any visible ACM fragments (>50mm) in soils will result in that material being classified as hazardous waste. If the visible fragments are removed and the free fibre content is below 0.1%, the soils would become non-hazardous waste (17-05-04, assuming no other hazardous properties have been identified in that material).

Waste Related Recommendations

7.7 As noted above, it is advisable that the waste producer considers the classification of soils above in the context of the exploratory locations advanced in this investigation and the actual locations and depths of soils requiring disposal (once this information is known).

7.8 If any tanks, drums, scrap metal or other wastes are present on site, these will require separate assessment and disposal to remove these materials. Records should be kept of the removal of these waste items.

7.9 In addition, the following site-specific recommendations are made regarding waste classification. It is noted that these recommendations only apply if soils in these locations require excavation and off-site disposal; if soils in these locations remain in-situ, these points do not require actioning:

- Visible fragments of ACM will require removal from the soils by hand picking, undertaken under a suitable safe system of work. ACM should be stored in an asbestos skip and disposed of appropriately.
- Any oversized, non-inert and non-soil materials within the Made Ground (such as construction waste, metals, plastic and wood) should be segregated from the Made Ground for separate and appropriate disposal or recovery.
- Delineation through sampling and laboratory testing of the identified hazardous soils listed above to determine their extent – to inform appropriate waste management practices.
- Further testing of soils in-situ to fully characterise the Made Ground across the site and inform waste disposal. This is required due to the identification of the material having variable classifications across the site including both hazardous and non-hazardous properties. Due to the sporadic distribution of the hazardous materials and lack of suitable visual or olfactory identifying characteristics, the current dataset is insufficient to appropriately classify the material in between the immediate vicinity of the exploratory locations.
- WAC testing may be required by the waste recipient if the disposal route is likely to be an inert landfill or a hazardous landfill.

General Responsibilities (Waste)

7.10 The Client and contractors involved in the excavation, segregation and off-site disposal are responsible for the correct management and pre-treatment of waste spoil generated by all earthworks. These parties have a duty of care which requires suitable management and disposal of wastes in accordance with the regulations. Given that Lustre does not have any significant involvement during the earthworks phase, full responsibility for waste management rests with the principal contractor/waste producer.

7.11 The waste producer must retain a copy of *all* waste consignment notes, waste hauler documentation and waste recipient documentation and licenses.

Asbestos in Soils

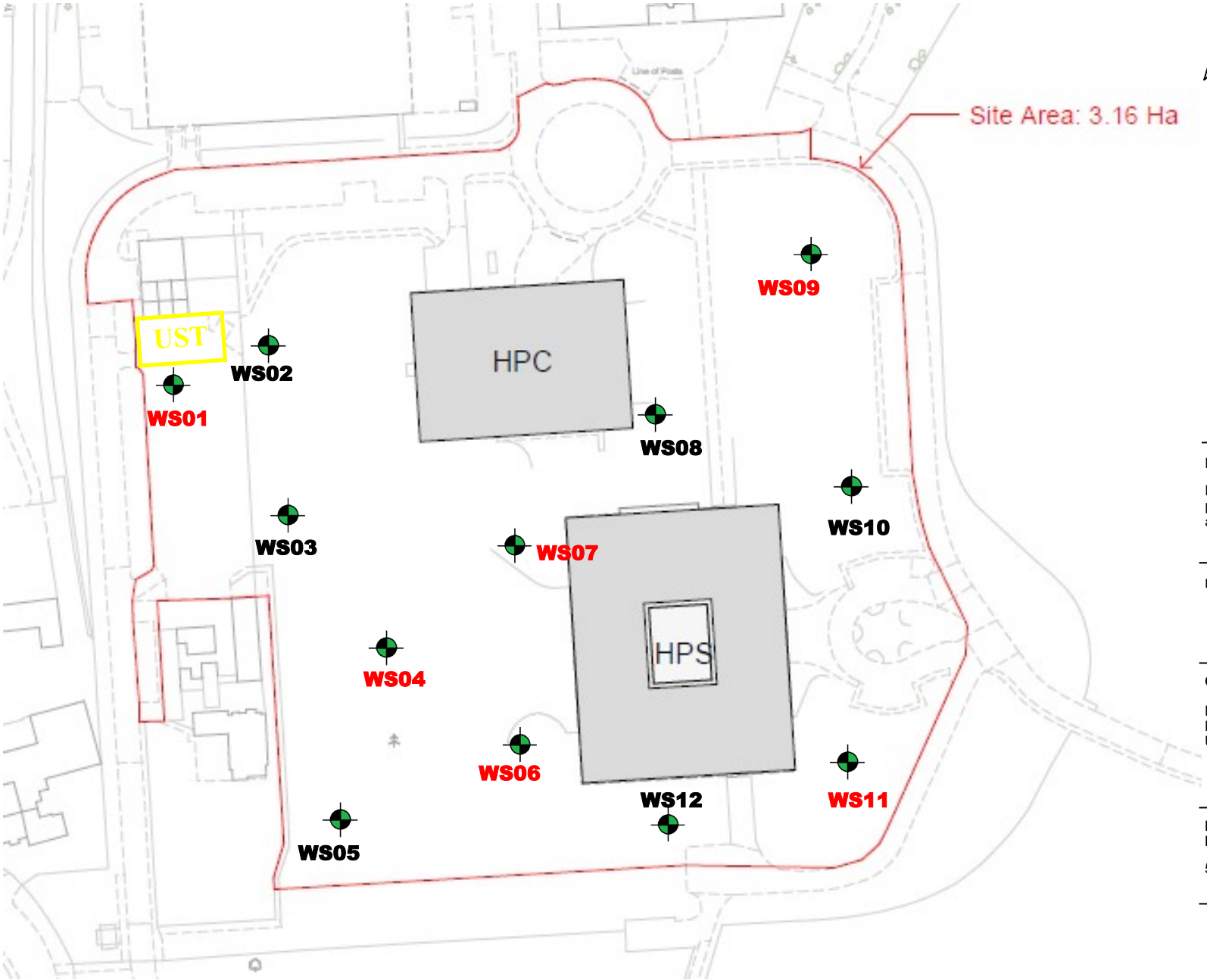
7.12 This report does not specifically consider the risk from asbestos in soils to construction workers. It is generally recommended that if asbestos has been recorded in soils on site, the groundworks contractor should prepare a detailed method statement for the excavation, handling and storage of asbestos contaminated soil (ACS), in addition to implementing an asbestos watching brief. As a minimum, the groundworks contractor should hold the appropriate level of asbestos awareness training and be competent in managing ACS. The risk from asbestos to groundworkers should be clearly understood and communicated to those working with soils on site.

Imported Soils and Recycled Crush

7.13 Any soils or crushed concrete imported to site during the development which will be retained on site should be checked to ensure they do not contain contaminants which may pose a risk to future site users. Evidence of due diligence in this regard is often requested by regulators to demonstrate that imported materials do not contain contaminants such as asbestos

RETURN

Drawings



Notes

Do not scale from this drawing. Approximate positions only. Report all errors and omissions to author.

Rev	Date	Description

Client / Project

HAYES PARK — HAYES
Hayes Site Road, Hayes, UB4 8FE

Drawing Title

As Drilled Exploratory Hole Plan

Project Number	Drawing Number	Date	Designed by	Approved by
5241	002	April 2025	ME	MD

Lustre Consulting Limited
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APPENDIX A: Reference Information

PHASE 2 REFERENCE INFORMATION

APPROACH TO INVESTIGATIONS & CONTAMINATED LAND DEFINITIONS

RETURN

Environmental site investigations are prepared in keeping with best practice and current planning guidance, where practicable and in accordance with the approved scope of work. The National Planning Policy Framework (NPPF)[8] advises regulatory consultees to ensure that adequate site investigation information is provided at the initial planning stage, whilst the Land contamination risk management guidance (LCRM, October 2020) requires a phased, risk based approach when dealing with land affected by contamination in the UK.

References to the term "contaminated land" in our reports relate to the statutory definition of contaminated land under the recently published Contaminated Land Statutory Guidance unless otherwise stated (also known as Category 1 and 2 under Part 2A). That definition is: "any land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances on in or under the land that –

a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
b) Significant pollution of water environment is being caused or there is significant possibility of such pollution being caused".

Other terms such as "land affected by contamination" or "land contamination" refer to the much broader categories of land where contaminants are present but usually not at a significant level of risk to be classified as contaminated land under the definition Part 2A (also known as Category 3 or Category 4 under Part 2A).

The National Planning Policy Framework (NPPF) states that "land should be suitable for its new use and as a minimum, after carrying out remediation (if required), the land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990".

NOTES ON LOGGING & SAMPLING

RETURN

For all exploratory holes excavated, soil arisings are recovered and logged to BS5930: 2015[9]. Where possible, observations on groundwater ingress and excavation stability are made. Soil arisings are then typically inspected for visual and olfactory evidence of contamination with samples recovered at varying depths for analysis depending on the scope of works. Disturbed and undisturbed samples (where applicable) are taken in accordance with guidance and deposited in suitable containers, prepared and dispatched to a UKAS (United Kingdom Accreditation Service) accredited laboratory.

If appropriate to the nature of the works, soil samples from the Made Ground or potentially contaminated soils are also deposited in sealable plastic bags to allow on-site headspace analysis. Samples are then left for at least 20 minutes before analysis and a photo-ionisation detector (PID) with 10.6eV lamp used to measure the concentration of volatile organic compounds (VOC) within the headspace. Soil samples are gently agitated during analysis to encourage the release of any volatiles.

QUANTITATIVE RISK ASSESSMENTS

RETURN

[8] Department for Communities and Local Government, National Planning Policy Framework, 2019.
[9] British Standard – Code of Practice for Site Investigation. BS 5939: 2015.

Human Health GQRA

To determine whether contamination presents an unacceptable level of risk to human health, concentrations of potential contaminants are screened against risk threshold values. Historically, these values had been in the form of Generic Assessment Criteria (GAC) and Soil Guideline Values (SGVs), published by regulatory and advisory bodies. However, in response to revised Part 2A Statutory Guidance, Defra published Category 4 Screening Levels (C4SLs) for six determinands to provide a simple test for deciding when land is 'suitable for use' and demonstrably not 'contaminated land'. The supporting documentation from Defra[10] acknowledges that where C4SLs exist, these values represent a greater risk threshold (i.e. low risk) rather than the previous SGVs/GACs (i.e. no risk). Acknowledging that the C4SLs were primarily intended for use under Part 2A Statutory Guidance, LQM in collaboration with the Chartered Institute of Environmental Health (CIEH), subsequently published a third set of generic assessment criteria known as LQM/CIEH Suitable 4 Use Levels (S4ULs)[11]. The S4ULs are based on the 'minimal or tolerable level of risk' as defined in previous Environment Agency guidance (namely SR2[12]) which underpinned all previous SGVs/GACs. The National Planning Policy Framework (NPPF)[13] requires that planning decisions undertaken by the Local Planning Authority should decide if a site is suitable for its new use and not just whether the site is determinable under Part 2A. Whilst Defra states that the C4SLs could be applied under the planning regime, it is acknowledged that these screening levels were primarily published to support the Part 2A Statutory Guidance. Taking this into account, the S4ULs are often used in the first instance. Where an exceedance above these levels is identified, comparison against C4SLs will generally be undertaken, with consideration given to the applicability of a less conservative threshold.

Water Pipeline Suitability Test

Often, at the time of site investigation, the route of any proposed potable water pipes are not known, or are largely inaccessible if an existing development is present. As such, potable water pipe assessments are based on the shallow soils across the site as a whole. In accordance with UKWIR guidance, we consider determinands for assessment based on the historical use of the site. Available analytical data is then compared against the UKWIR thresholds. The assessment of ethers, nitrobenzene, ketones, aldehydes and amines are often not considered applicable. The assessment of mineral oil is undertaken using the results from any speciated TPH test data, which provides a breakdown of the hydrocarbon fractions.

Groundwater GQRA

When assessing the risks to groundwater, the screening criteria adopted includes the UK Drinking Water Standards (DWS) as specified in Water Quality Regulations 2000[14], Environmental Quality Standards (EQS) for freshwater[15] and World Health Organisation (WHO) standards for drinking water quality[16]. The hierarchy that these are adopted is based on the conceptual site model and the most sensitive receptors in the context of the site and the local use of any groundwater. In the absence of UK published guidance values for total petroleum hydrocarbons, the WHO guideline values (provided in Petroleum Products in Drinking Water guidance) are adopted[17]. The use of the lowest screening criteria for an individual TPH fraction has been adopted as set out in the guidance, which provides a conservative assessment for TPH.

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[10] SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document, March 2014

[11] The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3455. All rights reserved

[12] Environment Agency, Human Health Toxicological Assessment of Contaminants in Soil (SR2), January 2009

[13] Department for Communities and Local Government, National Planning Policy Framework, 2019

[14] The Water Supply (Water Quality) Regulations 2000

[15] Environmental Quality Standards, The Water Supply (Water Quality) Regulations 2002

[16] World Health Organisation (WHO) Guidelines for Drinking Water Quality, 1984

[17] Petroleum Products in Drinking-water, WHO (WHO/SDE/WSH/05.08/123)

Ground Gas Risk Assessments

Ground gases such as methane and carbon dioxide can be generated naturally from the ground, particularly where decaying organic matter is present. These gases can also be generated by buried degradable waste or other organic compounds in Made Ground / infilled ground. Carbon dioxide and methane can migrate through the soil over significant distances and enter buildings via the subfloor void or other entry points. The hazard associated with methane is explosion, whilst for carbon dioxide the hazard is asphyxiation, particularly in confined spaces. BS 8485:2015[18] sets out a series of gas screening values to enable the assessment of risk, depending on the type and sensitivity of the proposed buildings on site.

CONCEPTUAL MODEL & QUALITATIVE RISK ASSESSMENTS

RETURN

The objective of a conceptual model is to firstly identify potential contaminant sources, pathways and receptors relating to the site and surrounding area based on the findings of this investigation. This information is then collated, and a qualitative risk assessment carried out in line with good practice and current guidance[19,20] to assess any viable source-pathway-receptor pollution linkages. The potential for a pollution event to occur is then evaluated using a risk classification tool[21]. The level of risk is assigned by considering the likelihood that a pollution event might occur with the consequence its occurrence. The consequence is essentially a measurement of the severity of a hazard or source (e.g. contaminated soil) and sensitivity of the receptor (e.g. aquifer type or end user).

REMEDIATION AND VALIDATION

RETURN

Following the identification of unacceptable risks to receptors in a site investigation, either more investigation is required to better understand the risk, or often remediation is required. Remediation aims to lower the risk to an acceptable level by either removing the source or breaking / reducing the pathway. The methodology for carrying out any remediation is documented in a Remediation Strategy, and typically forms the third stage in the iterative risk-based approach. The strategy requires regulatory approval before commencing the actual remedial work. Remediation requires careful management and planning, with inspections and testing by the consultant to verify that the remediation has been undertaken in accordance with Remediation Strategy. Information collected over the course of the remedial work is then compiled into a Verification Report in line with the Environment Agency's Evidence, Verification of Remediation of Land Contamination[22].

NOTES ON WASTE CLASSIFICATION (SOILS)

RETURN

Guidance set out in the Waste Framework Directive and the Environment Agency's Technical Guidance WM3 Hazardous Waste , provides information and controls on how sites should manage and control waste soils. The first stage of the waste assessment, as set out in Technical Guidance WM3 Hazardous Waste, requires the chemical composition of the soils to be determined by analytical testing, in order to determine if the soils should be classified as hazardous or not hazardous. The second stage requires a Waste Acceptance Criteria (WAC) test to determine the case of inert or non-hazardous waste disposal routes for the soil. Landfills have set criteria for wastes which they can legally accept, and the WAC test therefore provides information on which type of landfill can accept the waste.

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[18] BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.

[19] Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66, NHBC, 2008.

[20] Construction Industry Research and Information Association (CIRIA). Contaminated Land Risk Assessment. A Guide to Good Practice. CIRIA C552 2001.

[21] Department of the Environment, Transport and the Regions, Environment Agency and Institute of Environmental Health. Guidelines for Environmental Risk Assessment and Management. HMSO July 2000.

[22] Environment Agency, Evidence, Verification of Remediation of Land Contamination, SC030114/R1, 2010

Only contaminated soils which are excavated will require classification and assessment for waste disposal as under the Waste Framework Directive, as these soils cannot be re-used on site. In-situ, unexcavated contaminated soils do not require classification. Also uncontaminated soils and other naturally occurring material excavated in the course of construction activities, when it is certain that the material will be used for the purposes of construction in its natural state, on the site from which it was excavated, also do not require classification.

Waste Classification Methodology

The first stage of this assessment is to assign a waste code to the soils requiring classification. This is obtained from the 20 Chapters of The List of Waste (England) Regulations 2005 and includes the consideration of both mirror entries and absolute entries. For mirror entries the soils requiring disposal will be assessed within the HazWasteOnline tool to determine if hazardous properties are present and therefore if the mirror hazardous or mirror non-hazardous code is applicable to the waste classification.

The results of the laboratory analysis are screened in a propriety hazardous waste assessment tool (HazWasteOnline) to determine if the soils would be considered hazardous from a waste disposal perspective. Concentrations of each contaminant are screened to determine if they exceed any of the sixteen hazardous properties (HP) and/or statements as set out the Environment Agency's Technical Guidance WM3 (Guidance on the classification and assessment of waste, 1st edition 2015).

The initial waste assessment on HazWasteOnline identifies those contaminants which exceed any of the sixteen hazardous properties / statements. This is based on the presence of individual anions or cations identified during the chemical analysis of the soils. However, this analysis does not always identify which specific components are present. Where possible, further information has been obtained on which precise substances are likely to be present within the soils, based on the known historical and current site uses and operations. This information can be used to rule out the presence of 'worst case' substances within the HazWasteOnline tool. Further information on the specific assumptions made during the waste assessment are provided in the Assumptions Section below and in the HazWasteOnline output sheet included as an attachment to this letter report.

Following the application of project specific assumptions, a detailed waste assessment has been generated. As part of the detailed waste assessment, consideration has also been given to whether the soils should be considered as a single population or as sub populations based on field observations or the presence of specific contaminants.

Waste Assessment Assumptions

Based on our current understanding of historical and current site operations, the following assumptions have been applied within the HazWasteOnline tool, unless explicitly stated in Chapter 7:

- HP3 Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. This is likely due to advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.
- Metallic compounds are not considered to be present in their chromate form as the laboratory analysis has demonstrated that insufficient concentrations of hexavalent chromium are present to enable the formation of chromates within the soils.
- Based on the data available it is considered likely that any metallic compounds present within the soils underlying the site are most likely present in their oxide form, rather than as chlorides, sulphates, sulphides, carbonates or phosphates.

RETURN

APPENDIX B: Exploratory Hole Logs

Borehole Log

WS01

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.10) 0.10		Asphalt concrete. [Bituminous Material]
						(0.20) 0.30		Grey sandy fine to coarse angular to subrounded GRAVEL of sandstone and granite (sub-base aggregates). [Sub-base Material]
	▽	0.70 0.70	PID ES 1	9.30		(0.50) 0.80		Black gravelly fine to coarse SAND. Gravel is fine to coarse angular to subrounded of brick, asphalt, flint, sandstone and granite. Distinct hydrocarbon odour. [Made Ground]
						(2.20)		Fim to stiff brown mottled grey CLAY. [London Clay]
						3.00		*End of Borehole at 3.00m*

Remarks
Hole had distinct hydrocarbon odour.

Method, Plant, Stability, Dimensions **Logger**
0.00 - 3.00m WS Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS02

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.20 0.20	PID ES 1	3.90		(0.40) 0.40		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of brick, glass, flint and asphalt. Frequent rootlets. [Made Ground]
						(0.60) 1.00		Soft to firm light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and brick. [Made Ground]
						(1.00) 2.00		Firm to stiff light brown mottled grey CLAY. [London Clay]
								End of Borehole at 2.00m

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS03

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.30 0.30	PID ES 1	1.70		(0.20) 0.20		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, flint, brick and asphalt. Frequent rootlets. [Made Ground]
						(0.90)		Soft to firm light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and brick. [Made Ground]
						1.10		Firm to stiff light brown mottled grey CLAY. Occasional fine to medium sized gravels of claystone. [London Clay]
						(0.90)		
						2.00		*End of Borehole at 2.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

LUSTRE CONSULTING

Borehole Log

WS04

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.10 0.10	PID ES 1	5.70		(0.40) 0.40		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, flint and asphalt. Frequent rootlets. [Made Ground]
		0.60 0.60	PID ES 2	6.20		(0.50) 0.90		Black gravelly clayey fine to coarse SAND. Gravel is fine to coarse angular to subrounded of brick, asphalt, glass, tile and flint. [Made Ground]
						(0.30) 1.20		Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and brick. [Made Ground]
						(1.80)		Firm to stiff light brown mottled grey CLAY. Occasional fine to medium sized gravels of claystone. [London Clay]
						3.00		*End of Borehole at 3.00m*

Remarks

Method, Plant, Stability, Dimensions
0.00 - 3.00m WS

Logger
Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS05

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.40 0.40	PID ES 1	5.30		(0.90) 0.90		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, flint, wood. Frequent rootlets. [Made Ground]
						(0.40) 1.30		Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded of flint, claystone and brick. Occassional iron staining. [Made Ground]
						(0.70) 2.00		Firm to stiff light brown mottled grey CLAY. Occassional fine to medium gravels of claystone. [London Clay]
								End of Borehole at 2.00m

Remarks

Method, Plant, Stability, Dimensions
0.00 - 2.00m WS

Logger
Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

LUSTRE CONSULTING

Borehole Log

WS06

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-03	2025-04-03

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.10 0.10	PID ES 1	0.10		(0.80)		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded of glass, flint, brick, tile, clinker and asphalt. One subangular cobble of flint. Frequent rootlets. [Made Ground]
		0.60 0.60	PID ES 2	0.20		0.80 (0.50)		Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded of flint and brick. [Made Ground]
						1.30 (0.70)		Firm to stiff light brown mottled grey CLAY. Occassional fine to medium gravels of claystone. [London Clay]
						2.00		*End of Borehole at 2.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS07

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-02	2025-04-02

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.50 0.50	PID ES 1	0.80		(0.60) 0.60		Brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of glass, flint, brick, tile and asphalt. Occassional rootlets. [Made Ground]
						(0.80) 1.40		Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and brick. One cobble of brick. [Made Ground]
						(0.60) 2.00		Soft to firm light brown mottled grey CLAY. Occassional fine to medium gravels of claystone and pyritic nodules. [London Clay]
								End of Borehole at 2.00m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS08

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-01	2025-04-01

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.20 0.20	PID ES 1	3.40		(0.40) 0.40		Brownish grey gravelly silty fine to coarse SAND. Gravel is fine to coarse subangular to subrounded of brick, flint and glass. [Sub-base Material]
		0.80 0.80	PID ES 2	1.80				Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint, brick, wood, ceramic pipe. Weak organic odour. [Made Ground] Backfilled ceramic pipe encountered @ 0.5m bgl. (0.50m)
		1.20	SPT	N=7 (1,2/2,2,1,2)		(1.70)		
		2.00	SPT	N=50 (2,2/2,3,3,0 for 225mm)		2.10		Soft to firm light brown mottled grey CLAY. [London Clay]
		3.00	SPT	N=15 (1,2/3,4,3,5)		(1.90)		
		4.00	SPT	N=18 (2,2/4,4,4,6)		4.00		*End of Borehole at 4.00m*

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 4.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

LUSTRE CONSULTING

Borehole Log

WS09

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-01	2025-04-01

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.40 0.40	PID ES 1	1.10		(0.80)		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, flint and brick. Occassional rootlets. [Made Ground]
		1.20	SPT	N=5 (0,0/1,1,2,1)		0.80 (0.50) 1.30		Soft light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and claystone. Occassional iron staining. [Made Ground]
		2.00	SPT	N=16 (2,2/3,4,4,5)		(2.70)		Soft to firm light brown mottled grey CLAY. Occassional fine to medium gravels of claystone and pyritic nodules. [London Clay]
		3.00	SPT	N=16 (6,4/3,4,4,5)				
		4.00	SPT	N=19 (2,3/3,5,5,6)		4.00		*End of Borehole at 4.00m*

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 4.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

Borehole Log

WS10

Sheet 1 of 1

LUSTRE CONSULTING

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-01	2025-04-01

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.50 0.50	PID ES 1	5.60		(1.10)		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, brick, asphalt, concrete, clinker, flint and wood. Rare rootlets. [Made Ground] concrete obstuctions in west side of pit (0.28 - 0.40m)
		1.20	SPT	N=6 (3,3/2,1,1,2)		1.10 (0.90)		Soft to firm light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint and claystone. [Made Ground]
		2.00	SPT	N=10 (1,1/2,2,3,3)		2.00		*End of Borehole at 2.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.00m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

LUSTRE CONSULTING

Borehole Log

WS11

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-01	2025-04-01

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.30 0.30	PID ES 1	3.60		(0.80) 0.80		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium subangular to subrounded of glass, flint, brick, asphalt and clinker. Occassional rootlets. [London Clay]
						(1.50) 2.30		Soft to firm light brown mottled dark brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded of flint, brick, concrete, wood and claystone. One subangular cobble of brick. [Made Ground]
						(0.50) 2.80		Soft to firm light brown mottled grey CLAY. Occassional fine to medium gravels of claystone and pyritic nodules. [London Clay]
								End of Borehole at 2.80m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.80m WS — Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

LUSTRE CONSULTING

Borehole Log

WS12

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WS				1:50

Project Name	Project No.	Start Date	End Date
Hayes Park	5241	2025-04-03	2025-04-03

Client
Shall Do Developments - Marson Property Ltd

Contractor
PJ Drilling

Consultant
Lustre Consulting

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.50 0.50	PID ES 1	0.30		(0.90) 0.90		Brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of glass, flint, brick, tile, concrete and asphalt. Frequent rootlets. [Made Ground]
						(0.50) 1.40		Soft to firm light brown mottled dark brown slightly gravelly CLAY with low cobble content. Gravel is fine to coarse angular to subrounded of flint, brick, and concrete. Cobbles are subangular of brick. [Made Ground]
						(0.60) 2.00		Soft to firm light brown mottled grey CLAY. Occassional fine to medium gravels of claystone and pyritic nodules. [London Clay]
								End of Borehole at 2.00m

Remarks

Method, Plant, Stability, Dimensions
0.00 - 2.00m WS

Logger
Maddie Edwards

Checked By: Toby Hill **Approved By:** Matt Dean **Status:** FINAL

APPENDIX C: Laboratory Test Certificates

RETURN

Lustre Consulting Ltd
Units 42 & 43
The Joiners Shop
The Historic Dockyard,
Chatham
Kent
ME4 4TZ

t: 01634 757 705

e: Maddie.Edwards@lustreconsulting.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 25-017029

Replaces Analytical Report Number: 25-017029, issue no. 1
Additional analysis undertaken.
Asbestos Quantifcation has been added to sample 503883,503886,5389,503891,503892 as per clients request

Project / Site name:	Hayes Park - Hayes	**Samples received on:**	04/04/2025
Your job number:	5241	**Samples instructed on/ Analysis started on:**	04/04/2025
Your order number:		**Analysis completed by:**	30/04/2025
Report Issue Number:	2	**Report issued on:**	07/05/2025
Samples Analysed:	15 soil samples		

Signed:

Arslaan Saleem
Customer Service Advisor
For & on behalf of i2 Analytical Ltd.

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

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

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

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503879	503880	503881	503882	503883
Sample Reference				WS01	WS02	WS03	WS04	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.70	0.20	0.30	0.10	0.60
Date Sampled				02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	11.9	< 0.1	< 0.1	25.2	< 0.1
Moisture Content	%	0.01	NONE	13	18	12	13	21
Total mass of sample received	kg	0.1	NONE	0.5	0.5	0.5	0.6	0.5
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA	SCA	SCA
Analysis completed	N/A	N/A	N/A	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025
Actinolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	-	-	-	-	Detected
Anthophyllite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	-	-	-	-	Detected
Crocidolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	-	-	-	-	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-	-	-	0.003
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	-	-	Loose Fibres, Loose Fibrous Debris
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	10.1	8	7.1	6.9	7.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	760	85	45	35	570
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	378	42.4	22.3	17.5	286
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	4.5	3.9	2.2	2.9	6.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	2.4	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	68	0.22	0.06	0.11	0.13
Acenaphthylene	mg/kg	0.05	MCERTS	6.7	0.18	0.05	< 0.05	0.31
Acenaphthene	mg/kg	0.05	MCERTS	72	0.3	0.07	0.4	< 0.05
Fluorene	mg/kg	0.05	MCERTS	95	0.32	0.12	0.26	0.06
Phenanthrene	mg/kg	0.05	MCERTS	390	2.9	0.66	3.1	0.85
Anthracene	mg/kg	0.05	MCERTS	130	0.75	0.17	0.67	0.31
Fluoranthene	mg/kg	0.05	MCERTS	360	4.5	0.98	5	2.6
Pyrene	mg/kg	0.05	MCERTS	270	3.9	0.79	4.3	2.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	120	2.2	0.45	2.2	1.9
Chrysene	mg/kg	0.05	MCERTS	110	2.2	0.42	2.2	2.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	110	3.3	0.59	2.6	3.8
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	54	1.1	0.23	1.2	1.8
Benzo(a)pyrene	mg/kg	0.05	MCERTS	110	2.6	0.52	2.4	3
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	50	1.5	0.25	1.2	2.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	11	0.38	0.06	0.35	0.59
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	51	1.7	0.23	1.2	2.7

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503879	503880	503881	503882	503883
Sample Reference				WS01	WS02	WS03	WS04	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.70	0.20	0.30	0.10	0.60
Date Sampled				02/04/2025	02/04/2025	02/04/2025	02/04/2025	02/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2020	28.1	5.66	27	25.1
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	45	16	17	90
Boron (water soluble)	mg/kg	0.2	MCERTS	4.8	2.1	0.6	1.6	4.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	2.7	0.8	1.5	2.9
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	49	30	32	61
Copper (aqua regia extractable)	mg/kg	1	MCERTS	20	480	45	64	1100
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	1100	150	200	3100
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.9	0.5	< 0.3	4.9
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14	53	23	23	100
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	45	640	100	140	1600
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	3.3	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	37	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	78	< 8.0	< 8.0	< 8.0	9
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	350	30	< 8.0	< 8.0	88
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	460	30	< 10	< 10	97
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	0.024	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	0.025	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	0.2	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	51	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	240	3.5	< 2.0	3.7	< 2.0
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	830	14	< 10	16	< 10
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	1000	30	< 10	32	54
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	2100	48	< 10	52	54
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	17	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	20	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	29	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	79	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	53	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503884	503885	503886	503887	503888
Sample Reference				WS05	WS06	WS06	WS07	WS08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.40	0.10	0.60	0.50	0.20
Date Sampled				02/04/2025	03/04/2025	03/04/2025	03/04/2025	01/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	39.3	17.8
Moisture Content	%	0.01	NONE	14	11	16	17	8.3
Total mass of sample received	kg	0.1	NONE	0.5	0.5	0.5	0.5	0.5
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA	MJN	MJN
Analysis completed	N/A	N/A	N/A	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025
Actinolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Amosite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Anthophyllite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Chrysotile detected	Type	N/A	ISO 17025	-	-	Detected	-	-
Crocidolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Tremolite detected	Type	N/A	ISO 17025	-	-	Not-detected	-	-
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	-	< 0.001	-	-
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	-	Loose Fibres	-	-
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	5.8	8	7.7	7.9	8.8
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	40	44	54	52	270
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	19.8	22.1	26.9	26	133
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.6	2.1	5.3	2.1	1.1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.25	0.1	0.13
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.08	0.17	< 0.05	0.21
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.12	0.32	0.18	0.32
Fluorene	mg/kg	0.05	MCERTS	0.07	0.09	0.24	0.13	0.28
Phenanthrene	mg/kg	0.05	MCERTS	0.48	1.2	3.2	1.4	3.7
Anthracene	mg/kg	0.05	MCERTS	0.09	0.31	0.64	0.31	1
Fluoranthene	mg/kg	0.05	MCERTS	0.67	2.7	5.5	2.2	7.7
Pyrene	mg/kg	0.05	MCERTS	0.55	2.4	5	2	6.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.28	1.3	2.8	1.1	4.1
Chrysene	mg/kg	0.05	MCERTS	0.24	1.3	3	1.1	3.8
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.38	2	4	1.3	5.4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.13	0.7	1.9	0.61	2
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.28	1.6	3.4	1.2	4.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.14	0.86	2	0.62	2.2
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.23	0.5	0.14	0.51
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.12	0.86	2.2	0.65	2.3

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503884	503885	503886	503887	503888
Sample Reference				WS05	WS06	WS06	WS07	WS08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.40	0.10	0.60	0.50	0.20
Date Sampled				02/04/2025	03/04/2025	03/04/2025	03/04/2025	01/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.44	15.8	35.1	13.1	44.5
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	25	16	58	24	15
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.9	1.4	2.1	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.9	1.4	2.3	0.8	0.6
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	32	49	35	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	28	53	630	87	37
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	140	1600	260	140
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.4	2.7	0.4	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	20	89	33	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	78	140	900	170	150
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	3.5
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	7.7
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	14
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	9.4	< 8.0	62
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	88
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	2.7
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	5.7
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	12	< 10	33
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	27	< 10	65
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	< 10	< 10	39	< 10	110
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503889	503890	503891	503892	503893
Sample Reference				WS08	WS09	WS10	WS11	WS12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.80	0.40	0.50	0.30	0.50
Date Sampled				01/04/2025	01/04/2025	01/04/2025	01/04/2025	03/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	15.7	17.9	< 0.1	31.4
Moisture Content	%	0.01	NONE	21	22	15	24	12
Total mass of sample received	kg	0.1	NONE	0.5	0.4	0.5	0.5	0.5
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Detected	Detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MJN	MJN	MJN	MJN	MJN
Analysis completed	N/A	N/A	N/A	11/04/2025	11/04/2025	11/04/2025	11/04/2025	11/04/2025
Actinolite detected	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	-
Amosite detected	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	-
Anthophyllite detected	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	-
Chrysotile detected	Type	N/A	ISO 17025	-	Detected	Detected	Detected	-
Crocidolite detected	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	-
Tremolite detected	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	-
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	< 0.001	0.327	< 0.001	-
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	Loose Fibres	Asbestos Cement	Loose Fibres	-
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.8	7.6	7.8	7.8	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	1	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	63	67	150	99	67
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	31.3	33.4	75.5	49.7	33.4
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.9	6.5	2.2	4.6	1.9
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.07	0.08	0.12	0.26	0.15
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.19	0.09	0.1	0.12
Acenaphthene	mg/kg	0.05	MCERTS	0.31	< 0.05	0.1	0.07	0.21
Fluorene	mg/kg	0.05	MCERTS	0.18	< 0.05	0.08	0.05	0.22
Phenanthrene	mg/kg	0.05	MCERTS	3	1.1	1.3	1.1	2.7
Anthracene	mg/kg	0.05	MCERTS	0.47	0.23	0.24	0.19	0.61
Fluoranthene	mg/kg	0.05	MCERTS	4.3	3.2	2.6	2.5	5.1
Pyrene	mg/kg	0.05	MCERTS	3.7	3.5	2.5	2.5	4.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	2.1	1.3	1.4	2.4
Chrysene	mg/kg	0.05	MCERTS	1.9	2.4	1.5	1.7	2.3
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	2.3	4.3	1.9	2.4	3.4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.73	1.8	0.88	1	1.2
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.6	3.1	1.7	1.7	2.6
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.71	1.9	0.78	1	1.2
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.43	0.19	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.83	2.6	1	1.3	1.4

Analytical Report Number: 25-017029
Project / Site name: Hayes Park - Hayes

Lab Sample Number				503889	503890	503891	503892	503893
Sample Reference				WS08	WS09	WS10	WS11	WS12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.80	0.40	0.50	0.30	0.50
Date Sampled				01/04/2025	01/04/2025	01/04/2025	01/04/2025	03/04/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	21.8	26.9	16.3	17.2	28.2
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	32	100	22	59	15
Boron (water soluble)	mg/kg	0.2	MCERTS	2	2.5	1.7	1.5	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	3.8	1.5	1.9	1
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	71	35	50	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	130	1200	100	730	150
Lead (aqua regia extractable)	mg/kg	1	MCERTS	440	4000	290	1900	270
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.8	5.1	0.5	2.9	0.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	40	110	30	74	19
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	350	1600	200	970	190
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.8	6.2
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	2.6	< 2.0	4.6	4.1
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	8.4	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	96	26	51	43
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	< 10	110	26	58	53
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	2.1	3.3	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	16	12	13	< 10
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	91	38	21	41
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	< 10	110	54	33	41
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

4041

Analytical Report Number: **25-017029**
Project / Site name: **Hayes Park - Hayes**
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample	Analysis completed	Analyst ID
503883	WS04	0.60	114	Loose Fibres, Loose Fibrous Debris	**Amosite & Chrysotile**	0.003	**0.003**	30/04/2025	SCA
503886	WS06	0.60	117	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	30/04/2025	SCA
503890	WS09	0.40	140	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	30/04/2025	MJN
503891	WS10	0.50	139	Asbestos Cement	**Chrysotile**	0.327	**0.327**	30/04/2025	MJN
503892	WS11	0.30	135	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	30/04/2025	MJN

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 25-017029
Project / Site name: Hayes Park - Hayes

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
503879	WS01	None Supplied	0.7	Brown gravelly clay with tar and stones
503880	WS02	None Supplied	0.2	Brown loam and sand with gravel and vegetation
503881	WS03	None Supplied	0.3	Brown loam with gravel and vegetation
503882	WS04	None Supplied	0.1	Brown loam with vegetation and stones
503883	WS04	None Supplied	0.6	Brown loam
503884	WS05	None Supplied	0.4	Brown loam and clay with gravel and vegetation
503885	WS06	None Supplied	0.1	Brown loam with gravel and vegetation
503886	WS06	None Supplied	0.6	Brown loam with vegetation
503887	WS07	None Supplied	0.5	Brown loam and clay with stones
503888	WS08	None Supplied	0.2	Brown loam with stones
503889	WS08	None Supplied	0.8	Brown clay and loam with gravel
503890	WS09	None Supplied	0.4	Brown loam with stones
503891	WS10	None Supplied	0.5	Brown loam and clay with stones
503892	WS11	None Supplied	0.3	Brown loam and clay with gravel
503893	WS12	None Supplied	0.5	Brown loam with stones

Analytical Report Number : 25-017029
Project / Site name: Hayes Park - Hayes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

Analytical Report Number : 25-017029
Project / Site name: Hayes Park - Hayes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

APPENDIX D: Field Monitoring Records

RETURN

GAS MONITORING & GROUNDWATER LEVEL LOG

RND	Project No.:	5241	Date:	11/04/2025	Weather:	clear, sunny & warm
1	Project Name:	Hayes Park - Hayes	Initials:	ME	24 hr Pressure:	1018

LUSTRE CONSULTING

BH ID	FLOW		PRESSURE		METHANE		CARBON DIOXIDE		OXYGEN		CO	H_2S	WATER LEVEL	BASE OF WELL	PID		GAS TAP OPEN	FLOODED WELL	TOP OF LNAPL	BASE OF LNAPL	ODOUR	COMMENTS
	Peak	Steady	Atmos.	Relative	Peak	Steady	Peak	Steady	Min	Steady	-	-	-	-	Peak	Steady						
	(Litres / hr)		(mb)		% V\V		% V\V		% V\V		(ppm)		(m bgl)		(ppm)		(Y/N)		(m bgl)			
WS01	9.7	6.2	1018	0.04	0	0	1	0.1	18.4	18.9	3	1	0.49	1.14	1.7	1.6	N	Y	-	-	Y	FLOODED
WS04	0.1	0	1018	-0.03	0.1	0	0.8	1	18.7	19	0	0	dry	1.15	0.2	0.1	N	N	-	-		
WS06	0	0	1018	0.12	0.1	0.1	1.1	1.1	18.9	18.9	4	0	dry	1.15	0.3	0	N	N	-	-		
WS07	0	0	1018	0.02	0	0	1.1	1.1	18.6	18.6	0	0	dry	1.13	0.2	0.1	N	N	-	-		
WS09	0	0	1018	0.76	0	0	0.9	0.9	18.1	18.2	0	1	dry	1.17	0.3	0.1	N	N	-	-		
WS11	0	0	1018	0.14	0	0	0.8	0.6	18.2	19	0	0	dry	1.15	0.1	0	N	N	-	-		

NOTES: Flow is recorded for a minimum of 60 seconds. If flow remains variable then monitoring continued to a maximum of 120 seconds.
NOTES: Gas concentrations and PID headspace is monitored for a minimum of 160 seconds. If concentrations remains variable then monitoring continued to a maximum of 300 seconds.

COMMENTS	

GAS MONITORING & GROUNDWATER LEVEL LOG

RND	Project No.:	5241	Date:	17/04/2025	Weather:	sunny & warm but cloudy
2	Project Name:	Hayes Park - Hayes	Initials:	ME	24 hr Pressure:	1006

LUSTRE CONSULTING

BH ID	FLOW		PRESSURE		METHANE		CARBON DIOXIDE		OXYGEN		CO	H_2S	WATER LEVEL	BASE OF WELL	PID		GAS TAP OPEN	FLOODED WELL	TOP OF LNAPL	BASE OF LNAPL	ODOUR	COMMENTS
	Peak	Steady	Atmos.	Relative	Peak	Steady	Peak	Steady	Min	Steady	-	-	-	-	Peak	Steady						
	(Litres / hr)		(mb)		% V\V		% V\V		% V\V		(ppm)		(m bgl)		(ppm)		(Y/N)		(m bgl)			
WS01	9.7	6.4	1006	-1.02	0	0	1	0.9	19	19.8	0	1	0.52*	1.14	0.5	0.4	N	Y	-	-	Y	FLOODED - GW @ 0.49m, purged to 0.91m, 1 hour later 0.52m
WS04	0	0	1006	-0.02	0.2	0.2	0.9	0.8	19.6	19.6	0	0	dry	1.15	0.3	0.1	N	N	-	-		
WS06	0	0	1006	-0.09	0.1	0.1	1.3	1.2	19.1	19.1	0	0	dry	1.15	0.2	0.2	N	N	-	-		
WS07	0	0	1006	-0.05	0.1	0.1	1.1	1.1	18.8	18.8	0	0	dry	1.13	0.2	0.1	N	N	-	-		
WS09	-0.1	0	1006	0.07	0.1	0.1	1	1	19.1	19.2	0	0	dry	1.17	0.2	0.1	N	N	-	-		
WS11	0	0	1006	0.19	0.1	0.1	1	0.8	18.7	19.2	0	0	dry	1.15	0.2	0.2	N	N	-	-		

NOTES: Flow is recorded for a minimum of 60 seconds. If flow remains variable then monitoring continued to a maximum of 120 seconds.
NOTES: Gas concentrations and PID headspace is monitored for a minimum of 160 seconds. If concentrations remains variable then monitoring continued to a maximum of 300 seconds.

COMMENTS	

GAS MONITORING & GROUNDWATER LEVEL LOG

RND	Project No.:	5241	Date:	23.04.25	Weather:	wet and cloudy
3	Project Name:	Hayes Park - Hayes	Initials:	ME	24 hr Pressure:	1006

LUSTRE CONSULTING

BH ID	FLOW		PRESSURE		METHANE		CARBON DIOXIDE		OXYGEN		CO	H_2S	WATER LEVEL	BASE OF WELL	PID		GAS TAP OPEN	FLOODED WELL	TOP OF LNAPL	BASE OF LNAPL	ODOUR	COMMENTS
	Peak	Steady	Atmos.	Relative	Peak	Steady	Peak	Steady	Min	Steady	-	-	-	-	Peak	Steady						
	(Litres / hr)		(mb)		% V\V		% V\V		% V\V		(ppm)		(m bgl)		(ppm)		(Y/N)		(m bgl)			
WS01	11.4	7.7	1006	-9.22	0.1	0.1	0.1	0.1	19.8	20.5	0	0	0.46	1.14	1.2	1.0	N	Y	-	-	Y	
WS04	0	0	1006	0.1	0.2	0.2	0.8	0.7	20.1	20.1	0	0	dry	1.15	0.2	0.0	N	N	-	-		
WS06	0	0	1006	0	0.2	0.1	1.2	1.2	19.7	19.7	0	0	dry	1.15	0.6	0.4	N	N	-	-		
WS07	0	0	1006	0.17	0.1	0.1	1.2	1.2	19.4	19.4	0	0	dry	1.13	0.7	0.3	N	N	-	-		
WS09	0	0	1006	0.22	0.1	0.1	1.1	1.1	19.8	19.8	0	0	dry	1.17	0.7	0.5	N	N	-	-		
WS11	0	0	1006	0.14	0.2	0.1	1.2	0.8	19.3	20	0	0	dry	1.15	0.8	0.6	N	N	-	-		

NOTES: Flow is recorded for a minimum of 60 seconds. If flow remains variable then monitoring continued to a maximum of 120 seconds.
NOTES: Gas concentrations and PID headspace is monitored for a minimum of 160 seconds. If concentrations remains variable then monitoring continued to a maximum of 300 seconds.

COMMENTS	

APPENDIX E: Assessment Tables

HUMAN HEALTH QUANTITATIVE RISK ASSESSMENT - SOILS
MADE GROUND
5241

Hayes Park - Hayes

LUSTRE CONSULTING

Assessment Scenario: POSresi
Assessment Criteria Source: SGVs, GACs, S4ULs & C4SLs
Soil Organic Matter (%): SOM = 2.5%

DETERMINAND	UNITS	MINIMUM	AVERAGE	MAXIMUM	No. of TESTS	Sample Ref	No. > AC	503879	503880	503881	503882	503883	503884	503885	503886	503887	503888	503889	503890
						ASSESSMENT CRITERIA		WS01	WS02	WS03	WS04	WS04	WS05	WS06	WS06	WS07	WS08	WS08	WS09
								0.7	0.2	0.3	0.1	0.6	0.4	0.1	0.6	0.5	0.2	0.8	0.4
Asbestos in Soil Detected/Not Detected	N/A	N/A	N/A	N/A	15	Detected	5	Not-detected	Not-detected	Not-detected	Not-detected	**Detected**	Not-detected	Not-detected	**Detected**	Not-detected	Not-detected	Not-detected	**Detected**
pH	no units	5.80	7.80	10.10	15	No Criteria	0	10.1	8	7.1	6.9	7.4	5.8	8	7.7	7.9	8.8	7.8	7.6
Total Cyanide	mg/kg	<LOD	1.00	1.00	15	53.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	1
Total Organic Carbon (TOC)	mg/kg	1.10	3.28	6.50	15	No Criteria	0	4.5	3.9	2.2	2.9	6.4	1.6	2.1	5.3	2.1	1.1	1.9	6.5
Water Soluble SO4 16hr extraction (2:1)	mg/kg	35.00	160.07	760.00	15	No Criteria	0	760	85	45	35	570	40	44	54	52	270	63	67
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	17.50	79.82	378.00	15	#N/A	0	378	42.4	22.3	17.5	286	19.8	22.1	26.9	26	133	31.3	33.4
Arsenic	mg/kg	14.00	36.53	100.00	15	79.00	2	14	45	16	17	**90**	25	16	58	24	15	32	**100**
Boron	mg/kg	0.60	#N/A	4.80	15	21000.00	0	4.8	2.1	0.6	1.6	4.6	0.7	0.9	1.4	2.1	0.7	2	2.5
Cadmium	mg/kg	<LOD	1.52	3.80	15	220.00	0	0.4	2.7	0.8	1.5	2.9	0.9	1.4	2.3	0.8	0.6	<LOD	3.8
Chromium	mg/kg	24.00	40.27	71.00	15	1500.00	0	31	49	30	32	61	40	32	49	35	25	40	71
Chromium (hexavalent)	mg/kg	<LOD	<LOD	<LOD	15	23	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Copper	mg/kg	20.00	323.60	1200.00	15	12000.00	0	20	480	45	64	1100	28	53	630	87	37	130	1200
Lead	mg/kg	24.00	910.47	4000.00	15	630.00	5	24	**1100**	150	200	**3100**	43	140	**1600**	260	140	440	**4000**
Mercury	mg/kg	<LOD	1.50	5.10	15	170.00	0	<LOD	1.9	0.5	<LOD	4.9	<LOD	0.4	2.7	0.4	<LOD	0.8	5.1
Nickel	mg/kg	14.00	45.07	110.00	15	230.00	0	14	53	23	23	100	27	20	89	33	21	40	110
Selenium	mg/kg	<LOD	<LOD	<LOD	15	1100.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Zinc	mg/kg	45.00	484.87	1600.00	15	81000.00	0	45	640	100	140	1600	78	140	900	170	150	350	1600
Naphthalene	mg/kg	<LOD	4.65	68.00	15	4900.00	0	68	0.22	0.06	0.11	0.13	<LOD	0.06	0.25	0.1	0.13	0.07	0.08
Acenaphthylene	mg/kg	<LOD	0.56	6.70	15	15000.00	0	6.7	0.18	0.05	<LOD	0.31	<LOD	0.08	0.17	<LOD	0.21	<LOD	0.19
Acenaphthene	mg/kg	<LOD	4.97	72.00	15	15000.00	0	72	0.3	0.07	0.4	<LOD	<LOD	0.12	0.32	0.18	0.32	0.31	<LOD
Fluorene	mg/kg	<LOD	6.48	95.00	15	9900.00	0	95	0.32	0.12	0.26	0.06	0.07	0.09	0.24	0.13	0.28	0.18	<LOD
Phenanthrene	mg/kg	0.48	27.78	390.00	15	3100.00	0	390	2.9	0.66	3.1	0.85	0.48	1.2	3.2	1.4	3.7	3	1.1
Anthracene	mg/kg	0.09	9.07	130.00	15	74000.00	0	130	0.75	0.17	0.67	0.31	0.09	0.31	0.64	0.31	1	0.47	0.23
Fluoranthene	mg/kg	0.67	27.30	360.00	15	3100.00	0	360	4.5	0.98	5	2.6	0.67	2.7	5.5	2.2	7.7	4.3	3.2
Pyrene	mg/kg	0.55	20.98	270.00	15	7400.00	0	270	3.9	0.79	4.3	2.7	0.55	2.4	5	2	6.4	3.7	3.5
Benzo(a)anthracene	mg/kg	0.28	9.68	120.00	15	29.00	1	**120**	2.2	0.45	2.2	1.9	0.28	1.3	2.8	1.1	4.1	1.6	2.1
Chrysene	mg/kg	0.24	9.08	110.00	15	57.00	1	**110**	2.2	0.42	2.2	2.2	0.24	1.3	3	1.1	3.8	1.9	2.4
Benzo(b)fluoranthene	mg/kg	0.38	9.84	110.00	15	7.20	1	**110**	3.3	0.59	2.6	3.8	0.38	2	4	1.3	5.4	2.3	4.3
Benzo(k)fluoranthene	mg/kg	0.13	4.62	54.00	15	190.00	0	54	1.1	0.23	1.2	1.8	0.13	0.7	1.9	0.61	2	0.73	1.8
Benzo(a)pyrene	mg/kg	0.28	9.34	110.00	15	5.70	1	**110**	2.6	0.52	2.4	3	0.28	1.6	3.4	1.2	4.4	1.6	3.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.14	4.44	50.00	15	82.00	0	50	1.5	0.25	1.2	2.3	0.14	0.86	2	0.62	2.2	0.71	1.9
Dibenz(a,h)anthracene	mg/kg	<LOD	0.97	11.00	15	0.57	2	**11**	0.38	0.06	0.35	**0.59**	<LOD	0.23	0.5	0.14	0.51	<LOD	0.43
Benzo(ghi)perylene	mg/kg	0.12	4.67	51.00	15	640.00	0	51	1.7	0.23	1.2	2.7	0.12	0.86	2.2	0.65	2.3	0.83	2.6
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	<LOD	<LOD	<LOD	15	590000.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	<LOD	<LOD	<LOD	15	610000.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	<LOD	<LOD	<LOD	15	13000.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	<LOD	1.42	6.20	15	13000.00	0	3.3	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	3.5	<LOD	<LOD
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	<LOD	4.07	37.00	15	13000.00	0	37	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	7.7	<LOD	2.6
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	<LOD	7.66	78.00	15	125000.00	0	78	<LOD	<LOD	<LOD	9	<LOD	<LOD	<LOD	<LOD	14	<LOD	8.4
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	<LOD	51.56	350.00	15	125000.00	0	350	30	<LOD	<LOD	88	<LOD	<LOD	9.4	<LOD	62	<LOD	96
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	<LOD	0.01	0.02	15	56000.00	0	0.024	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	<LOD	0.03	0.03	15	56000.00	0	0.025	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	<LOD	0.48	0.20	15	5000.00	0	0.2	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	<LOD	4.01	51.00	15	5000.00	0	51	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	2.7	<LOD	<LOD
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	<LOD	17.52	240.00	15	5100.00	0	240	3.5	<LOD	3.7	<LOD	<LOD	<LOD	<LOD	<LOD	5.7	<LOD	2.1
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	<LOD	63.30	830.00	15	3800.00	0	830	14	<LOD	16	<LOD	<LOD	<LOD	12	<LOD	33	<LOD	16
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	<LOD	94.27	1000.00	15	3800.00	0	1000	30	<LOD	32	54	<LOD	<LOD	27	<LOD	65	<LOD	91
Benzene	mg/kg	<LOD	0.00	0.02	15	140.00	0	0.017	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Toluene	mg/kg	<LOD	0.00	0.02	15	56000.00	0	0.02	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Ethylbenzene	mg/kg	<LOD	0.01	0.03	15	24000.00	0	0.029	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
p & m-xylene	mg/kg	<LOD	0.01	0.08	15	42000.00	0	0.079	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
o-Xylene	mg/kg	<LOD	4.67	0.05	15	42000.00	0	0.053	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Total Phenols (monohydric)	mg/kg	<LOD	1.09	2.40	15	690.00	0	2.4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	<LOD	<LOD	<LOD	15	84.00	0	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD

HUMAN HEALTH QUANTITATIVE RISK ASSES
MADE GROUND
5241

Hayes Park - Hayes

DETERMINAND	*503891*	*503892*	*503893*
	WS10	*WS11*	*WS12*
	0.5	*0.3*	*0.5*
Asbestos in Soil Detected/Not Detected	**Detected**	**Detected**	Not-detected
pH	7.8	7.8	8.3
Total Cyanide	<LOD	<LOD	<LOD
Total Organic Carbon (TOC)	2.2	4.6	1.9
Water Soluble SO4 16hr extraction (2:1)	150	99	67
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	75.5	49.7	33.4
Arsenic	22	59	15
Boron	1.7	1.5	0.6
Cadmium	1.5	1.9	1
Chromium	35	50	24
Chromium (hexavalent)	<LOD	<LOD	<LOD
Copper	100	730	150
Lead	290	**1900**	270
Mercury	0.5	2.9	0.4
Nickel	30	74	19
Selenium	<LOD	<LOD	<LOD
Zinc	200	970	190
Naphthalene	0.12	0.26	0.15
Acenaphthylene	0.09	0.1	0.12
Acenaphthene	0.1	0.07	0.21
Fluorene	0.08	0.05	0.22
Phenanthrene	1.3	1.1	2.7
Anthracene	0.24	0.19	0.61
Fluoranthene	2.6	2.5	5.1
Pyrene	2.5	2.5	4.5
Benzo(a)anthracene	1.3	1.4	2.4
Chrysene	1.5	1.7	2.3
Benzo(b)fluoranthene	1.9	2.4	3.4
Benzo(k)fluoranthene	0.88	1	1.2
Benzo(a)pyrene	1.7	1.7	2.6
Indeno(1,2,3-cd)pyrene	0.78	1	1.2
Dibenz(a,h)anthracene	0.19	<LOD	<LOD
Benzo(ghi)perylene	1	1.3	1.4
TPH-CWG - Aliphatic >EC5 - EC6	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC6 - EC8	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC8 - EC10	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC10 - EC12	<LOD	2.8	6.2
TPH-CWG - Aliphatic >EC12 - EC16	<LOD	4.6	4.1
TPH-CWG - Aliphatic >EC16 - EC21	<LOD	<LOD	<LOD
TPH-CWG - Aliphatic >EC21 - EC35	26	51	43
TPH-CWG - Aromatic >EC5 - EC7	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC7 - EC8	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC8 - EC10	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC10 - EC12	<LOD	<LOD	<LOD
TPH-CWG - Aromatic >EC12 - EC16	3.3	<LOD	<LOD
TPH-CWG - Aromatic >EC16 - EC21	12	13	<LOD
TPH-CWG - Aromatic >EC21 - EC35	38	21	41
Benzene	<LOD	<LOD	<LOD
Toluene	<LOD	<LOD	<LOD
Ethylbenzene	<LOD	<LOD	<LOD
p & m-xylene	<LOD	<LOD	<LOD
o-Xylene	<LOD	<LOD	<LOD
Total Phenols (monohydric)	<LOD	<LOD	<LOD
MTBE (Methyl Tertiary Butyl Ether)	<LOD	<LOD	<LOD

PHYTOTOXICITY RISK ASSESSMENT

5241

Hayes Park - Hayes

Risk Criteria: British Standard BS 3882:2007 (Specification for topsoil and requirements for use)

LUSTRE CONSULTING

TABLE SHOWING PHYTOTOXICITY ASSESSMENT FOR MADE GROUND

DETERMINAND	UNITS	MINIMUM	AVERAGE	MAXIMUM	No. of TESTS	ASSESSMENT CRITERIA	No. > AC	DETAILS
Copper	mg/kg	20.00	323.60	1200.00	15	200.00	5	WS02 (0.2 m bgl) at 480mg/kg, WS04 (0.6 m bgl) at 1100mg/kg, WS06 (0.6 m bgl) at 630mg/kg, WS09 (0.4 m bgl) at 1200mg/kg, WS11 (0.3 m bgl) at 730mg/kg
Nickel	mg/kg	14.00	-	110.00	15	110.00	0	-
Zinc	mg/kg	45.00	484.87	1600.00	15	300.00	6	WS02 (0.2 m bgl) at 640mg/kg, WS04 (0.6 m bgl) at 1600mg/kg, WS06 (0.6 m bgl) at 900mg/kg, WS08 (0.8 m bgl) at 350mg/kg, WS09 (0.4 m bgl) at 1600mg/kg, WS11 (0.3 m bgl) at 970mg/kg

BURIED CONCRETE ASSESSMENT

5241

Hayes Park - Hayes

TABLE SHOWING BURIED CONCRETE ASSESSMENT

SOIL GROUP	DETERMINAND	UNITS	NO. OF TESTS	MIN	MAX	CHARACTERISTIC VALUE	BRE CLASSIFICATION
MADE GROUND	Total Potential Sulfate	%	0	-	-	-	DS1
	Water Soluble Sulphate as SO4	mg/l	15	17.50	378.00	378.000	
	pH	-	15	5.8	10.1	5.8	AC-1s

OTHER FACTORS CONSIDERED:

Made Ground - Based on the calculated oxidisable sulphides pyrite may be present. Oxidisable sulphides were recorded above the 0.3% threshold in 15 samples (maximum oxidisable sulphide 2280%).

Pyritic soils (Natural Ground) have not been encountered in this assessment.

GENERAL NOTES:

The Characteristic Value is based on lowest pH value / highest SO4.

Where the DS Class if different for soluble sulphates and total potential sulphates, the highest DS Class is adopted in accordance with BRE Special Digest 1:2005, 3rd Edition, 'Concrete in Aggressive Ground.' However, if the assessment of TPS is not appropriate (owing to low oxidisable sulphates) only the soluble sulphates have been considered.

POTABLE WATER PIPELINE RISK ASSESSMENT

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Hayes Park - Hayes

TABLE SHOWING WATER PIPELINE ASSESSMENT

DETERMINAND	UNITS	THRESHOLD		THRESHOLD		MAXIMUM CONCENTRATION
		PE	EXCEEDED	PVC	EXCEEDED	
GROUP 1						
Total VOC (with TICs)*	mg/kg	0.50	NO	0.13	NO	0.00
BTEX & MTBE	mg/kg	0.10	NO	0.03	NO	0.000
GROUP 2						
**Total SVOC Suite (with TIC)	mg/kg	2.00	NO	1.40	NO	
Phenols	mg/kg	2.00	NO	0.40	NO	
Cresols & Chlorinated Phenols	mg/kg	2.00	NO	0.04	NO	
†Ethers	mg/kg	0.50	-	1.00	-	
†Nitrobenzene	mg/kg	0.50	-	0.40	-	
†Ketones	mg/kg	0.50	-	0.02	-	
†Aldehydes	mg/kg	0.50	-	0.02	-	
GROUP 3						
Mineral Oils (C11 to C20)	mg/kg	10.00	YES	No effect	NO	66.60
GROUP 4						
Mineral Oils (C21 to C40)	mg/kg	500.00	NO	No effect	NO	187.00
GROUP 5^						
Conductivity	µ2/cm	-	-	-	-	-
Redox Potential	mV	-	-	-	-	-
pH	-	-		-		-
GROUP 6						
†Amines	ug/kg	N/A	-	No effect	-	-

NOTES:

WS01 DATA EXCLUDED

*Minus total concentration of BTEX + MTBE.

**Minus total concentration of phenols, cresols and chlorinated phenols.

†Only required if current or historical site use indicates they may be present.

^Only applicable when selecting suitable barrier pipe (see UKWIR Guidance document)

RISK CRITERIA:

UK Water Industry Research (UKWIR). Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites. Ref. 10/WM/03/21. 2010

GROUND GAS SUMMARY

5241

Hayes Park - Hayes

TABLE SHOWING SUMMARY MONITORING DATA

MONITORING ID	MAXIMUM FLOW (l/hr)	MAXIMUM METHANE (% v/v)	MAXIMUM CO2 (% v/v)	MINIMUM O2 (% v/v)	MAXIMUM PID	NO. OF ROUNDS MONITORED
WS01	0	0.1	1	18.4	1.7	3
WS04	0.1	0.2	0.9	18.7	0.3	3
WS06	0	0.2	1.3	18.9	0.6	3
WS07	0	0.1	1.2	18.6	0.7	3
WS09	0	0.1	1.1	18.1	0.7	3
WS11	0	0.2	1.2	18.2	0.8	3
MAXIMUM*	0.1	0.2	1.3	18.1	1.7	3

* Reported value for oxygen in minimum.

TABLE SHOWING GROUND GAS ASSESSMENT PER ROUND

ROUND NO.	MAX FLOW	METHANE GSV	CO2 GSV	CHARACTERISTIC SITUATION	NHBC CLASSIFICATION	> ADVISORY THRESHOLD
1	0.1	0.0097	0.1067	2	Amber I	NO
2	0	0.0194	0.1261	2	Amber I	NO
3	0	0.0228	0.1368	2	Amber I	NO

TABLE SHOWING OVERALL GROUND GAS ASSESSMENT

		METHANE	CO2	RECOMMENDATION
GAS SCREENING VALUE (GSV)		0.0002	0.0013	
MODIFIED WILSON & CARD	CHARACTERISTIC SITUATION	1	1	Negligible gas regime identified and gas protection measures not considered necessary.
	COMBINED:	1		
NHBC - LOW RISE RESIDENTIAL	CLASSIFICATION	Green	Green	No special precautions required.
	COMBINED:	Green		

Advisory Threshold Exceeded?	METHANE	NO	CO2	NO	No additional recommendation

LUSTRE
CONSULTING

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Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

KJS4B-IJ8HI-QTXUA

Report is invalid if pages are removed.

Job name

updated 25-017029_HWOL

Description/Comments

Project

5241

Site

Hayes Park, Hayes

Classified by

Name:
Toby Hill
Date:
12 May 2025 13:43 GMT
Telephone:
01634 757 705

Company:
Lustre Consulting
Suite 1, Second Floor North,
The Fitted Rigging House,
Chatham
ME4 4TZ

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: **CERTIFIED**

Course	Date
Hazardous Waste Classification	06 Oct 2022

Next 3 year Refresher due by Oct 2025

Purpose of classification

2 - Material Characterisation

Address of the waste

Hayes Park, Hayes, UB4 8TA **Post Code** UB4 8TA

SIC for the process giving rise to the waste

41100 Development of building projects

Description of industry/producer giving rise to the waste

Redevelopment of disused office buildings to residential with amenity open space including a playground.

Description of the specific process, sub-process and/or activity that created the waste

Waste created during landscaping to facilitate the construction of parkland with amenity areas.

Description of the waste

Made Ground comprising brown sandy slightly gravelly CLAY; light brown mottled dark brown slightly gravelly CLAY; Black sandy GRAVEL. Anthropogenic inclusions such as brick, asphalt, flint, glass limestone, wood, tile and clinker.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01--02042025-0.70		Hazardous	HP 3(i), HP 7, HP 11	3
2	WS02--02042025-0.20		Non Hazardous		6
3	WS03--02042025-0.30		Non Hazardous		9
4	WS04--02042025-0.10		Non Hazardous		11
5	WS04--02042025-0.60		Hazardous	HP 14	14
6	WS05--02042025-0.40		Non Hazardous		17
7	WS06--03042025-0.10		Non Hazardous		19
8	WS06--03042025-0.60		Non Hazardous		21
9	WS07--03042025-0.50		Non Hazardous		24
10	WS08--01042025-0.20		Non Hazardous		26
11	WS08--01042025-0.80		Non Hazardous		29
12	WS09--01042025-0.40		Hazardous	HP 10, HP 14	31
13	WS10--01042025-0.50		Hazardous	HP 7	34
14	WS11--01042025-0.30		Non Hazardous		37
15	WS12--03042025-0.50		Non Hazardous		40

Related documents

#	Name	Description
1	updated 25-017029_HWOL.hwol	i2 Analytical .hwol file used to populate the Job
2	Contaminated Soils including Acid / Alkali Reserve	waste stream template used to create this Job

Report

Created by: Toby Hill

Created date: 12 May 2025 13:43 GMT

Classification of sample: WS01--02042025-0.70

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

Sample details

Sample name:
WS01--02042025-0.70
Moisture content:
13%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 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. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene (conc.: 1.7e-06%)
toluene (conc.: 2.0e-06%)
ethylbenzene (conc.: 2.9e-06%)

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

Because of determinands:

TPH (C6 to C40) petroleum group (conc.: 0.223%)
xylene (conc.: 0.00001%)

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.: 0.223%)

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.: 0.223%)

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14 mg/kg	1.32	16.082 mg/kg	0.00161 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		4.8 mg/kg	3.22	13.446 mg/kg	0.00134 %	✓	

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.398 mg/kg	0.0000398 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		31 mg/kg	1.462	45.308 mg/kg	0.00453 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	19.59 mg/kg	0.00196 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	24 mg/kg		20.88 mg/kg	0.00209 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<**LOD**
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		14 mg/kg	1.545	18.82 mg/kg	0.00188 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		45 mg/kg	1.245	48.731 mg/kg	0.00487 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		2560 mg/kg		2227.2 mg/kg	0.223 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		0.017 mg/kg		0.017 mg/kg	0.0000017 %		
15	toluene	601-021-00-3	203-625-9	108-88-3		0.02 mg/kg		0.02 mg/kg	0.000002 %		
16	ethylbenzene	601-023-00-4	202-849-4	100-41-4		0.029 mg/kg		0.029 mg/kg	0.0000029 %		
17	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		0.132 mg/kg		0.132 mg/kg	0.0000132 %		
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<**LOD**
19	pH			PH		10.1 pH		10.1 pH	10.1 pH		
20	naphthalene	601-052-00-2	202-049-5	91-20-3		68 mg/kg		59.16 mg/kg	0.00592 %	✓	
21	acenaphthylene		205-917-1	208-96-8		6.7 mg/kg		5.829 mg/kg	0.000583 %	✓	
22	acenaphthene		201-469-6	83-32-9		72 mg/kg		62.64 mg/kg	0.00626 %	✓	
23	fluorene		201-695-5	86-73-7		95 mg/kg		82.65 mg/kg	0.00827 %	✓	
24	phenanthrene		201-581-5	85-01-8		390 mg/kg		339.3 mg/kg	0.0339 %	✓	
25	anthracene		204-371-1	120-12-7		130 mg/kg		113.1 mg/kg	0.0113 %	✓	
26	fluoranthene		205-912-4	206-44-0		360 mg/kg		313.2 mg/kg	0.0313 %	✓	
27	pyrene		204-927-3	129-00-0		270 mg/kg		234.9 mg/kg	0.0235 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
28		benzo[a]anthracene				120	mg/kg		104.4	mg/kg	0.0104 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				110	mg/kg		95.7	mg/kg	0.00957 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				110	mg/kg		95.7	mg/kg	0.00957 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				54	mg/kg		46.98	mg/kg	0.0047 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				110	mg/kg		95.7	mg/kg	0.00957 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				50	mg/kg		43.5	mg/kg	0.00435 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				11	mg/kg		9.57	mg/kg	0.000957 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				51	mg/kg		44.37	mg/kg	0.00444 %	✓	
			205-883-8	191-24-2									
36	●	monohydric phenols				2.4	mg/kg		2.4	mg/kg	0.00024 %		
				P1186									
										Total:	0.416 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)

because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene (conc.: 1.7e-06%)
toluene (conc.: 2.0e-06%)
ethylbenzene (conc.: 2.9e-06%)

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

Because of determinands:

TPH (C6 to C40) petroleum group (conc.: 0.223%)
xylene (conc.: 0.00001%)

Classification of sample: WS02--02042025-0.20

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

Sample details

Sample name:
WS02--02042025-0.20
Moisture content:
18%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		45	mg/kg	1.32	48.72	mg/kg	0.00487 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		2.1	mg/kg	3.22	5.545	mg/kg	0.000554 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.7	mg/kg	1.142	2.529	mg/kg	0.000253 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		49	mg/kg	1.462	71.616	mg/kg	0.00716 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		480	mg/kg	1.126	443.15	mg/kg	0.0443 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1100	mg/kg		902	mg/kg	0.0902 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.9	mg/kg	1.353	2.109	mg/kg	0.000211 %	✓	
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		53	mg/kg	1.545	67.154	mg/kg	0.00672 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		640	mg/kg	1.245	653.226	mg/kg	0.0653 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		78	mg/kg		63.96	mg/kg	0.0064 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
19		pH				8	pH		8	pH	8pH		
				PH									
20		naphthalene				0.22	mg/kg		0.18	mg/kg	0.000018 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.18	mg/kg		0.148	mg/kg	0.0000148 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.3	mg/kg		0.246	mg/kg	0.0000246 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.32	mg/kg		0.262	mg/kg	0.0000262 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				2.9	mg/kg		2.378	mg/kg	0.000238 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.75	mg/kg		0.615	mg/kg	0.0000615 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				4.5	mg/kg		3.69	mg/kg	0.000369 %	✓	
			205-912-4	206-44-0									
27		pyrene				3.9	mg/kg		3.198	mg/kg	0.00032 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				2.2	mg/kg		1.804	mg/kg	0.00018 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				2.2	mg/kg		1.804	mg/kg	0.00018 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				3.3	mg/kg		2.706	mg/kg	0.000271 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.1	mg/kg		0.902	mg/kg	0.0000902 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				2.6	mg/kg		2.132	mg/kg	0.000213 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				1.5	mg/kg		1.23	mg/kg	0.000123 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.38	mg/kg		0.312	mg/kg	0.0000312 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				1.7	mg/kg		1.394	mg/kg	0.000139 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.228 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0064%)

Classification of sample: WS03--02042025-0.30

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

Sample details

Sample name:
WS03--02042025-0.30
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16	mg/kg	1.32	18.59	mg/kg	0.00186 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6	mg/kg	3.22	1.7	mg/kg	0.00017 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8	mg/kg	1.142	0.804	mg/kg	0.0000804 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30	mg/kg	1.462	43.847	mg/kg	0.00438 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		45	mg/kg	1.126	44.585	mg/kg	0.00446 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	150	mg/kg		132	mg/kg	0.0132 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5	mg/kg	1.353	0.596	mg/kg	0.0000596 %	✓	
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		23	mg/kg	1.545	31.275	mg/kg	0.00313 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		100	mg/kg	1.245	109.535	mg/kg	0.011 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<20	mg/kg		<20	mg/kg	<0.002 %		<**LOD**
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				7.1	pH		7.1	pH	7.1 pH		
				PH									
20		naphthalene				0.06	mg/kg		0.0528	mg/kg	0.00000528 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.05	mg/kg		0.044	mg/kg	0.0000044 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.07	mg/kg		0.0616	mg/kg	0.00000616 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.12	mg/kg		0.106	mg/kg	0.0000106 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				0.66	mg/kg		0.581	mg/kg	0.0000581 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.17	mg/kg		0.15	mg/kg	0.000015 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				0.98	mg/kg		0.862	mg/kg	0.0000862 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.79	mg/kg		0.695	mg/kg	0.0000695 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.45	mg/kg		0.396	mg/kg	0.0000396 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.42	mg/kg		0.37	mg/kg	0.000037 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.59	mg/kg		0.519	mg/kg	0.0000519 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.23	mg/kg		0.202	mg/kg	0.0000202 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.52	mg/kg		0.458	mg/kg	0.0000458 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.25	mg/kg		0.22	mg/kg	0.000022 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.06	mg/kg		0.0528	mg/kg	0.00000528 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.23	mg/kg		0.202	mg/kg	0.0000202 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.0388 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS04--02042025-0.10

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

Sample details

Sample name:
WS04--02042025-0.10
Moisture content:
13%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17 mg/kg	1.32	19.528 mg/kg	0.00195 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.6 mg/kg	3.22	4.482 mg/kg	0.000448 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.5 mg/kg	1.142	1.491 mg/kg	0.000149 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		64 mg/kg	1.126	62.689 mg/kg	0.00627 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	200 mg/kg		174 mg/kg	0.0174 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<**LOD**
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		23 mg/kg	1.545	30.919 mg/kg	0.00309 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		140 mg/kg	1.245	151.606 mg/kg	0.0152 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		52 mg/kg		45.24 mg/kg	0.00452 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				6.9	pH		6.9	pH	6.9 pH		
				PH									
20		naphthalene				0.11	mg/kg		0.0957	mg/kg	0.00000957 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				0.4	mg/kg		0.348	mg/kg	0.0000348 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.26	mg/kg		0.226	mg/kg	0.0000226 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				3.1	mg/kg		2.697	mg/kg	0.00027 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.67	mg/kg		0.583	mg/kg	0.0000583 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				5	mg/kg		4.35	mg/kg	0.000435 %	✓	
			205-912-4	206-44-0									
27		pyrene				4.3	mg/kg		3.741	mg/kg	0.000374 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				2.2	mg/kg		1.914	mg/kg	0.000191 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				2.2	mg/kg		1.914	mg/kg	0.000191 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				2.6	mg/kg		2.262	mg/kg	0.000226 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.2	mg/kg		1.044	mg/kg	0.000104 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				2.4	mg/kg		2.088	mg/kg	0.000209 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				1.2	mg/kg		1.044	mg/kg	0.000104 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.35	mg/kg		0.305	mg/kg	0.0000305 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				1.2	mg/kg		1.044	mg/kg	0.000104 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.056 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)

because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00452%)

Classification of sample: WS04--02042025-0.60

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

Sample details

Sample name:
WS04--02042025-0.60
Moisture content:
21%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

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

Because of determinands:

lead compounds with the exception of those specified elsewhere in this Annex (Note 1 conc.: 0.245%)
zinc oxide (compound conc.: 0.157%)

Determinands

Moisture content: 21% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		90 mg/kg	1.32	93.875 mg/kg	0.00939 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		4.6 mg/kg	3.22	11.701 mg/kg	0.00117 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.9 mg/kg	1.142	2.617 mg/kg	0.000262 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		61 mg/kg	1.462	89.155 mg/kg	0.00892 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		1100 mg/kg	1.126	978.397 mg/kg	0.0978 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	3100 mg/kg		2449 mg/kg	0.245 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		4.9 mg/kg	1.353	5.239 mg/kg	0.000524 %	✓	
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		100 mg/kg	1.545	122.07 mg/kg	0.0122 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		1600 mg/kg	1.245	1573.318 mg/kg	0.157 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		151 mg/kg		119.29 mg/kg	0.0119 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		603-181-00-X	216-653-1	1634-04-4									
14		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
15		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
19		pH				7.4	pH		7.4	pH	7.4 pH		
				PH									
20		naphthalene				0.13	mg/kg		0.103	mg/kg	0.0000103 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.31	mg/kg		0.245	mg/kg	0.0000245 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23		fluorene				0.06	mg/kg		0.0474	mg/kg	0.00000474 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				0.85	mg/kg		0.671	mg/kg	0.0000671 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.31	mg/kg		0.245	mg/kg	0.0000245 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				2.6	mg/kg		2.054	mg/kg	0.000205 %	✓	
			205-912-4	206-44-0									
27		pyrene				2.7	mg/kg		2.133	mg/kg	0.000213 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.9	mg/kg		1.501	mg/kg	0.00015 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				2.2	mg/kg		1.738	mg/kg	0.000174 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				3.8	mg/kg		3.002	mg/kg	0.0003 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.8	mg/kg		1.422	mg/kg	0.000142 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				3	mg/kg		2.37	mg/kg	0.000237 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				2.3	mg/kg		1.817	mg/kg	0.000182 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.59	mg/kg		0.466	mg/kg	0.0000466 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				2.7	mg/kg		2.133	mg/kg	0.000213 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
37		asbestos				30	mg/kg		23.7	mg/kg	0.00237 %	✓	
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6									

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
				77536-67-5 12001-29-5							
								Total:	0.549 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%) because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0119%)

Classification of sample: WS05--02042025-0.40

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

Sample details

Sample name:
WS05--02042025-0.40
Moisture content:
14%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		25	mg/kg	1.32	28.387	mg/kg	0.00284 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7	mg/kg	3.22	1.938	mg/kg	0.000194 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9	mg/kg	1.142	0.884	mg/kg	0.0000884 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		40	mg/kg	1.462	58.462	mg/kg	0.00585 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		28	mg/kg	1.126	27.111	mg/kg	0.00271 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	43	mg/kg		36.98	mg/kg	0.0037 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		27	mg/kg	1.545	35.879	mg/kg	0.00359 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		78	mg/kg	1.245	83.495	mg/kg	0.00835 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<20	mg/kg		<20	mg/kg	<0.002 %		<**LOD**
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				5.8	pH		5.8	pH	5.8 pH		
				PH									
20		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				0.07	mg/kg		0.0602	mg/kg	0.00000602 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				0.48	mg/kg		0.413	mg/kg	0.0000413 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.09	mg/kg		0.0774	mg/kg	0.00000774 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				0.67	mg/kg		0.576	mg/kg	0.0000576 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.55	mg/kg		0.473	mg/kg	0.0000473 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.28	mg/kg		0.241	mg/kg	0.0000241 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.24	mg/kg		0.206	mg/kg	0.0000206 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.38	mg/kg		0.327	mg/kg	0.0000327 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.13	mg/kg		0.112	mg/kg	0.0000112 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.28	mg/kg		0.241	mg/kg	0.0000241 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.14	mg/kg		0.12	mg/kg	0.000012 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.12	mg/kg		0.103	mg/kg	0.0000103 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.0276 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06--03042025-0.10

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

Sample details

Sample name:
WS06--03042025-0.10
Moisture content:
11%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16 mg/kg	1.32	18.801 mg/kg	0.00188 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.9 mg/kg	3.22	2.579 mg/kg	0.000258 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.4 mg/kg	1.142	1.423 mg/kg	0.000142 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		53 mg/kg	1.126	53.108 mg/kg	0.00531 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	140 mg/kg		124.6 mg/kg	0.0125 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.4 mg/kg	1.353	0.482 mg/kg	0.0000482 %	✓	
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		20 mg/kg	1.545	27.504 mg/kg	0.00275 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		140 mg/kg	1.245	155.091 mg/kg	0.0155 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<20 mg/kg		<20 mg/kg	<0.002 %		<**LOD**
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				8	pH		8	pH	8pH		
				PH									
20		naphthalene				0.06	mg/kg		0.0534	mg/kg	0.00000534 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.08	mg/kg		0.0712	mg/kg	0.00000712 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.12	mg/kg		0.107	mg/kg	0.0000107 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.09	mg/kg		0.0801	mg/kg	0.00000801 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				1.2	mg/kg		1.068	mg/kg	0.000107 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.31	mg/kg		0.276	mg/kg	0.0000276 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				2.7	mg/kg		2.403	mg/kg	0.00024 %	✓	
			205-912-4	206-44-0									
27		pyrene				2.4	mg/kg		2.136	mg/kg	0.000214 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.3	mg/kg		1.157	mg/kg	0.000116 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.3	mg/kg		1.157	mg/kg	0.000116 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				2	mg/kg		1.78	mg/kg	0.000178 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.7	mg/kg		0.623	mg/kg	0.0000623 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.6	mg/kg		1.424	mg/kg	0.000142 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.86	mg/kg		0.765	mg/kg	0.0000765 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.23	mg/kg		0.205	mg/kg	0.0000205 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.86	mg/kg		0.765	mg/kg	0.0000765 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.0444 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS06--03042025-0.60

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

Sample details

Sample name:
WS06--03042025-0.60
Moisture content:
16%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		58	mg/kg	1.32	64.326	mg/kg	0.00643 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.4	mg/kg	3.22	3.787	mg/kg	0.000379 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.3	mg/kg	1.142	2.207	mg/kg	0.000221 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		49	mg/kg	1.462	71.616	mg/kg	0.00716 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		630	mg/kg	1.126	595.82	mg/kg	0.0596 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1600	mg/kg		1344	mg/kg	0.134 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		2.7	mg/kg	1.353	3.07	mg/kg	0.000307 %	✓	
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		89	mg/kg	1.545	115.518	mg/kg	0.0116 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		900	mg/kg	1.245	941.004	mg/kg	0.0941 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		39	mg/kg		32.76	mg/kg	0.00328 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				7.7	pH		7.7	pH	7.7 pH		
				PH									
20		naphthalene				0.25	mg/kg		0.21	mg/kg	0.000021 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.17	mg/kg		0.143	mg/kg	0.0000143 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.32	mg/kg		0.269	mg/kg	0.0000269 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.24	mg/kg		0.202	mg/kg	0.0000202 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				3.2	mg/kg		2.688	mg/kg	0.000269 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.64	mg/kg		0.538	mg/kg	0.0000538 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				5.5	mg/kg		4.62	mg/kg	0.000462 %	✓	
			205-912-4	206-44-0									
27		pyrene				5	mg/kg		4.2	mg/kg	0.00042 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				2.8	mg/kg		2.352	mg/kg	0.000235 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				3	mg/kg		2.52	mg/kg	0.000252 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				4	mg/kg		3.36	mg/kg	0.000336 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.9	mg/kg		1.596	mg/kg	0.00016 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				3.4	mg/kg		2.856	mg/kg	0.000286 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				2	mg/kg		1.68	mg/kg	0.000168 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.5	mg/kg		0.42	mg/kg	0.000042 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				2.2	mg/kg		1.848	mg/kg	0.000185 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
37		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.32 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00328%)

Classification of sample: WS07--03042025-0.50

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

Sample details

Sample name:
WS07--03042025-0.50
Moisture content:
17%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		24 mg/kg	1.32	26.301 mg/kg	0.00263 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		2.1 mg/kg	3.22	5.612 mg/kg	0.000561 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.759 mg/kg	0.0000759 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		87 mg/kg	1.126	81.3 mg/kg	0.00813 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	260 mg/kg		215.8 mg/kg	0.0216 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.4 mg/kg	1.353	0.449 mg/kg	0.0000449 %	✓	
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		33 mg/kg	1.545	42.323 mg/kg	0.00423 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		170 mg/kg	1.245	175.629 mg/kg	0.0176 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<20 mg/kg		<20 mg/kg	<0.002 %		<LOD
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				7.9	pH		7.9	pH	7.9 pH		
				PH									
20		naphthalene				0.1	mg/kg		0.083	mg/kg	0.0000083 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				0.18	mg/kg		0.149	mg/kg	0.0000149 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.13	mg/kg		0.108	mg/kg	0.0000108 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				1.4	mg/kg		1.162	mg/kg	0.000116 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.31	mg/kg		0.257	mg/kg	0.0000257 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				2.2	mg/kg		1.826	mg/kg	0.000183 %	✓	
			205-912-4	206-44-0									
27		pyrene				2	mg/kg		1.66	mg/kg	0.000166 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.1	mg/kg		0.913	mg/kg	0.0000913 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.1	mg/kg		0.913	mg/kg	0.0000913 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				1.3	mg/kg		1.079	mg/kg	0.000108 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.61	mg/kg		0.506	mg/kg	0.0000506 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.2	mg/kg		0.996	mg/kg	0.0000996 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.62	mg/kg		0.515	mg/kg	0.0000515 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.14	mg/kg		0.116	mg/kg	0.0000116 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.65	mg/kg		0.54	mg/kg	0.000054 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.061 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS08--01042025-0.20

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

Sample details

Sample name:
WS08--01042025-0.20
Moisture content:
8.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.3% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15	mg/kg	1.32	18.161	mg/kg	0.00182 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7	mg/kg	3.22	2.067	mg/kg	0.000207 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.629	mg/kg	0.0000629 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	36.539	mg/kg	0.00365 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		37	mg/kg	1.126	38.2	mg/kg	0.00382 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	140	mg/kg		128.38	mg/kg	0.0128 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		21	mg/kg	1.545	29.756	mg/kg	0.00298 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		150	mg/kg	1.245	171.21	mg/kg	0.0171 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		198	mg/kg		181.566	mg/kg	0.0182 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
19		pH				8.8	pH		8.8	pH	8.8 pH		
				PH									
20		naphthalene				0.13	mg/kg		0.119	mg/kg	0.0000119 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.21	mg/kg		0.193	mg/kg	0.0000193 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.32	mg/kg		0.293	mg/kg	0.0000293 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.28	mg/kg		0.257	mg/kg	0.0000257 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				3.7	mg/kg		3.393	mg/kg	0.000339 %	✓	
			201-581-5	85-01-8									
25		anthracene				1	mg/kg		0.917	mg/kg	0.0000917 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				7.7	mg/kg		7.061	mg/kg	0.000706 %	✓	
			205-912-4	206-44-0									
27		pyrene				6.4	mg/kg		5.869	mg/kg	0.000587 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				4.1	mg/kg		3.76	mg/kg	0.000376 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				3.8	mg/kg		3.485	mg/kg	0.000348 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				5.4	mg/kg		4.952	mg/kg	0.000495 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				2	mg/kg		1.834	mg/kg	0.000183 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				4.4	mg/kg		4.035	mg/kg	0.000403 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				2.2	mg/kg		2.017	mg/kg	0.000202 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.51	mg/kg		0.468	mg/kg	0.0000468 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				2.3	mg/kg		2.109	mg/kg	0.000211 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.0647 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0182%)

Classification of sample: WS08--01042025-0.80

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

Sample details

Sample name:
WS08--01042025-0.80
Moisture content:
21%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		32	mg/kg	1.32	33.378	mg/kg	0.00334 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		2	mg/kg	3.22	5.087	mg/kg	0.000509 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<**LOD**
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		40	mg/kg	1.462	58.462	mg/kg	0.00585 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		130	mg/kg	1.126	115.629	mg/kg	0.0116 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	440	mg/kg		347.6	mg/kg	0.0348 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.8	mg/kg	1.353	0.855	mg/kg	0.0000855 %	✓	
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		40	mg/kg	1.545	48.828	mg/kg	0.00488 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		350	mg/kg	1.245	344.163	mg/kg	0.0344 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<20	mg/kg		<20	mg/kg	<0.002 %		<**LOD**
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
20		naphthalene				0.07	mg/kg		0.0553	mg/kg	0.00000553 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				0.31	mg/kg		0.245	mg/kg	0.0000245 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.18	mg/kg		0.142	mg/kg	0.0000142 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				3	mg/kg		2.37	mg/kg	0.000237 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.47	mg/kg		0.371	mg/kg	0.0000371 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				4.3	mg/kg		3.397	mg/kg	0.00034 %	✓	
			205-912-4	206-44-0									
27		pyrene				3.7	mg/kg		2.923	mg/kg	0.000292 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.6	mg/kg		1.264	mg/kg	0.000126 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.9	mg/kg		1.501	mg/kg	0.00015 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				2.3	mg/kg		1.817	mg/kg	0.000182 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.73	mg/kg		0.577	mg/kg	0.0000577 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.6	mg/kg		1.264	mg/kg	0.000126 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.71	mg/kg		0.561	mg/kg	0.0000561 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.83	mg/kg		0.656	mg/kg	0.0000656 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
										Total:	0.0971 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS09--01042025-0.40

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

Sample details

Sample name:
WS09--01042025-0.40
Moisture content:
22%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (Note 1 conc.: 0.312%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

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

Because of determinands:

dicopper oxide; copper (I) oxide (compound conc.: 0.105%)
lead compounds with the exception of those specified elsewhere in this Annex (Note 1 conc.: 0.312%)
zinc oxide (compound conc.: 0.155%)

Determinands

Moisture content: 22% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		100 mg/kg	1.32	102.985 mg/kg	0.0103 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		2.5 mg/kg	3.22	6.279 mg/kg	0.000628 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		3.8 mg/kg	1.142	3.386 mg/kg	0.000339 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		71 mg/kg	1.462	103.77 mg/kg	0.0104 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		1200 mg/kg	1.126	1053.831 mg/kg	0.105 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	4000 mg/kg		3120 mg/kg	0.312 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		5.1 mg/kg	1.353	5.384 mg/kg	0.000538 %	✓	

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		110	mg/kg	1.545	132.577	mg/kg	0.0133 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		1600	mg/kg	1.245	1553.403	mg/kg	0.155 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		220	mg/kg		171.6	mg/kg	0.0172 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
16	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
17	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1	mg/kg	1.884	1.884	mg/kg	0.000188 %		
19	pH			PH		7.6	pH		7.6	pH	7.6 pH		
20	naphthalene	601-052-00-2	202-049-5	91-20-3		0.08	mg/kg		0.0624	mg/kg	0.00000624 %	✓	
21	acenaphthylene		205-917-1	208-96-8		0.19	mg/kg		0.148	mg/kg	0.0000148 %	✓	
22	acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23	fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
24	phenanthrene		201-581-5	85-01-8		1.1	mg/kg		0.858	mg/kg	0.0000858 %	✓	
25	anthracene		204-371-1	120-12-7		0.23	mg/kg		0.179	mg/kg	0.0000179 %	✓	
26	fluoranthene		205-912-4	206-44-0		3.2	mg/kg		2.496	mg/kg	0.00025 %	✓	
27	pyrene		204-927-3	129-00-0		3.5	mg/kg		2.73	mg/kg	0.000273 %	✓	
28	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.1	mg/kg		1.638	mg/kg	0.000164 %	✓	
29	chrysene	601-048-00-0	205-923-4	218-01-9		2.4	mg/kg		1.872	mg/kg	0.000187 %	✓	
30	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		4.3	mg/kg		3.354	mg/kg	0.000335 %	✓	
31	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.8	mg/kg		1.404	mg/kg	0.00014 %	✓	
32	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.1	mg/kg		2.418	mg/kg	0.000242 %	✓	
33	indeno[123-cd]pyrene		205-893-2	193-39-5		1.9	mg/kg		1.482	mg/kg	0.000148 %	✓	
34	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.43	mg/kg		0.335	mg/kg	0.0000335 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
35		benzo[ghi]perylene				2.6	mg/kg		2.028	mg/kg	0.000203 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
37		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.628 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%) because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0172%)

Classification of sample: WS10--01042025-0.50

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

Sample details

Sample name:
WS10--01042025-0.50
Moisture content:
15%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

asbestos (conc.: 0.278%)

Determinands

Moisture content: 15% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		22 mg/kg	1.32	24.69 mg/kg	0.00247 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.7 mg/kg	3.22	4.653 mg/kg	0.000465 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.5 mg/kg	1.142	1.456 mg/kg	0.000146 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		100 mg/kg	1.126	95.701 mg/kg	0.00957 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	290 mg/kg		246.5 mg/kg	0.0246 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5 mg/kg	1.353	0.575 mg/kg	0.0000575 %	✓	
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		30 mg/kg	1.545	39.402 mg/kg	0.00394 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		200 mg/kg	1.245	211.601 mg/kg	0.0212 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		80 mg/kg		68 mg/kg	0.0068 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		603-181-00-X	216-653-1	1634-04-4									
14		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
15		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
19		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
20		naphthalene				0.12	mg/kg		0.102	mg/kg	0.0000102 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.09	mg/kg		0.0765	mg/kg	0.00000765 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.1	mg/kg		0.085	mg/kg	0.0000085 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.08	mg/kg		0.068	mg/kg	0.0000068 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				1.3	mg/kg		1.105	mg/kg	0.000111 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.24	mg/kg		0.204	mg/kg	0.0000204 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				2.6	mg/kg		2.21	mg/kg	0.000221 %	✓	
			205-912-4	206-44-0									
27		pyrene				2.5	mg/kg		2.125	mg/kg	0.000213 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.3	mg/kg		1.105	mg/kg	0.000111 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.5	mg/kg		1.275	mg/kg	0.000127 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				1.9	mg/kg		1.615	mg/kg	0.000162 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.88	mg/kg		0.748	mg/kg	0.0000748 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.7	mg/kg		1.445	mg/kg	0.000145 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.78	mg/kg		0.663	mg/kg	0.0000663 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.19	mg/kg		0.161	mg/kg	0.0000161 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				1	mg/kg		0.85	mg/kg	0.000085 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
37		asbestos				3270	mg/kg		2779.5	mg/kg	0.278 %	✓	
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6									

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
				77536-67-5 12001-29-5							
								Total:	0.354 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%) because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0068%)

Classification of sample: WS11--01042025-0.30

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

Sample details

Sample name:
WS11--01042025-0.30
Moisture content:
24%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 24% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		59	mg/kg	1.32	59.203	mg/kg	0.00592 %	✓	
2		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.5	mg/kg	3.22	3.671	mg/kg	0.000367 %	✓	
3		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.9	mg/kg	1.142	1.65	mg/kg	0.000165 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		50	mg/kg	1.462	73.078	mg/kg	0.00731 %		
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		730	mg/kg	1.126	624.643	mg/kg	0.0625 %	✓	
7		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1900	mg/kg		1444	mg/kg	0.144 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		2.9	mg/kg	1.353	2.983	mg/kg	0.000298 %	✓	
9		nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		74	mg/kg	1.545	86.901	mg/kg	0.00869 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
11		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		970	mg/kg	1.245	917.603	mg/kg	0.0918 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		91	mg/kg		69.16	mg/kg	0.00692 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
20		naphthalene				0.26	mg/kg		0.198	mg/kg	0.0000198 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.1	mg/kg		0.076	mg/kg	0.0000076 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.07	mg/kg		0.0532	mg/kg	0.00000532 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.05	mg/kg		0.038	mg/kg	0.0000038 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				1.1	mg/kg		0.836	mg/kg	0.0000836 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.19	mg/kg		0.144	mg/kg	0.0000144 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				2.5	mg/kg		1.9	mg/kg	0.00019 %	✓	
			205-912-4	206-44-0									
27		pyrene				2.5	mg/kg		1.9	mg/kg	0.00019 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				1.4	mg/kg		1.064	mg/kg	0.000106 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				1.7	mg/kg		1.292	mg/kg	0.000129 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				2.4	mg/kg		1.824	mg/kg	0.000182 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1	mg/kg		0.76	mg/kg	0.000076 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				1.7	mg/kg		1.292	mg/kg	0.000129 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				1	mg/kg		0.76	mg/kg	0.000076 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				1.3	mg/kg		0.988	mg/kg	0.0000988 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
37		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.33 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00692%)

Classification of sample: WS12--03042025-0.50

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

Sample details

Sample name:
WS12--03042025-0.50
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15 mg/kg	1.32	17.428 mg/kg	0.00174 %	✓	
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6 mg/kg	3.22	1.7 mg/kg	0.00017 %	✓	
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1 mg/kg	1.142	1.005 mg/kg	0.000101 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24 mg/kg	1.462	35.077 mg/kg	0.00351 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		150 mg/kg	1.126	148.617 mg/kg	0.0149 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	270 mg/kg		237.6 mg/kg	0.0238 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.4 mg/kg	1.353	0.476 mg/kg	0.0000476 %	✓	
9	nickel { nickel(IV) oxide (nickel dioxide) }	028-004-00-8	234-823-3	12035-36-8		19 mg/kg	1.545	25.836 mg/kg	0.00258 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
11	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		190 mg/kg	1.245	208.116 mg/kg	0.0208 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		94 mg/kg		82.72 mg/kg	0.00827 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
19		pH				8.3	pH		8.3	pH	8.3 pH		
				PH									
20		naphthalene				0.15	mg/kg		0.132	mg/kg	0.0000132 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.12	mg/kg		0.106	mg/kg	0.0000106 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				0.21	mg/kg		0.185	mg/kg	0.0000185 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.22	mg/kg		0.194	mg/kg	0.0000194 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				2.7	mg/kg		2.376	mg/kg	0.000238 %	✓	
			201-581-5	85-01-8									
25		anthracene				0.61	mg/kg		0.537	mg/kg	0.0000537 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				5.1	mg/kg		4.488	mg/kg	0.000449 %	✓	
			205-912-4	206-44-0									
27		pyrene				4.5	mg/kg		3.96	mg/kg	0.000396 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				2.4	mg/kg		2.112	mg/kg	0.000211 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				2.3	mg/kg		2.024	mg/kg	0.000202 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				3.4	mg/kg		2.992	mg/kg	0.000299 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				1.2	mg/kg		1.056	mg/kg	0.000106 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				2.6	mg/kg		2.288	mg/kg	0.000229 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				1.2	mg/kg		1.056	mg/kg	0.000106 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				1.4	mg/kg		1.232	mg/kg	0.000123 %	✓	
			205-883-8	191-24-2									
36		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.0783 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Flammable has been discounted as a viable Hazardous Property as the soils considered within this assessment are a solid waste without a free draining liquid phase. Advice from the laboratory indicates that testing for flammability was not appropriate due to the low level of TPH. The waste does not display this hazardous property.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00827%)

Appendix A: Classifier defined and non GB MCL determinands

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

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **lead compounds with the exception of those specified elsewhere in this Annex**

GB MCL index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

- **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

- **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 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 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Muta. 2; H341 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , Acute Tox. 3; H301 , STOT RE 2; H373 , Skin Corr. 1B; H314 , Skin Corr. 1B; H314 >= 3 % , Skin Irrit. 2; H315 1 <= conc. < 3 % , Eye Irrit. 2; H319 1 <= conc. < 3 % , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic.

boron {diboron trioxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility.

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history.

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight.

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight.

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected.

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Metallic compounds are not considered to be present in their chromate form as the laboratory analysis has demonstrated that insufficient concentrations of hexavalent chromium are present to enable the formation of chromates within the soils. It is considered likely that any metallic compounds present within the soils are most likely present in their oxide form, rather than as chlorides, sulphates, sulphides, carbonates or phosphates

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight.

nickel {nickel(IV) oxide (nickel dioxide)}

Metallic compounds are not considered to be present in their chromate form as the laboratory analysis has demonstrated that insufficient concentrations of hexavalent chromium are present to enable the formation of chromates within the soils. It is considered likely that any metallic compounds present within the soils are most likely present in their oxide form, rather than as chlorides, sulphates, sulphides, carbonates or phosphates

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight.

zinc {zinc oxide}

Metallic compounds are not considered to be present in their chromate form as the laboratory analysis has demonstrated that insufficient concentrations of hexavalent chromium are present to enable the formation of chromates within the soils. It is considered likely that any metallic compounds present within the soils are most likely present in their oxide form, rather than as chlorides, sulphates, sulphides, carbonates or phosphates

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide]

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2025.127.6614.12023 (07 May 2025)
HazWasteOnline Database: 2025.127.6614.12023 (07 May 2025)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021
GB MCL List v2.0 - version 2.0 of 20th October 2023
GB MCL List v3.0 - version 3.0 of 11th January 2024
GB MCL List v4.0 - version 4.0 of 2nd March 2024
GB MCL List v5.0 - version 5.0 of 26th June 2024
GB MCL List v6.0 - version 6.0 of 15th February 2025