

National Trust

Castlefield Viaduct, Manchester

Ground investigation report and contaminated land risk assessment

Reference: CVI-ARUP-Ground investigation report and contaminated land risk assessment

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Ove Arup & Partners Limited

3 St Paul's Place
Norfolk Street
Sheffield S1 2JE
United Kingdom
arup.com

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1. Introduction

Ove Arup and Partners Ltd (Arup) has been commissioned by the National Trust to prepare this report summarising the results of a ground investigation undertaken to inform the Castlefield Viaduct development in Manchester.

Ground investigation was undertaken by Igne along Castlefield Viaduct in July 2024 [1]. The purpose of this report is to provide an assessment of the results of the ground investigation to update the ground contamination risk assessment presented in the Arup 2024 desk study [2]. Ground investigation was undertaken by Royal Haskoning DHV (RH) [3] along the eastern part of the viaduct in 2021 and information from this investigation has been used to further inform this assessment.

2. Site location

The site is elevated on Castlefield viaduct to the west of Manchester city centre (see Figure 1). The Bridgewater Canal is aligned parallel to the viaduct and connects to the River Irwell, approximately 200m to the west of the site.

Castlefield Viaduct is a 330-metre long, grade II listed structure. To the east of the site a 200m portion of viaduct comprises National Trust public realm and gardens. On the site the rail track has been removed and the surface contains railway ballast and other debris. In the east of the site the viaduct is crossed by steel spans while the west of the viaduct is a masonry structure.

Figure 1 Site location



3. Proposed development

The proposed development forms Phase 2 of the Castlefield Viaduct scheme and will comprise an urban park. The made ground along the viaduct will be removed and disposed offsite and replaced with topsoil or a mound with low-cost decorative grass. Paint flaking off the steel spans will be brushed down and debris

removed from site during development. A lift shaft and stair to allow access to the viaduct from the A57 will be constructed in the west of the site.

4. Ground investigation

4.1 Royal Haskoning DHV (2021)

Royal Haskoning DHV (RH) undertook ground investigation along the viaduct in 2012 on behalf the National Trust. The ground investigation comprised the excavation of ten hand dug pits (HP101 to HP110) to obtain samples of the made ground cover for geoenvironmental laboratory testing and ten paint samples (PS101 to PS110) were obtained from the steel viaduct spans.

Locations HP101 to HP105 and PS 101 to PS105 are within the current site boundary and have been considered in this assessment. The ground investigation locations are shown on Drawing 1.

4.2 Igne (2024)

Igne was appointed by the National Trust to undertake ground investigation on site. The intrusive site work was completed on 16th July 2024 and comprised the excavation of five hand dug pits (OP201 to OP205) to a depth of 0.3m within the made ground cover along the viaduct in the west of the site. The ground investigation locations are shown on Drawing 1 and the factual report is included in Appendix A.

A soil sample for geoenvironmental laboratory testing was obtained from each hand dug pit. Soil and leachate analysis was undertaken on each sample.

Further ground investigation at ground level beneath the viaduct to obtain geotechnical and geoenvironmental information for the proposed lift shaft and stair access in the west of the site is proposed. This ground investigation will be undertaken at a later date and the results will be reported separately.

5. Ground conditions

The ground conditions along the viaduct comprised made ground to a depth of 0.3m directly on the viaduct structure. Soils sampled were typically described as a dark brown to black sandy clayey gravel and sandy gravel with occasional rootlets fine to coarse sand and fine to coarse gravels of ballast, limestone, clinker and brick.

Visual and olfactory evidence of contamination was reported as an oily/greasy feel on the soil with some hydrocarbon staining on the ballast sampled in the east of the site during the 2021 ground investigation. No evidence of visual or olfactory contamination was recorded during the 2024 ground investigation.

6. Geoenvironmental risk assessment

6.1 Initial conceptual model

A preliminary conceptual site model (CSM) was produced for the proposed development following the framework outlined within the Environment Agency's Land Contamination Risk Management (LCRM) guidance¹.

The CSM was presented in the Arup (2024) desk study [2] and is summarised in Table 1.

¹ Environment Agency (2020) Land Contamination Risk Management [online] <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

Table 1 Preliminary conceptual model

Sources		Pathways	Receptors
Made ground on the viaduct	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→ Site workers during construction and site neighbours
		Inhalation of volatile contaminants	
	X	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→ Future site users and maintenance workers
	X	Leaching of contaminants and migration via surface water drainage network	→ River Medlock, Bridgewater Canal
Paint flakes on viaduct steel spans	→	Direct exposure via dermal contact, ingestion or inhalation of paint	→ Site workers during construction and future maintenance workers
			→ Future site users (members of public)
Made ground at ground level	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→ Site workers during construction and site neighbours
		Inhalation of volatile contaminants	→ Maintenance workers
	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	X Future site users
	→	Creation of preferential migration pathway via piling	→ Groundwater within bedrock geology (Principal aquifer)
Leachable contaminants in the made ground at ground level	X	Vertical migration of dissolved phase contamination	→ Groundwater within bedrock geology (Principal aquifer)
		Lateral migration of dissolved phase contamination in groundwater	→ River Medlock and Bridgewater Canal
Soils aggressive to building materials at ground level	→	Direct contact with aggressive soils	→ Buried concrete Buried water supply pipes

The ground investigation data assessed in this report was designed to inform further assessment of the potential contaminant linkages associated with sources of contamination on the viaduct level identified above. The pollutant linkages associated with potential sources of contamination at ground level will be assessed separately when the ground investigation in this part of the site is completed.

The results of the chemical testing of soil, soil leachate and paint samples have been assessed to determine the potential significance of the levels recorded. Results have been compared against appropriate screening criteria, intended to be protective of human health and the wider environment.

6.2 Human health screening assessment

6.2.1 Assessment criteria

The soil results have been compared to Arup human health generic assessment criteria (GAC) for a public open space end use which is considered to be the most appropriate scenario for the proposed development. The GAC have been generated for a soil with organic matter content of 6% (based on average organic matter content identified in soil samples taken on site) using the Contaminated Land Exposure Assessment (CLEA) model (v1.07).

6.2.2 Soil screening results

The results of the soil screening are presented in Appendix B. A total of ten soil samples obtained from the made ground were screened and contaminants which exceed the GAC are summarised in Table 2.

Table 2 Soil exceedances of human health GAC

Determinand	GAC (mg/kg)	Concentration range (mg/kg)	No. samples >GAC	Locations > GAC
Lead	1,300	48 to 4,400	2	HP103 and HP105
Benzo(a)anthracene	63	2 to 97	1	HP103
Benzo(b)fluoranthene	16	1.7 to 130	3	HP101, HP103 and HP105
Benzo(a)pyrene	13	1.1 to 62	3	HP101, HP103 and HP105
Dibenzo(a,h)anthracene	1.4	0.18 to 12	5	HP101 to HP105

No asbestos was encountered in any of the samples.

6.2.3 Paint samples

Paint samples were obtained from the steel spans on the viaduct during the 2021 RH ground investigation with five paint samples within the current site (PS101 to PS105). The paint samples were tested for heavy metals and assessed in the RH (2021) risk assessment report [3].

The paint was found to contain high concentrations of lead and zinc and the results are summarised in Table 3.

Table 3 Summary of paint sample results (from RH 2021 ground investigation)

Determinand	Number of samples	Concentration range (mg/kg)
Cadmium	5	<0.2 - 10
Chromium	5	120 – 310
Lead	5	55,000 – 62,000
Nickel	5	13 – 30
Zinc	5	1,200 – 5,800

6.2.4 Risk assessment

The viaduct is covered with a layer of made ground and ground investigation has identified the presence of elevated concentrations of lead and polycyclic aromatic hydrocarbons (PAHs) which could pose a potential risk to human health where site users come into contact with soil on site. The made ground will be removed from the viaduct and disposed off-site during the construction works. Clean soil will be imported to site to form soft landscaping areas of the urban park. Therefore, there will be no risk to future site users from contact with made ground as this potential source of contamination will be removed.

The steel spans on the viaduct which cross the eastern part of the site are covered in paint that has been identified as containing elevated concentrations of metals (lead and zinc). The paint has been observed to have deteriorated and flakes of paint are present on the ballast. There is a risk that future site users could be exposed to contaminants in the paint flakes by direct contact and ingestion pathways. During the development works the steel spans will be brushed down to remove any loose paint and all paint flake debris will be swept up and removed from site prior to installation of the urban park. While this will prevent paint flaking on the urban park in the short term, over the longer term there may be continued degradation of the steel spans and any remaining paintwork may flake off and be deposited on the soil surface within the park.

A new balustrade, spaced off the steel spans, will be installed within the park to prevent members of the public from getting too close to the paintwork. While exposure to the paint for future site users is possible it is considered unlikely that members of the public would be interfering with the paint work on the steel spans or disturbing the soils within the park where paint flakes may be present and therefore there will be a low risk to future site users from direct exposure to the viaduct paintwork.

The biggest risk from interaction with soils and flaking paint onsite arises during the construction works. There is a possibility that the made ground and paint flakes may pose a short-term risk to human health for the construction workforce via potential exposure pathways including dermal contact, dust/fibre inhalation and ingestion pathways outdoors. There is also a possible risk to site neighbours during construction via dust/fibre inhalation exposure pathways. Such risks can be mitigated by the contractor following standard good practice during construction and adoption of adequate health and safety procedures, including use of PPE.

6.3 Controlled waters screening assessment

6.3.1 Assessment criteria

Soil leachate test results have been screened against criteria based on published freshwater Environmental Quality Standards (EQS) to identify potential contaminants of concern. Where no EQS values are available the results have been compared against UK or EU drinking water standards or World Health Organisation standards (WHO).

6.3.2 Soil leachate screening results

The results of the soil leachate screening are presented in Appendix C. A total of ten soil leachate samples were screened and contaminants which exceed the screening criteria are summarised in Table 3.

Table 4 Soil exceedances of human health GAC

Determinand	GAC (µg/l)	Concentration range (µg/l)	No. samples >GAC	Locations > GAC
Copper	1	2.1 to 24	10	All
Lead	1.2	1 to 9.6	9	All except OP204
Zinc	12.3	<1.3 to 28	1	HP101
Fluoranthene	0.0063	0.03 to 0.4	10	All
Benzo(a)pyrene	0.00017	<0.01 to 0.32	8	All except HP102 and HP104

6.3.3 Risk assessment

The made ground layer on the viaduct has been identified as having potentially leachable contaminants (metals and PAHs). The made ground will be removed from the viaduct during the development therefore the risk of contaminants leaching out of the made ground and entering nearby surface watercourses via the surfaced drainage network on the viaduct is negligible.

7. Hazardous waste assessment

7.1 Methodology

An indicative waste classification assessment has been undertaken on the soil chemical results to provide information for management and disposal of soils at the site.

The online waste classification service HazWasteOnline was used to screen the soil chemical results to identify those samples that may be classified as hazardous waste if offsite disposal is required in line with current waste guidance, WM3. Once data is uploaded, HazWasteOnline generates detailed reports containing

the hazardous properties (risk phrase) identified for each sample. Summary tables from these reports are presented in Appendix D. It identifies samples as being hazardous, potentially hazardous or non-hazardous waste. The user is required to employ site specific knowledge to confirm the classification.

7.2 Results

In total 10 samples of made ground were tested for a range of inorganic and organic contaminants during the recent ground investigations. HazWasteOnline classification identified seven samples as non-hazardous and three samples as hazardous.

Three samples from HP101, HP103 and HP105 were classified as hazardous due to elevated lead (HP7: carcinogenic) concentrations.

Two samples from HP103 and HP105 were found to have hazardous concentrations of TPH aliphatic and aromatic compounds. At these concentrations HP3(i): Flammable, HP 7: Carcinogenic, H10 “Toxic for reproduction”, HP 11: Mutagenic, H14 “Ecotoxic”, are triggered.

Made ground which is not classified as hazardous will be, by default, classified as non-hazardous. A subset of non-hazardous waste is inert. To classify material as inert, stringent Waste Acceptance Criteria (WAC) testing must be undertaken, and thresholds met.

8. Conclusions

Ground investigation was undertaken along the Castlefield Viaduct in 2021 and 2024 to excavate hand dug pits to obtain soil samples for chemical laboratory testing to inform risk assessment for the proposed Castlefield Viaduct urban park development.

The ground conditions along the viaduct comprise made ground to a depth of 0.3m directly on the viaduct structure which is a dark brown to black sandy clayey gravel and sandy gravel with occasional rootlets fine to coarse sand and fine to coarse gravels of ballast, limestone, clinker and brick.

The contamination risk assessment has identified contaminants associated with the soils and flaking paint on the viaduct that could pose a risk to human health, specifically to construction workers. Exposure of construction workers and maintenance workers to contaminated soils and paint should be controlled through appropriate site management procedures and PPE.

The made ground along the viaduct will be removed from the viaduct and disposed off-site to an appropriately licensed waste management facility during the construction works. Indicative waste classification indicates that material in the west of the site could be classified as non-hazardous and in the east of the site as hazardous. It may be possible during excavation to segregate these soils prior to disposal to avoid impacting non-hazardous material. Topsoil will be imported to site to form soft landscaping areas of the urban park. Therefore, there will be no risk to future site users from contact with ballast or to controlled waters via leaching as this potential source of contamination will be removed.

There is a risk that future site users could be exposed to contaminants in the paint flakes by direct contact and ingestion pathways. During the development works the steel spans will be brushed down to remove any loose paint and all paint flake debris will be swept up and removed from site prior to installation of the urban park. A new balustrade, spaced off the steel spans, will be installed within the park to prevent members of the public from getting too close to the paintwork. While exposure to the paint for future site users is possible it is considered unlikely that members of the public would be interfering with the paint work on the steel spans or disturbing the soils within the park where paint flakes may be present and therefore there will be a low risk to future site users from direct exposure to the viaduct paintwork.

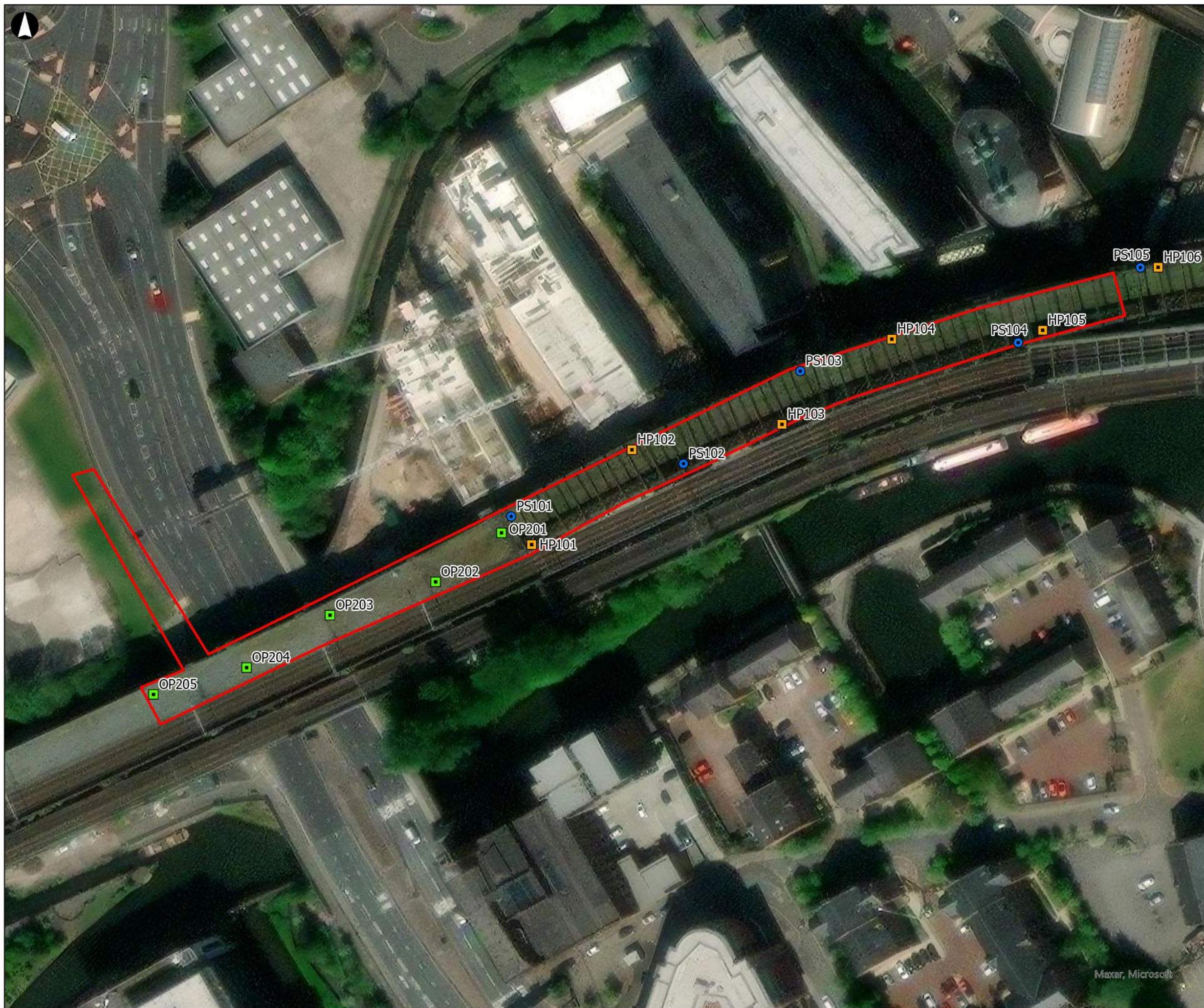
Further ground investigation is proposed in the west of the site at ground level to provide information for the lift and stair access. Once these works have been undertaken a separate report will be produced to assess potential contamination risks in this part of the site.

9. References

- [1] Igne, “Castlefield Viaduct Phase 2 Final Factual Report,” 2024.
- [2] Arup, “Castlefield Viaduct, Manchester, Geotechnical and Geoenvironmental Desk Study.,” 2024.
- [3] Royal Haskoning DHV, “Castlefield Viaduct, Manchester, Land Quality Interpretive Ground Investigation Report and Generic Risk Assessment Report, PC2387-RHD-ZZ-XX-RP-Z-0009.”.

Drawings

Drawing 1 Ground investigation locations



Site Boundary

Site Boundary

Ign 2024 GI Locations

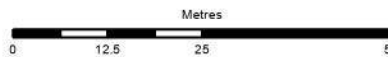
Hand Dug Pit (Viaduct Level)

RH 2021 GI Locations

Hand Dug Pit

Paint Sample

Coordinate System: British National Grid



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Rev	Date	By	Chkd	Appd	Authd

ARUP

3 Piccadilly Place
Manchester M1 3BN
Tel +44 161 228 2331
www.arup.com

Client
National Trust

Project Name
Castlefield Viaduct

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Ground Investigation Locations

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1:1,000

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282210-42

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Drawing 1

Rev
A

Appendix A

Igne 2024, Factual ground investigation report



CASTLEFIELD VIADUCT PHASE 2

Final Factual Report
(Rev.00)



Contract Number: NW1659
Client: National Trust
Consulting Engineer: Arup

Date: August 2024



REPORT CONTROL SHEET

Contract Details

Contract Title	Castlefield Viaduct Phase 2
Contract Number	NW1659
Location	Castlefield Viaduct, Castlefield. To the west of Manchester City Centre
National Grid Reference	SJ 828 975

Report Details

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Client/Consultant Engineer Details

Client	Consultant Engineer
National Trust Kemble Drive Swindon Wiltshire SN2 2NA	Arup 6 th Floor 3 Piccadilly Place Manchester M1 3BN

Signed & Approved On Behalf of Igne

Engineering Reports Supervisor Laura Clarke BSc (Hons).	Approved:	Date:
		07/08/2024
Technical Manager Kerry Wade BSc (Hons), MSc, FGS, MCMI	Approved:	Date:
		07/08/2024
Director Nick Vater BSc (Hons), MSc, CGeol, EurGeol, FGS.	Approved:	Date:
		07/08/2024



CASTLEFIELD VIADUCT PHASE 2

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1. INTRODUCTION

The proposed development at the site includes an Urban Park with garden areas and the installation of a new lift shaft and stairs underneath the existing Castlefield Viaduct, to the west of Manchester City Centre.

Allied Exploration & Geotechnics Limited trading as Igne (AEG t/a Igne) were contracted by the National Trust with Arup acting in the capacity of Consulting Engineer to perform a ground investigation at this site in order to provide information on the subsurface ground and groundwater conditions as well as to obtain samples for specialist chemical testing.

1.1 Scope of Works

The investigation works consisted of the following main elements:

- Five hand excavated inspection pits.
- Associated sampling.
- Specialist chemical testing.

Site work was carried out on the 15th July 2024 with subsequent laboratory testing and reporting thereafter. A factual report only was requested.

The comments and opinions expressed in this report are based on the ground conditions encountered during the site work and on the results of tests carried out in the field and in the laboratory. There may, however, be special conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report.

2. THE SITE

2.1 Location

The National Grid Reference of the approximate centre of the site is SJ 828 975. This can be found on Ordnance Survey 1:50,000 Sheet Number 109 (Manchester, Bolton & Warrington). Part of this sheet is reproduced as Figure 1, the Site Location Plan.

The site is located approximately 2km west of Manchester City Centre.

2.2 Site Description and Topography

The site is located in Castlefield along an existing viaduct structure which is approximately 16m above the ground. The section of viaduct investigated as part of this contract is covered by a layer of railway ballast and is approximately 100m in length and 14m wide and runs over the Bridgewater Canal. Metrolink lines run along the viaduct immediately adjacent to the south of the site. The site is further bound to the north and south by residential housing and apartments.

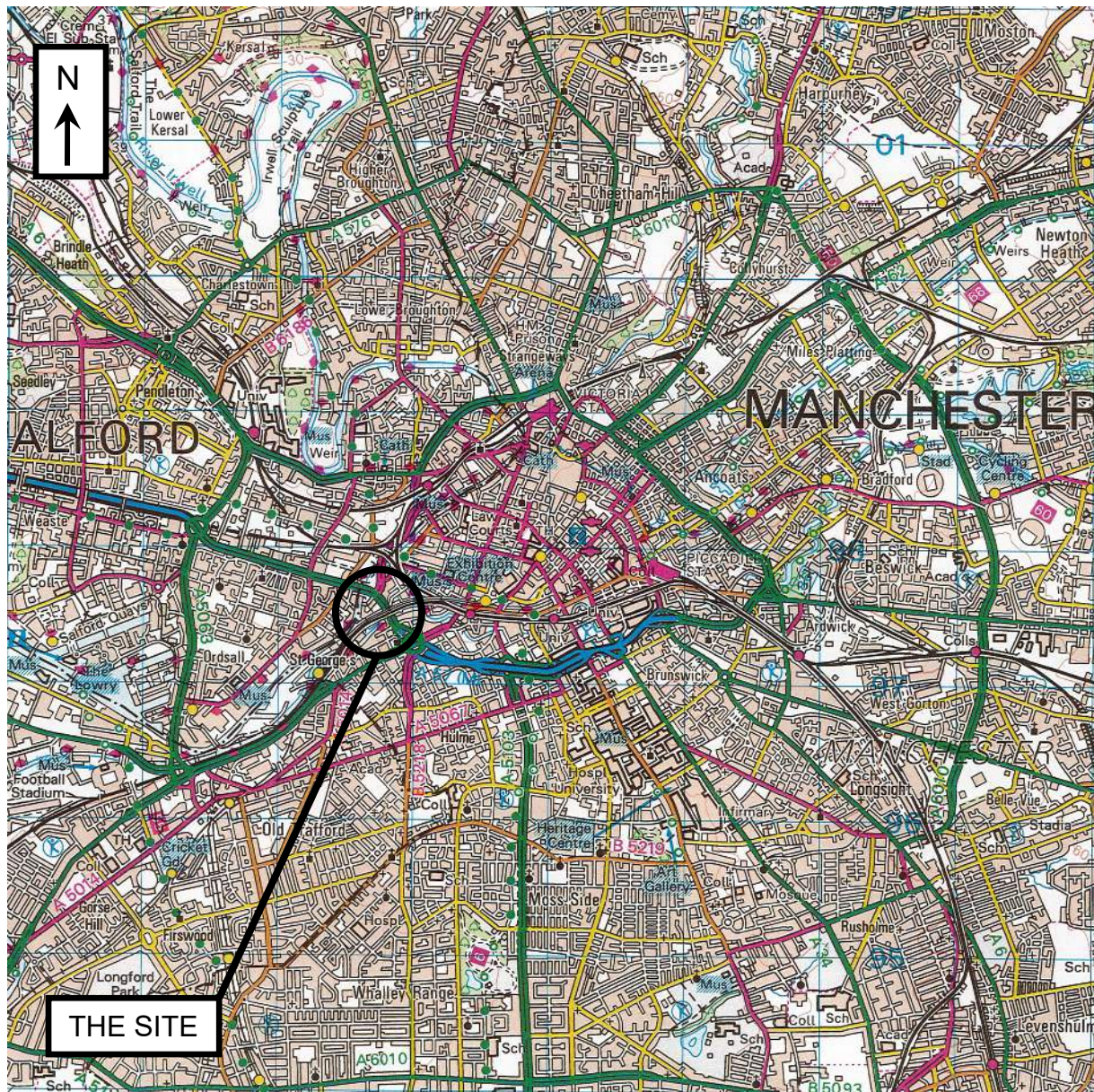


Figure 1: Site Location Plan

Reproduced from the Ordnance Survey 1:50,000 scale Landranger map by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, Crown Copyright. All rights reserved. Licence number AL 100002282.



3. SITE OPERATIONS

3.1 General

All exploratory hole work, associated sampling, *in-situ* testing and logging was carried out in accordance with techniques outlined in Table 1, as appropriate; at positions as near as practicable to those supplied by the Consulting Engineer. The approximate locations are shown on the Exploratory Hole Location Plan, Field Data Enclosure 1.

Reference Code Number	Title
BS 1377:1990	Methods of Test for Soils for Civil Engineering Purposes (where not in contravention or superseded by Eurocode references)
BS 5930:2015 + A1:2020	Code of Practice for Ground Investigation (where not in contravention or superseded by Eurocode references)
BS EN ISO 14688-1:2018 & 14688-2:2018	Identification and Classification of Soil
BS 10175:2011+A2:2017	Investigation of Potentially Contaminated Sites

Table 1: British Standard Reference Code Number

The depths of all inspection pits, descriptions of the material encountered, details of any groundwater encountered, samples taken and *in-situ* testing carried out together with any other relevant information can be found on the Inspection Pit Records, Field Data Enclosure 2. A key to all symbols and abbreviations used throughout the report is included in the Key Sheets.

The primary purpose of ground investigation exploratory holes is to probe the stratified sequences of soil and/or rock. From the results of these probings no conclusion should be drawn concerning the presence of, size, lithological nature, and numbers per unit volume of ground cobbles and boulders in soil types such as glacial till (boulder clay). Refer to the Key Sheets for further information.

3.2 Health & Safety Considerations: Services

Before the commencement of any exploratory hole a search for underground services was conducted as prescribed in HSE publication '*Avoiding Underground Services (HSG47)*' and in accordance with in-house internal safety procedure AEG-14.

Service plans were provided by the Client and were consulted prior to using a service locating device (such as a Cable Avoidance Tool or C.A.T.) to scan a working area around the proposed exploratory hole location. Where no services were indicated a '*Permit-to-Work*' form was issued by the investigation supervisor. The inspection pit was also scanned during the excavation procedure. It should be noted that the digging of an inspection pit only confirms or guards against the possible presence of underground public utility services within the excavated pit.

Where services were located or there was reasonable belief that they were present, the position was relocated in agreement with the Client. Details of any services uncovered/located during this investigation are given in Table 2.



Exploratory Hole Number	Type of Service	Orientation & Depth (size where indicated)	Status (Damaged/Undamaged)	Additional Remarks
No services were encountered within the inspection pits dug for the purposes of the exploratory hole works. Services were known to exist within the vicinity of exploratory holes, The location and nature of these services are beyond the scope of this report.				

Table 2: Services Encountered

3.3 Exploratory Holes: Mechanically Excavated Trial Pits

Five inspection pits were hand excavated to depths of 0.30m BGL (OP201 to UP205 inclusive). The Trial Pit Records are presented as Field Data Enclosure 2 and a summary of any relevant remarks are detailed in Table 3.

Exploratory Hole Number	Excavation Method	Completion Depth (m BGL)	Remarks
OP201	Hand Excavated	0.30	Advanced to required depth.
OP202	Hand Excavated	0.30	Advanced to required depth.
OP203	Hand Excavated	0.30	Advanced to required depth.
OP204	Hand Excavated	0.30	Advanced to required depth.
OP205	Hand Excavated	0.30	Advanced to required depth.
Any relevant photographs are presented after the applicable Trial Pit Record			

Table 3: Trial Pit Summary

3.4 Samples

Representative samples of soil were obtained from the inspection pits and were taken to the laboratory for selected specialist chemical testing.

Environmental samples were taken in accordance with the contract specification during the investigation using an approved selection of container types in order to suit the encountered material properties and designated laboratory analytical parameters. Full chain of custody procedures were in place post sampling and during the transportation stage to the nominated specialist chemical laboratory. Environmental samples were administered appropriately following the best practice guidance provided in the contract specification.

3.5 Groundwater

The comments on groundwater conditions are based on the observations made at the time of investigation. It should be noted that groundwater levels may vary due to seasonal and other effects.

Distinct groundwater strikes and standing water were not encountered in the inspection pits during the site works operation.

3.6 Instrumentation & Monitoring

Groundwater or gas monitoring instrumentation was not installed into any completed inspection pit as part of this investigation contract.



3.7 Operative Observations: Potential Contamination

For the purposes of determining the condition of the site, with regard to human health and environmental issues, reference should specifically be made to any specialist chemical testing undertaken as part of the investigation scheme, as well as any supporting desk study and risk assessment documentation. The information given herein collates the observations made by the operatives involved in the investigation only and comments that have been indicated on the engineering records.

Where there was potential evidence of contamination, principally as a consequence of olfactory and visual identification, information is provided in Table 4.

Exploratory Hole Number	Occurrence (in-situ/surface/ laboratory sample)	Visual / Olfactory / Laboratory Testing	Depth (m BGL)	Occurrence Type	Additional Remarks
No occurrences recorded during the investigation.					

Table 4: Potential Contamination Encountered

It should be stressed that the information provided herein is subjective, as it is based on the perceptions of individuals and not specialists routinely involved in the chemical determination of contaminated residues, liquors, vapours or solid contaminants.

3.8 Surveying

AEG t/a Igne was not required to survey the positions as part of this contract.

4. LABORATORY TESTING

4.1 Specialist Chemical Testing

Selected samples have been submitted for chemical analysis as specified by the Consulting Engineer, conducted under a subcontract arrangement with Derwentside Environmental Testing Services (DETS). The results of this testing are presented as Appendix I.

4.2 Laboratory Identified Asbestos

Selected samples were analysed for asbestos content as specified by the Consulting Engineer. Any identified asbestos is presented in Table 5 which has been summarised from specialist chemical testing results (see Appendix I for further details).

Exploratory Hole Number	Occurrence	Depth (m BGL)	Occurrence Type	Additional Remarks
No asbestos was detected within the samples selected for testing by the Consulting Engineer				

Table 5: Laboratory Identified Asbestos

Key Sheets



INTRODUCTION

The following explanatory notes define the terminologies, abbreviations and symbols pertaining to each individual column or section of the Exploratory Hole records. 'Exploratory Hole' is used as a general term in this report to comprise borehole, drillhole, and trial pit. All exploratory hole records have been produced using 'gINT®', which is an integrated software environment for the storage and manipulation of subsurface data.

The primary purpose of ground investigation exploratory holes is to probe the stratified sequences of soil and/or rock. From the results of these probings no conclusion should be drawn concerning the presence of, size, lithological nature, and numbers per unit volume of ground cobbles and boulders in soil types such as glacial till (boulder clay). With respect to rotary coring, driller's records and observations of the recovered core are used to determine any zones of no recovery (core loss). These zones are based on the interpretation of the logging engineer and are therefore potentially subjective. In addition, where relevant, every effort is made to highlight material/zones that may relate to suspected old workings. However, it should be noted that this is not straightforward (especially without detailed information regarding anticipated subsurface conditions) and therefore no guarantee can be made with regards to the accuracy of the interpretation of the recovered core.

INFORMATION COMMON TO ALL EXPLORATORY HOLE RECORDS

Status Box

The status box in the top right hand corner of each exploratory hole record gives the status of each individual record i.e. PRELIM1, PRELIM2, PRELIM3 FINAL etc. The date shown relates to the last instance the data was revised. This information is for AEG Quality Assurance only.

Exploratory Hole No

The identity number used throughout the report.

Project

The ground investigation project name. Occasionally the project name may be shortened or abbreviated due to string length restraints imposed by the gINT® computer programme.

Client

Client's name responsible for funding the ground investigation project. The Client's name may be shortened or abbreviated due to string length restraints imposed by the gINT® computer programme.

Location

The exploratory hole position given as either national grid co-ordinates, local grid if specified, or a reference name normally pertaining to the area of investigation.

Method (Equipment)

Represents the drilling, excavation or boring method(s) or equipment used.

Ground Level (m(AOD))

The precise ground level in metres above Ordnance Datum at the exploratory hole location from which the reduced level for each stratigraphic boundary is calculated.

Date

The date relating to the start of the exploratory hole excavation.

Sheet

The sheet number and total number of sheets for the particular record.

Checked By

Printed signature of the person who has carried out the technical quality check on the log.

Logged By

The name of the engineer who has carried out the logging of the exploratory hole.

Contract No.

The Allied Exploration & Geotechnics Limited reference number for the project.

Key Sheets



INFORMATION RELEVANT TO BOREHOLE AND WINDOW/WINDOWLESS SAMPLE HOLE RECORDS

Sample & Tests Columns

Depth	The depth over which a sample or test is taken is shown in depth column of the exploratory hole record in a "from...to" format.
Type No	Indicates the type of sample/test and number given by the driller.
Test Result	Result of the test given in the applicable units.

Water Column

Water Strike	Level of groundwater strike within an exploratory hole. The symbol  denotes a water strike and is suffixed with a number, which indicates the strike order. The corresponding unfilled symbol  is the depth the strike rose to.
Seepage	Groundwater seepage within an exploratory hole is denoted by the  symbol.

Strata Columns

Reduced Level	The corresponding reduced level of each soil or rock boundary in metres Ordnance Datum.
Legend	A graphical representation of the materials encountered using BS 5930 recommended symbols for soil and rock.
Depth (Thickness)	The depth below ground level of each soil or rock boundary in metres and the thickness of each individual stratigraphic unit (given in brackets).
Description	Engineering description of each individual soil or rock type follows recommendations outlined in the current BS 5930 with the following implementation: - The amendment of section 6 incorporates the guidance indicated in BS EN ISO 14688-1, BS EN ISO 14688-2 and BS EN ISO 14689-1 European Standard with particular emphasis on current UK practice. - Supplementary laboratory or in-situ assessed measurements of undrained strength are provided where applicable information is available in parenthesis in accordance with BS 5930 after the field strength determined consistency. The description based measurement table indicating the quantitative undrained strength classification divisions is provided in Key Sheets Table 1.

Term based on measurement	Undrained strength classification definition cu, in kPa (from BS EN ISO 14688-2, 5.3, Table 6)
Extremely low	<10
Very low	10-20
Low	20-40
Medium	40-75
High	75-150
Very High	150-300
Extremely High	300-600

KEY SHEETS TABLE 1

- Cobble and boulder content is expressed in accordance with the terms provided in BS5930 where visually identified in trial pit excavations, or inferred/recovered during the drilling operations. The assessment of frequency and spatial occurrence of coarse and very coarse rock material should not be considered as precise, but only an indicator or estimate of the potential conditions. It should be noted that the recovery of coarse or very coarse particles in boreholes is dependent on the limitations imposed by the casing diameter. The terminology used is outlined in Key Sheets Table 2.

Key Sheets



Fraction	Percent by Mass	Term
Boulders	<5	Low boulder content
	5 to 20	Medium boulder content
	>20	High boulder content
Cobbles	<10	Low cobble content
	10 to 20	Medium cobble content
	>20	High cobble content

KEY SHEETS TABLE 2

- 4 Rock Strength based on assessed field or measured unconfined compressive strength follows the classification scheme given in BS5930 as outlined in Key Sheets Table 3.

Term for use in field or based on measurement	Definition for field use	Definition on basis of Unconfined Compressive Strength measurement (MPa)	Superseded Classification of Rock Strength: Terminology (Strength Range MPa)	Definition for field use
Extremely weak	Scratched by thumbnail, gravel size lumps can be crushed between finger and thumb.	0.6-1.0	Extremely weak (0.6-1.0)	Can be indented by thumbnail. Gravel sized lumps crush between finger and thumb.
Very weak	Scratched by thumbnail, lumps can be broken by heavy hand pressure, can be peeled easily by a pocket knife, crumbles under firm blows with point of geological hammer.	1-5	Very weak (1-5)	Crumbles under firm blows with point of geological hammer. Can be peeled by a pocket knife.
Weak	Thin slabs, corners or edges can be broken off with hand pressure, can be scratched with difficulty by pocket knife, shallow indentations made by firm blow with point of geological hammer.	5-12.5	Weak (5-25)	Can be peeled by a pocket knife with difficulty. Shallow indentations made by firm blow with the point of geological hammer.
Moderately Weak	Thin slabs, corners or edges can be broken off with hand pressure, can be scratched with difficulty by pocket knife, hand-held specimen can be broken with single firm blow of geological hammer.	12.5-25		
Medium Strong	Cannot be scraped or peeled with a pocket knife, specimen on a solid surface can be fractured with single firm blow of geological hammer.	25-50	Medium Strong (25-50)	Cannot be scraped with pocket knife. Can be fractured with a single firm blow of geological hammer.
Strong	Specimen requires more than one blow of geological hammer to fracture it.	50-100	Strong (50-100)	Requires more than one blow of geological hammer to fracture.
Very Strong	Specimen requires many blows of geological hammer to fracture it.	100-250	Very Strong (100-250)	Requires many blows of geological hammer to fracture.
Extremely strong	Specimen can only be chipped with geological hammer.	>250	Extremely strong (>250)	Can only be chipped with geological hammer.
Based on current BS EN ISO 14689-1 4.2.7, Table 2			Based on BS EN ISO 14689-1:2003 4.2.7, Table 5 (Superseded Version)	

KEY SHEETS TABLE 3

- 5 Where 'rock weathering classification' can be applied it is 'Approach 4' which will be used. If any other approach is used the factual text of the report will provide details of the applicable specific approach. (Ref.: BS5930). An outline of the 'Approach 4' rock weathering classification scheme is provided as Key Sheets Table 4.

APPROACH 4 CLASSIFICATION INCORPORATING MATERIAL AND MASS FEATURES		
Class	Classifier	Typical characteristics
A	Unweathered	Original strength, colour, fracture spacing
B	Partially weathered	Slightly reduced strength, slightly closer fracture spacing, weathering penetrating in from fractures, brown oxidation
C	Distinctly weathered	Further weathered, much closer fracture spacing grey reduction
D	Destructured	Greatly weakened, mottled, ordered lithorelics in matrix becoming weakened and disordered, bedding disturbed.
E	Residual or reworked	Matrix with occasional altered random or 'apparent' lithorelics, bedding destroyed. Classed as reworked when foreign inclusions are present as a result of transportation.

KEY SHEETS TABLE 4

Key Sheets



Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.

Boring Progress and Water Observations Columns

This section provides information on each day's production as a daily log.

Date	Date of shift.
Depth	Depth of hole at the start of the shift.
Casing	Casing's depth at the start of the shift.
Casing Dia	Casing's diameter at the start of the shift.
Water Depth	Water level within the borehole at the start and end of shift.

Chiselling Columns

Indicates where hard strata occurred in the borehole and breaking out was carried out to advance the borehole.

From	The depth commenced.
To	The depth finished.
Hours	The time spent for breaking out.

Water Added Columns

Indicates the depth range where water was added to the borehole to facilitate boring or to prevent stress relief disturbance "blowing/boiling" in granular soils.

From	Depth in metres from where water was added.
To	Depth in metres to where water was added.

General Remarks

Any remarks believed to be relevant to the exploratory hole.

INFORMATION RELEVANT TO PIT/TRENCH RECORDS

The pit/trench records follow the same format as the borehole and window/windowless sample hole records for the Samples & Tests, Water and Strata columns. However, in addition to these there are the following:

Plan

A schematic plan view of the pit showing its excavated dimensions together with its orientation, given as a compass bearing to magnetic north.

Groundwater

Notes on water bearing horizons.

Stability

The engineer's comments outlining the stability of the sides during pit excavation.

General Remarks

The engineer's comments of any other information relevant to construction of the pit.

Additional Information

An indication if a sketch and/or photographs accompany the record.

Key Sheets



Underground Services

Depth	Depth service was encountered.
Orientation	Orientation given as a compass bearing to magnetic north.
Type	Type of service encountered.
Diameter	Diameter of service encountered.
Condition	Condition the service encountered was noticed in.

INFORMATION RELEVANT TO DRILLHOLE RECORDS AND ROTARY CONTINUATION

Run Details Columns

Depth	Each drill run is highlighted by a horizontal line with the top and bottom depths shown in metres. Core diameter (C Dia) is presented also within each run.
TCR (SCR) RQD	Information provided on the total core recovery, solid core recovery and rock quality designation. Refer to Abbreviations for further details.
Fracture Index	Information given relating to the fracture index of the rock.

Strata Columns

As the strata columns for borehole and window/windowless sample hole records except for description which is as follows:

Discontinuities Detail	Information on core discontinuities, localised variations in weathering, lithology, strength and structure follows recommendations outlined in BS5930.
Main	Engineering description of each individual soil or rock type follows recommendations outlined in BS5930.

Instrument/Backfill Column

A graphical representation of backfill material or instrumentation detail using graphic legends. Its placement in the column is relative to depth in metres and corresponds to the exploratory hole in scale.

Drilling Progress and Water Observations Columns

Date	Date of shift.
Depth	Depth of hole at the start of the shift.
Casing	Casing's depth at the start of the shift.
Water Strike	Depth at which water was encountered.
Water Standing	Depth at which water in the hole levelled off.
Water Remarks	Any remarks believed to be relevant to the water e.g. Artesian.

Standard Penetration Test

Depth	The depth commenced.
Type	Type of standard penetration test (SPT).
Result	Result of SPT.

Flush

From	The depth commenced.
To	The depth finished.
Type	Details of the type of flush used. A = Air, F = Foam, W = Water and Pol = Polymer.
Returns	An indication of the percentage of the returned flush material.

General Remarks

Any remarks believed to be relevant to the exploratory hole.

Key Sheets



SAMPLES

B	Bulk disturbed sample.
ES	Environmental soil sample.
EW	Environmental water sample.
G	Gas sample.
D	Small disturbed sample.
LB	Large bulk disturbed sample.
P	Piston sample.
P*	An attempted but failed undisturbed piston sample.
U	Undisturbed sample.
U*	An attempted but failed general purpose undisturbed sample.
L	Sonic sample liner/Windowless sample liner
U _(ss)	The sample preceding brackets has been subsampled.
ES _(U)	Brackets following a sample denotes a subsample. The sample information within the brackets is the origin of the subsample.
W	Water sample.
CC	Core Cutter Sample

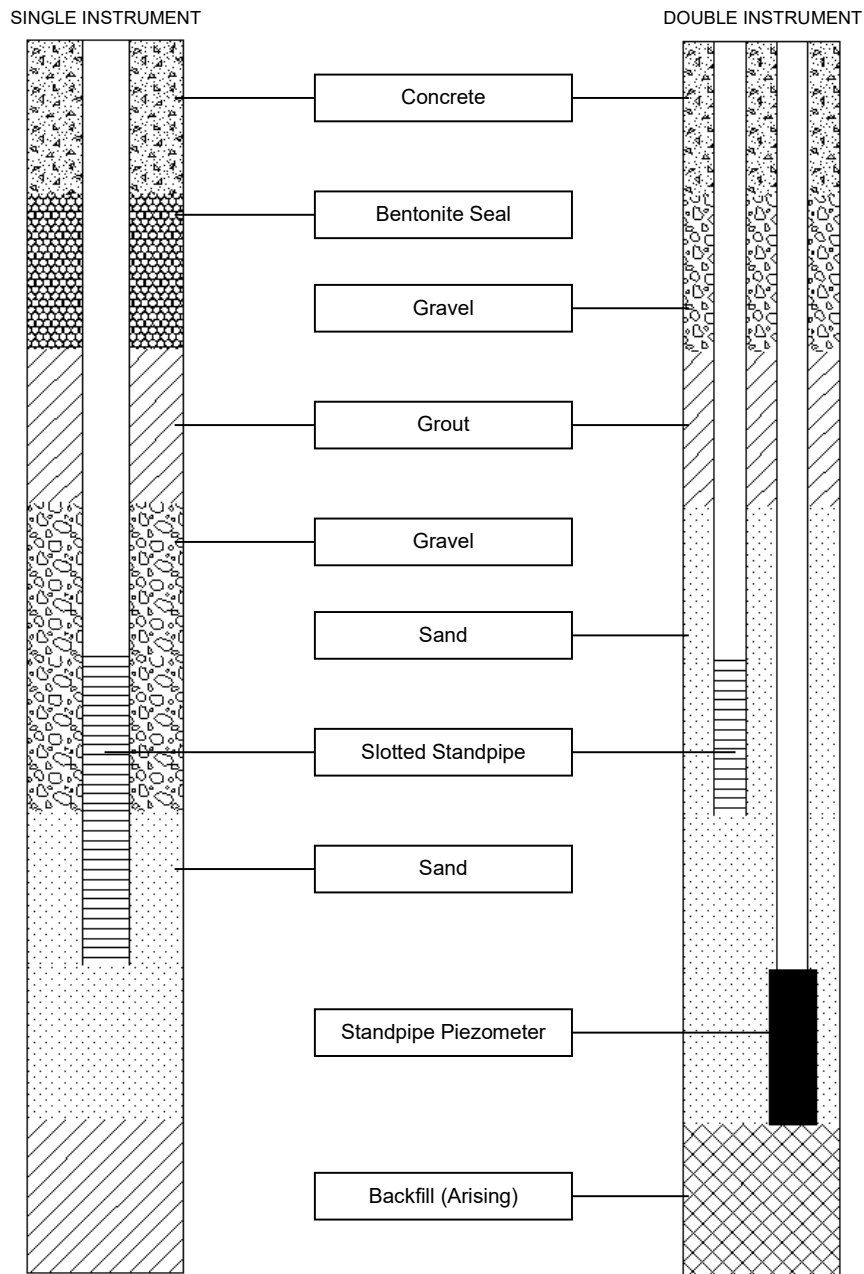
IN-SITU TESTS

CBR	California Bearing Ratio mould sample or test.
HSV	In-situ hand shear vane.
HSV*	An attempted but failed in-situ hand shear vane.
HSV result of e.g 80(20)kPa	Denotes average HSV peak result followed by average HSV residual result (in brackets).
HP	Hand penetrometer test.
K (F)	Falling head permeability test.
K (R)	Rising head permeability test.
K (C)	Constant head permeability test.
K (P)	Packer permeability test.
PT	Pressuremeter test.
PID	Photo ionisation detector test.
FID	Flame ionisation detector test.
S	Standard Penetration Test (SPT) using the split barrel sampler (shoe). The corresponding uncorrected 'N' value is given in the test result column with more detailed information provided in the In-Situ Testing Enclosures where applicable. Testing has been conducted in accordance with BS EN ISO 22476-3.
C	Denotes SPT test using a solid cone in preference to the split barrel sampler (usually in coarse granular soil) with all other reporting requirements as outlined above for the split barrel sampler.
SV	In-situ down-the-hole shear vane test. The remoulded shear strength is given in brackets.

ROCK QUALITY AND CORE RECOVERY

TCR	Total Core Recovery - the length of the recovered core expressed as a percentage of the length of core run.
SCR	Solid Core Recovery - the sum length of all core pieces that are recovered with at least one full diameter, expressed as a percentage of the length of core run.
RQD	Rock Quality Designation - The sum length of all core pieces that are 100mm or longer (measured along the centre of the core), expressed as a percentage of the length of core run.
FI	Fracture Index - The number of fractures per 1000mm length of solid core.
NI	Non-intact - The material recovered in a non-intact state.
NR	No recovery from the core run. These zones are based on the interpretation of the logging engineer and are therefore potentially subjective.

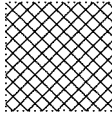
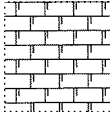
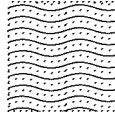
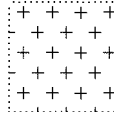
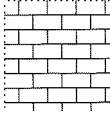
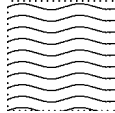
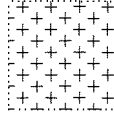
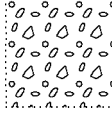
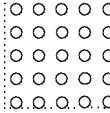
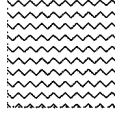
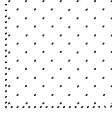
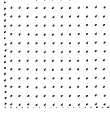
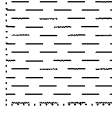
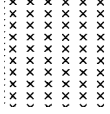
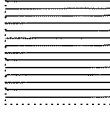
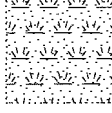
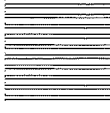
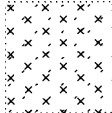
Symbols and Abbreviations: Explanation of Instrumentation Legends Used



Key Sheets



Symbols and Abbreviations: Explanation of Legends Used

Soils	Rocks						
	Sedimentary	Metamorphic	Igneous				
	Made Ground		Chalk		Coarse Grained		Coarse Grained
	Cobbles and Boulders		Limestone		Medium Grained		Medium Grained
	Gravel		Conglomerate		Fine Grained		Fine Grained
	Sand		Breccia				
	Silt		Sandstone				
	Clay		Siltstone				
	Peat		Mudstone				
	Topsoil		Shale				
			Coal				
Note: Composite soil types will be signified by combined symbols e.g.			Pyroclastic (Volcanic Ash)				
	Silty Sand		Gypsum				

Exploratory Hole Location Plan



Project ID:

NW1659

Title:

Exploratory Hole Location Plan

Project Title:

Castlefield Viaduct Phase 2

Scale:

1:1500

Location:

Castlefield Viaduct, Castlefield

Consultant:

Arup

Client:

National Trust

Contractor:

Allied Exploration & Geotechnics Limited t/a Igne

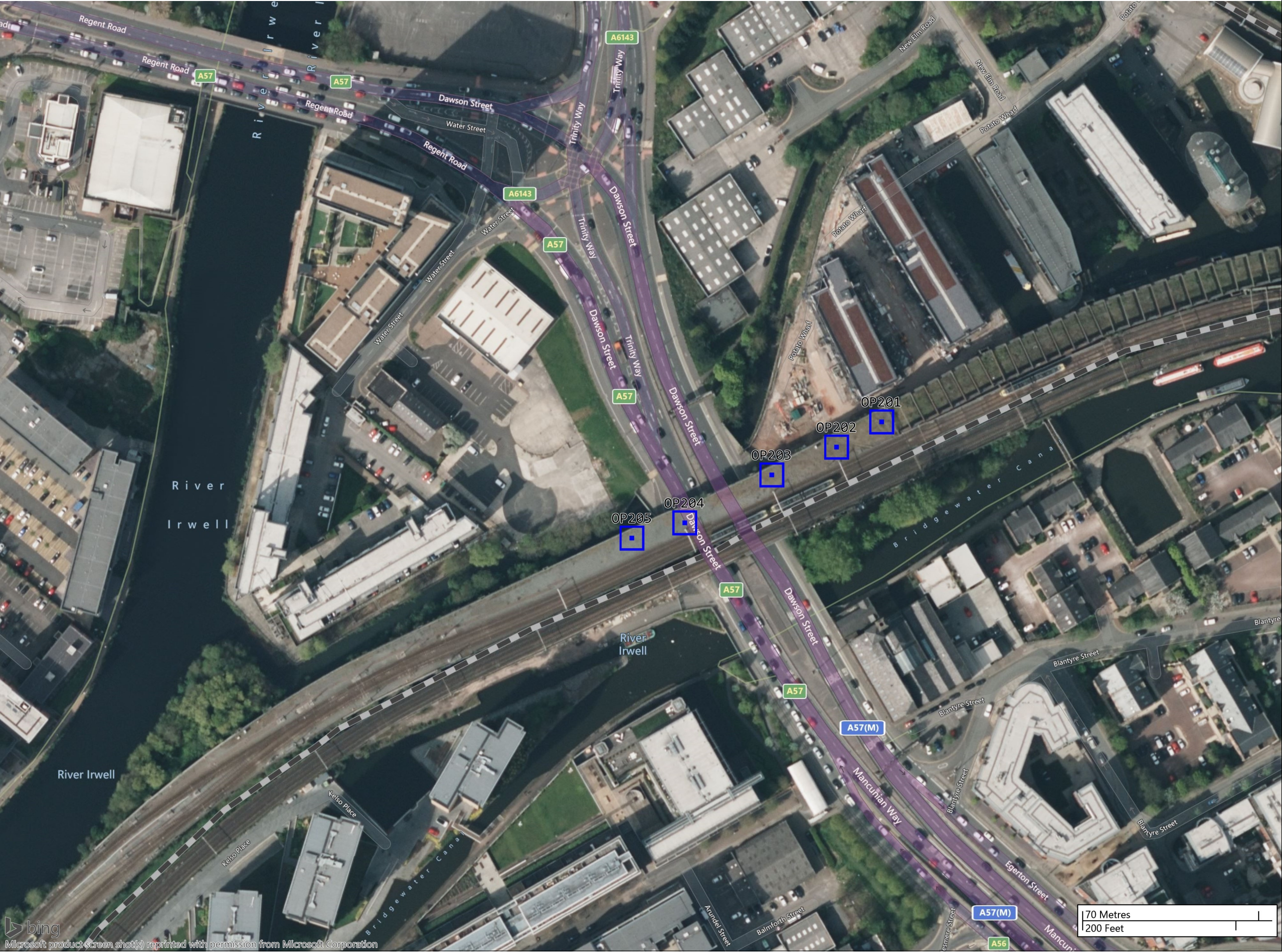


Key

Locations By Type - IP

NOTE:

All exploratory hole locations are approximate.



Inspection Pit Records





INSPECTION PIT RECORD

Status:-

PRELIM3

Project:		Castlefield Viaduct Phase 2		Exploratory Hole No. OP201					
Client:		National Trust				Location:		Castlefield Viaduct, Castlefield E: N:	
Method (Equipment):		Hand Excavated (Hand Tools)		Ground Level (m):		Start Date:		Sheet:	
						15/07/2024		1 of 3	

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	Description
0.30	ES1					0.20	MADE GROUND (Topsoil consisting of black sandy gravel with some rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular to angular and includes clinker and limestone).
						0.30	
							MADE GROUND (Black sandy gravel. Sand is fine to coarse. Gravel is fine to coarse angular to subangular and includes limestone, clinker and brick).
							at c.0.20m BGL ... plastic and fabric membrane.
							Complete at 0.30m BGL.

PLAN 0.40 Face A Orientation 000° Face D Face B 0.40 Face C	GROUNDWATER No groundwater inflow observed.
	STABILITY Pit sides and base moderately unstable throughout excavation.

ADDITIONAL INFORMATION			GENERAL REMARKS		
Sketch Diagram:	No Sketch Taken				
Photographs:	Yes	See additional sheets.			

All dimensions in metres
Scale 1:50.00

For explanation of symbols and
abbreviations see Key Sheets

Checked by:

Logged by:
J. Myall

Contract No.
NW1659

INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP201
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 2 of 3

Figure OP201.1
OP201 Before Investigation Works.



Figure OP201.2
OP201.



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2			Exploratory Hole No. OP201
Client: National Trust	Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)	Ground Level (m):	Start Date: 15/07/2024	Sheet: 3 of 3

**Figure OP201.3
OP201 Reinstatement.**



Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP202
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 2 of 3

Figure OP202.1
OP202 Before Investigation Works.



Figure OP202.2
OP202.



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP202
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 3 of 3

**Figure OP202.3
OP202 Reinstatement.**



Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP203
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 2 of 3

Figure OP203.1
OP203 Before Investigation Works.



Figure OP203.2
OP203.



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP203
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 3 of 3

**Figure OP203.3
OP203 Reinstatement.**



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP204
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 2 of 3

Figure OP204.1
OP204 Before Investigation Works.



Figure OP204.2
OP204.



INSPECTION PIT RECORD

Status:- PRELIM3

Project: Castlefield Viaduct Phase 2			Exploratory Hole No. OP204
Client: National Trust	Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)	Ground Level (m):	Start Date: 15/07/2024	Sheet: 3 of 3

**Figure OP204.3
OP204 Reinstatement.**



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2			Exploratory Hole No. OP205
Client: National Trust	Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)	Ground Level (m):	Start Date: 15/07/2024	Sheet: 2 of 3

Figure OP205.1
OP205 Before Investigation Works.



Figure OP205.2
OP205.



INSPECTION PIT RECORD

Status:-
PRELIM3

Project: Castlefield Viaduct Phase 2				Exploratory Hole No. OP205
Client: National Trust		Location: Castlefield Viaduct, Castlefield E: N:		
Method (Equipment): Hand Excavated (Hand Tools)		Ground Level (m):	Start Date: 15/07/2024	Sheet: 3 of 3

**Figure OP205.3
OP205 Reinstatement.**



Specialist Chemical Testing (Tested Externally)





Certificate of Analysis

Certificate Number 24-14623

Issued: 24-Jul-24

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference 24-14623

Client Reference ~ NW1659

Order No ~ A00386

Contract Title ~ Castlefield Viaduct Phase 2

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

Date Received 16-Jul-24

Date Started 16-Jul-24

Date Completed 24-Jul-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager



Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

Page 1 of 17

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Sample ID	Other ID	Depth	Lab No	Completed	Matrix Description
OP201	1	0.3	2364747	24/07/2024	Dark brown very gravelly, sandy CLAY including odd rootlets
OP202	1	0.3	2364748	24/07/2024	Dark brown slightly gravelly, sandy CLAY including odd rootlets
OP203	1	0.3	2364749	24/07/2024	Dark brown very gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
OP204	1	0.3	2364750	24/07/2024	Dark brown very gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
OP205	1	0.3	2364751	24/07/2024	Dark brown very gravelly, sandy CLAY

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364747	2364748	2364749	2364750	2364751
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg	27	30	3.9	5.9	26
Barium	DETSC 2301#	1.5	mg/kg	260	290	43	68	280
Beryllium	DETSC 2301#	0.2	mg/kg	1.5	2.5	0.4	0.6	2.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.7	0.8	0.2	0.3	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.8	0.5	1.6	0.3	0.7
Chromium	DETSC 2301#	0.15	mg/kg	31	19	10	13	28
Chromium III	DETSC 2301*	0.15	mg/kg	31	19	10	13	28
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	260	280	48	61	170
Lead	DETSC 2301#	0.3	mg/kg	290	210	48	51	200
Mercury	DETSC 2325#	0.05	mg/kg	0.30	0.26	< 0.05	< 0.05	0.20
Nickel	DETSC 2301#	1	mg/kg	36	40	12	11	39
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	72	50	45	54	60
Zinc	DETSC 2301#	1	mg/kg	250	170	81	71	200
Inorganics								
pH	DETSC 2008#		pH	8.1	8.2	8.7	9.8	9.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.3	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	16	25	2.1	6.3	20
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	1.2	1.7	< 0.50	< 0.50	< 0.50
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >EC10-EC12	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50
Aliphatic >EC12-EC16	DETSC 3521#	1.2	mg/kg	< 1.20	< 1.20	< 1.20	< 1.20	< 1.20
Aliphatic >EC16-EC21	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50
Aliphatic >EC21-EC35	DETSC 3521#	3.4	mg/kg	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40
Aliphatic >EC35-EC40	DETSC 3521*	3.4	mg/kg	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40
Aliphatic >EC40-EC44	DETSC 3521*	3.4	mg/kg	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40
Aliphatic C5-C44	DETSC 3521*	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >EC10-EC12	DETSC 3521#	0.9	mg/kg	< 0.90	1.51	< 0.90	< 0.90	< 0.90
Aromatic >EC12-EC16	DETSC 3521#	0.5	mg/kg	5.55	8.18	3.20	2.62	5.53
Aromatic >EC16-EC21	DETSC 3521#	0.6	mg/kg	28.21	37.61	23.24	19.10	29.01
Aromatic >EC21-EC35	DETSC 3521#	1.4	mg/kg	41.33	57.04	39.14	33.47	45.45
Aromatic >EC35-EC40	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40
Aromatic >EC40-EC44	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40
Aromatic C5-C44	DETSC 3521*	10	mg/kg	75.09	104.3	65.58	55.19	79.99

Summary of Chemical Analysis Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364747	2364748	2364749	2364750	2364751
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
TPH Ali/Aro C5-C44	DETSC 3521*	10	mg/kg	75.09	104.3	65.58	55.19	79.99
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	0.51	1.4	0.18	0.14	0.32
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.05	0.08	0.03	< 0.03	0.06
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.90	1.3	0.51	0.32	0.78
Fluorene	DETSC 3303	0.03	mg/kg	0.49	0.85	0.29	0.19	0.46
Phenanthrene	DETSC 3303#	0.03	mg/kg	4.4	6.3	3.0	2.1	4.4
Anthracene	DETSC 3303	0.03	mg/kg	0.93	1.4	0.65	0.48	1.1
Fluoranthene	DETSC 3303#	0.03	mg/kg	6.2	8.2	5.1	3.6	6.8
Pyrene	DETSC 3303#	0.03	mg/kg	7.0	8.6	5.4	3.9	7.3
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	2.7	3.4	2.0	1.5	2.5
Chrysene	DETSC 3303	0.03	mg/kg	2.6	3.6	1.9	1.5	2.2
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	2.7	3.0	1.8	1.7	2.2
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	1.1	1.4	0.67	< 0.03	0.76
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	2.0	2.6	1.3	1.1	1.8
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.70	0.88	0.57	0.47	0.56
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.22	0.31	0.18	0.18	0.19
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	1.2	1.3	0.95	0.78	0.88
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	34	44	24	18	32
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.7	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364747	2364748	2364749	2364750	2364751
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

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

Summary of Chemical Analysis Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364747	2364748	2364749	2364750	2364751
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aniline	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364747	2364748	2364749	2364750	2364751
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Diphenylamine	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Azobenzene	DETSC 3433	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbazole	DETSC 3433*	0.1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364752	2364753	2364754	2364755	2364756
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Preparation								
BS EN 12457 10:1	DETS 1009*			Y	Y	Y	Y	Y
Metals								
Arsenic, Dissolved	DETS 2306	0.16	ug/l	0.75	1.2	0.63	0.55	1.0
Barium, Dissolved	DETS 2306	0.26	ug/l	34	17	7.7	6.4	14
Beryllium, Dissolved	DETS 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETS 2306*	12	ug/l	< 12	< 12	< 12	< 12	< 12
Cadmium, Dissolved	DETS 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETS 2306*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETS 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETS 2306	0.4	ug/l	3.1	2.9	2.1	2.6	3.0
Lead, Dissolved	DETS 2306	0.09	ug/l	2.1	2.7	1.6	1.0	2.2
Mercury, Dissolved	DETS 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETS 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETS 2306	0.25	ug/l	0.25	0.34	< 0.25	< 0.25	< 0.25
Vanadium, Dissolved	DETS 2306	0.6	ug/l	< 0.6	0.7	1.2	1.0	1.6
Zinc, Dissolved	DETS 2306	1.3	ug/l	< 1.3	1.5	< 1.3	< 1.3	1.7
Inorganics								
pH	DETS 2008		pH	6.6	6.6	6.8	6.7	6.6
Alkalinity as CaCO ₃ (Automated)	DETS 2030	10	mg/l	11	11	< 10	< 10	11
Ammoniacal Nitrogen as N	DETS 2207	0.015	mg/l	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETS 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETS 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364752	2364753	2364754	2364755	2364756
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
PAHs								
Naphthalene	DETSC 3304	0.05	ug/l	0.13	0.09	0.07	0.05	0.64
Acenaphthylene	DETSC 3304	0.01	ug/l	0.03	0.03	0.01	0.01	0.03
Acenaphthene	DETSC 3304	0.01	ug/l	0.06	0.03	0.02	0.02	0.08
Fluorene	DETSC 3304	0.01	ug/l	0.03	0.02	0.01	< 0.01	0.03
Phenanthrene	DETSC 3304	0.01	ug/l	0.16	0.10	0.07	0.07	0.13
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.04	0.03	0.04	0.05
Fluoranthene	DETSC 3304	0.01	ug/l	0.40	0.25	0.17	0.21	0.36
Pyrene	DETSC 3304	0.01	ug/l	0.48	0.31	0.20	0.26	0.42
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.23	0.15	0.09	0.12	0.21
Chrysene	DETSC 3304	0.01	ug/l	0.21	0.14	0.09	0.11	0.20
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.39	0.33	0.19	0.22	0.42
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.17	0.13	0.06	0.09	0.14
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.30	0.20	0.11	0.13	0.32
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.19	0.23	0.12	0.14	0.28
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.05	0.05	0.03	0.03	0.06
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.20	0.21	0.11	0.12	0.23
PAH Total	DETSC 3304	0.2	ug/l	3.0	2.3	1.4	1.6	3.6
Phenols								
Phenol - Monohydric	DETSC 2130	100	ug/l	< 100	< 100	< 100	< 100	< 100

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364752	2364753	2364754	2364755	2364756
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
VOCs								
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27	< 27	< 27	< 27	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2	< 2	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4	< 4	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364752	2364753	2364754	2364755	2364756
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2	< 2	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1	< 1	< 1	< 1
SVOCs								
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Chemical Analysis

Leachate Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	2364752	2364753	2364754	2364755	2364756
Sample ID ~	OP201	OP202	OP203	OP204	OP205
Depth ~	0.30	0.30	0.30	0.30	0.30
Other ID ~	1	1	1	1	1
Sample Type ~	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Asbestos Analysis Soil Samples

Our Ref 24-14623

Client Ref ~ NW1659

Contract Title ~ Castlefield Viaduct Phase 2

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2364747	OP201 1 0.30	SOIL	NAD	none	Pierce Booth
2364748	OP202 1 0.30	SOIL	NAD	none	Pierce Booth
2364749	OP203 1 0.30	SOIL	NAD	none	Pierce Booth
2364750	OP204 1 0.30	SOIL	NAD	none	Pierce Booth
2364751	OP205 1 0.30	SOIL	NAD	none	Pierce Booth

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-14623
 Client Ref ~ NW1659
 Contract ~ Castlefield Viaduct Phase 2

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Hold time exceeded for tests	Inappropriate container for tests
2364747	OP201 0.30 SOIL	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		
2364748	OP202 0.30 SOIL	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		
2364749	OP203 0.30 SOIL	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		
2364750	OP204 0.30 SOIL	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		
2364751	OP205 0.30 SOIL	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		
2364752	OP201 0.30 LEACHATE	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		VOC
2364753	OP202 0.30 LEACHATE	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		VOC
2364754	OP203 0.30 LEACHATE	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		VOC
2364755	OP204 0.30 LEACHATE	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		VOC
2364756	OP205 0.30 LEACHATE	15/07/24	GJ 250ml x3, GJ 60ml x2, PT 1L x2		VOC

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

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

Soil Analysis Notes

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

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
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Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Appendix B

Human health soil screening assessment

Concentration exceeds GAC	100.00
Limit of Detection value exceeds GAC	<0.1

ARUP

Concentration exceeds GAC		100.00		ARUP					Hole Ref	OP201	OP202	OP203	OP204	OP205	HP101	HP102	HP103	HP104	HP105			
Limit of Detection value exceeds GAC		<0.1							Sample Ref	2364747	2364748	2364749	2364750	2364751								
									Sample Depth (mbgl)	0.3	0.3	0.3	0.3	0.3								
									Sample Date	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024							
				Aquifer	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground												

Concentration exceeds GAC	100.00
Limit of Detection value exceeds GAC	<0.1

ARUP

Concentration exceeds GAC		100.00		ARUP					Hole Ref	OP201	OP202	OP203	OP204	OP205	HP101	HP102	HP103	HP104	HP105										
Limit of Detection value exceeds GAC		<0.1							Sample Ref	2364747	2364748	2364749	2364750	2364751															
									Sample Depth (mbgl)	0.3	0.3	0.3	0.3	0.3															
									Sample Date	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024															
				Aquifer	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground																				
Contaminant Name		GAC	GAC Source	Units	Total > LOD	Total > GAC	Min	Max	95th %ile																				
1,3-dichloropropane	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Dibromochloromethane	100	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2-dibromoethane	0.4	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Chlorobenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,1,1,2-tetrachloroethane	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Ethylbenzene	20	EQS*		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
m+p-Xylene	-			µg/l	0 of 10	0	1	2	2.0	< 2	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
o-Xylene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Styrene	50	EQS*		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Bromoform	100	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Isopropylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,1,2,2-tetrachloroethane	400	USEPA		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Bromobenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2,3-trichloropropane	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
n-propylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
2-chlorotoluene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,3,5-trimethylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
4-chlorotoluene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Tert-butylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2,4-trimethylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
sec-butylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
p-isopropyltoluene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,3-Dichlorobenzene	3000	USEPA		µg/l	0 of 10	0	1	2	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,4-dichlorobenzene	300	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
n-butylbenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2-dichlorobenzene	-			µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2-dibromo-3-chloropropane	1	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2,4-trichlorobenzene	70	USEPA		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
Hexachlorobutadiene	0.6	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
1,2,3-trichlorobenzene	-			µg/l	0 of 10	0	0.1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1										
MTBE	15	WHO		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
SVOCs																													
Aniline	-			µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
2-Chlorophenol	50	EQS*		µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
Benzyl Alcohol	-			µg/l	0 of 5	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
2-Methylphenol	100	EQS*		µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
Bis(2-chloroisopropyl)ether	-			µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
3&4-Methylphenol	100	EQS*		µg/l	0 of 5	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Bis(2-chloroethoxy)methane	-			µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
2,4-Dimethylphenol	100	EQS*		µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
2,4-Dichlorophenol	4.2	EQS		µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
1,2,4-Trichlorobenzene	70	USEPA		µg/l	0 of 10	0	1	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0										
4-Chloro-3-methylphenol	40	EQS*		µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
2-Methylnaphthalene	-			µg/l	0 of 10	0	0.05	1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05										
Hexachlorocyclopentadiene																													

Appendix C

Controlled waters soil leachate screening assessment

Concentration exceeds GAC	100.00
Limit of Detection value exceeds GAC	<0.1
Concentration exceeds saturation value but not GAC	50

ARUP

Concentration exceeds GAC				100.00				Hole Ref Sample Ref Sample Depth (mbgl) Sample Date Investigation Geology	OP201	OP202	OP203	OP204	OP205	HP101	HP102	HP103	HP104	HP105
Limit of Detection value exceeds GAC				<0.1					2364747	2364748	2364749	2364750	2364751					
Concentration exceeds saturation value but not GAC				50					0.3	0.3	0.3	0.3	0.3	0.25	0.3	0.15	0.3	0.2
									15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
								ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
								Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground
Contaminant Name		GAC	GAC Source	Units	Total > LOD	Total > GAC	Min	Max										
Metal																		
Arsenic	168	AGAC	mg/kg	10 of 10	0	3.9	69	27	30	3.9	5.9	26	62	69	51	66	44	
Barium	-			10 of 10	0	43	610	260	290	43	68	280	310	230	610	220	330	
Beryllium	63	AGAC/S4UL	mg/kg	10 of 10	0	0.4	2.5	1.5	2.5	0.4	0.6	2.3	1.7	1.9	1.5	1.3	1.2	
Boron, Water Soluble (2.5:1)	46200	AGAC	mg/kg	10 of 10	0	0.2	1.1	0.7	0.8	0.2	0.3	0.7	1.1	0.7	0.7	0.5	0.6	
Cadmium	532	S4UL	mg/kg	10 of 10	0	0.3	3.1	0.8	0.5	1.6	0.3	0.7	2.4	3.1	2.6	2.7	1.6	
Chromium	33000	AGAC/S4UL	mg/kg	10 of 10	0	10	69	31	19	10	13	28	58	69	63	61	57	
Chromium III	33000	AGAC/S4UL	mg/kg	10 of 10	0	10	69	31	19	10	13	28	58	69	63	60	57	
Chromium, Hexavalent	220	AGAC/S4UL	mg/kg	0 of 10	0	1	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	
Copper	44400	AGAC/S4UL	mg/kg	10 of 10	0	48	330	260	280	48	61	170	330	310	230	250	210	
Lead	1300	C4SL	mg/kg	10 of 10	2	48	4400	290	210	48	51	200	1200	550	4400	520	1400	
Mercury	240	AGAC (inorganic)	mg/kg	3 of 10	0	0.05	0.3	0.3	0.26	< 0.05	< 0.05	0.2	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	
Nickel	804	AGAC	mg/kg	10 of 10	0	11	1.1	36	40	12	11	39	67	80	150	61	55	
Selenium	1850	AGAC	mg/kg	0 of 10	0	0.5	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Vanadium	5000	S4UL (pentavalent)	mg/kg	10 of 10	0	45	72	72	50	45	54	60	67	70	65	68	67	
Zinc	173000	AGAC	mg/kg	10 of 10	0	71	680	250	170	81	71	200	680	290	500	320	320	
Inorganic																		
pH	-		pH units	10 of 10	0	7.7	9.8	8.1	8.2	8.7	9.8	9.5	7.7	8	7.8	8	7.9	
Cyanide, Total	24	AGAC	mg/kg	3 of 5	0	0.1	0.3	0.2	0.3	< 0.1	< 0.1	0.2						
Total Organic Carbon	-		%	10 of 10	0	2.1	25	16	25	2.1	6.3	20	6.3	6	8.1	4.8	4.8	
Ammoniacal Nitrogen as N	-		mg/kg	4 of 10	0	0.5	1.7	1.2	1.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	1	
Phenols - monohydric	1300	S4UL	mg/kg	1 of 10	0	0.3	1	0.7	< 0.3	< 0.3	< 0.3	< 0.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Asbestos																		
Asbestos in Soil	Presence			0 of 10	0			Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	
TPH																		
Aliphatics >C5-C6	181000	AGAC	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aliphatics >C6-C8	316000	AGAC	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aliphatics >C8-C10	21400	AGAC	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aliphatics >C10-C12	24300	AGAC	mg/kg	0 of 10	0	1	1.5	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatics >C12-C16	25700	AGAC	mg/kg	3 of 10	0	1.2	18	< 1.20	< 1.20	< 1.20	< 1.20	< 1.20	18	< 2.0	12	< 2.0	7.2	
Aliphatics >C16-C21	494000	AGAC (Ali >C16-35)	mg/kg	3 of 10	0	1.5	35	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	35	< 8.0	21	< 8.0	28	
Aliphatics >C21-C35	494000	AGAC (Ali >C16-35)	mg/kg	5 of 10	0	3.4	340	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40	180	320	92	210	340	
Aliphatics >C35-C40	494000	AGAC (Ali >C16-35)	mg/kg	0 of 5	0	3.4	3.4	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40						
Aliphatics >C40-EC44	494000	AGAC (Ali >C16-35)	mg/kg	0 of 5	0	3.4	3.4	< 3.40	< 3.40	< 3.40	< 3.40	< 3.40						
Aliphatic C5-C44	-		mg/kg	0 of 5	0	10	10	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00						
Aromatics >EC6-EC7	113	AGAC/S4UL (benzene)	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aromatics >EC7-EC8	101000	AGAC (toluene)	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aromatics >EC8-EC10	9290	AGAC	mg/kg	0 of 10	0	0.001	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Aromatics >EC10-EC12	10000	AGAC/S4UL	mg/kg	6 of 10	0	0.9	11	< 0.90	1.51	< 0.90	< 0.90	< 0.90	4.4	5.6	11	6.9	4.6	
Aromatics >EC12-EC16	10400	AGAC	mg/kg	10 of 10	0	2.62	42	5.55	8.18	3.2	2.62	5.53	30	27	42	24	26	
Aromatics >EC16-EC21	7770	AGAC	mg/kg	10 of 10	0	19.1	410	28.21	37.61	23.24	19.1	29.01	210	73	410	81	170	
Aromatics >EC21-EC35	7850	AGAC	mg/kg	10 of 10	0	33.47	790	41.33	57.04	39.14	33.47	45.45	380	200	790	200	430	
Aromatics >EC35-EC40	7850	AGAC	mg/kg	0 of 5	0	1.4	1.4	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40						
Aromatic >EC40-EC44	7850	AGAC	mg/kg	0 of 5	0	1.4	1.4	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40						
Aromatic C5-C44	-		mg/kg	5 of 5	0	55.19	104.3	75.09	104.3	65.58	55.19	79.99						
TPH Ali/Aro C5-C44	-		mg/kg	5 of 5	0	55.19	104.3	75.09	104.3	65.58	55.19	79.99						
PAHs																		
Naphthalene	2950	AGAC	mg/kg	10 of 10	0	0.14	2.7	0.51	1.4	0.18	0.14	0.32	2.7	1.8	2.4	2.3	1.4	
Acenaphthylene	29900	AGAC	mg/kg	8 of 10	0	0.03	1.3	0.05	0.08	0.03	< 0.03	0.06	0.61	< 0.05	1.3	0.27	0.59	
Acenaphthene	29900	AGAC	mg/kg	10 of 10	0	0.32	7.4	0.9	1.3	0.51	0.32	0.78	7.4	1.6	6.2	3.6	2.9	
Fluorene	20100	AGAC	mg/kg	10 of 10	0	0.19	5.2	0.49	0.85	0.29	0.19	0.46	5.2	1	3.7	2	1.7	
Phenanthrene	6270	AGAC	mg/kg	10 of 10	0	2.1	54	4.4	6.3	3	2.1	4.4	49	13	54	20	24	
Anthracene	152000	AGAC	mg/kg	10 of 10	0	0.48	16	0.93	1.4	0.65	0.48	1.1	13	3.3	16	4.2	6.5	
Fluoranthene	6350	AGAC	mg/kg	10 of 10	0	3.6	170	6.2	8.2	5.1	3.6	6.8	81	24	170	2		

Concentration exceeds GAC	100.00
Limit of Detection value exceeds GAC	<0.1
Concentration exceeds saturation value but not GAC	50

ARUP

								Hole Ref	OP201	OP202	OP203	OP204	OP205	HP101	HP102	HP103	HP104	HP105
								Sample Ref	2364747	2364748	2364749	2364750	2364751					
								Sample Depth (mbgl)	0.3	0.3	0.3	0.3	0.3	0.25	0.3	0.15	0.3	0.2
								Sample Date	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
								Investigation	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
								Geology	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground
Contaminant Name	GAC	GAC Source	Units	Total > LOD	Total > GAC	Min	Max											
1,1,2-trichloroethane	1480	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethylene	1460	AGAC	mg/kg	0 of 5	0	0.01	0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
1,3-dichloropropane	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dibromoethane	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	2900	AGAC/S4UL	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-tetrachloroethane	2070	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	27100	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m+p-Xylene	31500	AGAC (p-xylene)	mg/kg	0 of 9	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	32600	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	6120	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	5220	AGAC	mg/kg	0 of 5	0	0.01	0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
Isopropylbenzene	33800	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	3460	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-trichloropropane	-		mg/kg	0 of 5	0	0.01	0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
n-propylbenzene	43900	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-chlorotoluene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-trimethylbenzene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-chlorotoluene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-butylbenzene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-trimethylbenzene	408	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-butylbenzene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-isopropyltoluene	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	392	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	36000	S4UL (inh)	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-butylbenzene	-		mg/kg	0 of 5	0	0.01	0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
1,2-dichlorobenzene	50500	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dibromo-3-chloropropane	-		mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-trichlorobenzene	3980	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	50.8	AGAC/S4UL	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-trichlorobenzene	1570	AGAC	mg/kg	0 of 10	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE	-		mg/kg	0 of 9	0	0.01	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		< 1.0	< 1.0	< 1.0	< 1.0
SVOCs																		
Phenol	1300	S4UL (direct contact)	mg/kg	0 of 10	0	0.2	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Aniline	-		mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	1060	AGAC	mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
2-Methylphenol	49400	AGAC	mg/kg	0 of 10	0	0.3	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroisopropyl)ether	-		mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
2,4-Dimethylphenol	9880	AGAC	mg/kg	0 of 10	0	0.3	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis-(dichloroethoxy)methane	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
2,4-Dichlorophenol	1040	AGAC	mg/kg	0 of 10	0	0.3	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	3980	AGAC	mg/kg	0 of 10	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	-		mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	-		mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
2,4,6-Trichlorophenol	1060	AGAC	mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	1100	S4UL	mg/kg	0 of 10	0	0.2	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chloronaphthalene	2750	AGAC	mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
2,4-Dinitrotoluene	990	AGAC	mg/kg	0 of 10	0	0.2	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
3-Nitroaniline	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
4-Nitrophenol	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
Dibenzofuran	-		mg/kg	0 of 10	0	0.2	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2,6-Dinitrotoluene	498	AGAC	mg/kg	0 of 10	0	0.1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	1050	AGAC	mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
Diethylphthalate	96000		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
4-Chlorophenylphenylether	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
4-Nitroaniline	-		mg/kg	0 of 10	0	0.2	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methyl-4,6-Dinitrophenol	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
Diphenylamine	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
4-Bromophenylphenylether	-		mg/kg	0 of 5	0	1	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					
Hexachlorobenzene	29.7	AGAC/S4UL	mg/kg	0 of 10	0	0.3	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.3	< 0.3	< 0.3	< 0.3	< 0

Appendix D

Hazardous waste assessment

Waste Classification Report

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

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



EOPUE-BRY1Z-JVG0R

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

Job name

Castlefield Viaduct 1

Description/Comments

Screening assessment to classify waste material from Castlefield Viaduct site.

Project

Castlefield Viaduct

Site

Castlefield Viaduct

Classified by

Name: **Lottie Harold**
Date: **09 Aug 2024 09:17 GMT**
Telephone: **07711093533**

Company: **Ove Arup**
6th floor, 3 Piccadilly Place
MANCHESTER
M1 3BN

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
Hazardous Waste Classification

Date
06 Jun 2024

Next 3 year Refresher due by Jun 2027

Purpose of classification

2 - Material Characterisation

Address of the waste

Castlefield Viaduct, Greater, Manchester

Post Code M3 4LG

SIC for the process giving rise to the waste

43120 Site preparation

Description of industry/producer giving rise to the waste

Redevelopment of viaduct structure into a public garden.

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

Waste created during the removal of material from the viaduct structure.

Description of the waste

Made ground comprising sand, gravel, brick and clinker, with a plastic membrane.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	OP201	0.3	Non Hazardous		3
2	OP202	0.3	Non Hazardous		5
3	OP203	0.3	Non Hazardous		7
4	OP204	0.3	Non Hazardous		9
5	OP205	0.3	Non Hazardous		11
6	HP101	0.25	Hazardous	HP 7	13
7	HP102	0.3	Non Hazardous		15
8	HP103	0.15	Hazardous	HP 3(i), HP 7, HP 10, HP 11, HP 14	17
9	HP104	0.3	Non Hazardous		20
10	HP105	0.2	Hazardous	HP 3(i), HP 7, HP 11	22

Related documents

#	Name	Description
1	Arup Contaminated Land Template 001	waste stream template used to create this Job

Report

Created by: Lottie Harold

Created date: 09 Aug 2024 09:17 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	25
Appendix B: Rationale for selection of metal species	26
Appendix C: Version	27

Classification of sample: OP201


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

Sample details

Sample name:	LoW Code:
OP201	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				27	mg/kg	1.32	35.649	mg/kg	0.00356 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				260	mg/kg	1.117	290.292	mg/kg	0.029 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				1.5	mg/kg	2.775	4.163	mg/kg	0.000416 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.7	mg/kg	6.272	4.39	mg/kg	0.000439 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	0.8	mg/kg	1.285	1.028	mg/kg	0.00008 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				31	mg/kg	1.462	45.308	mg/kg	0.00453 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				260	mg/kg	1.126	292.731	mg/kg	0.0293 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	290	mg/kg		290	mg/kg	0.029 %	✓	
	082-001-00-6											
9	mercury { mercury dichloride }				0.3	mg/kg	1.353	0.406	mg/kg	0.0000406 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
10	nickel { nickel dihydroxide }				36	mg/kg	1.579	56.862	mg/kg	0.00569 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				72	mg/kg	1.785	128.533	mg/kg	0.0129 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
12	zinc { zinc oxide }				250	mg/kg	1.245	311.178	mg/kg	0.0311 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
13	pH				8.1	pH		8.1	pH	8.1 pH		
14	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 }				0.2	mg/kg	1.884	0.377	mg/kg	0.0000377 %	✓	
	006-007-00-5											
15	phenol				0.7	mg/kg		0.7	mg/kg	0.00007 %	✓	
	604-001-00-2	203-632-7	108-95-2									

#	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	TPH (C6 to C40) petroleum group				75.09 mg/kg		75.09 mg/kg	0.00751 %	✓	
			TPH							
17	naphthalene				0.51 mg/kg		0.51 mg/kg	0.000051 %	✓	
	601-052-00-2	202-049-5	91-20-3							
18	acenaphthylene				0.05 mg/kg		0.05 mg/kg	0.000005 %	✓	
		205-917-1	208-96-8							
19	acenaphthene				0.9 mg/kg		0.9 mg/kg	0.00009 %	✓	
		201-469-6	83-32-9							
20	fluorene				0.49 mg/kg		0.49 mg/kg	0.000049 %	✓	
		201-695-5	86-73-7							
21	phenanthrene				4.4 mg/kg		4.4 mg/kg	0.00044 %	✓	
		201-581-5	85-01-8							
22	anthracene				0.93 mg/kg		0.93 mg/kg	0.000093 %	✓	
		204-371-1	120-12-7							
23	fluoranthene				6.2 mg/kg		6.2 mg/kg	0.00062 %	✓	
		205-912-4	206-44-0							
24	pyrene				7 mg/kg		7 mg/kg	0.0007 %	✓	
		204-927-3	129-00-0							
25	benzo[a]anthracene				2.7 mg/kg		2.7 mg/kg	0.00027 %	✓	
	601-033-00-9	200-280-6	56-55-3							
26	chrysene				2.6 mg/kg		2.6 mg/kg	0.00026 %	✓	
	601-048-00-0	205-923-4	218-01-9							
27	benzo[b]fluoranthene				2.7 mg/kg		2.7 mg/kg	0.00027 %	✓	
	601-034-00-4	205-911-9	205-99-2							
28	benzo[k]fluoranthene				1.1 mg/kg		1.1 mg/kg	0.00011 %	✓	
	601-036-00-5	205-916-6	207-08-9							
29	benzo[a]pyrene; benzo[def]chrysene				2 mg/kg		2 mg/kg	0.0002 %	✓	
	601-032-00-3	200-028-5	50-32-8							
30	indeno[123-cd]pyrene				0.7 mg/kg		0.7 mg/kg	0.00007 %	✓	
		205-893-2	193-39-5							
31	dibenz[a,h]anthracene				0.22 mg/kg		0.22 mg/kg	0.000022 %	✓	
	601-041-00-2	200-181-8	53-70-3							
32	benzo[ghi]perylene				1.2 mg/kg		1.2 mg/kg	0.00012 %	✓	
		205-883-8	191-24-2							
33	PAHs (total)				34 mg/kg		34 mg/kg	0.0034 %	✓	
Total:								0.16 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
CLP: Note 1	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00751%)

Classification of sample: OP202


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

Sample details

Sample name:	LoW Code:
OP202	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				30	mg/kg	1.32	39.61	mg/kg	0.00396 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				290	mg/kg	1.117	323.787	mg/kg	0.0324 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				2.5	mg/kg	2.775	6.938	mg/kg	0.000694 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.8	mg/kg	6.272	5.017	mg/kg	0.000502 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	0.5	mg/kg	1.285	0.643	mg/kg	0.00005 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				19	mg/kg	1.462	27.77	mg/kg	0.00278 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				280	mg/kg	1.126	315.249	mg/kg	0.0315 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	210	mg/kg		210	mg/kg	0.021 %	✓	
	082-001-00-6											
9	mercury { mercury dichloride }				0.26	mg/kg	1.353	0.352	mg/kg	0.0000352 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
10	nickel { nickel dihydroxide }				40	mg/kg	1.579	63.18	mg/kg	0.00632 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				50	mg/kg	1.785	89.259	mg/kg	0.00893 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
12	zinc { zinc oxide }				170	mg/kg	1.245	211.601	mg/kg	0.0212 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
13	pH				8.2	pH		8.2	pH	8.2 pH		
14	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 }				0.3	mg/kg	1.884	0.565	mg/kg	0.0000565 %	✓	
	006-007-00-5											
15	TPH (C6 to C40) petroleum group				102.83	mg/kg		102.83	mg/kg	0.0103 %	✓	

#	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	naphthalene				1.4 mg/kg		1.4 mg/kg	0.00014 %	✓	
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				0.08 mg/kg		0.08 mg/kg	0.000008 %	✓	
		205-917-1	208-96-8							
18	acenaphthene				1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
		201-469-6	83-32-9							
19	fluorene				0.85 mg/kg		0.85 mg/kg	0.000085 %	✓	
		201-695-5	86-73-7							
20	phenanthrene				6.3 mg/kg		6.3 mg/kg	0.00063 %	✓	
		201-581-5	85-01-8							
21	anthracene				1.4 mg/kg		1.4 mg/kg	0.00014 %	✓	
		204-371-1	120-12-7							
22	fluoranthene				8.2 mg/kg		8.2 mg/kg	0.00082 %	✓	
		205-912-4	206-44-0							
23	pyrene				8.6 mg/kg		8.6 mg/kg	0.00086 %	✓	
		204-927-3	129-00-0							
24	benzo[a]anthracene				3.4 mg/kg		3.4 mg/kg	0.00034 %	✓	
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				3.6 mg/kg		3.6 mg/kg	0.00036 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				3 mg/kg		3 mg/kg	0.0003 %	✓	
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				1.4 mg/kg		1.4 mg/kg	0.00014 %	✓	
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				2.6 mg/kg		2.6 mg/kg	0.00026 %	✓	
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				0.88 mg/kg		0.88 mg/kg	0.000088 %	✓	
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				0.31 mg/kg		0.31 mg/kg	0.000031 %	✓	
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
		205-883-8	191-24-2							
32	PAHs (total)				44 mg/kg		44 mg/kg	0.0044 %	✓	
Total:								0.149 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0103%)

Classification of sample: OP203


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

Sample details

Sample name:	LoW Code:
OP203	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				3.9	mg/kg	1.32	5.149	mg/kg	0.000515 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				43	mg/kg	1.117	48.01	mg/kg	0.0048 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				0.4	mg/kg	2.775	1.11	mg/kg	0.000111 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.2	mg/kg	6.272	1.254	mg/kg	0.000125 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	1.6	mg/kg	1.285	2.056	mg/kg	0.00016 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				10	mg/kg	1.462	14.616	mg/kg	0.00146 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				48	mg/kg	1.126	54.043	mg/kg	0.0054 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	48	mg/kg		48	mg/kg	0.0048 %	✓	
	082-001-00-6											
9	nickel { nickel dihydroxide }				12	mg/kg	1.579	18.954	mg/kg	0.0019 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				45	mg/kg	1.785	80.333	mg/kg	0.00803 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
11	zinc { zinc oxide }				81	mg/kg	1.245	100.822	mg/kg	0.0101 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	pH		PH		8.7	pH		8.7	pH	8.7 pH		
13	TPH (C6 to C40) petroleum group		TPH		65.58	mg/kg		65.58	mg/kg	0.00656 %	✓	
14	naphthalene				0.18	mg/kg		0.18	mg/kg	0.000018 %	✓	
	601-052-00-2	202-049-5	91-20-3									
15	acenaphthylene				0.03	mg/kg		0.03	mg/kg	0.000003 %	✓	
		205-917-1	208-96-8									
16	acenaphthene				0.51	mg/kg		0.51	mg/kg	0.000051 %	✓	
		201-469-6	83-32-9									

#	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							
17	fluorene	201-695-5	86-73-7		0.29 mg/kg		0.29 mg/kg	0.000029 %	✓	
18	phenanthrene	201-581-5	85-01-8		3 mg/kg		3 mg/kg	0.0003 %	✓	
19	anthracene	204-371-1	120-12-7		0.65 mg/kg		0.65 mg/kg	0.000065 %	✓	
20	fluoranthene	205-912-4	206-44-0		5.1 mg/kg		5.1 mg/kg	0.00051 %	✓	
21	pyrene	204-927-3	129-00-0		5.4 mg/kg		5.4 mg/kg	0.00054 %	✓	
22	benzo[a]anthracene	601-033-00-9	200-280-6		2 mg/kg		2 mg/kg	0.0002 %	✓	
23	chrysene	601-048-00-0	205-923-4		1.9 mg/kg		1.9 mg/kg	0.00019 %	✓	
24	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.8 mg/kg		1.8 mg/kg	0.00018 %	✓	
25	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.67 mg/kg		0.67 mg/kg	0.000067 %	✓	
26	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.3 mg/kg		1.3 mg/kg	0.00013 %	✓	
27	indeno[123-cd]pyrene	205-893-2	193-39-5		0.57 mg/kg		0.57 mg/kg	0.000057 %	✓	
28	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.18 mg/kg		0.18 mg/kg	0.000018 %	✓	
29	benzo[ghi]perylene	205-883-8	191-24-2		0.95 mg/kg		0.95 mg/kg	0.000095 %	✓	
30	PAHs (total)				24 mg/kg		24 mg/kg	0.0024 %	✓	
Total:								0.0488 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
🧪	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00656%)

Classification of sample: OP204


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

Sample details

Sample name:	LoW Code:
OP204	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				5.9	mg/kg	1.32	7.79	mg/kg	0.000779 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				68	mg/kg	1.117	75.922	mg/kg	0.00759 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.3	mg/kg	6.272	1.882	mg/kg	0.000188 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				13	mg/kg	1.462	19	mg/kg	0.0019 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				61	mg/kg	1.126	68.679	mg/kg	0.00687 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	51	mg/kg		51	mg/kg	0.0051 %	✓	
	082-001-00-6											
9	nickel { nickel dihydroxide }				11	mg/kg	1.579	17.374	mg/kg	0.00174 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				54	mg/kg	1.785	96.4	mg/kg	0.00964 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
11	zinc { zinc oxide }				71	mg/kg	1.245	88.375	mg/kg	0.00884 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	pH		PH		9.8	pH		9.8	pH	9.8 pH		
13	TPH (C6 to C40) petroleum group		TPH		55.19	mg/kg		55.19	mg/kg	0.00552 %	✓	
14	naphthalene				0.14	mg/kg		0.14	mg/kg	0.000014 %	✓	
	601-052-00-2	202-049-5	91-20-3									
15	acenaphthene				0.32	mg/kg		0.32	mg/kg	0.000032 %	✓	
		201-469-6	83-32-9									
16	fluorene				0.19	mg/kg		0.19	mg/kg	0.000019 %	✓	
		201-695-5	86-73-7									

#	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							
17	phenanthrene	201-581-5	85-01-8		2.1 mg/kg		2.1 mg/kg	0.00021 %	✓	
18	anthracene	204-371-1	120-12-7		0.48 mg/kg		0.48 mg/kg	0.000048 %	✓	
19	fluoranthene	205-912-4	206-44-0		3.6 mg/kg		3.6 mg/kg	0.00036 %	✓	
20	pyrene	204-927-3	129-00-0		3.9 mg/kg		3.9 mg/kg	0.00039 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		1.5 mg/kg		1.5 mg/kg	0.00015 %	✓	
22	chrysene	601-048-00-0	205-923-4		1.5 mg/kg		1.5 mg/kg	0.00015 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.7 mg/kg		1.7 mg/kg	0.00017 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.1 mg/kg		1.1 mg/kg	0.00011 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.47 mg/kg		0.47 mg/kg	0.000047 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.18 mg/kg		0.18 mg/kg	0.000018 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		0.78 mg/kg		0.78 mg/kg	0.000078 %	✓	
28	PAHs (total)				18 mg/kg		18 mg/kg	0.0018 %	✓	
Total:								0.052 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00552%)

Classification of sample: OP205


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

Sample details

Sample name:	LoW Code:
OP205	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				26	mg/kg	1.32	34.328	mg/kg	0.00343 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				280	mg/kg	1.117	312.622	mg/kg	0.0313 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				2.3	mg/kg	2.775	6.383	mg/kg	0.000638 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.7	mg/kg	6.272	4.39	mg/kg	0.000439 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	0.7	mg/kg	1.285	0.9	mg/kg	0.00007 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				28	mg/kg	1.462	40.924	mg/kg	0.00409 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				170	mg/kg	1.126	191.401	mg/kg	0.0191 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	200	mg/kg		200	mg/kg	0.02 %	✓	
	082-001-00-6											
9	mercury { mercury dichloride }				0.2	mg/kg	1.353	0.271	mg/kg	0.0000271 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
10	nickel { nickel dihydroxide }				39	mg/kg	1.579	61.6	mg/kg	0.00616 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
11	vanadium { divanadium pentaoxide; vanadium pentoxide }				60	mg/kg	1.785	107.111	mg/kg	0.0107 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
12	zinc { zinc oxide }				200	mg/kg	1.245	248.943	mg/kg	0.0249 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
13	pH				9.5	pH		9.5	pH	9.5 pH		
14	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 }				0.2	mg/kg	1.884	0.377	mg/kg	0.0000377 %	✓	
	006-007-00-5											
15	TPH (C6 to C40) petroleum group				79.99	mg/kg		79.99	mg/kg	0.008 %	✓	

#	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	naphthalene				0.32 mg/kg		0.32 mg/kg	0.000032 %	✓	
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				0.06 mg/kg		0.06 mg/kg	0.000006 %	✓	
		205-917-1	208-96-8							
18	acenaphthene				0.78 mg/kg		0.78 mg/kg	0.000078 %	✓	
		201-469-6	83-32-9							
19	fluorene				0.46 mg/kg		0.46 mg/kg	0.000046 %	✓	
		201-695-5	86-73-7							
20	phenanthrene				4.4 mg/kg		4.4 mg/kg	0.00044 %	✓	
		201-581-5	85-01-8							
21	anthracene				1.1 mg/kg		1.1 mg/kg	0.00011 %	✓	
		204-371-1	120-12-7							
22	fluoranthene				6.8 mg/kg		6.8 mg/kg	0.00068 %	✓	
		205-912-4	206-44-0							
23	pyrene				7.3 mg/kg		7.3 mg/kg	0.00073 %	✓	
		204-927-3	129-00-0							
24	benzo[a]anthracene				2.5 mg/kg		2.5 mg/kg	0.00025 %	✓	
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				2.2 mg/kg		2.2 mg/kg	0.00022 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				2.2 mg/kg		2.2 mg/kg	0.00022 %	✓	
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				0.76 mg/kg		0.76 mg/kg	0.000076 %	✓	
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				1.8 mg/kg		1.8 mg/kg	0.00018 %	✓	
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				0.56 mg/kg		0.56 mg/kg	0.000056 %	✓	
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				0.19 mg/kg		0.19 mg/kg	0.000019 %	✓	
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				0.88 mg/kg		0.88 mg/kg	0.000088 %	✓	
		205-883-8	191-24-2							
32	PAHs (total)				32 mg/kg		32 mg/kg	0.0032 %	✓	
Total:								0.135 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.008%)

Classification of sample: HP101

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

Sample details

Sample name:	LoW Code:
HP101	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.25 m	

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:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.12%)

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				62	mg/kg	1.32	81.86	mg/kg	0.00819 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				310	mg/kg	1.117	346.117	mg/kg	0.0346 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				1.7	mg/kg	2.775	4.718	mg/kg	0.000472 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				1.1	mg/kg	6.272	6.899	mg/kg	0.00069 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	2.4	mg/kg	1.285	3.085	mg/kg	0.00024 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				58	mg/kg	1.462	84.77	mg/kg	0.00848 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				330	mg/kg	1.126	371.543	mg/kg	0.0372 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	1200	mg/kg		1200	mg/kg	0.12 %	✓	
	082-001-00-6											
9	nickel { nickel dihydroxide }				67	mg/kg	1.579	105.826	mg/kg	0.0106 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				67	mg/kg	1.785	119.607	mg/kg	0.012 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
11	zinc { zinc oxide }				680	mg/kg	1.245	846.406	mg/kg	0.0846 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	pH				7.7	pH		7.7	pH	7.7 pH		
			PH									
13	TPH (C6 to C40) petroleum group				857.4	mg/kg		857.4	mg/kg	0.0857 %	✓	
			TPH									

#	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							
14	naphthalene				2.7 mg/kg		2.7 mg/kg	0.00027 %	✓	
	601-052-00-2	202-049-5	91-20-3							
15	acenaphthylene				0.61 mg/kg		0.61 mg/kg	0.000061 %	✓	
		205-917-1	208-96-8							
16	acenaphthene				7.4 mg/kg		7.4 mg/kg	0.00074 %	✓	
		201-469-6	83-32-9							
17	fluorene				5.2 mg/kg		5.2 mg/kg	0.00052 %	✓	
		201-695-5	86-73-7							
18	phenanthrene				49 mg/kg		49 mg/kg	0.0049 %	✓	
		201-581-5	85-01-8							
19	anthracene				13 mg/kg		13 mg/kg	0.0013 %	✓	
		204-371-1	120-12-7							
20	fluoranthene				81 mg/kg		81 mg/kg	0.0081 %	✓	
		205-912-4	206-44-0							
21	pyrene				78 mg/kg		78 mg/kg	0.0078 %	✓	
		204-927-3	129-00-0							
22	benzo[a]anthracene				41 mg/kg		41 mg/kg	0.0041 %	✓	
	601-033-00-9	200-280-6	56-55-3							
23	chrysene				39 mg/kg		39 mg/kg	0.0039 %	✓	
	601-048-00-0	205-923-4	218-01-9							
24	benzo[b]fluoranthene				44 mg/kg		44 mg/kg	0.0044 %	✓	
	601-034-00-4	205-911-9	205-99-2							
25	benzo[k]fluoranthene				16 mg/kg		16 mg/kg	0.0016 %	✓	
	601-036-00-5	205-916-6	207-08-9							
26	benzo[a]pyrene; benzo[def]chrysene				37 mg/kg		37 mg/kg	0.0037 %	✓	
	601-032-00-3	200-028-5	50-32-8							
27	indeno[123-cd]pyrene				14 mg/kg		14 mg/kg	0.0014 %	✓	
		205-893-2	193-39-5							
28	dibenz[a,h]anthracene				4.4 mg/kg		4.4 mg/kg	0.00044 %	✓	
	601-041-00-2	200-181-8	53-70-3							
29	benzo[ghi]perylene				17 mg/kg		17 mg/kg	0.0017 %	✓	
		205-883-8	191-24-2							
30	PAHs (total)				448 mg/kg		448 mg/kg	0.0448 %	✓	
Total:								0.492 %		

Key

	User supplied data
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0857%)

Classification of sample: HP102


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

Sample details

Sample name:	LoW Code:
HP102	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	Entry:

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				69	mg/kg	1.32	91.102	mg/kg	0.00911 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				230	mg/kg	1.117	256.796	mg/kg	0.0257 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				1.9	mg/kg	2.775	5.273	mg/kg	0.000527 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.7	mg/kg	6.272	4.39	mg/kg	0.000439 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	3.1	mg/kg	1.285	3.984	mg/kg	0.00031 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				69	mg/kg	1.462	100.847	mg/kg	0.0101 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				310	mg/kg	1.126	349.025	mg/kg	0.0349 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	550	mg/kg		550	mg/kg	0.055 %	✓	
	082-001-00-6											
9	nickel { nickel dihydroxide }				80	mg/kg	1.579	126.36	mg/kg	0.0126 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				70	mg/kg	1.785	124.963	mg/kg	0.0125 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
11	zinc { zinc oxide }				290	mg/kg	1.245	360.967	mg/kg	0.0361 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	pH		PH		8	pH		8	pH	8pH		
13	TPH (C6 to C40) petroleum group		TPH		625.6	mg/kg		625.6	mg/kg	0.0626 %	✓	
14	naphthalene				1.8	mg/kg		1.8	mg/kg	0.00018 %	✓	
	601-052-00-2	202-049-5	91-20-3									
15	acenaphthene				1.6	mg/kg		1.6	mg/kg	0.00016 %	✓	
		201-469-6	83-32-9									
16	fluorene				1	mg/kg		1	mg/kg	0.0001 %	✓	
		201-695-5	86-73-7									

#	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							
17	phenanthrene	201-581-5	85-01-8		13 mg/kg		13 mg/kg	0.0013 %	✓	
18	anthracene	204-371-1	120-12-7		3.3 mg/kg		3.3 mg/kg	0.00033 %	✓	
19	fluoranthene	205-912-4	206-44-0		24 mg/kg		24 mg/kg	0.0024 %	✓	
20	pyrene	204-927-3	129-00-0		23 mg/kg		23 mg/kg	0.0023 %	✓	
21	benzo[a]anthracene	601-033-00-9	200-280-6		14 mg/kg		14 mg/kg	0.0014 %	✓	
22	chrysene	601-048-00-0	205-923-4		12 mg/kg		12 mg/kg	0.0012 %	✓	
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		14 mg/kg		14 mg/kg	0.0014 %	✓	
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		5.3 mg/kg		5.3 mg/kg	0.00053 %	✓	
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		12 mg/kg		12 mg/kg	0.0012 %	✓	
26	indeno[123-cd]pyrene	205-893-2	193-39-5		5.8 mg/kg		5.8 mg/kg	0.00058 %	✓	
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1.4 mg/kg		1.4 mg/kg	0.00014 %	✓	
28	benzo[ghi]perylene	205-883-8	191-24-2		6.5 mg/kg		6.5 mg/kg	0.00065 %	✓	
29	PAHs (total)				140 mg/kg		140 mg/kg	0.014 %	✓	
Total:								0.288 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0626%)

Classification of sample: HP103

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

Sample details

Sample name:	LoW Code:	
HP103	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.15 m		

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. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.138%)

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:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.44%)

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.: 0.138%)

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 (worst case): (Note 1 conc.: 0.44%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.138%)

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

Hazard Statements hit:

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

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.44%)

Determinands

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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				51 mg/kg	1.32	67.337	mg/kg	0.00673 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	barium { barium oxide }				610 mg/kg	1.117	681.069	mg/kg	0.0681 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium oxide }				1.5 mg/kg	2.775	4.163	mg/kg	0.000416 %	✓	
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron trifluoride }				0.7 mg/kg	6.272	4.39	mg/kg	0.000439 %	✓	
	005-001-00-X	231-569-5	7637-07-2								
5	cadmium { cadmium sulfide }			1	2.6 mg/kg	1.285	3.342	mg/kg	0.00026 %	✓	
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				63 mg/kg	1.462	92.078	mg/kg	0.00921 %	✓	
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				230 mg/kg	1.126	258.954	mg/kg	0.0259 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	4400 mg/kg		4400	mg/kg	0.44 %	✓	
	082-001-00-6										
9	nickel { nickel dihydroxide }				150 mg/kg	1.579	236.925	mg/kg	0.0237 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				65 mg/kg	1.785	116.037	mg/kg	0.0116 %	✓	
	023-001-00-8	215-239-8	1314-62-1								
11	zinc { zinc oxide }				500 mg/kg	1.245	622.357	mg/kg	0.0622 %	✓	
	030-013-00-7	215-222-5	1314-13-2								
12	pH		PH		7.8 pH		7.8	pH	7.8 pH		
13	TPH (C6 to C40) petroleum group		TPH		1378 mg/kg		1378	mg/kg	0.138 %	✓	
14	naphthalene				2.4 mg/kg		2.4	mg/kg	0.00024 %	✓	
	601-052-00-2	202-049-5	91-20-3								
15	acenaphthylene				1.3 mg/kg		1.3	mg/kg	0.00013 %	✓	
		205-917-1	208-96-8								
16	acenaphthene				6.2 mg/kg		6.2	mg/kg	0.00062 %	✓	
		201-469-6	83-32-9								
17	fluorene				3.7 mg/kg		3.7	mg/kg	0.00037 %	✓	
		201-695-5	86-73-7								
18	phenanthrene				54 mg/kg		54	mg/kg	0.0054 %	✓	
		201-581-5	85-01-8								
19	anthracene				16 mg/kg		16	mg/kg	0.0016 %	✓	
		204-371-1	120-12-7								
20	fluoranthene				170 mg/kg		170	mg/kg	0.017 %	✓	
		205-912-4	206-44-0								
21	pyrene				170 mg/kg		170	mg/kg	0.017 %	✓	
		204-927-3	129-00-0								
22	benzo[a]anthracene				97 mg/kg		97	mg/kg	0.0097 %	✓	
	601-033-00-9	200-280-6	56-55-3								
23	chrysene				94 mg/kg		94	mg/kg	0.0094 %	✓	
	601-048-00-0	205-923-4	218-01-9								
24	benzo[b]fluoranthene				130 mg/kg		130	mg/kg	0.013 %	✓	
	601-034-00-4	205-911-9	205-99-2								
25	benzo[k]fluoranthene				97 mg/kg		97	mg/kg	0.0097 %	✓	
	601-036-00-5	205-916-6	207-08-9								
26	benzo[a]pyrene; benzo[def]chrysene				62 mg/kg		62	mg/kg	0.0062 %	✓	
	601-032-00-3	200-028-5	50-32-8								

#	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							
27	indeno[123-cd]pyrene				42 mg/kg		42 mg/kg	0.0042 %	✓	
		205-893-2	193-39-5							
28	dibenz[a,h]anthracene				12 mg/kg		12 mg/kg	0.0012 %	✓	
		601-041-00-2	200-181-8							
29	benzo[ghi]perylene				46 mg/kg		46 mg/kg	0.0046 %	✓	
			205-883-8							
30	PAHs (total)				996 mg/kg		996 mg/kg	0.0996 %	✓	
Total:								0.986 %		

Key

	User supplied data
	Hazardous result
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.138%)

Classification of sample: HP104


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

Sample details

Sample name:	LoW Code:
HP104	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.3 m	

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				66	mg/kg	1.32	87.141	mg/kg	0.00871 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	barium { barium oxide }				220	mg/kg	1.117	245.631	mg/kg	0.0246 %	✓	
		215-127-9	1304-28-5									
3	beryllium { beryllium oxide }				1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %	✓	
	004-003-00-8	215-133-1	1304-56-9									
4	boron { boron trifluoride }				0.5	mg/kg	6.272	3.136	mg/kg	0.000314 %	✓	
	005-001-00-X	231-569-5	7637-07-2									
5	cadmium { cadmium sulfide }			1	2.7	mg/kg	1.285	3.47	mg/kg	0.00027 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
6	chromium { chromium(III) oxide (worst case) }				60	mg/kg	1.462	87.693	mg/kg	0.00877 %	✓	
		215-160-9	1308-38-9									
7	copper { dicopper oxide; copper (I) oxide }				250	mg/kg	1.126	281.472	mg/kg	0.0281 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	520	mg/kg		520	mg/kg	0.052 %	✓	
	082-001-00-6											
9	nickel { nickel dihydroxide }				61	mg/kg	1.579	96.349	mg/kg	0.00963 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10	vanadium { divanadium pentaoxide; vanadium pentoxide }				68	mg/kg	1.785	121.393	mg/kg	0.0121 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
11	zinc { zinc oxide }				320	mg/kg	1.245	398.308	mg/kg	0.0398 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	pH		PH		8	pH		8	pH	8pH		
13	TPH (C6 to C40) petroleum group		TPH		521.9	mg/kg		521.9	mg/kg	0.0522 %	✓	
14	naphthalene				2.3	mg/kg		2.3	mg/kg	0.00023 %	✓	
	601-052-00-2	202-049-5	91-20-3									
15	acenaphthylene				0.27	mg/kg		0.27	mg/kg	0.000027 %	✓	
		205-917-1	208-96-8									
16	acenaphthene				3.6	mg/kg		3.6	mg/kg	0.00036 %	✓	
		201-469-6	83-32-9									

#	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							
17	fluorene	201-695-5	86-73-7		2 mg/kg		2 mg/kg	0.0002 %	✓	
18	phenanthrene	201-581-5	85-01-8		20 mg/kg		20 mg/kg	0.002 %	✓	
19	anthracene	204-371-1	120-12-7		4.2 mg/kg		4.2 mg/kg	0.00042 %	✓	
20	fluoranthene	205-912-4	206-44-0		29 mg/kg		29 mg/kg	0.0029 %	✓	
21	pyrene	204-927-3	129-00-0		26 mg/kg		26 mg/kg	0.0026 %	✓	
22	benzo[a]anthracene	601-033-00-9	200-280-6		14 mg/kg		14 mg/kg	0.0014 %	✓	
23	chrysene	601-048-00-0	205-923-4		14 mg/kg		14 mg/kg	0.0014 %	✓	
24	benzo[b]fluoranthene	601-034-00-4	205-911-9		16 mg/kg		16 mg/kg	0.0016 %	✓	
25	benzo[k]fluoranthene	601-036-00-5	205-916-6		5.9 mg/kg		5.9 mg/kg	0.00059 %	✓	
26	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		13 mg/kg		13 mg/kg	0.0013 %	✓	
27	indeno[123-cd]pyrene	205-893-2	193-39-5		5.9 mg/kg		5.9 mg/kg	0.00059 %	✓	
28	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1.8 mg/kg		1.8 mg/kg	0.00018 %	✓	
29	benzo[ghi]perylene	205-883-8	191-24-2		6.4 mg/kg		6.4 mg/kg	0.00064 %	✓	
30	PAHs (total)				164 mg/kg		164 mg/kg	0.0164 %	✓	
Total:								0.27 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
🧪	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0522%)

Classification of sample: HP105

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

Sample details

Sample name:	LoW Code:
HP105	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.2 m	

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. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.101%)

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:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.14%)

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.: 0.101%)

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.: 0.101%)

Determinands

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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				44 mg/kg	1.32	58.094 mg/kg		0.00581 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	barium { barium oxide }				330 mg/kg	1.117	368.447 mg/kg		0.0368 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium oxide }				1.2 mg/kg	2.775	3.33 mg/kg		0.000333 %	✓	
	004-003-00-8	215-133-1	1304-56-9								

#		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									
4		boron { boron trifluoride }			1	0.6	mg/kg	6.272	3.763	mg/kg	0.000376 %	✓	
		005-001-00-X	231-569-5	7637-07-2									
5		cadmium { cadmium sulfide }			1	1.6	mg/kg	1.285	2.056	mg/kg	0.00016 %	✓	
		048-010-00-4	215-147-8	1306-23-6									
6		chromium { chromium(III) oxide (worst case) }				57	mg/kg	1.462	83.309	mg/kg	0.00833 %	✓	
			215-160-9	1308-38-9									
7		copper { dicopper oxide; copper (I) oxide }				210	mg/kg	1.126	236.437	mg/kg	0.0236 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
8		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	1400	mg/kg		1400	mg/kg	0.14 %	✓	
		082-001-00-6											
9		nickel { nickel dihydroxide }				55	mg/kg	1.579	86.872	mg/kg	0.00869 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
10		vanadium { divanadium pentaoxide; vanadium pentoxide }				67	mg/kg	1.785	119.607	mg/kg	0.012 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
11		zinc { zinc oxide }				320	mg/kg	1.245	398.308	mg/kg	0.0398 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
12		pH				7.9	pH		7.9	pH	7.9 pH		
				PH									
13		TPH (C6 to C40) petroleum group				1005.8	mg/kg		1005.8	mg/kg	0.101 %	✓	
				TPH									
14		naphthalene				1.4	mg/kg		1.4	mg/kg	0.00014 %	✓	
		601-052-00-2	202-049-5	91-20-3									
15		acenaphthylene				0.59	mg/kg		0.59	mg/kg	0.000059 %	✓	
			205-917-1	208-96-8									
16		acenaphthene				2.9	mg/kg		2.9	mg/kg	0.00029 %	✓	
			201-469-6	83-32-9									
17		fluorene				1.7	mg/kg		1.7	mg/kg	0.00017 %	✓	
			201-695-5	86-73-7									
18		phenanthrene				24	mg/kg		24	mg/kg	0.0024 %	✓	
			201-581-5	85-01-8									
19		anthracene				6.5	mg/kg		6.5	mg/kg	0.00065 %	✓	
			204-371-1	120-12-7									
20		fluoranthene				65	mg/kg		65	mg/kg	0.0065 %	✓	
			205-912-4	206-44-0									
21		pyrene				67	mg/kg		67	mg/kg	0.0067 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				39	mg/kg		39	mg/kg	0.0039 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				33	mg/kg		33	mg/kg	0.0033 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				46	mg/kg		46	mg/kg	0.0046 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				16	mg/kg		16	mg/kg	0.0016 %	✓	
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				39	mg/kg		39	mg/kg	0.0039 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				17	mg/kg		17	mg/kg	0.0017 %	✓	
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				4.3	mg/kg		4.3	mg/kg	0.00043 %	✓	
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				19	mg/kg		19	mg/kg	0.0019 %	✓	
			205-883-8	191-24-2									
30		PAHs (total)				382	mg/kg		382	mg/kg	0.0382 %	✓	
Total:											0.453 %		

Key

	User supplied data
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
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: Under 1000 mg/kg TPH is unlikely to be flammable

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.101%)

Appendix A: Classifier defined and non GB MCL determinands

• barium oxide (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825>
Data source date: 02 Apr 2020
Hazard Statements: Acute Tox. 3; H301 , Skin Corr. 1B; H314 , Eye Dam. 1; H318 , Acute Tox. 1; H332

• 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 (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

• pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

• 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

• 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

• 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

■ **PAHs (total)**

Description/Comments: Worst case scenario combining risk phrases and substance specific thresholds from benzo[a]pyrene (CLP# 601-032-00-3) and benzo[a]anthracene (CLP# 601-033-00-9)

Data source: 2008/1272/EC – Table 3.2 of Annex VI of regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures and 2009/790/EC Annex IV – Annex IV of regulation 2009/790/EC - 1st Adaptation to Technical Progress for European Regulation 1272/2008

Data source date: 16 Dec 2008

Hazard Statements: Skin Sens. 1; H317 , Carc. 1B; H350 , Carc. 1B; H350 >= 0.01 % , Muta. 1B; H340 , Aquatic Acute 1; H400 (M=100) , Aquatic Chronic 1; H410 (M=100) , Repr. 1B; H360FD

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on risk phrases

barium {barium oxide}

No metal works

beryllium {beryllium oxide}

Worst case species based on risk phrases

boron {boron trifluoride}

Water soluble

cadmium {cadmium sulfide}

Worst case species based on risk phrases

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

Chromium (VI) below LOD

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Minor source of lead from lead paint on iron girders in the east of the viaduct.

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

vanadium {divanadium pentaoxide; vanadium pentoxide}

Worst case species

zinc {zinc oxide}

No significant sources of zinc chromate have been identified on site.

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

Worst case species

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2024.213.6193.11387 (31 Jul 2024)

HazWasteOnline Database: 2024.213.6193.11387 (31 Jul 2024)

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