

GROUNDTECH
CONSULTING

OLD MILL STREET, NEW ISLINGTON

GEO-ENVIRONMENTAL APPRAISAL

ONE HERITAGE PLC

JUNE 2024

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SUMMARY

Site Details	
Site Location	*The site is located circa 1.6km from Manchester City Centre and is approximately centred on National Grid Reference 385488, 398450.*
Site Area	*The site is rectangular in shape and approximately 0.06 hectare in area.* *The site is currently utilised as a car park, the surfacing of the site comprises crushed tarmac and limestone gravel.* *Black hoarding bounds the north, west and east perimeters of the site. The south east of the site is unbounded for access to the site. Four concrete boulders are present along the southern border. A circa 0.5m high wooden fence is located down the centre of the site running north to south.*
Ground Model	
Made Ground Soils	*Made Ground was encountered across the site to a maximum depth of 2.0m begl.* *The entire site was surfaced with crushed tarmac and limestone gravel to a maximum depth of 0.25m bgl. The Made Ground encountered generally comprised sandy gravelly clay, gravelly sand and sandy angular to subangular gravel with minor constituents of brick, concrete and ash.* *A historic brick wall was encountered in TP03 in the north west of the site to 2.0m bgl in the area of the former rectory.*
Natural Soils	*Two main natural stratifications were encountered during the Ground Investigation and comprised firm to stiff becoming very stiff sandy gravelly Clay with minor constituents of mudstone and chert to a maximum depth of 12.0m bgl underlain by dense gravelly Sand in CP01 and CP02 to a maximum depth of 17.4m bgl.*
Bedrock	*Extremely weak red brown Mudstone bedrock was encountered in CP01 and CP02 at 17.4m and 17.1m bgl respectively.*
Groundwater	*No groundwater was encountered during the Ground Investigation.*
Ground Engineering Assessment	
Foundations	*The most suitable foundations for the proposed development is considered to be pile foundations constructed in the Mudstone bedrock or dense granular deposits underlying the site.* *If the structure is a steel portal frame, oversized pads or Vibro Stone Columns (VSCs) may be an option.* *A historic brick wall was encountered in TP03 in the north west of the site in the area of the former rectory and cobbles were encountered within the Made Ground across the site. Piles should be suitable to resist hard driving or an alternative installation method adopted.*
Concrete	*The results of laboratory pH and sulphate content indicate that ACEC Class AC-2 and sulphate class DS-2 conditions prevail for the natural ground in accordance with BRE Special Digest 1 <Concrete in aggressive ground 2005.*

	BRE pyrite testing indicated potentially pyritic ground within the Made Ground of TP02 located in the west of the site associated with the hydrated lime. An increase in concrete classification should be considered in this area or the material removed.
Highways	*Where natural cohesive soils are encountered at the formation levels, CBR values of less than 2 to 3% are likely to be achieved in undisturbed natural soils for pavement design purposes. Untreated Made Ground should be assumed to have a CBR value of <2.5%, unless proven otherwise.*
SuDS	*SuDS drainage is not considered to be feasible for the proposed development due to the depth of Made Ground to 2.0m begl and natural cohesive deposits which are capable of poor infiltration rates.*
Constraints	*The main limitation of the site is the depth of Made Ground to 2.0m begl combined with the likely high loadings required for the proposed development.* *A brick wall was encountered in TP03 to 2.0m bgl in the north west of the site in the area of the former rectory. Cobbles of brick and concrete were also encountered in the Made Ground beneath the site in TP01 to TP10. Heavy plant may be required locally across the site to break out any obstructions encountered. If deep foundations are adopted for the proposed development, they should be able to penetrate obstructions and dense ground.* *Visual and olfactory evidence of contamination was encountered in the Made Ground of TP02 at 1.35m begl which is likely to be hydrated lime with high sulphate and sulphur concentrations, it is potentially pyritic and may result in an increase in concrete classification.* *An electrical substation is present on site along the eastern boundary of the site. The position of the substation should be taken into consideration during the development of the site.*
GQRA and Revised (PL) Assessment	
Human Health	*Geo-environmental testing recorded elevated levels of heavy metals and speciated PAHs when compared to residential without plant uptake screening values. Amosite and Chrysotile asbestos fibres were encountered in three of the samples screened through laboratory testing at trace concentrations of <0.001 mass%.* *The proposed development will include areas of soft landscaping. A 600mm cover system underlain by a 100mm hard dig layer/demarcation membrane is required in areas of soft landscaping.* *The risk to human health is Moderate.*
Controlled Waters	*No mobile contamination has been encountered and the risk to controlled waters is Low.*
Permanent Ground Gas	*The site could be CS1 or CS2 depending on the final gas assessment, the level of gas protection measures will be confirmed on completion of the monitoring programme. The site is not within an area where radon protective measures are required within foundations. The risk from ground gases is Low.*
Final Appraisal	

The following further work is considered necessary to progress the site to the construction phase:

- *Completion of gas monitoring programme*
- *Issue gas assessment*

- *Removal of hydrated lime*
- *Additional mercury testing*
- *Tree survey by qualified arboriculturist*
- *Design of remedial specification*
- *Detailed Foundation design*
- *Confirmation of recommendations made in this appraisal with regulators*

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Plans		
Plan Reference	*Revision*	*Title*
GRO-24102-P01	-	*Project Location Plan*
GRO-24102-P02	-	*Preliminary Findings and Constraints Plan*
GRO-24102-P03	-	*Exploratory Hole Location Plan*
GRO-24102-P04	-	*Generalised Ground Model*
GRO-24102-P05	-	*Soil Contamination Plan*
GRO-24102-P06	-	*Revised Illustrative Conceptual Site Model (CSM)*

1.0 INTRODUCTION

1.1 Project Objectives

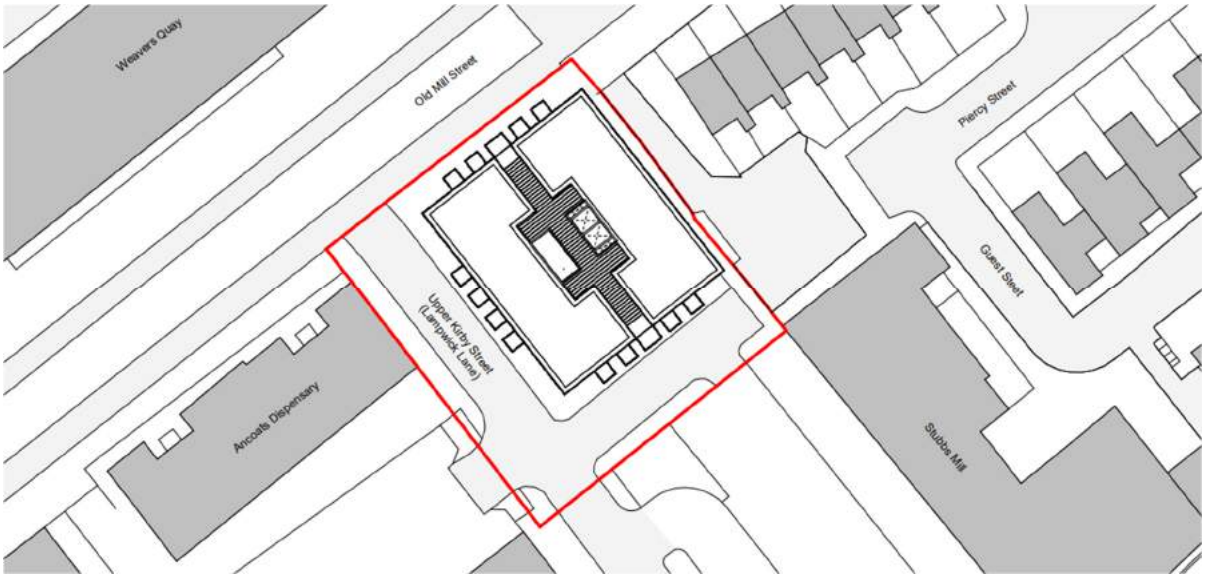
Groundtech Consulting Limited have been instructed by One Heritage LPC to undertake a Geo-environmental appraisal for a site at Old Mill Street in New Islington.

A Phase 1 Desk Study has previously been undertaken for the site by Wardell Armstrong referenced *GM12676-002-V2.0*, dated November 2023 and is summarised within the report.

A main investigation was undertaken in accordance with BS 5930:2020, BS 10175:2017, BS 8576:2013 and Eurocode 7 to revise the CSM and quantify the level of risk identified in the PRA. The Appraisal has been prepared in accordance with current UK Legislation and to discharge Land Quality pre-commencement planning conditions.

1.2 Proposed Development

The proposed development is residential end use comprising six-storey structure housing 40 No. apartments. A commercial space is proposed at ground floor level and associated features such as soft landscaping, cycle parking and supporting infrastructure is proposed on the site.



Proposed Development

1.3 Limitations

Other conditions may exist on the site that have not been taken into account in this assessment as they are outside the scope of works. Groundtech Consulting are not responsible for these circumstances that are not outlined in the report.

The assessment has been prepared for the exclusive use of the client. No third parties may rely on or reproduce the contents of the report without the written permission of Groundtech Consulting Limited. If any unauthorised third party comes into possession of the report they rely on it at their own risk and Groundtech Consulting Limited will not be obliged to provide a duty of care.

2.0 SITE SETTING

2.1 Location

The site is located circa 1.6km from Manchester City Centre, as shown on the Project Location Plan *GRO-24102-P01*. The site is approximately centred on National Grid Reference 385488, 398450.



Project Location

Access to the site is gained off Lampwick Lane to the west of the site.

2.2 Site Description

The site is rectangular in shape and approximately 0.06 hectare in area. The topography of the site is consistently flat as it has been previously levelled for use as a car park.

Site Features

The site is currently utilised as a car park with thirty two car parking spaces. The surfacing of the site comprises crushed tarmac and limestone gravel.

Black hoarding bounds the north, west and eastern perimeters of the site. The south east of the site is unbounded for access to the site. Four concrete boulders are present along the southern border. A circa 0.5m high wooden fence is located down the centre of the site running north to south.

Site Boundaries and Surrounding Area

The site is surrounded by following features/land uses:

- *North* - *Old Mill Street and residential housing consisting of houses and apartments*
- *East* - *Residential housing consisting of semi-detached and terraced houses*
- *South* - *Fanatics office building and construction site.*
- *West* - *Lampwick Lane with Lampwick Quay apartment complex beyond*

Site photographs are presented in *Appendix 2* and relevant features are recorded on the Preliminary Development Constraints Plan *GRO-24102-P02*.

3.0 PREVIOUS INVESTIGATION SUMMARY

3.1 Introduction

The following sections summarise the following report that was previously produced for the site:

- *Phase I Desk Study produced by Wardell Armstrong referenced GM12676 and dated November 2023*

3.2 Site History and Consultations

Site History

Earliest historical records from 1848 indicate the site was undeveloped covered by grassland. In 1891, a machine works was shown on the south of the site, a rectory was present in the north west and terrace housing were indicated on the eastern boundary. Maps from 1931/32 show the buildings on site and immediately south of the site as Mill Street Textile Engineering Works and was then relabelled as works in 1965.

Significant industrial development is shown in the surrounding area including a brickfield, coal yard, mills, foundry, iron works and brewery.

Consultations

The following environmental information was identified:

- *The site is not within an area requiring radon protective measures.*
- *There are 5 licensed pollutant releases within 500m of the site, the closest being 249m north east at Phoenix Mill for Di-isocyanate processes.*
- *Several historical waste sites within 500m of the site relating to Wastepaper Works and Scrapyards, the closest being c.74m south east of the site.*
- *Several waste exemptions within 500m of the site, Ancoats Dental Practice for sorting and de-naturing of controlled drugs for disposal 9m north east.*
- *Several licensed discharge to controlled waters within 500m of the site, the closest being historic for Soho Works c.138m south west of the site relating to miscellaneous discharges to Ashton Canal.*
- *Several pollution incidents within 500m of site, the closest being 99m south east in 2002 which had a minor land impact from the pollution of commercial, construction and demolition waste.*
- *An electrical substation is located on site.*

3.3 Geology and Hydrogeology

Made Ground is not indicated to underly the site, however is likely to be present due to previous developments on the site.

The superficial deposits underlying the site are indicated to be Glacial Till - Devensian which is classified as a Secondary Undifferentiated Aquifer.

The solid geology underlying the site is indicated to be the Manchester Marls Formation comprising mudstone which is classified as a Secondary B Aquifer. The Collyhurst Sandstone Formation encroaches onto the east of site.

The site is not indicated to lie within 500m of a Source Protection Zone and there are no groundwater abstraction wells within 500m of the site.

Hydrology
The nearest surface watercourse is the Ashton Canal running east to west and is located approximately 63m south east of the site.

3.4 Mining and Quarrying

Wardell Armstrong obtained a Consultant's Coal Mining Report for the site dated the 30th May 2023 and the information is summarised below.

Surface Workings
The Coal Authority indicated no evidence of surface extraction including quarries, pits or workings within 250m of the site.

Shallow Coal Mining
The site does not lie in an area designated by the Coal Authority as having recorded or probable unrecorded shallow workings.

Deep Coal Mining
The site lies in a Coal Consultation Area due to past deep underground coal mining occurring beneath the site and across the wider area. The Coal Authority records four coal seams to have been worked beneath the site ranging from 345m bgl to 1093m bgl between 1900 and 1961.

The site is not located within a Development High Risk Area as designated by the Coal Authority due to the age and depth of the recorded underground workings. Therefore the risk of subsidence or ground instability as a result of underground mining is considered to be low.

Mine Entries
The Coal Authority report indicated no mine shafts were recorded on site or within 100m of the site boundary.

Coal Mine Gas
It is unlikely that gases have migrated from abandoned coal mine workings may have affected the site due to the depth of the workings and the overlying Glacial till.

Non-Coal Mining
The Groundsure report highlights sporadic underground mining possibly occurring at a vein located 308m north and underground mining of limestone 413m east of the site.

3.5 Preliminary Conceptual Site Model

The following risks were identified by Wardell Armstrong:

Receptor	Risk	Discussion
Risk to Human Health	*Moderate*	*Made Ground is likely to be present on site associated with historic developments and their demolition which could be contaminated with a range of CoC. The risk to Human Health was considered to be Moderate.*

Risk to Controlled Waters	*Moderate to Low*	*Unknown nature of Made Ground on site may be a source of mobile contamination. The risk to controlled waters was considered to be Moderate to Low.*
Risk from Ground Gas	*Moderate to Low*	*Made Ground is likely present beneath the site which could be a source of ground gass. Also several sources identified in the surrounding area. The risk from ground gases was therefore considered to be Low to Moderate.*

4.0 SCOPE OF INVESTIGATION AND RATIONALE

4.1 Project Objectives

The aim of the fieldwork was to:

Determine the stratification beneath the site
Maintain watching brief for visual and olfactory evidence of contamination
Obtain samples using methodology in current guidance for contamination testing
Identify realistic pollution linkages to groundwater
Obtain relevant geotechnical parameters for preliminary foundation design to address both ULS and SLS condition.
Determine if targeted supplementary investigation in areas of concern is required and for remedial design
Install monitoring standpipes for gas and groundwater monitoring
Assess the identified pollution linkages in the CSM
Assess whether obstruction/ relic structures are present beneath the site

4.2 Scope of Works

The following scope of works was completed between the 13th May and 22nd May 2024:

- *Six Windowless Sample boreholes (WS01 to WS06) were drilled to a maximum depth of 4.5m begl using a Dando Terrier windowless sampling rig*
- *Ten machine excavated trial pits (TP01 to TP10) were carried out to a maximum depth of 3.65m begl*
- *Two cable percussive boreholes (CP01 and CP02) were drilled to a maximum depth of 19.5m begl*
- *Two rotary coring follow on boreholes (CP01 and CP02) were drilled 5.0m into the bedrock to a maximum depth of 25.5m begl*

The exploratory hole locations are presented on Groundtech Plan *GRO-24102-P03* and the exploratory hole logs are in *Appendix 3*.

The exploratory holes were positioned to establish the stratification beneath the site and target any areas of concern as summarised in the table below:

Location	Target Rationale
TP01 to TP10	*Identify obstructions from previous developments*
WS01 to WS06	*Site coverage and install standpipes*
CP01, CP02	*Obtain bedrock parameters/proposed building footprint*
WS01, WS06, TP01, TP05, TP06, CP02	*Area of former works building and terraced housing*

The exploratory holes were logged by a suitably experienced geo-environmental engineer in general accordance with the following current guidance:

- *BS 5930 'Code of Practice for Site Investigations' 2020*
- *BS EN 14688-1:2002 'Geotechnical Investigation and Testing – Identification and classification of soil'*

- *BS EN ISO 14689:2002 "Geotechnical investigation and testing – Identification and classification of rock"*

4.3 Soil Sampling

During the intrusive investigation, representative samples were taken at regular intervals, changes of strata and where evidence of contamination existed. Laboratory analysis was scheduled on the samples obtained.

The samples obtained are summarised in the table below:

Soil Sample	Number
Environmental Sample	*37*
Disturbed Sample	*75*
Bulk Sample	*6*
Undisturbed U100 Sample	*6*

The samples have been obtained in accordance with current environmental and geotechnical guidance. The sampling plan has been designed obtain samples from all required strata using the correct methodology.

Disturbed samples of soil for geo-environmental testing were placed in the correct sampling containers as required by the laboratory in accordance with their MCERTS and UKAS Accreditation. Transportation was arranged in a timely manner and the samples were at the correct temperature

The sample locations and depths are recorded on the exploratory logs.

4.4 Laboratory Testing

To inform the Generic Quantitative Risk Assessment, the following geo-environmental testing was scheduled to assess the risk from contamination on the site. The testing is based on the potential sources identified in the PRA and observations during the Ground Investigation.

Contaminant of Concern (CoC)	Matrix	Number
Arsenic, cadmium, chromium (total and hexavalent), copper, lead, mercury, nickel, selenium, zinc and pH	*Soil*	*9*
Total Petroleum Hydrocarbons (TPH CWG inc BTEX)	*Soil*	*2*
Speciated Polycyclic Aromatic Hydrocarbons (PAHs)	*Soil*	*9*
Volatile Organic Compounds (VOCs)	*Soil*	*2*
Asbestos Screening	*Soil*	*9*
Asbestos Quantification	*Soil*	*3*
Semi Volatile Organic Compounds (SVOCs)	*Soil*	*1*

The Geo-Environmental Laboratory Testing Results are presented in *Appendix 4*.

Representative disturbed samples were obtained for all soil types encountered. Selected samples were scheduled for testing at an approved laboratory in accordance with BS 1377 'Method of Test for Soils for Civil Engineering Purposes' 1990. The following tests were scheduled:

British Standard	Test Method	Number
Part 2	*Water Content*	*7*
Part 2	*Plasticity Index Analysis*	*7*
BRE	*BRE Full Suite*	*1*
Part 3	*pH Value*	*7*
Part 3	*Water Soluble Sulphate Content*	*7*
Part 7	*Determination of Undrained Shear Strength in Triaxial Compression*	*6*
ISRM	*Point Load*	*6*

The Geotechnical Laboratory Testing Results are presented in *Appendix 5*.

4.5 Gas and Groundwater Monitoring/Sampling

Gas monitoring installations were constructed in the boreholes. The standpipes consisted of either polyvinyl chloride (PVC) or high-density polyethylene (HDPE) pipe - a bentonite seal was placed around the plain pipe and a clean gravel pack was placed around the slotted pipe. A summary of the installation construction is presented in the table below:

Location	Depth	Response Zone (m bgl)	Targeted Strata	Reason
WS01	*3.60*	*1.0 – 3.6*	*Made Ground and Clay*	*Ground Gas*
WS03	*3.00*	*1.0 – 3.0*	*Made Ground and Clay*	*Ground Gas*
CP01	*2.00*	*1.0 – 2.0*	*Made Ground and Clay*	*Ground Gas*
CP02	*2.00*	*1.0 – 2.0*	*Made Ground and Clay*	*Ground Gas*

Permanent gas and flow rate monitoring was carried out using GFM 436 infrared gas monitor with integral electronic flow analyser. The measurements taken are listed below:

- *Oxygen (O_2), carbon dioxide (CO_2) and methane (CH_4) as the percentage volume in air (%v/v).*
- *Hydrogen sulphide (H_2S) and carbon monoxide (CO) as the percentage volume in air (%v/v).*
- *Lower Explosive Limit (%LEL) of methane.*
- *Atmospheric and borehole pressure, including pressure trend.*
- *Flow measurements (l/hr).*
- *Weather and ground surface conditions.*

Both peak and steady state conditions were monitored to understand the behaviour of the permanent ground gas, the steady state conditions were recorded by allowing the gas monitor to run for a minimum of 3 minutes or when equilibrium is reached.

Permanent gas and groundwater monitoring results are presented in *Appendix 6*.

5.0 GROUND MODEL

5.1 Made Ground

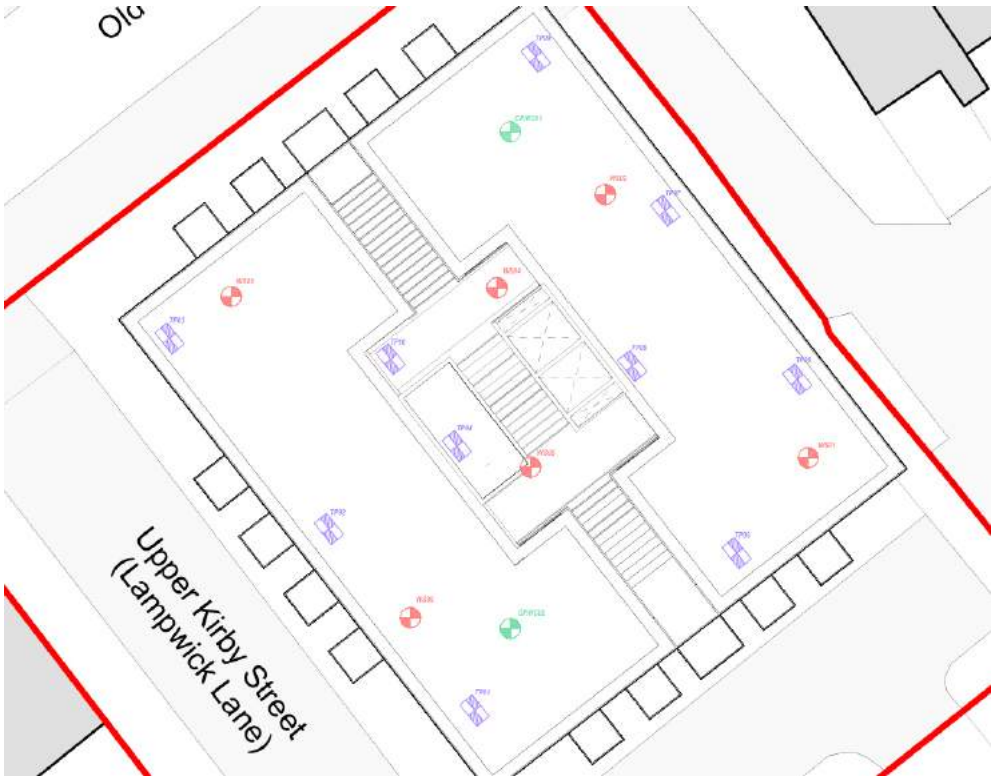
The site was entirely surfaced by angular to subangular fine to coarse gravel of crushed tarmac and limestone to a maximum depth of 0.25m bgl.

Made Ground was encountered beneath the site in all exploratory holes to depths of between 1.0m and 2.0m bgl. Three main Made Ground populations were encountered during the investigation and are described below:

1. *Soft to firm dark brown sandy gravelly clay with minor constituents of brick, ash and sandstone in WS01, WS02, WS04, WS05, TP01, and TP02 from depths of between 0.2m and 0.25m to between 1.3m and 1.6m bgl.*

2. *Brown sandy angular to subangular fine to coarse gravel of brick and concrete in TP02, TP03, TP05, TP06, TP07, TP09 and TP10 from between 0.2m and 0.3m to depths of between 0.2m and 2.0m bgl.*

3. *Brown, occasionally reddish brown, gravelly fine to coarse sand with minor constituents of brick, concrete and sandstone in CP01, CP02, WS03, WS06, TP04 and TP08 from depths between 0.15m and 0.25m to a maximum depth of 1.65m bgl.*



Exploratory Hole Locations

Black ashy fine to coarse sand was encountered in TP01 between 1.3m and 1.45m bgl in the south west of the site.

Yellowish brown sandy angular to subangular fine to coarse gravel of brick and sandstone was encountered locally to TP02 at depths of between 1.25m and 1.35m bgl in the west of the site.

5.2 Natural Ground

The natural strata encountered generally confirmed the published geological records. Two main natural stratification encountered during the investigation and are described below:

1. *Firm to stiff grey brown sandy gravelly Clay in all exploratory hole locations at minimum depths of between 1.0m and 1.8m to a maximum depth of 12.0m bgl.*

2. *Dense brown gravelly fine to coarse Sand with minor constituents of mudstone and chert was encountered underlying the clay in CP01 and CP02 between 12.0m and 17.4m bgl.*

5.3 Bedrock

Extremely weak red brown Mudstone residually weathered recovered as brown slightly clayey sandy angular to subangular gravel was encountered in CP01 and CP02 at 17.1m and 17.4m bgl respectively.

Rotary coring was undertaken from depths of 19.5m in CP01 and 18.0m in CP02 to depths of 24.0m and 25.5m bgl respectively. Extremely weak red brown Mudstone partially weathered with very close to closely spaced discontinuities was encountered to the base of the boreholes. Recovery was generally good after the first 1.5m of coring to the base of the borehole.

5.4 Groundwater

No groundwater was encountered during the Ground Investigation.

5.5 Watching Brief

A watching brief was maintained during the Ground Investigation for visual and olfactory evidence of contamination.

Ash was observed in the Made Ground of CP01, CP02, WS02, WS03, WS05, TP01, TP06 and TP07. Potential olfactory evidence of contamination was noted in TP02 between 1.35m and 1.5m begl where a sulphur odour was noted.

No other evidence of contamination was noted during the Ground Investigation.

5.6 Excavation Stability

No evidence of spalling or collapse was noted during excavation of the trial pits.

5.7 Obstructions

Evidence of a historic basement/foundation was encountered in TP03 in the north west of the site in the area of the former rectory, a brick wall was observed from ground level to 2.0m bgl along the southern face of the trial pit.

Cobbles of brick and concrete were also encountered within the Made Ground across the site.

5.8 Excavation Progress

Slow progress while excavating the trial pit was not experienced.

In CP02, drilling was slower between 13.0m and 15.0m begl due to encountering cobbles of Sandstone, chiselling was required to penetrate the dense strata.

Chiselling was undertaken at the base of the cable percussive boreholes in the residually weathered bedrock strata prior to commencing rotary coring.

6.0 GROUND ENGINEERING

6.1 Geotechnical Testing Results

Comparison of water content and the value of 0.4 times the Liquid Limit in accordance with BRE Digest 412 'Desiccation in Clay Soils' suggests significant desiccation has taken place when 0.4 times the Liquid Limit is greater than the actual water measured water content. This is a rudimentary method but also a good guide.

Results of the plasticity testing and the volume change potential of the Clay is summarised in the table below:

Reference	Depth	Modified PI	Volume Change Potential	Desiccated
TP03	*2.00*	*25.2*	*Medium*	*No*
TP04	*1.20*	*19.55*	*Low*	*No*
TP08	*1.85*	*28.8*	*Medium*	*No*
TP09	*1.50*	*15.0*	*Low*	*No*
WS01	*2.00*	*22.5*	*Medium*	*No*
WS02	*2.00*	*29.0*	*Medium*	*No*
WS06	*2.00*	*22.0*	*Medium*	*No*

Triaxial testing was undertaken to determine the undrained shear strength (C_u) of the Clay deposits encountered during the Ground Investigation, the results are presented in the table below:

Reference	Depth (m bgl)	Shear Strength C_u (kPa)	Relative Strength
CP01	*3.00*	*56*	*Medium*
CP01	*5.00*	*92*	*High*
CP01	*7.50*	*28*	*Low*
CP01	*10.5*	*200*	*Very High*
CP02	*3.00*	*64*	*Medium*
CP02	*5.00*	*154*	*High*

Results of the Point Load tests are summarised below:

Reference	Depth (m)	Orientation	I_{50} (MPa)
CP01	*20.72*	*Axial*	*0.80*
CP01	*21.23*	*Axial*	*0.13*
CP01	*24.40*	*Axial*	*0.05*
CP02	*20.95*	*Axial*	*0.70*
CP02	*21.65*	*Axial*	*0.09*
CP02	*23.20*	*Axial*	*0.05*
Reference	Depth (m)	Orientation	I_{50} (MPa)
CP01	*20.72*	*Diametral*	-
CP01	*21.23*	*Diametral*	-
CP01	*24.40*	*Diametral*	-
CP02	*20.95*	*Diametral*	-
CP02	*21.65*	*Diametral*	-
CP02	*23.20*	*Diametral*	*0.04*

6.2 Assessment Background

The ground engineering investigation has been undertaken to formulate an accurate ground model in order to undertake preliminary foundation design. The ground model has been constructed with a moderate to high level of confidence, the ground model has evolved from the information obtained by the PRA.

Background
Historical maps show a machine works on the south of the site and rectory in the north west, along with terrace houses along the eastern border. Later Mill Street Textile Engineering Works was established. The works building is no longer shown in 2010 and the site is shown in its current state.

Ground Conditions
The site was entirely surfaced by gravel to a maximum depth of 0.25m bgl. Made Ground was encountered beneath the site to maximum depths of between 1.65m and 1.8m bgl and generally comprised brown sandy gravelly clay with minor constituents of brick, ash and sandstone, brown fine to coarse sand with minor constituents of brick, concrete and sandstone, or brown sandy angular to subangular gravel of brick and concrete.

Natural strata was encountered at minimum depths of between 1.0m and 1.8m bgl and generally comprised firm to stiff brown sandy gravelly Clay with minor constituents of sandstone and mudstone to a maximum depth of 12.0m bgl underlain by brown gravelly fine to coarse Sand in CP01 and CP02 from 12.0m bgl to a maximum depth of 17.4m bgl.

Extremely weak red brown Mudstone residually weathered recovered as brown slightly clayey sandy angular to subangular gravel was encountered in CP01 and CP02 from between 17.1m and 17.4m bgl respectively.

Limitations
The main limitation of the site is the depth of Made Ground to 2.0m bgl combined with the likely high loadings required for the proposed development resulting in shallow foundations being unviable for the proposed development.

Also, a brick wall was encountered in TP03 to 2.0m bgl in the north west of the site in the area of the former rectory. Cobbles of brick and concrete were also encountered within the Made Ground beneath the site in TP01 to TP10. The presence of cobbles and obstructions should be taken into account during the enabling stage of the development. Heavy plant may be required locally across the site to break out any obstructions encountered. If deeper foundations are adopted for the proposed development, they should be able to resist hard driving.

In addition, visual and olfactory evidence of contamination was encountered in the Made Ground of TP02 at 1.35m bgl which is likely to be hydrated lime and a sulphur odour was noted. This material could potentially be pyritic and may result in an increase in concrete classification.

Low strength Clay has been encountered within CP01 at 7.5m identified by the laboratory testing, this is considered to be an anomalous result due to the gravel content of the sample.

Furthermore, an electrical substation is present on site along the eastern boundary of the site. The position of the substation should be taken into consideration during the development of the site.

The previous Preliminary Risk Assessment identified a negligible risk for historic coal mining.

6.3 Geotechnical Parameters

The geotechnical test results have been evaluated to derive geotechnical parameters for the soils underlying the site. A depth to SPT N value graph is presented on Plan *GRO-24102-P04* in *Appendix 7* to provide a generalised ground model for the site.

Characterization of the geotechnical parameters above has been undertaken to select a characteristic value, which is a cautious estimate of the value affecting the occurrence of the limit state. The characteristic values have been calculated based on the correlation with SPT values and direct laboratory measurements. The characteristic values for the Ultimate Limit State (ULS) conditions selected are presented in the table below:

Stratum	Parameter	Selected Characteristic Value
Firm medium strength Clay	*Undrained Shear Strength (C_u)*	*60kN/m^2*
Firm high strength Clay	*Undrained Shear Strength (C_u)*	*100kN/m^2*
Stiff high strength Clay	*Undrained Shear Strength (C_u)*	*200kN/m^2*
Dense Sand and Gravel	*Drained angle of friction (ϕ')*	*41°*
Weathered bedrock	*Drained angle of friction (ϕ')*	*34°*
Competent Bedrock	*Compressive Strength*	*2MPa*

The strength of the competent Mudstone has been correlated using the ISRM equation UCS=20(I_{s50}), a characteristic I_{s50} of 0.1MPa was selected.

6.4 Preliminary Foundation Design

The following foundation recommendations are based on current site levels.

Traditional Shallow Foundations and Ground Improvement

Traditional shallow strip foundations are not considered to be feasible for the proposed development due to needing to achieve higher loadings and encountering Made Ground to 2.0m bgl. If adopted, a safe allowable bearing pressure of 125kN/m^2 would be provided for ultimate limit state design in the medium strength Clay.

The proposed structure is concrete construction which will apply high loads and confirms that shallow foundations would not be suitable. There is also an option that a steel structure may be utilised, if this is the case - oversize pads may be an option subject to explicit settlement calculations. The building footprint is along the boundary and the foundations would need to be eccentrically loaded which would reduce the safe Allowable Bearing Pressure.

Alternatively, if the loadings are reduced for the steel portal frame, Vibro Stone Columns (VSCs) may be an option. The number of storeys of the proposed development may be a restriction. The VSCs would provide a safe Allowable Bearing Capacity of between 100kPa and 150kPa. A specialist vibro contractor should be consulted for further advice.

Piled Foundation Solution

The most suitable foundations for the proposed development are considered to be pile foundations either end bearing in the dense Sand and Gravel or the Mudstone at depth. The pile type should be suitable to allow hard driving to allow for the very stiff Clay and dense Sand and Gravel, alternatively CFA piles may be more cost effective and would provide more confidence in achieving the design depth.

The piles will transfer loads through all Made Ground and cohesive deposits. At this stage loadings are not available, pile caps and reinforced ring beam should be constructed to span between piles and support loadings from walls.

Design by Calculation

Preliminary design by calculation has been carried out using due skill and care using the global factor of safety method. EC7 compliant calculations can be undertaken using partial factors when the permanent and variable loads are available.

The preliminary design by calculation is based on the following ground model presented in begl:

- *Made Ground* - *1.6m*
- *Firm to stiff Clay, becoming very stiff* - *12.0m*
- *Dense Sand and Gravel* - *17.1m*
- *Mudstone bedrock* - *25.5m*

Compressive resistances for the different lengths of piles are presented in the table below, additional calculation can be provided for different diameters if required.

Pile Type	Length	Diameter	Allowable Load (kN)
Driven/CFA	*13m*	*300mm*	*1000*
CFA	*18m*	*300mm*	*1400*

The above pile lengths allow for the pile to penetrate 1m into the end bearing strata to satisfy twice the diameter of the pile requirement. Based on the allowable loads in the table above, the safe working load of the concrete/steel pile may dictate the design.

The thickness of the gravel is in excess of 5m and is sufficient to provide end bearing resistance for the piles.

Cobbles were encountered in the Made Ground beneath the site as well at dense Sand and Gravel at depth, this requires consideration in the detailed design and discussion with the piling contractor.

An appropriate working platform should be constructed in accordance with BR470 guidance. The risk from vibration to adjacent properties should be considered when selecting the type of pile and the installation method.

Design Validation

The piling type, length, depth of reinforcement and design should be discussed with a specialist piling contractor. They can then undertake the detailed design including drawings and specifications to provide fitness for purpose design.

Due to the number of storys proposed and anticipated loads, static load testing is likely to be required by the warranty provider to validate the design by calculation.

The piling works should be carried out in accordance with Execution Standard BS EN 12699:2015 'Execution of special geotechnical works. Displacement piles'. If driven piles are the preferred installation method, they will be driven to set using pile driving formulae in accordance with Eurocode 7. The piling works should be carried out in accordance with Execution Standard EN 1536 for Bored Piles if CFA piles are preferred.

Construction Recommendations

The recommendations in this appraisal are preliminary and the detailed design should be developed in advance and during the construction phase. If the ground conditions or groundwater regime encountered during the construction phase differ significantly to the conditions encountered during the Ground Investigation, work should cease and Groundtech Consulting contacted for further advice.

During the construction phase, supervision by a suitably qualified geotechnical engineer should be on a continuous basis to check the design assumptions are correct and construction conforms to design in accordance with EC7. Supervision should include inspections, Control Ground Investigations and monitoring by a suitably qualified geotechnical engineer.

6.5 Building Near Trees

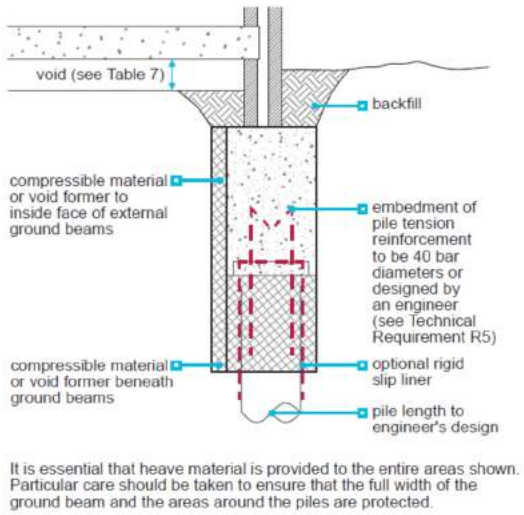
Semi-mature trees are present along the northern and eastern boundary of the site. If foundation excavations encounter cohesive strata in the vicinity of existing, proposed or recently removed trees, foundations should be adjusted in full accordance with NHBC Standards Chapter 4.2.

All foundations should be deepened below roots of greater than 5mm diameter during excavations for footings. The clay is of a medium volume change potential.

A survey of all trees and hedges on the site and within 30m of the site boundary should be undertaken to identify tree species, locations and heights. This information will be required in order to assess the effects of trees on the cohesive strata and inform a foundation schedule.

Where foundation depths due to trees already present or recently removed exceeds 1.5m there is a possibility for heave to occur on removal of the tree. NHBC Guidance states that for a medium volume change potential Clay, the void dimension against the site of foundations should be 25mm.

A typical example of heave precautions for piled foundations has been taken from appropriate guidance is displayed below:



Typical example of heave precautions for a piled foundation.

6.6 Floor Slabs

A ground bearing floor slab will not be suitable for the proposed development as greater than 600mm of Made Ground is present across the site, a suspended floor slab is recommended and is compatible with pile foundations.

6.7 Construction

The trial pits indicate that instability of excavations is not anticipated provided they are not exposed to adverse weather conditions for any substantial period of time. Instability of the Made Ground is a possibility and should be considered in the groundworks method statements.

Tracked high specification plant is recommended to maintain the build programme. A brick wall was encountered in TP03 in the north west of the site to 2.0m bgl. Cobbles were also encountered within the Made Ground across the site. Breaking equipment may also be required locally to penetrate obstructions identified by the Ground Investigation. Obstructions should be grubbed prior to constructing the working platform and installing the pile foundations.

No groundwater was encountered during the Ground Investigation and is unlikely to be an issue during the groundworks.

6.8 Concrete Classification

Made Ground
Water soluble sulphate testing was undertaken on nine samples of the Made Ground. The range of soluble sulphate (SO_4) recorded is 15.8mg/l to 1520mg/l. Associated pH values ranged between 8.0 and 11.1 indicating alkaline conditions.

For a dataset containing five to nine results, the mean of the highest two soluble sulphates is taken as the characteristic value along with the mean of the lowest two pH results. For the Made Ground the characteristic soluble sulphate is 1034.5mg/l and the associated pH value is 8.05.

Natural Strata
Water soluble sulphate testing was undertaken on seven samples of the natural ground. The range of soluble sulphate (SO_4) recorded is 28mg/l to 383mg/l. Associated pH values ranged between 8.0 and 8.8 indicating slightly alkaline conditions.

For a dataset containing five to nine results, the mean of the highest two soluble sulphates is taken as the characteristic value along with the mean of the lowest two pH results. For the Made Ground the characteristic soluble sulphate is 325mg/l and the associated pH value is 8.1.

Due to the presence of granular Made Ground, the groundwater is considered to be mobile.

The results of laboratory pH and sulphate content indicate that ACEC Class AC-2 and sulphate class DS-2 conditions prevail in accordance with BRE Special Digest 1 “Concrete in aggressive ground” 2005. The specific concrete mixes (the Design Concrete Class) to be used on site will be determined by the site specific concrete requirements in terms of the durability and structural performance. These are assessed in terms of the Structural Performance Level (SPL) and any need for Additional Protective Measures (APM) detailed in Part D of BRE Special Digest 1 with further guidance in Pt E and F.

Potentially Pyritic Ground

One BRE SD1 Pyrite Suite was carried out in TP02 in the east of the site at 1.35m bgl due to the visual and olfactory evidence of contamination encountered likely to be hydrated lime which is potentially pyritic due to the high sulphate content in the material. A summary of the testing results is presented below:

Stratum	Number of Samples	Contaminants of Concern	Range of Results
Made Ground	*1*	*Acid Soluble Sulphate (% SO_4)*	*0.774*
		Soluble Sulphate (mg/l SO_4)	*311*
		Total Sulphur (%)	*0.405*
		Magnesium (mg/l)	*<2.5*
		pH	*11.1*

The amount of oxidisable sulphites (OS % SO_4) in the suspected pyritic ground is determined by subtracting the acid soluble sulphates (AS % SO_4) from the total potential sulphate content:

$$OS\ \%\ SO_4 = TPS\ \%\ SO_4 - AS\ \%\ SO_4$$

The amount of oxidisable sulphites in TP02 at 1.35m bgl is indicated to be 0.441%, therefore pyritic ground is indicated to be present within the Made Ground at this depth. No other evidence of this soil population was observed. To avoid increasing the concrete and sulphate classification, it is recommended this material is removed as part of the enabling works.

6.9 Highway Design

CBR values of greater than 5% are likely to be achieved in undisturbed natural soils for pavement design purposes, unless proven otherwise by in-situ testing at sub-base level by a specialist geotechnical engineer. As a minimum the subgrade should be proof rolled prior to construction. Some reengineering of the subgrade is required prior to highway construction to achieve the required design CBR value.

Untreated Made Ground should be assumed to have a CBR value of <2.5%, unless proven otherwise. Highways Agency document HD25 'Interim Advice Note 73/06 Revision 1' (2009) states that where a subgrade has a CBR value lower than 2.5%, it is considered unsuitable support for a pavement foundation since it would tend to deform under construction traffic, and must be improved.

The soils are considered to frost susceptible due to the fines content, highway construction should be a minimum thickness of 450mm to mitigate against the risk.

6.10 Sustainable Urban Drainage System (SuDS)

The use of SuDS drainage is not considered feasible at the site due to the presence of natural cohesive deposits underlying the site which are capable of poor infiltration rates, and the presence of locally deep Made Ground to 2.0m begl.

7.0 LAND QUALITY

7.1 Geo-Environmental Testing Results - Soils

Samples of Made Ground have been tested for a range of relevant Contaminants of Concern. In accordance with LCRM, a Generic Quantitative Risk Assessment (GQRA) has been undertaken to determine the significance of the concentrations as derived through Geo-Environmental testing.

The GQRA process comprises the comparison of the actual concentrations measured on site with Generic Assessment Criteria (GACs) for the protection of human health.

The GACs used for the assessment of soil concentrations have been derived using the CLEA model. The GACs used are listed below:

- *Soil Guideline Values (SGVs) which demonstrate minimal risk.*
- *LQM/CIEH S4ULs which use the same toxicological data as the SGVs but different exposure criteria.*
- *C4SLs which demonstrate low risk.*

In deriving the GACs for use on Brownfield sites we have assumed a 1% Soil Organic Matter, unless the results indicate otherwise.

The proposed end-use for the site is a residential development comprising a 6 storey apartment block with 40 No. apartments along with a communal ground floor space, soft landscaping and parking facilities. We have therefore undertaken the GQRA on the basis that the proposed development site falls under the Residential (without Plant Uptake) land-use scenario as defined in SR3 (EA, 2009b).

The strata or sources of contamination targeted by the laboratory testing scheduled is summarised in the table below:

Strata	Number of Samples Tested	Locations
Granular Made Ground (Population 1)	*2*	*TP08, WS03*
Cohesive Made Ground	*1*	*WS05*
Granular Made Ground (Population 2)	*6*	*TP02, TP05, TP06, TP07, TP09, TP10*
Hydrated Lime Made Ground	*1*	*TP02*
Former works building	*3*	*TP05, TP06, WS05*

A summary of the Geo-Environmental Testing results is presented below and the GQRA screening values are presented in *Appendix 8*:

Metals				
Contaminant	Range (mg/kg)	Screening value (mg/kg)	Exceedances	Locations
Arsenic	*14 – 61*	*40*	*1*	*WS05 at 0.3*
Cadmium	*<0.2 – 5.0*	*85*	-	-
Chromium	*16 – 40*	*910*	-	-
Hexavalent Chromium	*<1.8*	*6*	-	-
Copper	*35 – 170*	*7100*	-	-
Lead	*140 – 1300*	*310*	*4*	*TP07 at 0.5* *TP09 at 0.35*

				TP08 at 0.5 WS05 at 0.3
Mercury	<0.3 – 2.6	1.2	1	TP07 at 0.5
Nickel	15 – 53	180	-	-
Selenium	<1.0 – 2.8	430	-	-
Zinc	32 – 220	40000	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)				
Contaminant	Range (mg/kg)	Screening value (mg/kg)	Exceedances	Locations
Naphthalene	<0.05 – 3.2	15	-	-
Acenaphthylene	<0.05 – 0.99	2900	-	-
Acenaphthene	<0.05 – 31	3000	-	-
Fluorene	<0.05 – 22	2800	-	-
Phenanthrene	0.45 – 330	1300	-	-
Anthracene	<0.05 – 50	31000	-	-
Fluoranthene	1.6 – 290	1500	-	-
Pyrene	0.58 – 230	3700	-	-
Benzo(a)anthracene	<0.05 – 87	11	1	TP09 at 0.35
Chrysene	0.33 – 92	30	1	TP09 at 0.35
Benzo(b)fluoranthene	0.19 – 85	3.9	3	TP07 at 0.5 TP09 at 0.35 WS03 at 0.45
Benzo(k)fluoranthene	<0.05 – 37	110	-	-
Benzo(a)pyrene	<0.05 – 65	3.2	2	TP07 at 0.5 TP09 at 0.35
Indeno(123cd)pyrene	<0.05 – 35	45	-	-
Dibenzo(ah)anthracene	<0.05 – 13	0.31	-	-
Benzo(ghi)perylene	0.14 – 37	360	-	-
TPH CWG - Aliphatics				
Contaminant	Range (mg/kg)	Screening value (mg/kg)	Exceedances	Locations
>C5-C6	<0.020	42	-	-
>C6-C8	<0.020	100	-	-
>C8-C10	<0.050	27	-	-
>C10-C12	<1.0	130	-	-
>C12-C16	<2.0 – 3.9	1100	-	-
>C16-C21	<8.0 - 10	65000	-	-
>C21-C35	20 – 79	65000	-	-
Total aliphatics C5-35	24 – 89	-	-	-
TPH CWG – Aromatics				
Contaminant	Range (mg/)	Screening value (mg/kg)	Exceedances	Locations
>C5-EC7	<0.010	370	-	-
>EC7-EC8	<0.010	860	-	-
>EC8-EC10	<0.050	47	-	-
>EC10-EC12	<1.0 – 1.2	250	-	-
>EC12-EC16	2.9 – 8.1	1800	-	-
>EC16-EC21	<10 – 36	1900	-	-

>EC21-EC35	*45 – 57*	*1900*	-	-
Total aromatics C5-35	*61 – 89*	-	-	-
Others				
Organic Matter	*2.4 – 5.8%*			
Asbestos Screen				
Position	Depth (m bgl)	Result	Quantification	
TP07	*0.50*	*Amosite and Chrysotile - Loose Fibres*	*<0.001*	
TP09	*0.35*	*Amosite - Loose Fibres*	*<0.001*	
TP10	*0.40*	*Chrysotile - Loose Fibres*	*<0.001*	

7.2 Generic Quantitative Risk Assessment - Soils

The site is surfaced with gravel of crushed tarmac and limestone to a maximum depth of 0.25m bgl. Made Ground has been encountered beneath the site to a maximum depth of 2.0m bgl and generally consisted of brown sandy gravelly clay with minor constituents of brick, ash and sandstone, brown fine to coarse sand with minor constituents of brick, concrete and sandstone and brown sandy angular to subangular gravel of brick and concrete.

Visual and olfactory evidence of contamination was noted in TP02 in the form of a white material with a sulphur odour. Ash was also recorded as a minor constituent in the Made Ground. No other evidence contamination was noted during the Ground Investigation.

Metals
A single elevated concentration of arsenic was recorded in WS05 at 0.3m bgl. Elevated levels of Lead were encountered in the Made Ground of TP07 to TP09 and WS05. A single elevated level of Mercury was recorded in TP07 at 0.5m bgl within the Made Ground deposits. Elemental mercury is considered volatile above the screening value of 1.2mg/kg and further testing is recommended potentially including speciated mercury testing to determine if there is a risk.

The elevated concentrations of heavy metals are likely to be associated with the sites previous uses as a textile works and machine works.

Speciated Polycyclic Aromatic Hydrocarbons (PAHs)
Elevated concentrations of Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene and Benzo(a)pyrene have been recorded in the Made Ground of TP07, TP09 and WS03.

Some of the elevated concentrations are significant and are likely associated with the sites former use as a textile works, and also general Made Ground including ash deposited.

Total Petroleum Hydrocarbons (TPH CWG)
No elevated TPH was recorded above residential without plant uptake screening values. All lighter range TPH was also recorded below the laboratory limit of detection. No sources of fuel derived hydrocarbons were identified by the Preliminary Risk Assessment.

Volatile Organic Compounds (VOCs) and Semi Volatile Organic Compounds (SVOCs)
VOCs and SVOCs were tested for in TP02 at 1.35m bgl due to the visual and olfactory evidence of contamination at this location. All VOCs were recorded under the laboratory limit of detection. All SVOCs

were also recorded below the laboratory limit of detection with the exception of the speciated PAHs discussed above. This confirmed no significant impaction from the historic textile works.

PolyChlorinated Biphenyls (PCBs) may have been used in the electrical substation as a cooling agent situated on the north eastern corner of the site. It is still active and not possible to investigate the soils, due to the small scale any impact would be minimal and highly localised.

Asbestos
Asbestos was detected in TP07 at 0.5m, TP09 at 0.35m and TP10 at 0.4m bgl with a mass concentration of <0.001 mass%. No asbestos was identified in any of the other samples screened through laboratory testing. Therefore trace asbestos should be assumed to be present in the Made Ground beneath the site.

All elevated Contaminants of Concern (CoC) are presented on Groundtech Plan *GRO-24102-P05*.

7.3 Permanent Ground Gases

One monitoring visit has been carried out at the site on the 29th May 2024. A further three visits are to be carried out at the site.

Maximum concentrations of methane have been recorded in WS01 at a level of 1.2%v/v. No methane concentrations were recorded in the other boreholes. Concentrations of carbon dioxide (CO_2) were recorded up to a maximum level of 13.4%v/v and the associated oxygen concentrations were recorded at a minimum level of 3.0%v/v.

No positive gas flow rates have been detected.

The atmospheric pressure ranged between 999mb and 1001mb and the monitoring visit has been undertaken during a period of falling atmospheric pressure.

Characterisation of the Gas Screening Value (GSV)
Based on the results recorded, in accordance with NHBC Foundation Hazardous Ground Gas April 2023, BS 8485:2019 and CIRIA Report C665 - the risk to the site from ground gases has been assessed by converting the results to gas screening values (GSVs), calculated by multiplying the typical maximum gas concentrations with the recorded maximum positive flow rates. In addition, individual "hazardous gas flow rates" (Qhg) have been derived for each monitoring event.

GSV (l/hr) = max borehole flow rate (l/hr) x max gas concentration (%)

For this assessment, the maximum recorded concentration of carbon dioxide of 13.4%v/v and methane of 1.2% v/v has been used together with the maximum flow rate of to calculate the GSV. As no flow rates have been detected, the limit of detection of the gas analyser of 0.1l/hr has been used to calculate the GSV.

Carbon Dioxide GSV = 0.134 (13.4%) x 0.1 = 0.0134 l/hr

Methane GSV = 0.012 (1.2%) x 0.1 = 0.0012 l/hr

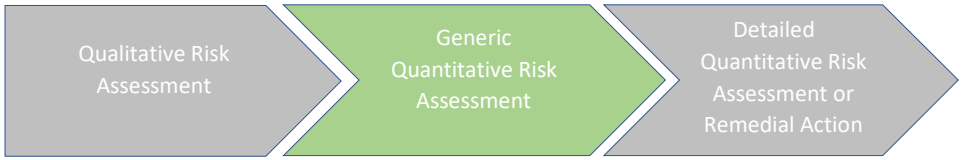
In order to assess the ground gas regime beneath the site and the need to incorporate ground gas precautions, guidance was taken from BS 8485:2019. Based on the site being developed residential apartments, the Wilson and Card method has been used to carry out the assessment.

When considering the results, in accordance with BS 8485:2019 (Modified Wilson and Card Classification), it can be seen that the GSV values for methane and carbon dioxide correspond with CS1 criteria (GSV of less than 0.07l/hr). Methane and carbon dioxide concentrations were recorded during the initial visit, the site could be classified as Characteristic Situation 1 or 2 depending on the subsequent visits.

7.4 Revised Pollution Linkage Assessment

The CSM has been revised based on the Ground Investigation and testing using Source-Pathway-Receptor assessment criteria that is applicable in the UK, a risk assessment has been completed to determine if a plausible pollution linkage exists between the identified contaminants and receptors. The risk classification has been estimated in accordance with the CIRIA C552 assessment criteria outlined in *Appendix 9*.

Human Health Pollution Linkage Assessment



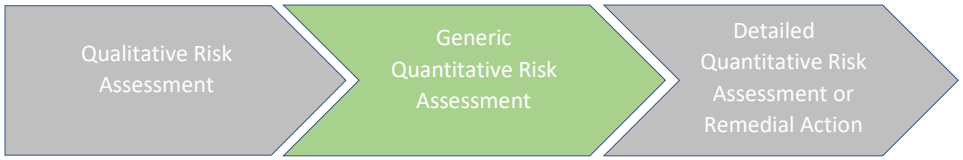
- The table below represents the second stage in the land quality risk assessment process - **the Generic Quantitative Risk Assessment**.
- In order for a development site to be deemed 'suitable for use' the level of risk needs to be reduced to an acceptable level - low to negligible risk. The purpose of each stage of risk assessment is to establish if there is a requirement for additional stages of assessment in order to have sufficient confidence to support a risk characterisation or remedial action.

Conceptual Site Model					*Generic Quantitative Risk Assessment*	
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	*Rationale and Action*
PL1	Contaminated Soils	Ingestion of soil and dust. Dermal contact with soil.	Likely	Medium	Moderate	*Pollution Linkage 1 refers to proposed site users coming into contact with contaminated soils on the site.* *The site is currently utilised as a car park. Historically, a rectory was present in the north west of site and a Textile works/works in the south of the site.* *Made Ground is present beneath the site to a maximum depth of 2.0m bgl and generally comprised both cohesive and granular soils. Ash was noted in the Made Ground as a minor constituent. Hydrated lime was identified locally in the Made Ground (TP02) which recorded high sulphate and sulphur concentrations.* *Elevated levels of heavy metals and speciated PAHs have been identified in the Made Ground in TP07 to TP09, WS03 and WS05 to a maximum depth of 0.5m bgl. Asbestos was identified in TP07, TP09 and TP10 at trace concentrations of <0.001 mass%.* *It is proposed to construct a 6 storey apartment block with a ground floor commercial space along with soft landscaping and cycle parking facilities.*

Conceptual Site Model						*Generic Quantitative Risk Assessment*
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	*Rationale and Action*
						A small substation is present on the north eastern corner of the site, the date of the electricity substation is unknown. The substation is still active and if PCBs were used, they would be highly localised if they have manged to impact the soils through the slab. *Elevated levels of CoC have been identified by the laboratory testing and asbestos has been identified in three of the samples screened through laboratory testing. Soft landscaping will be included in the proposed development. A pollution linkage is considered to exist between the Made Ground and site end users.*
PL2	Contaminated Soils	Inhalation of vapour.	Unlikely to Low likelihood	Medium to Severe	Low	*Pollution linkage 2 refers to vapours migrating into confined spaces within the proposed development.* *No visual or olfactory evidence of volatile contamination has been identified during the Ground Investigation and all VOC/SVOC concentrations were below detection limits. The elevated mercury was recorded in one location only, further testing will be undertaken but at this stage the risk is considered to be low.* *A realistic pollution linkage is not considered to exist.*
PL3	Contaminated Soils	Inhalation of soil dust by adjacent site users.	Unlikely	Medium	Low	*Pollution Linkage 3 relates to contamination on the subject site affecting adjacent site users.*

Conceptual Site Model						*Generic Quantitative Risk Assessment*
PL	Potential Source	Pollution Linkage	Likelihood	Consequence/ Severity	Risk Rating	*Rationale and Action*
						A source of mobile contamination has not been identified during the Ground Investigation and natural cohesive deposits underly the site. A plausible pollution linkage does not exist.
PL4	Contaminated Soils	Attacking potable water supply pipe.	Low Likelihood to Likely	Medium	Moderate to Low	*Pollution Linkage 4 refers to the possible contaminants permeating potable water pipes and consumption by the future site end users of the tainted water supply.* *Made Ground is present beneath the site to a maximum depth of 2.0m bgl and is likely to be present at installation depth. Potable water supply pipes will be included as part of the development, a local water company risk assessment is required prior to construction to advise on the level of protection required for the potable water supply.*
PL5	Ground Gas	Migration and accumulation of ground gas in internal spaces.	Low Likelihood toLikely	Medium to Severe	Moderate	*Made Ground was encountered across the site to a maximum depth of 2.0m bgl and comprised cohesive and granular soils. Several sources were identified in the surrounding area.* *Interim GSVs place the site in CS1, however methane and carbon dioxide have been recorded which may increase the site to CS2. The level of precautions will be confirmed following completion of the monitoring period.* *The site is not within an area requiring radon precautions within foundations.*

Controlled Waters Pollution Linkage Assessment



- The table below represents the second stage in the land quality risk assessment process – **Generic Quantitative Risk Assessment**.
- In order for a development site to be deemed 'suitable for use' the level of risk needs to be reduced to an acceptable level - low to negligible risk. The purpose of each stage of risk assessment is to establish if there is a requirement for additional stages of assessment in order to have sufficient confidence to support a risk characterisation or remedial action.

Conceptual Site Model					*Generic Quantitative Risk Assessment*	
PL	Potential source	Pollution linkage	Likelihood	Severity	Level of risk	*Rationale*
PL6	Contaminated Soils	Impaction of groundwater from soil contamination (diffuse and point). Impaction of groundwater from groundwater plume.	Unlikely	Medium	Low	*Made Ground was encountered across the site to a maximum depth of 2.0m bgl and comprised both cohesive and granular soils. No evidence of mobile contamination was encountered during the Ground Investigation and no groundwater was encountered.* *The site is not within 500m of a SPZ and the groundwater is not considered to be a sensitive resource. In addition, there are no active potable water abstractions within 2000m.* *Impermeable Clay was encountered across the site to a maximum depth of 12.0m bgl. The presence of natural cohesive deposits will limit the downwards migration of any contamination within the Made Ground soils into the underlying Secondary B bedrock Aquifer.* *A realistic pollution linkage is not considered to exist.*

Conceptual Site Model						*Generic Quantitative Risk Assessment*
PL	Potential source	Pollution linkage	Likelihood	Severity	Level of risk	*Rationale*
PL7	Contaminated Soils	Migration of soil and groundwater contamination impacting surface waters.	Unlikely	Medium	Low	*Pollution linkage 7 refers to the impaction of the Ashton Canal running east to west circa 63m south east of the site from contaminated soils and groundwater.* *No evidence of mobile contamination was encountered during the Ground Investigation and no groundwater was encountered. A plausible pollution linkage is not considered to exist.*

7.5 Outline Remedial Strategy

Soils

Made Ground was encountered beneath the site to a maximum depth of 2.0m begl. Elevated levels of heavy metals, speciated PAHs and trace asbestos have been identified in the Made Ground. The proposed development is residential end use comprising a 6 storey apartment block with an associated communal ground floor space, soft landscaping and parking. In areas of soft landscaping, a cover system comprising 600mm of suitable clean material inclusive of 150mm topsoil is required to mitigate against the risk. A 100mm hard dig layer/demarcation membrane should be placed below the cover system.

The hydrated lime should be removed during the enabling works and replaced with suitably clean material to prevent the concrete and sulphate classification being increased. The material should be stockpiled separately on a visqueen bunded area prior to removal. The validation should can be undertaken visually due to its white putty like appearance.

Vapours

Further mercury testing is recommended, potentially including speciated mercury testing to determine the concentrations of elemental and methyl mercury to quantify the vapour risk. The risk is currently considered to be low, remedial action will depend on the findings of the additional testing.

Controlled Waters

No mobile contamination was noted during the Ground Investigation and remediation in relation to controlled waters is not required.

Ground Gas

Ground gas monitoring indicates that the site could be CS1 or CS2, the level of protection will be confirmed by the final assessment. The site is not in an area requiring radon protection measures.

Watching Brief and Regulatory Compliance

A watching brief should be in place during ground works and construction. If previously unidentified contamination is encountered, work should cease in that area and Groundtech Consulting contacted for advice.

Regulatory compliance should be obtained pre-commencement to avoid delays during the construction phase which will have cost implications.

7.6 Asbestos in Soils

Asbestos fibres were detected in three out of the nine samples of Made Ground that were screened at trace concentrations of <0.001 mass%.

Where possible, it is advised that any Made Ground soils containing asbestos are left in the ground undisturbed.

Where soils will be disturbed as part of the ground works, in accordance with the Joint Industry Working Group (JIWG) decision support tool for CAR2012 work categories, the combined hazard and exposure ranking is Very Low for the asbestos detected. The work is classified as non-licenced, and CAR does not apply.

The JIWG tables are presented in *Appendix 10*. This should be used as an aid to classify risk and recommend the level of protection required, the final decision on how asbestos within the soils should be managed should be made by the contractor.

The presence of asbestos within the ground will require, a safe system of work to be set up on site to deal with the asbestos risk from the Made Ground. This may include but be not limited to:

- *The use of qualified personnel where required.*
- *Careful segregation of stockpiles on site.*
- *Defining transport routes.*
- *Cleaning down of machinery in designated areas.*
- *Decontamination unit for ground workers.*
- *Damping down of soils to prevent dust migration.*

All such works will need to be agreed with the regulatory bodies (HSE, LA).

7.7 Health and Safety - Construction and Ground Workers

During the reclamation and construction phases of the site development it will be necessary to protect the health and safety of site personnel. The risk to construction and ground workers is assessed in the table below:

PL Ref	Potential Source	Pollution Linkage	Likelihood	Severity	Level of Risk
PL8	*Made Ground*	*Ingestion, direct contact, inhalation of dusts.*	*Likely*	*Medium*	*Medium*
PL8	*Asbestos*	*Ingestion, direct contact, inhalation of dusts.*	*Likely*	*Medium*	*Low*

The risk to site personnel should be communicated through inductions and information boards.

General guidance on these matters is given in the Health and Safety Executive (HSE) document "Protection of Workers and the General Public during the Redevelopment of Contaminated Land". In summary, the following measures are suggested to provide a minimum level of protection:

- *All ground workers should be issued with the relevant protective clothing, footwear and gloves. These protective items should not be removed from the site and personnel should be instructed as to why and how they are to be used.*
- *Hand-washing and boot-washing facilities should be provided.*
- *Care should be taken to minimise the potential for off-site migration of contamination by the provision of dust suppression control and wheel cleaning equipment during the construction works.*
- *Good practices relating to personal hygiene should be adopted on the site.*
- *The contractor shall satisfy the Health and Safety Executive with regard to any other matters concerning the health, safety and welfare of persons on the site.*

7.8 Waste Classification by Assessment

We have reviewed the testing results and inputted them into the HazWasteOnline model which allows users to code and classify waste as defined in the EWC (European Waste Catalogue 2002) based on EC Regulation 1272/2008 on the Classification, labelling and packaging of substances and mixtures (CLP) and latest Environment Agency guidance (WM3 "Guidance on the classification and assessment of waste (1st edition 2015)-Technical Guidance").

This is a useful tool as waste producers have the legal responsibility to classify any waste they produce.

Nine samples were tested to assess whether they contained any contaminants in the hazardous range when screened against assessment criteria within WM3. The results are in the Waste Classification Report presented in *Appendix 11*.

Location	Depth (m bgl)	Material	Classification	Hazardous Properties
TP02	*1.35*	*Made Ground*	*Non-Hazardous*	-
TP05	*0.40*	*Made Ground*	*Non-Hazardous*	-
TP06	*0.45*	*Made Ground*	*Non-Hazardous*	-
TP07	*0.50*	*Made Ground*	*Non-Hazardous*	-
TP08	*0.50*	*Made Ground*	*Non-Hazardous*	-
TP09	*0.35*	*Made Ground*	*Non-Hazardous*	-
TP10	*0.40*	*Made Ground*	*Non-Hazardous*	-
WS03	*0.45*	*Made Ground*	*Non-Hazardous*	-
WS05	*0.30*	*Made Ground*	*Hazardous*	*HP7 – carcinogenic due to lead*

Based on the assessment tool the Made Ground have generally been classified as *Non-Hazardous*. The Made Ground of WS05 has been classified as Hazardous due to the carcinogenic properties. Total testing was not undertaken on the natural soils and are assumed to also be *Non-Hazardous*.

Asbestos was identified in the Made Ground of TP07, TP09 and TP10 at trace concentrations of <0.001 mass%. However does not exceed the threshold of 0.1% for hazardous waste.

7.9 Waste Acceptance Criteria (WAC) Results

The Landfill Directive (Directive 1999/31/EC on the landfilling of waste) led to the establishment of a methodology for classifying wastes. Wastes can only be accepted at a landfill if they meet the relevant Waste Acceptance Criteria (WAC) for that type of landfill. There are three different WAC, these are for:

- *Inert waste*
- *Non-Hazardous waste*
- *Hazardous waste*

Wastes should first be classified based on their total concentrations as detailed in the previous section. WAC testing is then required if the end disposal route is a landfill.

Waste Acceptance Criteria (WAC) testing was outside the scope of this investigation and the guidance given below is general.

The possibility of automatic inert classification of the natural soils should be explored in accordance with Section 4.3 of the EA guidance document. The Council Decision includes a list of wastes in Section 2.1.1 of the document that are assumed to be inert and therefore acceptable at a landfill for inert waste without testing, this is the case if:

- *They are single stream waste of a single waste type (although different waste types from the list may be accepted together if they are from a single source)*
  and
- *There is no suspicion of material or substances such as metals, asbestos, plastics, chemicals, etc to an extent which increases the risk associated with the waste sufficiently to justify contamination and they do not contain other their disposal in other classes of landfill.*

If any organic contaminated material is encountered during the construction phase, it is possible that this may be classified as hazardous and testing should be undertaken at that time.

Materials should segregated and where necessary sufficient time is allowed to further classify the material properly, including discussion with landfill sites and waste transfer stations to find the best disposal route. It is recommended that where possible that the soils could be recycled at a suitable local waste treatment plant or transfer station rather than a landfill disposal route.

The reuse of soils on the site this should be done in accordance with the CL:AIRE "Development Industry Code of Practice for the Definition of Waste" (CL:AIRE CoP). Any re-use scheme should be designed to minimise disposal costs.

After a cut and fill balance plan/volume calculation has been carried out, a U1 and T5 exemption could be registered. This will allow the use of the following soils without a waste permit or under Dow CoP MMP:

- *1,000 tonnes (c. 600m^3) of non-hazardous soil*
- *5,000 tonnes (c. 3,000m^3) of natural sand and gravels.*
- *50,000 tonnes (c. 25,000m^3) of bituminous material to be used in roadways.*
- *5,000 tonnes (c. 3,000m^3) of crushed concrete/stone.*

8.0 FINAL APPRAISAL

8.1 Land Quality

Earliest historical records show the site was undeveloped covered by grassland. A machine works is shown in the south of the site from the late nineteenth century, a rectory is present in the north west and terrace houses are indicated on the eastern border. In the 1930s, the buildings on site and immediately south of the site as Mill Street Textile Engineering Works. A yard is shown in place of the rectory on site in 1978. The buildings are no longer shown on site from 2010.

It is proposed to construct a 6 storey apartment block with 40 No. residential apartments along with a commercial unit on the ground floor with associated soft landscaping and cycle parking facilities.

Made Ground has been encountered to a maximum depth of 2.0m bgl and generally comprising sandy gravelly clay, gravelly sand and sandy gravel with minor constituents of brick, concrete and ash. Firm to stiff becoming very stiff sandy gravelly Clay was encountered to a maximum depth of 12.0m bgl in CP01 and CP02 and was underlain by dense Sand and Gravel to a maximum depth of 17.4m bgl. Extremely weak Mudstone bedrock was encountered in CP01 and CP02 from 17.4m and 17.1m bgl respectively.

Geo-Environmental testing recorded elevated levels of heavy metals and speciated PAHs when compared with residential without plant uptake screening values. Asbestos has been encountered in three of the samples screened through laboratory testing at a concentration of <0.001 mass%. Due to the elevated CoC and asbestos identified, in areas of soft landscaping a 600mm cover system with a 100mm hard dig layer/demarcation membrane is required. The risk to human health is *Moderate*.

No mobile contamination has been identified and the risk to controlled waters is *Low*.

The site could be CS1 pr CS2 and gas protection measures may be required. The level of precautions will be confirmed on completion of the monitoring. The site is not within an area where radon protective measures are required in foundations.

Based on the waste classification assessment, the Made Ground has been classified as *Non-Hazardous*.

8.2 Ground Engineering

The most suitable foundations for the proposed development are considered to be pile foundations, the length of the piles will be dependent on the proposed loadings of the structure. A concrete structure was originally proposed, however a steel farmed structure may also be an option. If the latter is the case, there is the potential for oversize pads of Vibro Stone Columns (VSCs) to be utilised.

The results of laboratory pH and sulphate content indicate that ACEC Class AC-2 and sulphate class DS-2 conditions prevail. In the area of TP02 in the east of the site, potential pyritic ground has been recorded in the Made Ground at 1.35m bgl. It is recommended the hydrated lime is removed during the enabling works.

A suspended floor slab is required as greater than 600mm of Made Ground is present.

Where natural cohesive soils are encountered at the formation levels, CBR values of 2% to 3% are likely to be achieved in undisturbed natural soils for pavement design purposes. Untreated Made Ground should be assumed to have a CBR value of <2.5%, unless proven otherwise.

SuDS drainage is not considered to be feasible for the proposed development due to the presence of deeper Made Ground up to 2.0m bgl and natural cohesive soils beneath the site which are capable of poor infiltration rates. Aldo the development covers the majority of the site and there is unlikely to be sufficient space to install.

The Preliminary Risk Assessment considered there to be a negligible risk from historic coal mining.

8.3 Required Further Work

The following further work is considered necessary to progress the site to construction phase:

Completion of gas monitoring programme
Issue gas assessment
Removal of hydrated lime
Additional mercury testing
Tree survey by qualified arboriculturist
Design of remedial specification
Detailed Foundation design
Confirmation of recommendations made in this appraisal with regulators

9.0 RELEVANT INDUSTRY REFERENCES

British Standards Institution. *Investigation of Potentially Contaminated sites - code of practice*. BS 10175:2017.

British Standards Institution '*Code of Practice for Site Investigations*' BS 5930:2020

British Standards Institution "*Geotechnical investigation and testing – Identification and classification of soil*" BS EN ISO 14688:2002.

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UKWIR Report 10/WM/03/21 2010 "Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites"

Health & Safety Executive, 1991. 'Protection of Workers & the General Public during the Development of Contaminated Land'.

Environment Agency & NHBC, 2000. R&D Publication 66. Guidance for the Safe Development of Housing on Land Affected by Contamination.

Environment Agency "Guidance on the classification and assessment of waste (1st edition 2015) Technical Guidance WM3"

NHBC Standards 2024

CL:AIRE "*The Definition of Waste: Development Industry Code of Practice*" Version 2 March 2011.

CIRIA "*Asbestos in soil and made ground: a guide to understanding and managing risks*" C733 2014

Control of Asbestos Regulations (CAR) 2012

Harris, M R, Herbert, S. M, Smith, M A 'Remedial Treatment for Contaminated Land' (twelve volumes), special publications 101-112, CIRIA 1996.

Department of the Environment. 1995. Industry Profiles - 48 separate publications available from The Stationery Office, London

BRE Digest 365 "Soakaway Design" 2016.

Environment Agency. R&D Publication 20. Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources. 1999.

Environment Agency Technical Guidance Note 01. Hydrogeological Risk Assessment for Landfills.

Specification for Highways Works – Series 600 Earthworks November 2016.

APPENDIX 1 - Plans



GROUNDTECH CONSULTING

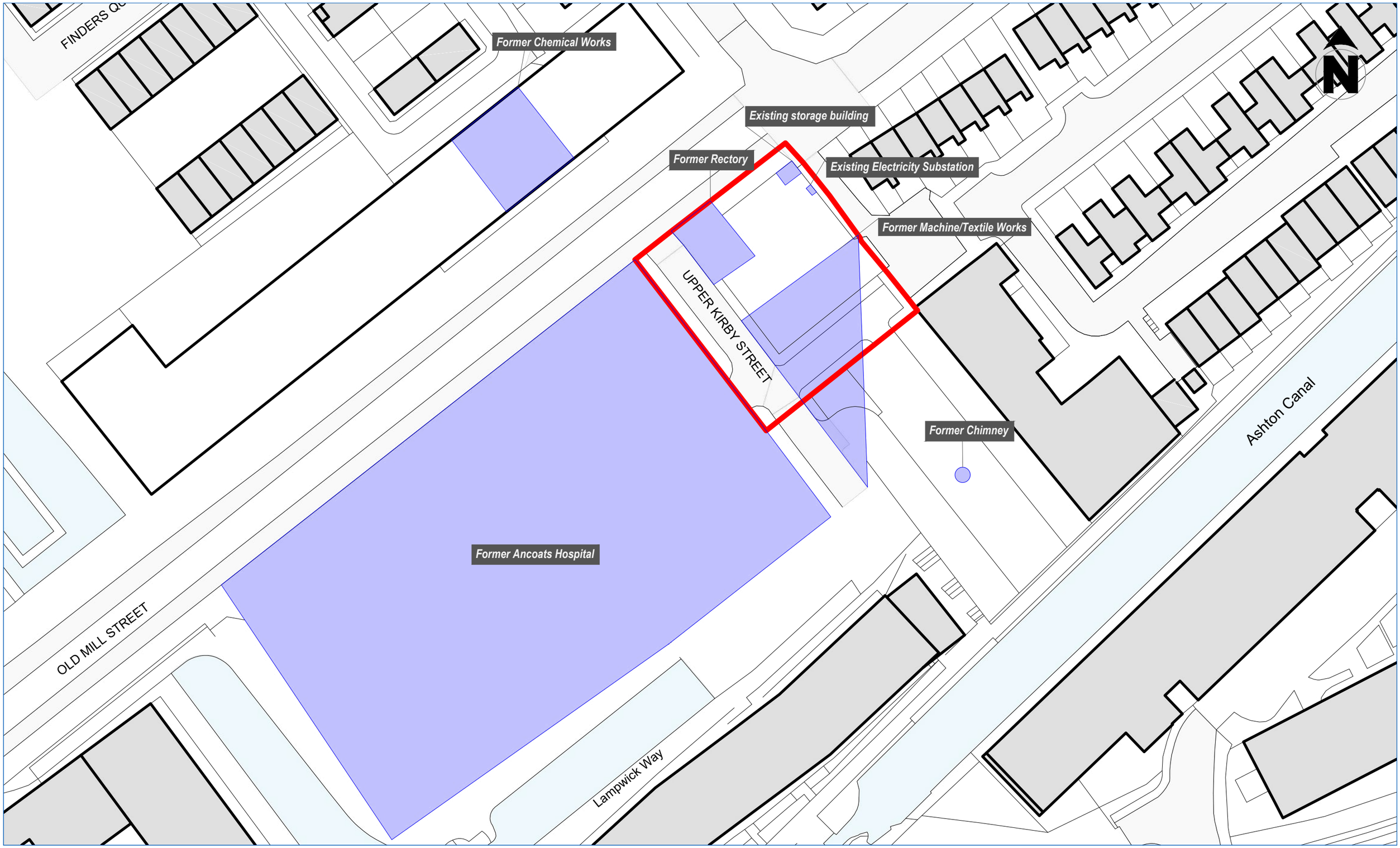
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PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	PROJECT LOCATION PLAN
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P01

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Site Location



GROUNDTECH CONSULTING

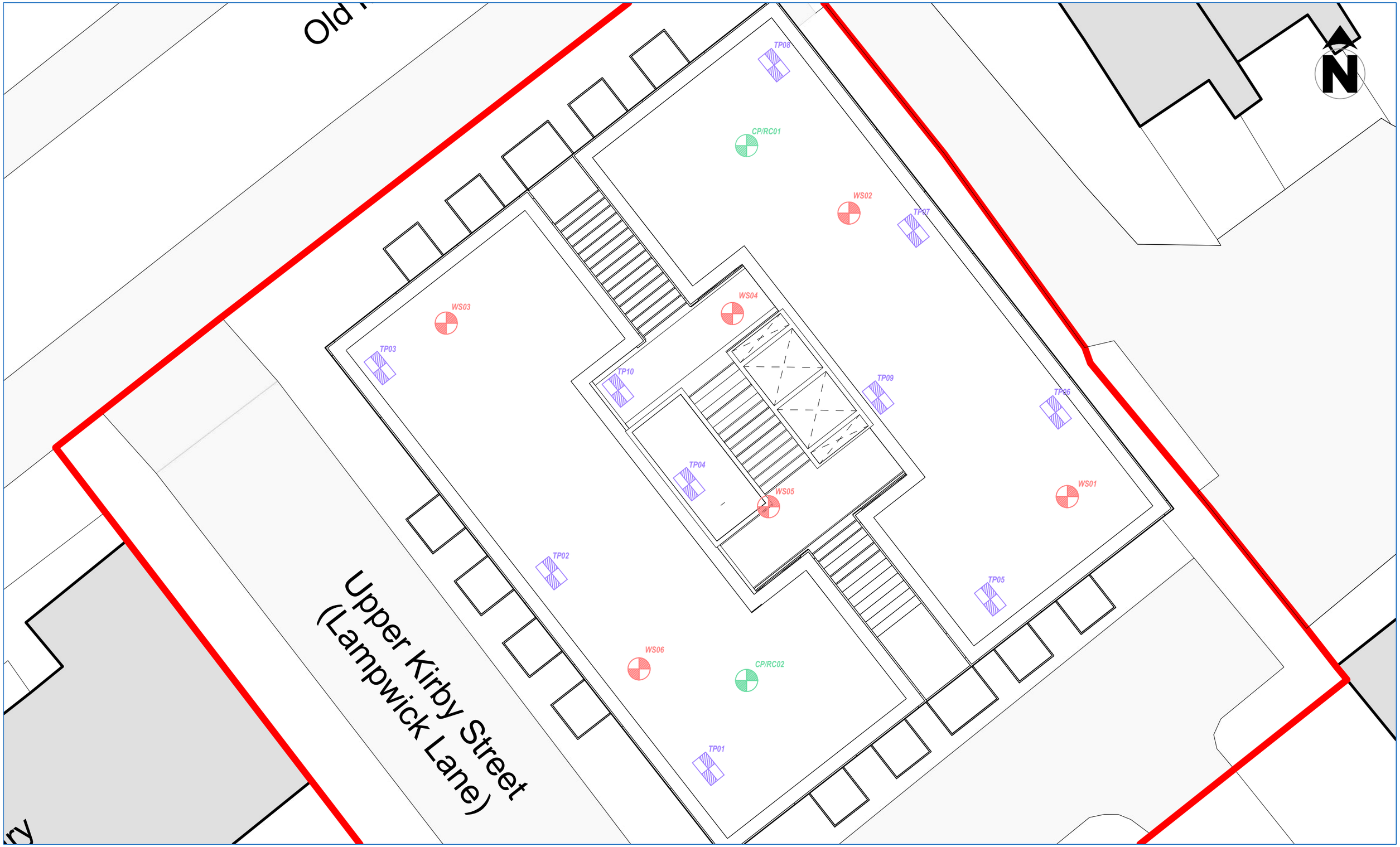
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PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	PRELIMINARY DEVELOPMENT CONSTRAINTS PLAN
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P02

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Site Boundary



GROUNDTECH CONSULTING

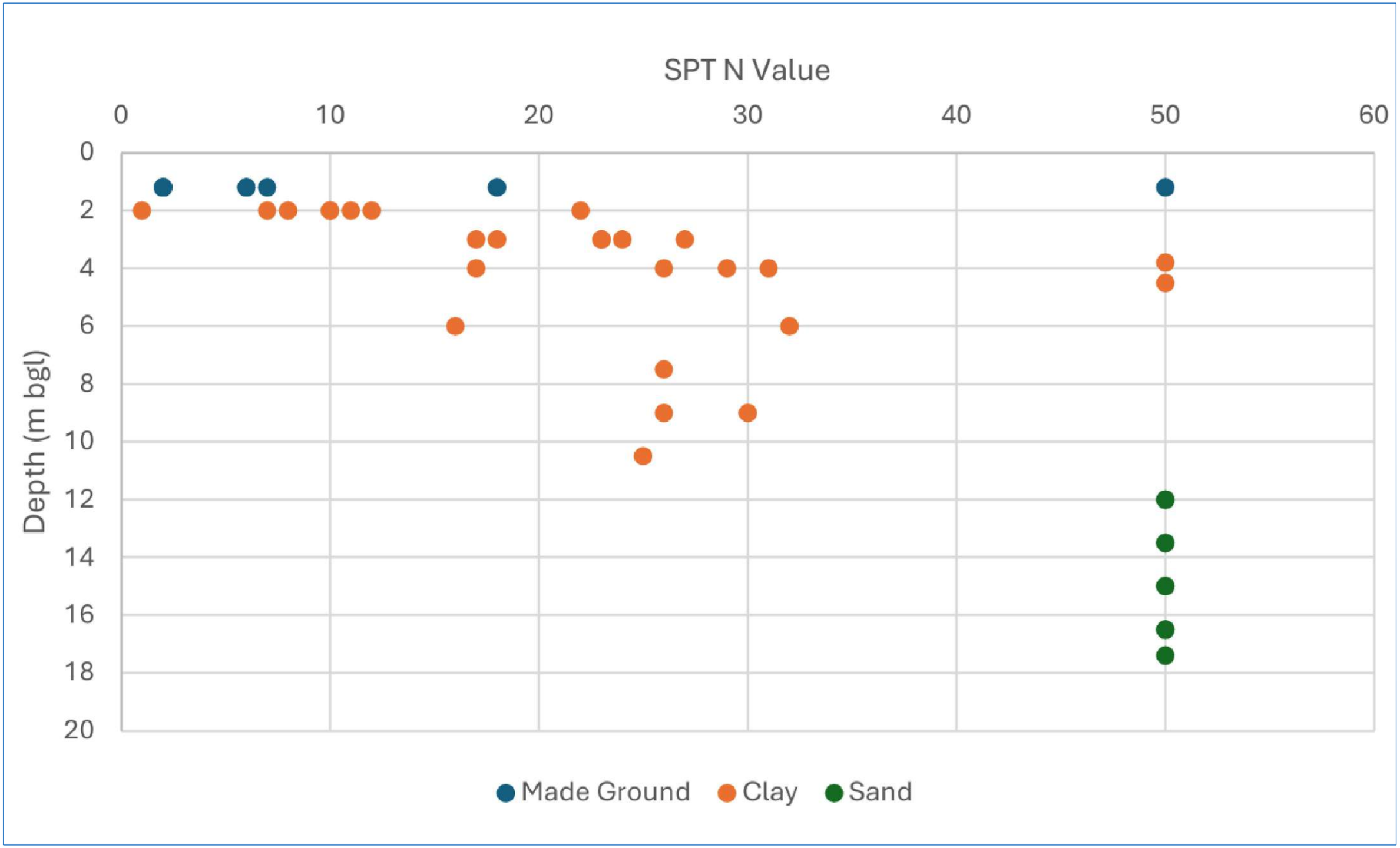
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PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	EXPLORATORY HOLE LOCATION PLAN
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P03

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Rotary Core/Cable Percussive Boreholes
- Window Sample Boreholes
- Trial Pit Locations



GROUNDTECH CONSULTING

CLIENT	ONE HERITAGE PLC
PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	GENERALISED GROUND MODEL
DATE	JUNE 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P04

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes



GROUNDTECH CONSULTING

CLIENT	ONE HERITAGE PLC
PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	SOIL CONTAMINATION PLAN
DATE	JUNE 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P05

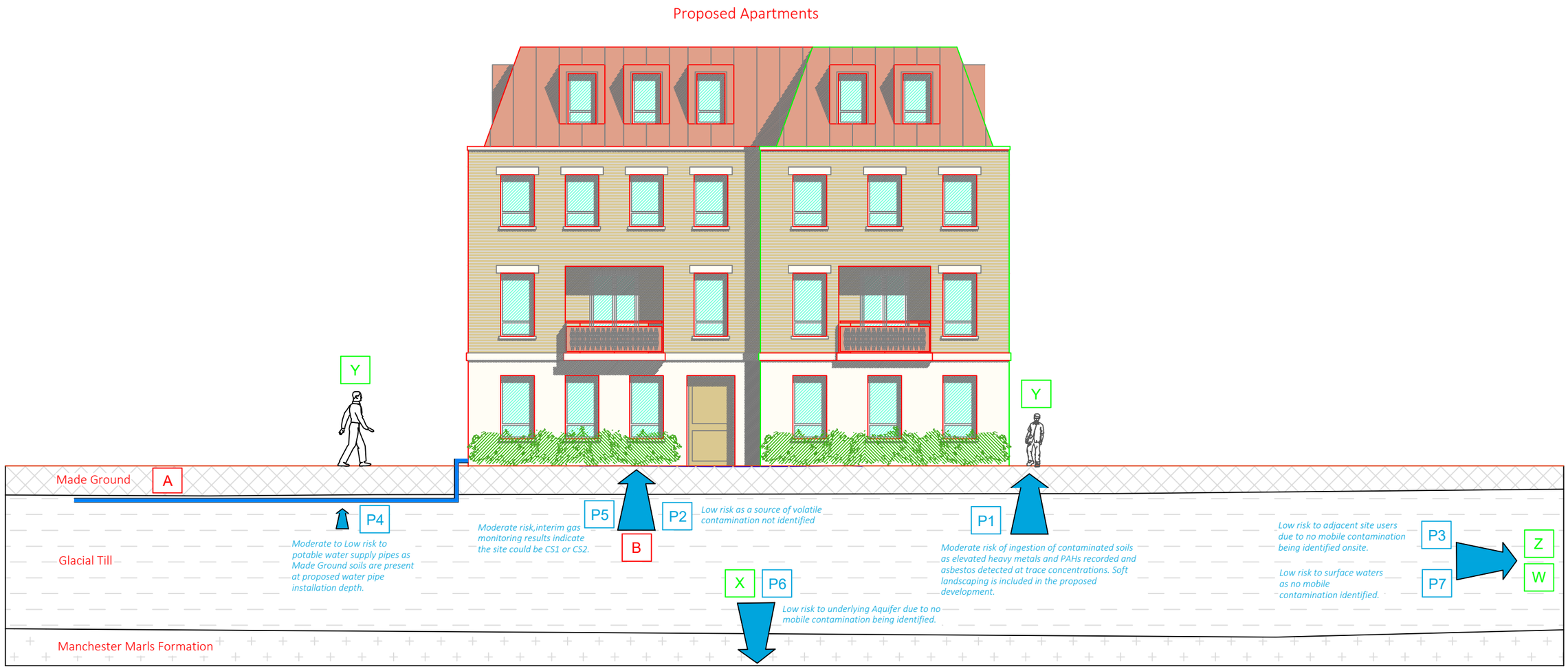
Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Rotary Core/Cable Percussive Boreholes
- Window Sample Boreholes
- Trial Pit Locations

SOURCES	POLLUTION LINKAGES	RECEPTORS
A. Contaminated soils / Made Ground. B. Ground gas.	P1. Ingestion of soil and dust. P2. Inhalation of vapour. P3. Inhalation of soil dust by adjacent site users. P4. Attacking of potable water supply pipe. P5. Migration and accumulation of ground gas in internal places. P6. Impaction of groundwater from soil contamination. P7. Migration of soil and groundwater contamination impacting surface waters.	W. Ashton Canal c.63m southeast. X. Groundwater within the underlying Secondary B bedrock Aquifer. Y. Site end users. Z. Adjacent site users.



GROUNDTECH CONSULTING	CLIENT: ONE HERITAGE PLC	DATE: JUNE 2024			Status:
	PROJECT TITLE: OLD MILL STREET, NEW ISLINGTON	SCALE: NTS			Preliminary / Draft / Issued / For Comment / Approved
	PLAN TITLE: ILLUSTRATIVE REVISED CSM	PLAN NUMBER: GRO-24102-P06	Rev.	Details / Date	Notes

APPENDIX 2 - Site Photographs



Photograph 1 – Access via the south of the site



Photograph 2 – Western extent of site and site boundaries



Photograph 3 – Northern extent of site



Photograph 4 - East of site and electricity substation



Photograph 5 – Brick storage building in the north east corner of site



Photograph 6 – Historic brick wall encountered in TP03 in the north east of site

APPENDIX 3 - Exploratory Hole Logs

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 1 of 6

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		0.10	D					0.30			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		0.40	D								MADE GROUND: Reddish brown gravelly fine to coarse Sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, concrete and ash.
		1.20 - 1.65	D				(2)	1.60			Firm brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine to coarse.
		2.00 - 2.45	D				(1)				
		3.00 - 3.45	U								
		3.50	D								
		4.00 - 4.45	D				(17)				
		5.00 - 5.45	U								

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 2 of 6

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		5.50	D								Firm brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine to coarse.
		6.00 - 6.45	B				(16)				
		6.00 - 6.45	D								
		7.50 - 7.95	U								
		8.00	D								
		9.00 - 9.45	D				(30)	9.00			Firm to stiff brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine to coarse.

6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		10.50 - 10.95	U								Firm to stiff brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine to coarse.
		11.00	D								
							N=50 (25 for 85mm/ 50 for 165mm)	12.00			Brown very gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mixed lithologies including mudstone and chert.
		13.50 - 13.95	D				N=50 (25 for 125mm /50 for 95mm)				

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 4 of 6

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
							N=50 (25 for 115mm/ 50 for 125mm)				Brown very gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mixed lithologies including mudstone and chert.
							N=50 (25 for 125mm /50 for 125mm)	17.10			Extremely weak red brown MUDSTONE residually weathered recovered as clayey subangular to subrounded medium to coarse gravel.
											Between 19.5m and 20.52m bgl no recovery.

16 17 18 19 20

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		19.50 - 21.00	NR	32	12	0		20.72			Extremely weak red brown MUDSTONE residually weathered recovered as clayey subangular to subrounded medium to coarse gravel.
			NI								
			1								Extremely weak red brown MUDSTONE partially weathered with very close to closely spaced planar rough (5°) discontinuities.
			NI								
			2								
		21.00 - 22.50	NR	97	78	9					*Between 20.8m and 20.9m bgl recovered as clayey angular to subangular fine to medium gravel.*
			NI								*At 20.9m bgl vertical discontinuities are present.*
			17								*Between 21.0m and 21.04m bgl no recovery.*
											Between 21.04m and 21.23m bgl recovered as angular to subangular gravel and cobbles.
											At 21.34 discontinuities are open.
											Between 21.69m and 21.79m bgl discontinuities are stepped.
			NI								*Between 22.29m and 22.5m bgl recovered as clayey angular to subangular fine to coarse gravel.*
		22.50 - 24.00	NR	93	55	26					*Between 22.5m and 22.6m bgl no recovery.*
			NI								*Between 22.6m and 22.75m bgl recovered as angular to subangular fine to coarse gravel and cobbles.*
			3								
			NI								*Between 22.98m and 23.1m bgl recovered as angular to subangular fine to coarse gravel and cobbles.*
			12								*Between 23.7m and 23.8m bgl discontinuities are stepped.*
		24.00 - 25.50	9	100	48	32					

21 22 23 24 25

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 16/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP01	CP+RC		HM	1:25	Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
			NI								Extremely weak red brown MUDSTONE partially weathered with very close to closely spaced planar rough (5°) discontinuities.
			2								*Between 25.0m and 25.2m bgl recovered as angular to subangular fine to medium gravel.*
			NI					25.50			*Between 25.4m and 25.5m bgl recovered as angular to subangular cobbles.*
											End of Borehole at 25.500m

26
27
28
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30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 19.5m bgl. 5. Rotary coring follow on to 25.5m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 17/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP02	CP+RC		HM	1:25	Sheet 1 of 5

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		0.00 - 1.20	B					0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
											MADE GROUND: Reddish brown clayey gravelly fine to coarse sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, concrete and ash.
		1.20 - 1.65	D				N=50 (25 for 0mm/50 for 0mm)	1.50			
											Firm brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse mudstone. Sand is fine to coarse.
		2.00 - 2.45	D				(11)				
		2.30 - 2.80	B								
		3.00 - 3.45	U								
		3.50	D								
		4.00 - 4.45	D				(26)				
		5.00 - 5.45	U								

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 18.0m bgl. 5. Rotary coring follow on to 24.0m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 17/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP02	CP+RC		HM	1:25	Sheet 2 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		5.50	D								Firm brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse mudstone. Sand is fine to coarse.
		6.00 - 6.45	D				(32)				
		7.50 - 7.95 7.50 - 8.00	B D				(26)				
		9.00 - 9.45	D				(26)				

6 7 8 9 10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 18.0m bgl. 5. Rotary coring follow on to 24.0m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 17/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP02	CP+RC		HM	1:25	Sheet 3 of 5

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		10.50 - 10.95	D				(25)				Firm brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse mudstone. Sand is fine to coarse.
		12.00 - 12.45	B				N=50 (2,4/50 for 245mm)	12.00			Brown very gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mixed lithologies including mudstone and chert with occasional cobbles of chert.
		13.50 - 13.95	D				N=50 (25 for 20mm/ 50 for 20mm)				
			D								

11 12 13 14 15

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 18.0m bgl. 5. Rotary coring follow on to 24.0m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

GROUNDTECH CONSULTING

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 17/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP02	CP+RC		HM	1:25	Sheet 4 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		15.00 - 15.45					N=50 (25 for 95mm/ 50 for 75mm)				Brown very gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mixed lithologies including mudstone and chert with occasional cobbles of chert.
		16.50 - 16.95	B				N=50 (25 for 0mm/50 for 0mm)				
							N=50 (10,14/ 50 for 95mm)	17.40			Extremely weak red brown MUDSTONE residually weathered recovered as brown clayey subangular to subrounded medium to coarse gravel.
		18.00 - 19.50	NR	10	0	0					*Between 18.0m and 19.35m bgl no recovery.*
			NI								
			NR								*Between 19.5m and 19.8m bgl no recovery.*
			NI					19.95			

16 17 18 19 20

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 18.0m bgl. 5. Rotary coring follow on to 24.0m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Rotary Core Log

GROUNDTECH CONSULTING

Project Name: OLD MILL STREET	Client: ONE HERITAGE PLC	Date: 17/05/2024 - 23/05/2024
Location: NEW ISLINGTON	Contractor:	
Project No. : GRO-24102	Crew Name:	Drilling Equipment:

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP02	CP+RC		HM	1:25	Sheet 5 of 5

Well	Water	Depth (m)	Type /FI	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		19.50 - 21.00	8	80	58	8					Extremely weak red brown MUDSTONE partially weathered with very close to closely spaced planar rough (5°) discontinuities.
			NI								*At 20.52m bgl discontinuities are stepped.*
		21.00 - 22.50	NR	86	53	23					*Between 20.95m and 21.0m bgl recovered as angular to subangular fine to coarse gravel.*
			5								*Between 21.0m and 21.2m bgl no recovery.*
			NI								*Between 21.7m and 21.75m bgl recovered as clayey angular to subangular fine to medium gravel.*
			11								*At 22.07m bgl discontinuities are open.*
			NI								*Between 22.4m and 22.5m bgl recovered as angular to subangular fine to coarse gravel.*
		22.50 - 24.00	NR	97	52	28					*Between 22.5m and 22.54m bgl no recovery.*
			NI								*Between 22.54m 22.7m bgl recovered as angular to subangular fine to coarse gravel and cobbles.*
			9								
			NI								*Between 23.6m and 23.65m bgl recovered as angular to subangular fine to medium gravel.*
			3								
			NI					24.00			*Between 23.95m and 24.0m bgl recovered as angular to subangular fine to coarse gravel.*
											End of Borehole at 24.000m

21 22 23 24 25

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand dug inspection pit carried out to 1.2m bgl. 3. No groundwater encountered. 4. Cable percussive borehole drilled to 18.0m bgl. 5. Rotary coring follow on to 24.0m bgl. 6. Standpipe installed to 2.0m bgl (1m plain,1m slotted).

Trial Pit Log

GROUNDTECH CONSULTING

Trialpit No **TP01** Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): Depth 3.40 — 1.8 × 0.45	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.25	ES		0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
			HVP=55				MADE GROUND: Firm brown sandy gravelly Clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, chert, sandstone and concrete. Sand is fine to coarse. Low cobble content of brick
	1.00	ES					
	1.35	ES		1.30			MADE GROUND: Black ashy fine to coarse sand.
	1.50	D		1.45			
	1.50	ES	HVP=60				Firm to stiff greyish brown sandy gravelly friable CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine.
	2.00	D					
	2.00	ES	HVP=150				
	3.00	D					
	3.00	ES	HVP=131				
				3.40			End of pit at 3.40 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.40m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP02**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 2.15 × 0.45, Depth 3.50	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.50	ES	HVP=47				MADE GROUND: Firm brown sandy gravelly Clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, chert, sandstone and concrete. Sand is fine to coarse. Low cobble content of brick.
			HVP=39				
				1.25			MADE GROUND: Yellowish brown sandy angular to subangular fine to coarse gravel of mixed lithologies including brick and sandstone. Sand is fine to coarse.
				1.35			MADE GROUND: Brownish grey sandy clayey angular to subangular fine to coarse gravel of mixed lithologies including ash,, hydrated lime, sandstone and brick. Sand is fine to coarse.
			HVP=70	1.50			Firm to stiff greyish brown sandy gravelly friable CLAY. Gravel is angular to subangular fine to coarse of mudstone. Sand is fine to coarse.
	1.55	ES					
	2.00	D					
	2.00	ES	HVP=150				
	3.00	D					
	3.00	ES	HVP=150				
				3.50			End of pit at 3.50 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.50m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP03**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 1.9 × 0.45, Depth 3.30	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.30	ES					MADE GROUND: Dark brown clayey sandy angular to subangular fine to coarse gravel of mixed lithologies including brick, concrete and sandstone. Sand is fine to coarse. High cobble content of brick.
			HVP=45				
	1.35 1.35	D ES					
	2.00 2.00	D ES	HVP=80	2.00			Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	3.00 3.00	D ES	HVP=111				
				3.30			End of pit at 3.30 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.30m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

Trial Pit Log

GROUNDTECH CONSULTING

Trialpit No **TP04**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 1.95 × 0.45, Depth 3.65	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.25	ES		0.15			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
							MADE GROUND: Brown gravelly fine to coarse sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, concrete and sandstone.
	1.20 1.20	D ES	HVP=56	1.10			Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	2.00 2.00	D ES	HVP=68				
	3.00 3.00	D ES	HVP=102				
				3.65			End of pit at 3.65 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.65m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP05** Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): Depth 3.65 — 2 × 0.45	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.40	ES					MADE GROUND: Brown sandy clayey angular to subangular fine to coarse gravel of mixed lithologies including brick and concrete. Sand is fine to coarse. High cobble content of concrete.
				1.00			
	1.10	ES					Firm to stiff brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	1.25	D	HVP=88				
	2.00	D					
	2.00	ES	HVP=123				
	3.00	D					
	3.00	ES	HVP=141				
				3.65			End of pit at 3.65 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.65m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP06** Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 1.85 × 0.45, Depth 3.50	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
				0.30			
	0.45	ES					MADE GROUND: Greyish brown clayey sandy angular to subangular fine to coarse gravel of mixed lithologies including brick, ash, concrete and mudstone. Sand is fine to coarse.
			HVP=67				
				1.30			
	1.40	ES					Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	1.50	D					
	2.00	D					
	2.00	ES					
			HVP=141				
	3.00	D					
	3.00	ES					
			HVP=130				
				3.50			End of pit at 3.50 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.50m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

Trial Pit Log

GROUNDTECH CONSULTING

Trialpit No **TP07**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 2.05 × 0.45, Depth 3.60	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.50	ES					MADE GROUND: Dark brown sandy angular to subangular fine to coarse gravel of mixed lithologies including brick, ash, concrete and ceramic. Sand is fine to coarse.
	1.65	ES		1.60			Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	1.70	D					
	2.00	D					
	2.00	ES	HVP=92				
	3.00	D					
	3.00	ES	HVP=103				
				3.60			End of pit at 3.60 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.60m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP08**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 1.9 × 0.45, Depth 3.50	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.50	ES					MADE GROUND: Brown gravelly fine to coarse sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, concrete and sandstone. High cobble content of brick and concrete.
	1.00	ES					
				1.65			Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	1.85	D					
	2.00	D					
	2.00	ES	HVP=53				
	3.00	D					
	3.00	ES	HVP=142				
				3.50			End of pit at 3.50 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.50m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No **TP09**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): 1.95 × 0.45, Depth 3.50	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.35	ES					MADE GROUND: Brown sandy clayey angular to subangular fine to coarse gravel of mixed lithologies including brick and concrete. Sand is fine to coarse.
			HVP=84				
				1.25			Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	1.40	ES					
	1.50	D					
	2.00	D					
	2.00	ES					
			HVP=115				
	3.00	D					
	3.00	ES					
			HVP=128				
				3.50			End of pit at 3.50 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.50m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

GROUNDTECH CONSULTING

Trial Pit Log

Trialpit No
TP10
Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: - Level:	Date 13/05/2024
Location: NEW ISLINGTON		Dimensions (m): Depth 3.35 — 2 × 0.45	Scale 1:25
Client: ONE HERITAGE PLC			Logged HM

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
	0.40	ES					MADE GROUND: Brown sandy angular to subangular fine to coarse gravel of mixed lithologies including brick and concrete. High cobble content of concrete.
				1.80			
	1.90	ES					Firm to stiff greyish brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
	2.00	D	HVP=99				
	2.50	D					
	2.50	ES					
	3.00	D					
	3.00	ES	HVP=145				
				3.35			End of pit at 3.35 m

1 2 3 4 5

Remarks: 1. Location cleared of services using handheld CAT Scanner. 2. No groundwater encountered. 3. Trial Pit terminated at 3.35m bgl. 4. Trial pit backfilled with arisings.

Stability: Stable.

Borehole Log

GROUNDTECH CONSULTING

Borehole No. **WS01**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.25	ES		0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		1.20 1.20	D	N=2 (1,0/1,0,1,0)				MADE GROUND: Soft dark brown sandy gravelly Clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick and sandstone. Sand is fine to coarse.
		1.50	ES		1.45			Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone and sandstone.
		2.00 2.00 2.00	D ES	N=10 (1,2/2,3,2,3)				
		3.00 3.00	D	N=24 (3,4/5,6,6,7)				
		3.60	D		3.60			End of borehole at 3.60 m

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 3.60m bgl due to borehole collapse. 5. Monitoring standpipe installed to 3.60m bgl. (2.00m plain, 1.60m slotted).

Borehole Log

GROUNDTECH CONSULTING

Borehole No. **WS02**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		0.50	ES					MADE GROUND: Soft dark brown sandy gravelly Clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, ash and sandstone. Sand is fine to coarse.
		1.20	D					
		1.20		N=2 (1,2/1,1,0,0)	1.30			
		1.40	ES					Soft to firm yellowish brown sandy CLAY. Sand is fine to coarse.
		2.00	D		1.95			
		2.00	ES					Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone and sandstone.
		2.00		N=10 (1,2/2,3,3,2)				
		3.00	D					
		3.00	ES					
		3.00		N=18 (3,4/4,4,5,5)				
		4.00		N=29 (5,5/5,7,8,9)				
		4.50		N=50 (9,10/50 for 295mm)	4.50			End of borehole at 4.50 m

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 4.50m bgl due to SPT refusal. 5. Borehole backfilled with arisings.

GROUNDTECH CONSULTING

Borehole Log

Borehole No. **WS03**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.25			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		0.45	ES					MADE GROUND: Reddish brown gravelly fine to coarse sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, concrete and ash.
		1.00	ES					
		1.20	D					
		1.20		N=6 (1,2/2,1,1,2)				
					1.40			Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
		1.60	ES					
		2.00	D					
		2.00	ES					
		2.00		N=22 (1,2/3,5,7,7)				
		3.00	D		3.00			End of borehole at 3.00 m
		3.00	ES					
		3.00		N=23 (3,4/5,5,6,7)				

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 3.00m bgl due to borehole collapse. 5. Monitoring standpipe installed to 3.0m bgl (2.00m plain, 1.00m slotted).

Borehole Log

GROUNDTECH CONSULTING

Borehole No. **WS04**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		0.35	ES					MADE GROUND: Soft greyish brown sandy gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including slate, brick, mudstone and sandstone.
		1.00	D					
		1.00	ES					
		1.20		N=6 (1,2/2,1,1,2)				
					1.60			Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
		2.00	D					
		2.00	ES					
		2.00		N=7 (2,2/2,2,1,2)				
		2.50	ES					
		3.00	D					
		3.00		N=23 (2,3/3,5,7,8)	3.05			End of borehole at 3.05 m

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 3.00m bgl due to borehole collapse. 5. Borehole backfilled with arisings.

Borehole Log

GROUNDTECH CONSULTING

Borehole No. **WS05**

Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
		0.35	ES					MADE GROUND: Soft dark brown sandy gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, ash and sandstone. Sand is fine to coarse.
		1.00	ES					
		1.20	D					
		1.20		N=18 (7,12/6,6,3,3)				
					1.45			
		1.50	ES					Firm to stiff dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
		2.00	D					
		2.00	ES					
		2.00		N=8 (1,1/2,2,2,2)				
		3.00	D					
		3.00	ES					
		3.00		N=17 (2,3/3,4,5,5)				
		4.00		N=31 (3,3/7,8,8,8)	4.00			End of borehole at 4.00 m

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 4.00m bgl due to cobble encountered at 4.00m bgl. 5. Borehole backfilled with arisings.

Borehole Log

GROUNDTECH CONSULTING

Borehole No. **WS06** Sheet 1 of 1

Project Name: OLD MILL STREET	Project No. GRO-24102	Co-ords: -	Hole Type WS
Location: NEW ISLINGTON		Level:	Scale 1:25
Client: ONE HERITAGE PLC		Dates: 14/05/2024 -	Logged By HM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.15			MADE GROUND: Grey angular to subangular fine to coarse gravel of limestone.
					0.25			MADE GROUND: Light grey concrete.
		0.55	ES					MADE GROUND: Brown clayey gravelly fine to coarse Sand. Gravel is angular to subangular fine to coarse of brick, concrete and mudstone.
		1.00	ES					
		1.20 1.20	D	N=7 (1,1/1,2,2,2)				
		1.60	ES		1.65			Firm to stiff Dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone.
		2.00 2.00 2.00	D ES	N=12 (2,2/3,3,3,3)				
		3.00 3.00 3.00	D ES	N=27 (3,4/5,6,8,8)				
		3.80		N=50 (8,9/10,10,11,19)	3.80			End of borehole at 3.80 m

1 2 3 4 5

Remarks

1. Location cleared of services using handheld CAT scanner. 2. Hand excavated inspection pit to 1.20m bgl. 3. No groundwater encountered. 4. Borehole terminated at 3.80m bgl due to SPT refusal. 5. Borehole backfilled with arisings.

APPENDIX 4 - Geo-Environmental Testing Results

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First Floor, Lloyd House
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WN7 3XJ

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e: hm@groundtechconsulting.com

i2 Analytical Ltd.
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Analytical Report Number : 24-019996

Replaces Analytical Report Number: 24-019996, issue no. 2
Client references/information amended.
Sample id's amended at customers request

Project / Site name:	Old Mill Street	**Samples received on:**	16/05/2024
Your job number:	GRO-24102	**Samples instructed on/ Analysis started on:**	16/05/2024
Your order number:		**Analysis completed by:**	07/06/2024
Report Issue Number:	3	**Report issued on:**	12/06/2024
Samples Analysed:	9 soil samples		

[redacted]

Signed:

Adam Fenwick
Key Account Executive
For & on behalf of i2 Analytical Ltd.

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

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

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

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201047	201048	201049	201050	201051
Sample Reference				TP02	TP09	TP05	TP08	TP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.35	0.35	0.40	0.50	0.40
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	45.7	63.1	< 0.1	< 0.1	20.9
Moisture Content	%	0.01	NONE	25	7.9	19	18	18
Total mass of sample received	kg	0.1	NONE	0.8	0.9	0.8	0.9	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	MBI	MBI	MBI	MBI	MBI
Actinolite detected	Type	N/A	ISO 17025	-	Not-detected	-	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	-	Detected	-	-	Not-detected
Anthophyllite detected	Type	N/A	ISO 17025	-	Not-detected	-	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	-	Not-detected	-	-	Detected
Crocidolite detected	Type	N/A	ISO 17025	-	Not-detected	-	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	-	Not-detected	-	-	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-	< 0.001	-	-	< 0.001
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-	Loose Fibres	-	-	Loose Fibres

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	11.1	10.5	8.3	8.6	8.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	7700	9700	610	1600	2100
Total Sulphate as SO_4	%	0.005	MCERTS	0.774	-	-	-	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	620	3000	150	32	34
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	311	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	311	1520	75.3	15.8	16.9
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	390 $^{\$\$}$	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	4000	-	-	-	-
Total Sulphur	%	0.005	MCERTS	0.405	-	-	-	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	14	-	-	-	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	0.83	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	2.4	4.7	2.9	2.9	2.2
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	-	-	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	-	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.35	3.2	0.05	0.17	0.13
Acenaphthylene	mg/kg	0.05	MCERTS	0.08	0.99	< 0.05	< 0.05	0.1
Acenaphthene	mg/kg	0.05	MCERTS	0.84	31	< 0.05	0.23	0.11
Fluorene	mg/kg	0.05	MCERTS	0.86	22	< 0.05	0.19	0.09
Phenanthrene	mg/kg	0.05	MCERTS	7.5	330	0.45	2.2	1.1
Anthracene	mg/kg	0.05	MCERTS	1.5	50	< 0.05	0.49	0.24
Fluoranthene	mg/kg	0.05	MCERTS	5.9	290	0.58	3.7	1.7
Pyrene	mg/kg	0.05	MCERTS	5.3	230	0.58	3.9	1.8
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.2	87	< 0.05	2.1	0.91

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201047	201048	201049	201050	201051
Sample Reference				TP02	TP09	TP05	TP08	TP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.35	0.35	0.40	0.50	0.40
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Chrysene	mg/kg	0.05	MCERTS	2.1	92	0.33	2.2	1.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.9	85	0.4	2.6	1.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.99	37	0.13	0.63	0.41
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.7	65	0.31	2.1	0.94
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.78	35	0.17	1.1	0.52
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.35	13	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.89	37	0.26	1.4	0.68
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	33.2	1410	3.27	23.2	11
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	17	19	29	29
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.5	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	27	30	22	16
Copper (aqua regia extractable)	mg/kg	1	MCERTS	63	68	58	97	58
Lead (aqua regia extractable)	mg/kg	1	MCERTS	210	340	140	520	230
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	0.8	1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	21	31	25	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	2.8	< 1.0	1.6	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	32	83	74	200	140
Magnesium (leachate equivalent)	mg/l	2.5	NONE	< 2.5	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	< 5.0	-	-	-	-
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >C5 - C6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	-	< 0.020	-	-
TPHCWG - Aliphatic >C6 - C8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	-	< 0.020	-	-
TPHCWG - Aliphatic >C8 - C10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	-	< 0.050	-	-
TPHCWG - Aliphatic >C10 - C12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	-
TPHCWG - Aliphatic >C12 - C16 EH_CU_1D_AL	mg/kg	2	MCERTS	3.9	-	< 2.0	-	-
TPHCWG - Aliphatic >C16 - C21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	-	10	-	-
TPHCWG - Aliphatic >C21 - C35 EH_CU_1D_AL	mg/kg	8	MCERTS	20	-	79	-	-
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_1D_AL	mg/kg	10	NONE	24	-	89	-	-
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	-	< 0.010	-	-
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	-	< 0.010	-	-
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	-	< 0.050	-	-
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	-	1.2	-	-
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	8.1	-	2.9	-	-
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	36	-	< 10	-	-
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	45	-	57	-	-
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	89	-	61	-	-
VOCs								
Chloromethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Chloroethane	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
Bromomethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Vinyl Chloride	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
Trichlorofluoromethane	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,1-Dichloroethene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201047	201048	201049	201050	201051
Sample Reference				TP02	TP09	TP05	TP08	TP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.35	0.35	0.40	0.50	0.40
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
Trans 1,2-dichloroethylene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,1-Dichloroethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
2,2-Dichloropropane	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
Chloroform	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,2-Dichloroethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,1-Dichloropropene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	-
Carbontetrachloride	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,2-Dichloropropane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Trichloroethene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Dibromomethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Bromodichloromethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Toluene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	-
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,3-Dichloropropane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Dibromochloromethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Tetrachloroethene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,2-Dibromoethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Chlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	-
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	-
Styrene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Bromoform	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
o-Xylene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	-
Isopropylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
Bromobenzene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
n-Propylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
2-Chlorotoluene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
4-Chlorotoluene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
tert-Butylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
sec-Butylbenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,3-Dichlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
p-Isopropyltoluene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,4-Dichlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,2-Dichlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Butylbenzene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-
Hexachlorobutadiene	µg/kg	5	NONE	< 5.0	-	< 5.0	-	-
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	< 5.0	-	< 5.0	-	-

SVOCs

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201047	201048	201049	201050	201051
Sample Reference				TP02	TP09	TP05	TP08	TP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.35	0.35	0.40	0.50	0.40
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	0.4	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Hexachloroethane	mg/kg	0.05	ISO 17025	< 0.05	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.4	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	0.7	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	< 0.3	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	< 0.3	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.30	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	0.4	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	0.5	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	-	-	-	-

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

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201052	201053	201054	201055
Sample Reference				TP07	TP06	WS05	WS03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.45	0.30	0.45
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	18.6	61.7	19.2	62.6
Moisture Content	%	0.01	NONE	16	7.7	19	6.6
Total mass of sample received	kg	0.1	NONE	0.9	0.9	0.8	0.9
Asbestos							
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MMI	MMI	MMI	MMI
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	-	-
Amosite detected	Type	N/A	ISO 17025	Detected	-	-	-
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	-	-
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	-	-
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	-	-
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	-	-
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	-	-
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	-	-
General Inorganics							
pH (L099)	pH Units	N/A	MCERTS	8	10.4	8.1	9.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	920	520	1500	590
Total Sulphate as SO_4	%	0.005	MCERTS	-	-	-	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	96	83	1100	64
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	47.9	41.3	549	31.8
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	5.8	2.4	3.1	5.6
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	0.56	0.1	0.23	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.82	< 0.05	< 0.05	0.17
Acenaphthene	mg/kg	0.05	MCERTS	1.1	0.11	0.06	0.32
Fluorene	mg/kg	0.05	MCERTS	1.7	0.08	0.09	0.27
Phenanthrene	mg/kg	0.05	MCERTS	11	0.93	0.46	1.9
Anthracene	mg/kg	0.05	MCERTS	2.7	0.19	0.15	0.66
Fluoranthene	mg/kg	0.05	MCERTS	15	1.6	0.36	4.8
Pyrene	mg/kg	0.05	MCERTS	16	1.5	0.38	4.9
Benzo(a)anthracene	mg/kg	0.05	MCERTS	7.1	0.8	0.23	2.4

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201052	201053	201054	201055
Sample Reference				TP07	TP06	WS05	WS03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.45	0.30	0.45
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Chrysene	mg/kg	0.05	MCERTS	8.6	0.75	0.22	2.5
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	8.6	0.88	0.19	4.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.9	0.36	< 0.05	1.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	8.4	0.81	< 0.05	4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.9	0.48	< 0.05	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.4	0.09	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.8	0.55	0.14	2.1
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	94.6	9.21	2.51	31.2
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	36	13	61	10
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.8
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	25	26	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	170	44	120	35
Lead (aqua regia extractable)	mg/kg	1	MCERTS	960	140	1300	180
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.6	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	34	20	53	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.8	< 1.0	1.6	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	220	78	58	67
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Petroleum Hydrocarbons							
TPHCWG - Aliphatic >C5 - C6 HS_1D_AL	mg/kg	0.02	NONE	-	-	-	-
TPHCWG - Aliphatic >C6 - C8 HS_1D_AL	mg/kg	0.02	NONE	-	-	-	-
TPHCWG - Aliphatic >C8 - C10 HS_1D_AL	mg/kg	0.05	NONE	-	-	-	-
TPHCWG - Aliphatic >C10 - C12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	-	-	-
TPHCWG - Aliphatic >C12 - C16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	-	-	-
TPHCWG - Aliphatic >C16 - C21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-	-
TPHCWG - Aliphatic >C21 - C35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-	-
TPHCWG - Aliphatic >C5 - C35 EH_CU+HS_1D_AL	mg/kg	10	NONE	-	-	-	-
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	-	-	-	-
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	-	-	-	-
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	-	-	-	-
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	-	-	-
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	-	-	-
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-	-
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-	-
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	5	ISO 17025	-	-	-	-
Chloroethane	µg/kg	5	NONE	-	-	-	-
Bromomethane	µg/kg	5	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	5	NONE	-	-	-	-
Trichlorofluoromethane	µg/kg	5	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	5	NONE	-	-	-	-

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201052	201053	201054	201055
Sample Reference				TP07	TP06	WS05	WS03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.45	0.30	0.45
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	-	-	-	-
Trans 1,2-dichloroethylene	µg/kg	5	NONE	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	-	-
1,1-Dichloroethane	µg/kg	5	ISO 17025	-	-	-	-
2,2-Dichloropropane	µg/kg	5	NONE	-	-	-	-
Chloroform	µg/kg	5	ISO 17025	-	-	-	-
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,2-Dichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,1-Dichloropropene	µg/kg	5	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	-	-	-	-
Benzene	µg/kg	5	MCERTS	-	-	-	-
Carbontetrachloride	µg/kg	5	NONE	-	-	-	-
1,2-Dichloropropane	µg/kg	5	ISO 17025	-	-	-	-
Trichloroethene	µg/kg	5	ISO 17025	-	-	-	-
Dibromomethane	µg/kg	5	ISO 17025	-	-	-	-
Bromodichloromethane	µg/kg	5	ISO 17025	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	-	-
Toluene	µg/kg	5	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,3-Dichloropropane	µg/kg	5	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	5	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	5	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	5	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	5	MCERTS	-	-	-	-
Styrene	µg/kg	5	ISO 17025	-	-	-	-
Bromoform	µg/kg	5	NONE	-	-	-	-
o-Xylene	µg/kg	5	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	5	ISO 17025	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	NONE	-	-	-	-
Bromobenzene	µg/kg	5	NONE	-	-	-	-
n-Propylbenzene	µg/kg	5	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	5	ISO 17025	-	-	-	-
4-Chlorotoluene	µg/kg	5	ISO 17025	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	5	ISO 17025	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	5	ISO 17025	-	-	-	-
1,3-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	5	ISO 17025	-	-	-	-
1,4-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
Butylbenzene	µg/kg	5	NONE	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
Hexachlorobutadiene	µg/kg	5	NONE	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-

SVOCs

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street

Lab Sample Number				201052	201053	201054	201055
Sample Reference				TP07	TP06	WS05	WS03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.45	0.30	0.45
Date Sampled				13/04/2024	13/04/2024	13/04/2024	13/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	ISO 17025	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-

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

UKAS TESTING
4041

Analytical i2 Environmental Science

Analytical Report Number: 24-019996
Project / Site name: Old Mill Street
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

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

Quantitative Analysis

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

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

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

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
201048	TP09	0.35	130	Loose Fibres	**Amosite**	< 0.001	**< 0.001**
201051	TP10	0.40	121	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
201052	TP07	0.50	140	Loose Fibres	**Amosite & Chrysotile**	< 0.001	**< 0.001**

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

Analytical Report Number : 24-019996
Project / Site name: Old Mill Street

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
201047	TP02	None Supplied	1.35	Brown clay and sand with tar
201048	TP09	None Supplied	0.35	Brown clay and sand with clinker and tar
201049	TP05	None Supplied	0.4	Brown clay and sand with gravel
201050	TP08	None Supplied	0.5	Brown loam and sand with gravel and vegetation
201051	TP10	None Supplied	0.4	Brown loam and sand with gravel and vegetation
201052	TP07	None Supplied	0.5	Brown loam and clay with gravel and tar
201053	TP06	None Supplied	0.45	Brown clay and sand with gravel and stones
201054	WS05	None Supplied	0.3	Brown clay and sand with clinker and brick
201055	WS03	None Supplied	0.45	Brown sand with tar and brick

Analytical Report Number : 24-019996
Project / Site name: Old Mill Street

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088	D/W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078B	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS

Analytical Report Number : 24-019996
Project / Site name: Old Mill Street

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

$$ - Result was reported from high dilution. The result should be interpreted with caution.

APPENDIX 5 - Geotechnical Testing Results

LABORATORY REPORT

Contract Number: PSL24/3760

Report Date: 10 June 2024

Client's Reference: GRO-24102-4153

Client Name: Groundtech Consulting
First Floor
Lloyd House
Orford Court
Greenfold Way
WN7 3XJ

For the attention of: Rebecca Rowlinson

Contract Title: Old Mill Street

Date Received: 29/5/2024
Date Commenced: 29/5/2024
Date Completed: 10/6/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

[redacted]

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R Berriman (Associate Director)
S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
T Watkins (Senior Technician)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
CP01		U	3.00	3.45	Firm brown slightly gravelly slightly sandy CLAY.
CP01		U	5.00	5.45	Stiff brown slightly gravelly slightly sandy CLAY.
CP01		U	7.50	7.95	Soft brown slightly gravelly slightly sandy CLAY.
CP01		U	10.50	10.95	Very stiff brown slightly gravelly slightly sandy CLAY.
CP02		U	3.00	3.45	Firm brown slightly gravelly slightly sandy CLAY.
CP02		U	5.00	5.45	Very stiff brown slightly gravelly slightly sandy CLAY.
TP03		D	2.00		Brown mottled grey slightly gravelly slightly sandy CLAY.
WS02		D	2.00		Brown gravelly sandy CLAY.
TP104		D	1.20		Brown mottled grey slightly gravelly slightly sandy CLAY.
WS101		D	2.00		Brown gravelly sandy CLAY.
WS106		D	2.00		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP108		D	1.85		Brown mottled grey slightly sandy CLAY.
TP109		D	1.50		Brown sandy CLAY.

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP03		D	2.00		21			51	23	28	90	High Plasticity CH
WS02		D	2.00		25			45	22	23	85	Intermediate Plasticity CI
TP104		D	1.20		25			60	28	32	90	High Plasticity CH
WS101		D	2.00		22			42	22	20	75	Intermediate Plasticity CI
WS106		D	2.00		25			50	25	25	90	High Plasticity CH
TP108		D	1.85		22			52	23	29	100	High Plasticity CH
TP109		D	1.50		23			45	23	22	100	Intermediate Plasticity CI

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

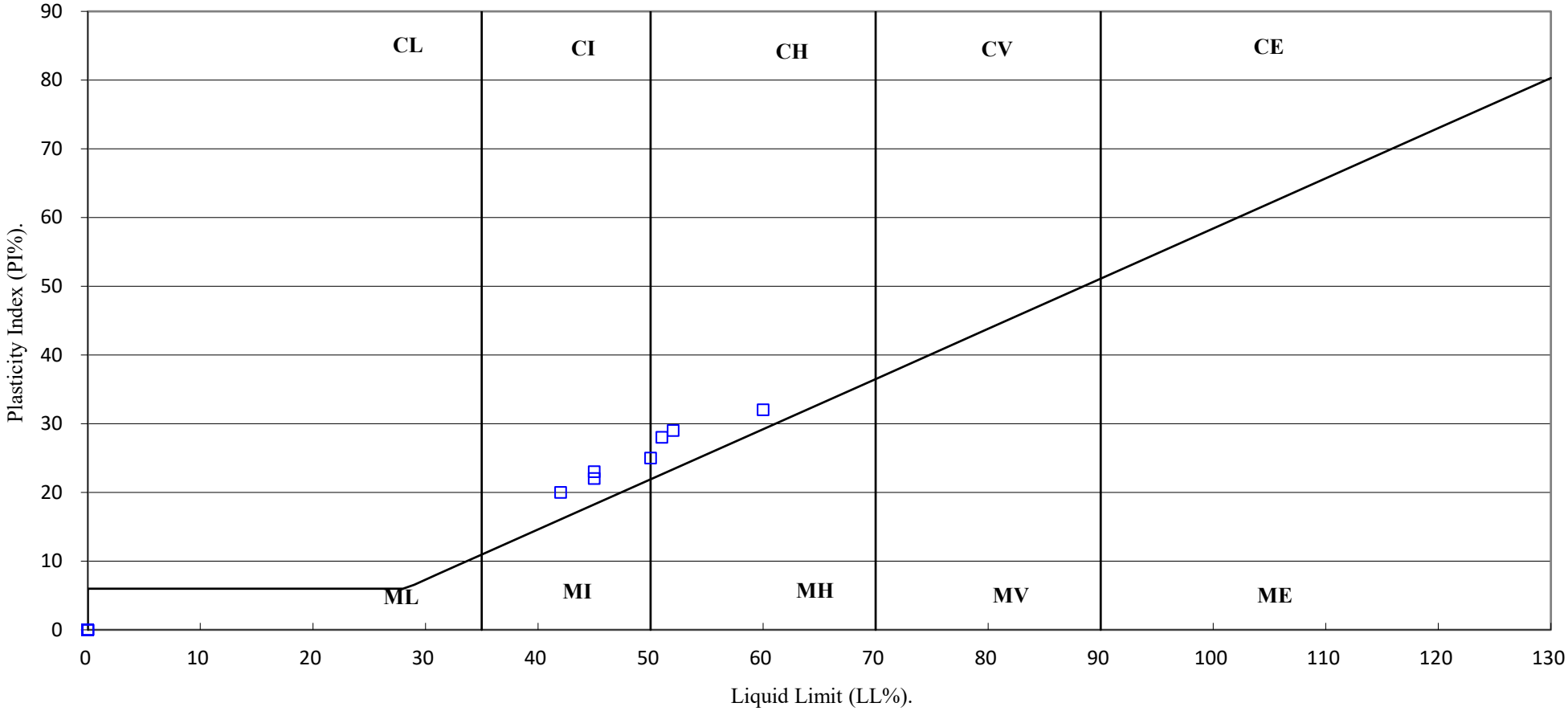
Contract No:

PSL24/3760

Client Ref:

24102

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Old Mill Street**	**Contract No:** PSL24/3760 **Client Ref:** 24102

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

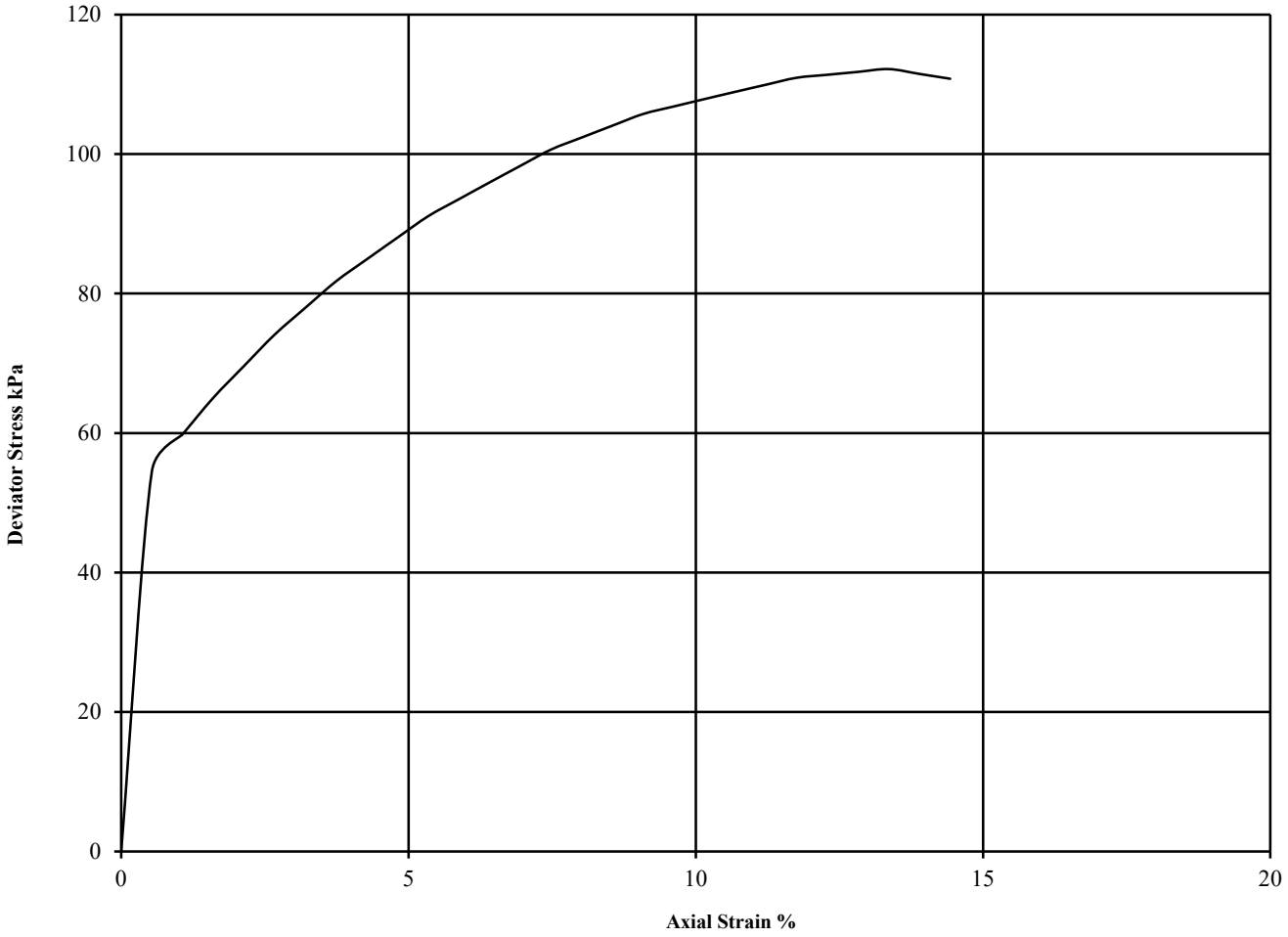
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP01 **Top Depth (m):** 3.00

Sample Number: **Base Depth (m):** 3.45

Sample Type U



Diameter (mm):		90	Height (mm):		187	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2.1 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.39
1	23	2.10	1.70	60	112	56	13.4	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: PSL24/3760

Client Ref: 24102

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

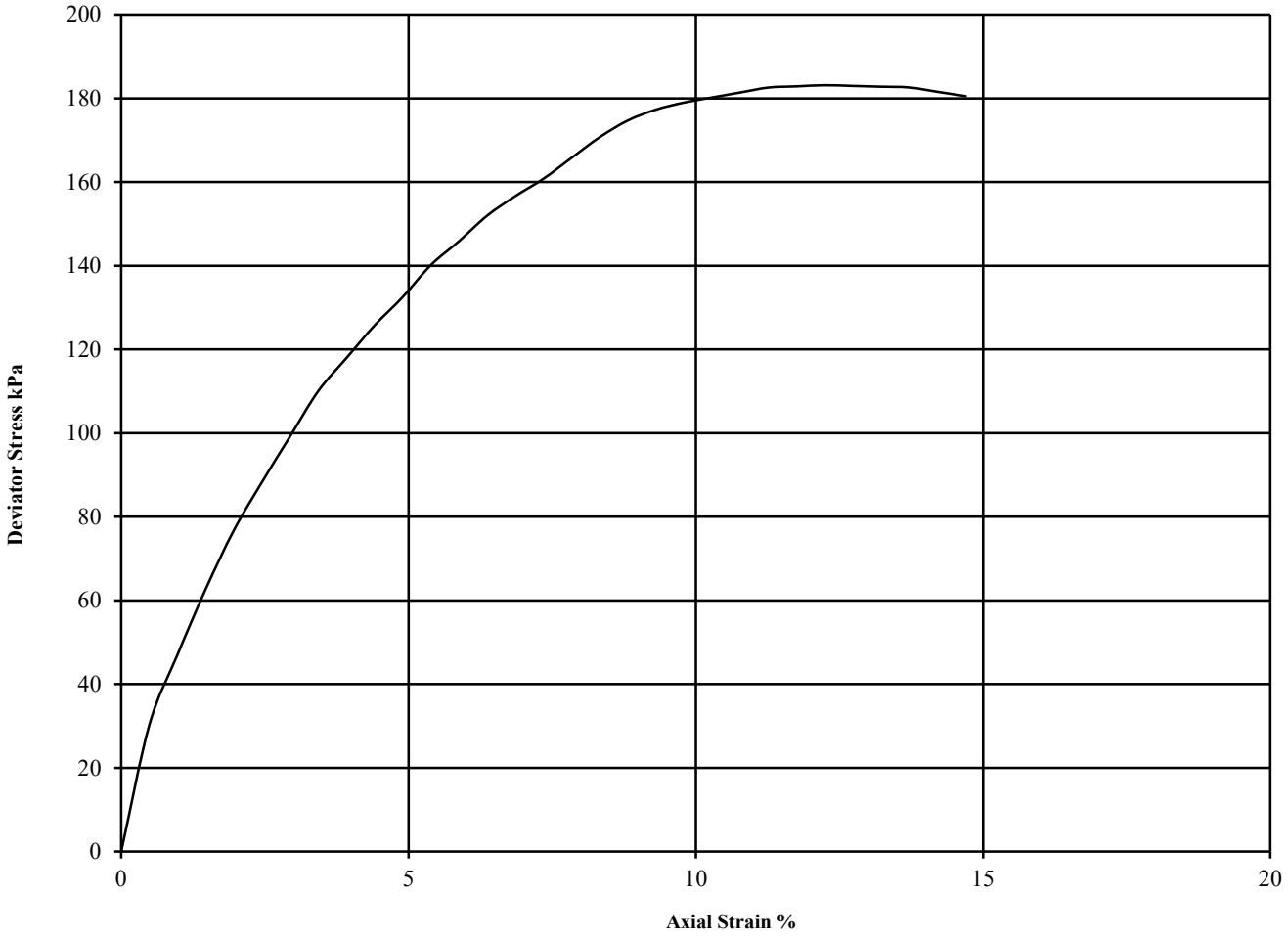
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **CP01** **Top Depth (m):** **5.00**

Sample Number: **Base Depth (m):** **5.45**

Sample Type **U**



Diameter (mm):		102	Height (mm):		204	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 1.9 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35
1	16	2.19	1.89	100	183	92	12.2	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: **PSL24/3760**

Client Ref: **24102**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

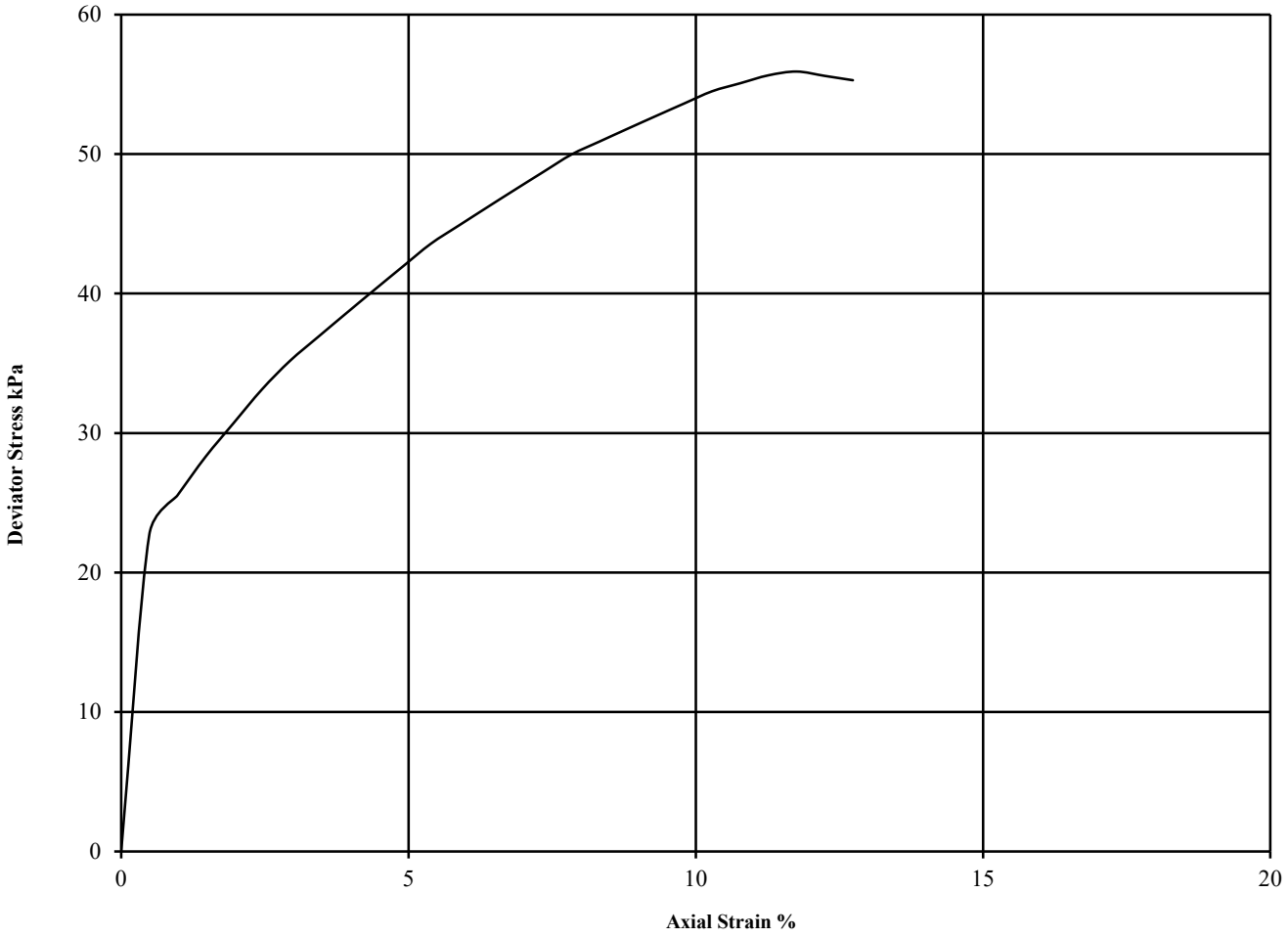
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP01 **Top Depth (m):** 7.50

Sample Number: **Base Depth (m):** 7.95

Sample Type U



Diameter (mm):		102	Height (mm):		204	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 1.9 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35
1	18	2.15	1.83	150	56	28	11.8	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: PSL24/3760

Client Ref: 24102

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

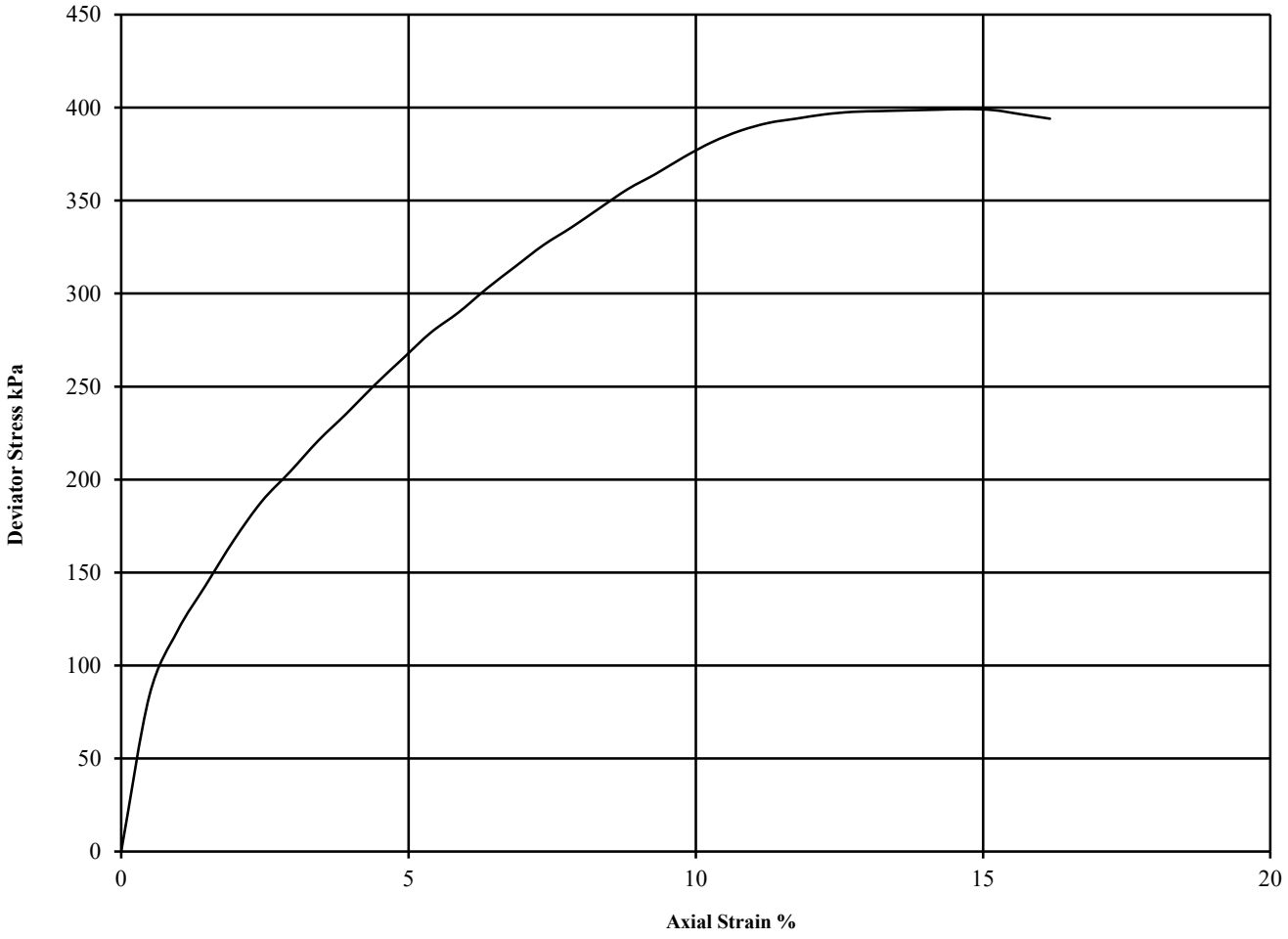
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP01 **Top Depth (m):** 10.50

Sample Number: **Base Depth (m):** 10.95

Sample Type U



Diameter (mm):		102	Height (mm):		204	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 1.9 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.34
1	14	2.26	1.98	210	399	200	14.7	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: PSL24/3760

Client Ref: 24102

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

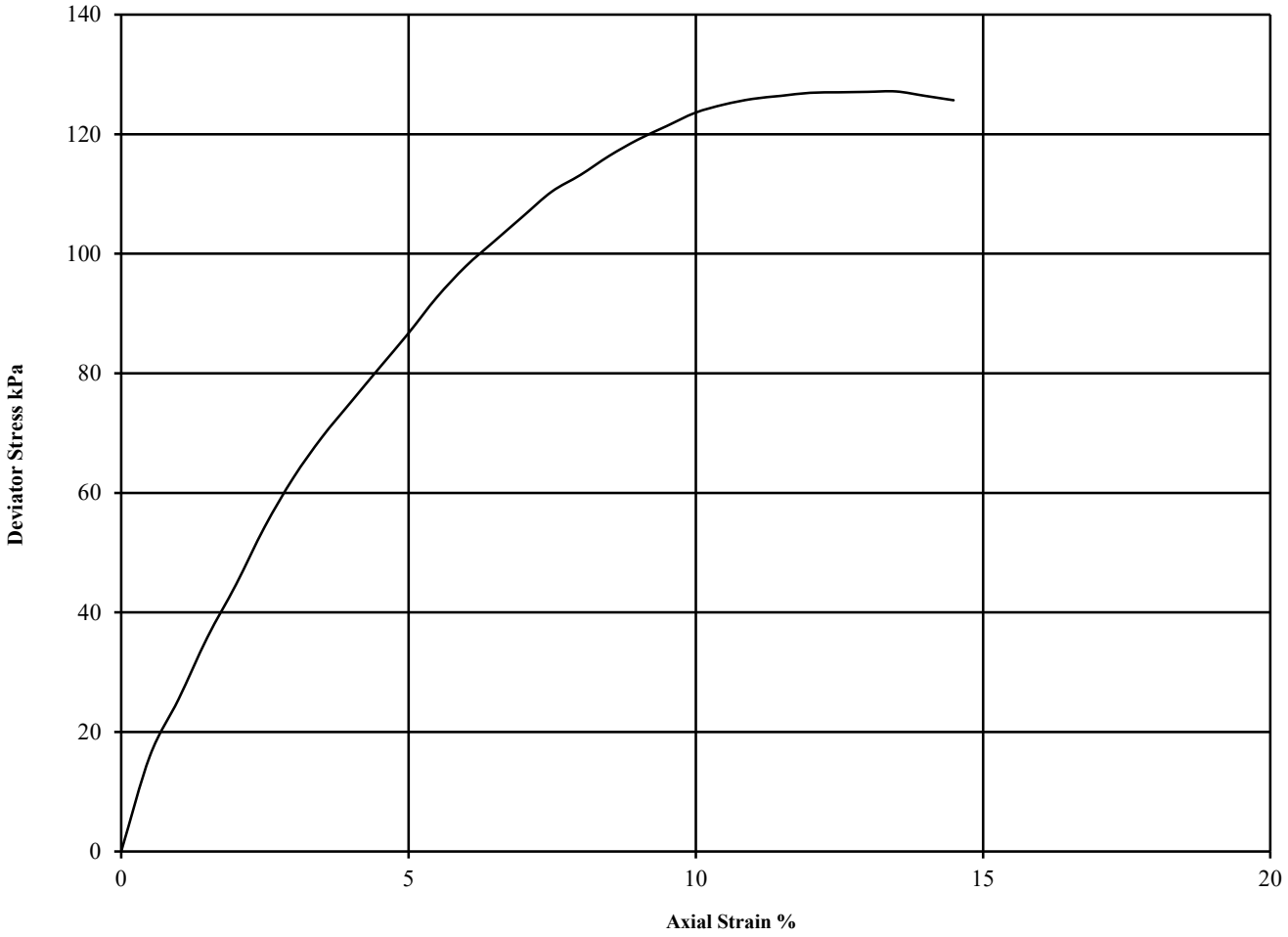
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP02 **Top Depth (m):** 3.00

Sample Number: **Base Depth (m):** 3.45

Sample Type U



Diameter (mm):		70	Height (mm):		140	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2.1 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.49
1	19	2.13	1.79	60	127	64	13.5	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: PSL24/3760

Client Ref: 24102

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

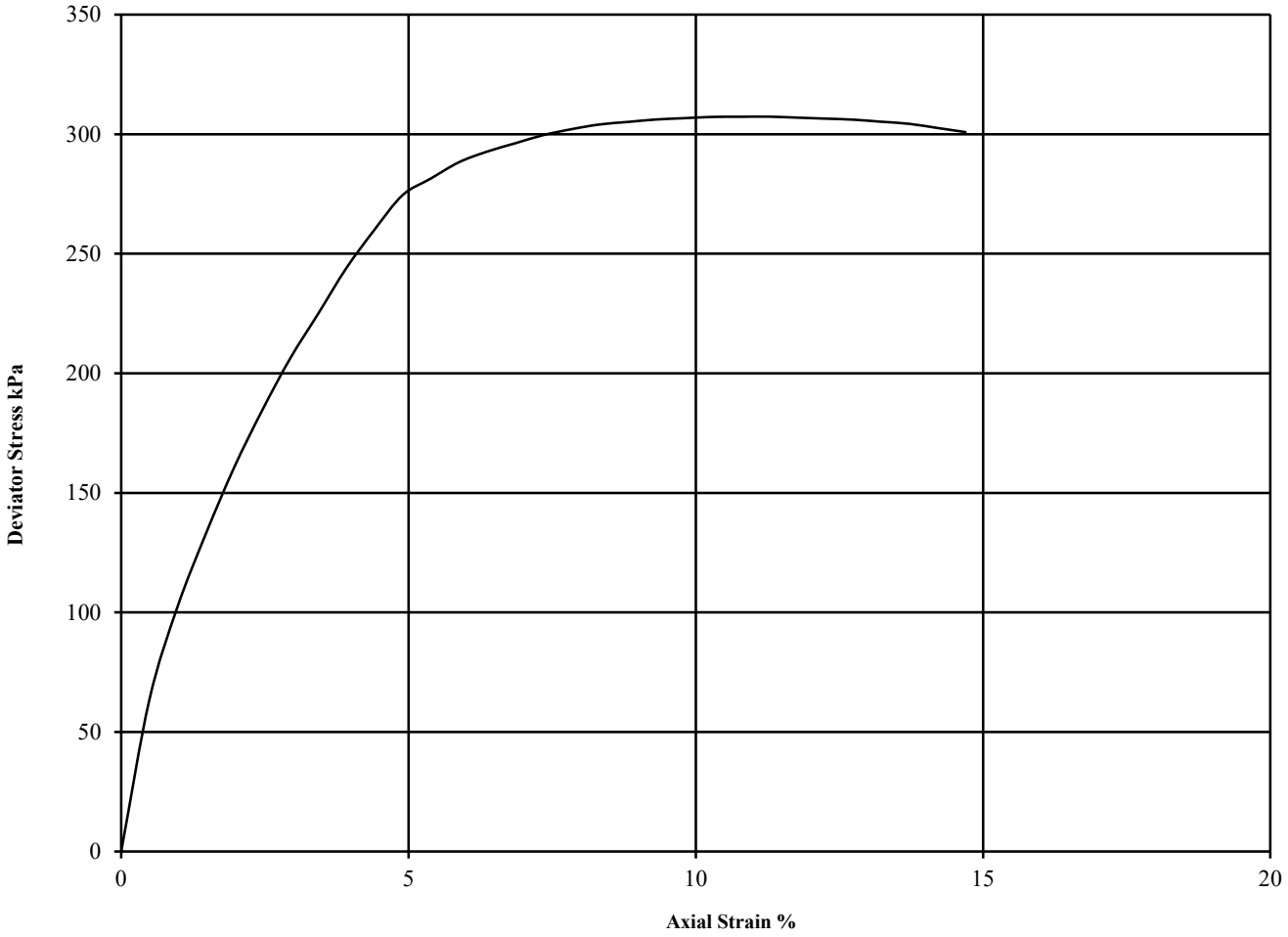
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: CP02 **Top Depth (m):** 5.00

Sample Number: **Base Depth (m):** 5.45

Sample Type U



Diameter (mm):		102	Height (mm):		204	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 1.9 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35
1	14	2.22	1.94	100	307	154	11.3	Plastic	See summary of soil descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No: PSL24/3760

Client Ref: 24102

LABORATORY REPORT

Contract Number: PSL24/4090

Report Date: 12 June 2024

Client's Reference: GRO-24102-4153

Client Name: Groundtech Consulting
First Floor
Lloyd House
Orford Court
Greenfold Way
WN7 3XJ

For the attention of: Rebecca Rowlinson

Contract Title: Old Mill Street

Date Received: 12/6/2024
Date Commenced: 12/6/2024
Date Completed: 12/6/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
[redacted]
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

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awatkins@prosoils.co.uk

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
CP01	24.40		A	Perp	85	54	4590	5844.17	76.45	-	0.24	0.04	1.211	0.05	Valid	
CP01	20.72		A	Perp	84	79	6636	8449.22	91.92	-	5.11	0.60	1.315	0.80	Valid	
CP01	21.23		A	Perp	84	46	3864	4919.80	70.14	-	0.54	0.11	1.165	0.13	Valid	
CP02	21.65		A	Perp	85	58	4930	6277.07	79.23	-	0.45	0.07	1.230	0.09	Valid	
CP02	23.20		A	Perp	85	59	5015	6385.30	79.91	-	0.27	0.04	1.235	0.05	Valid	
CP02	20.95		A	Perp	85	56	4760	6060.62	77.85	-	3.50	0.58	1.220	0.70	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No:

PSL24/4090

Client Ref:

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D_e^2	D_e	Failure Load		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	L	D		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
CP02	23.20		D	Par	-	85	7225	85.00	-	0.21	0.029	1.270	0.04	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Old Mill Street

Contract No:

PSL24/4090

Client Ref:

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First Floor, Lloyd House
Oxford Court
Greenfold Way
WN7 3XJ

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e: hm@groundtechconsulting.com

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Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

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

Analytical Report Number : 24-023180

Project / Site name:	Old Mill Street	**Samples received on:**	31/05/2024
Your job number:	GRO 24102	**Samples instructed on/ Analysis started on:**	05/06/2024
Your order number:		**Analysis completed by:**	11/06/2024
Report Issue Number:	1	**Report issued on:**	11/06/2024
Samples Analysed:	4 soil samples		



Signed:

Adam Fenwick
Key Account Executive
For & on behalf of i2 Analytical Ltd.

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

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

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

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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

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

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 24-023180
Project / Site name: Old Mill Street

Lab Sample Number				217556	217557	217558	217559
Sample Reference				CP01	CP01	CP02	CP02
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				4.00	9.00	17.50	13.50
Date Sampled				16/05/2024	16/05/2024	16/05/2024	16/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	38.5
Moisture Content	%	0.01	NONE	13	9.6	8.5	4.7
Total mass of sample received	kg	0.1	NONE	0.7	0.6	0.6	0.6
General Inorganics							
pH (L099)	pH Units	N/A	MCERTS	8.4	8.6	8	8.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	540	290	770	56
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	268	147	383	28

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

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 24-023180
Project / Site name: Old Mill Street

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
217556	CP01	None Supplied	4	Brown clay with gravel
217557	CP01	None Supplied	9	Brown clay and sand with gravel
217558	CP02	None Supplied	17.5	Brown clay and sand with gravel
217559	CP02	None Supplied	13.5	Brown gravely sand with stones

Analytical Report Number : 24-023180
Project / Site name: Old Mill Street

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

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

Groundtech Consulting Ltd
First Floor, Lloyd House
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t: 07449819886

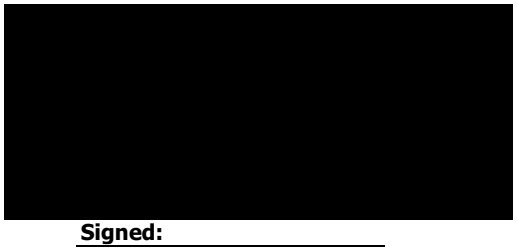
e: hm@groundtechconsulting.com

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WD18 8YS

t: 01923 225404
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e: reception@i2analytical.com

Analytical Report Number : 24-023172

Project / Site name:	Old Mill Street	**Samples received on:**	31/05/2024
Your job number:	GRO 24102	**Samples instructed on/ Analysis started on:**	05/06/2024
Your order number:		**Analysis completed by:**	11/06/2024
Report Issue Number:	1	**Report issued on:**	11/06/2024
Samples Analysed:	3 soil samples		



Signed:

Adam Fenwick
Key Account Executive
For & on behalf of i2 Analytical Ltd.

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

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

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

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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

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

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 24-023172
Project / Site name: Old Mill Street

Lab Sample Number				217493	217494	217495
Sample Reference				CP01	TP109	TP105
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				17.00	2.00	2.00
Date Sampled				17/05/2024	13/05/2024	13/05/2024
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	4.1	17	17
Total mass of sample received	kg	0.1	NONE	1.3	0.6	0.5

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.8	8.5	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	63	180	220
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	31.5	91.8	109

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

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 24-023172
Project / Site name: Old Mill Street

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
217493	CP01	None Supplied	17	Brown clay
217494	TP109	None Supplied	2	Brown clay
217495	TP105	None Supplied	2	Brown clay

Analytical Report Number : 24-023172
Project / Site name: Old Mill Street

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

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

APPENDIX 6 - Interim Gas Monitoring Results

PERMANENT GROUND GAS MONITORING FORM

GROUNDTECH CONSULTING

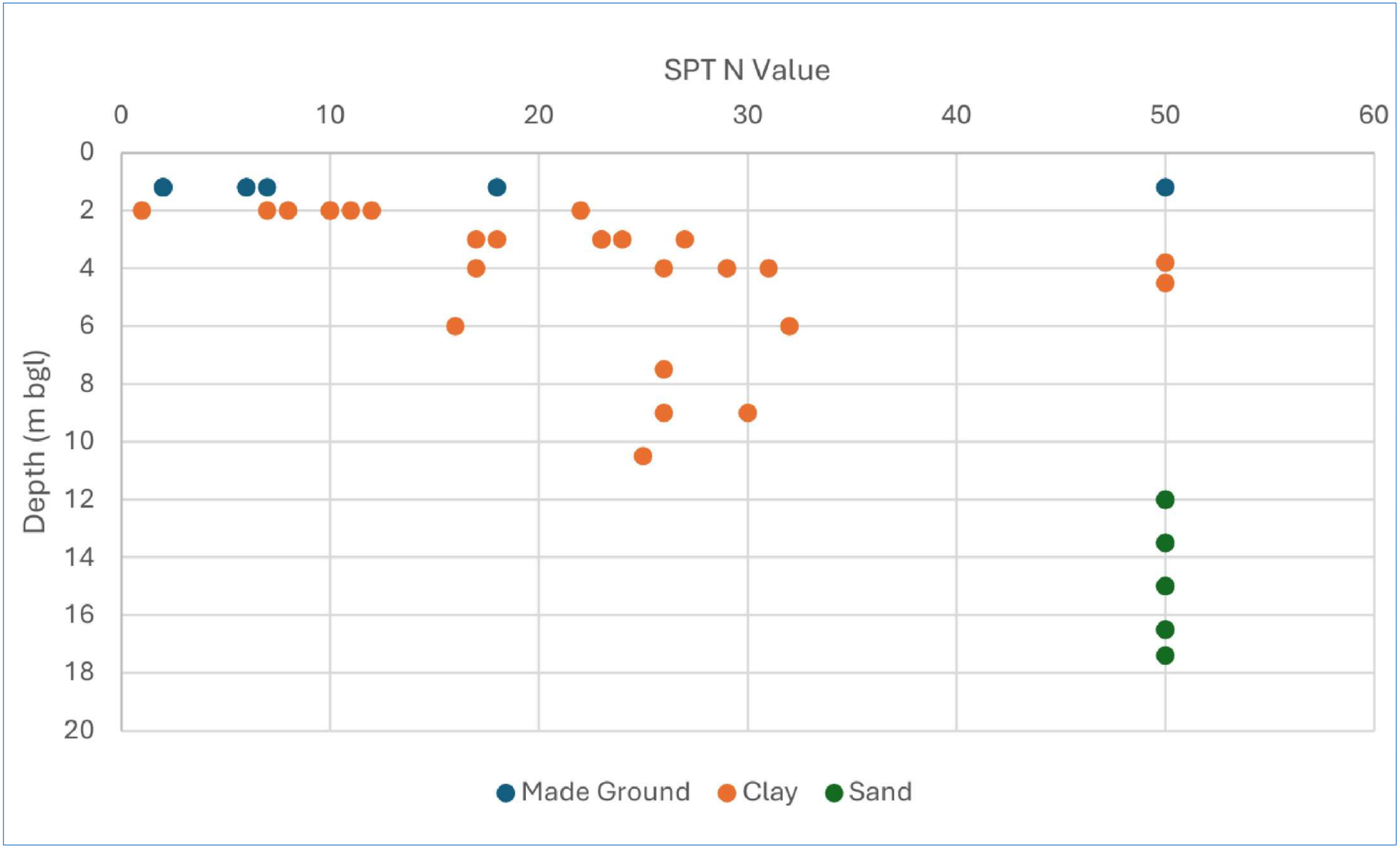
SITE NAME:	*OLD MILL STREET*				***ENGINEER:***	*Georgia Barnes*						
CLIENT:	*ONE HERITAGE GROUP PLC*				***DATE:***	*29/05/2024*						
JOB NO:	*GRO-24102*											
Pressure Trend:	*Falling*	***Weather:***	*Overcast*			***Equipment:***	*GFM 436*					

Ambient:	O_2 (%v/v)	CH_4 (%v/v)	CO_2 (%v/v)	LEL	H_2S (ppm)	CO (ppm)
Start	20.7	0.0	0.0	0.0	0.0	0.0
Finish	20.7	0.0	0.0	0.0	0.0	0.0

BH Ref.	Gas Flow Rate (l/hr)		Borehole Pressure (mb)	Methane (%v/v)			Carbon Dioxide (%v/v)		Oxygen (%v/v)		Hydrogen Sulphide (ppm)		Carbon Monoxide (ppm)		Q_{hg} CO_2 (l/hr)	Q_{hg} CH_4 (l/hr)	Atmos Press (mb)	PID (ppm)	Sheen (Y/N)	LNAPL (Y/N)	DNAPL (Y/N)	Depth to Water (m bgl)
	Peak	Steady		Peak	Steady	LEL	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady								
CP01	0.0	0.0	0.00	0.0	0.0	0.0	13.4	13.4	3.0	3.0	0.0	0.0	20.0	20.0	0.0134	0.0000	999	-	N	N/A	N/A	NGW
CP02	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	19.6	19.5	0.0	0.0	0.0	0.0	0.0000	0.0000	1001	-	N	N/A	N/A	NGW
WS01	0.0	0.0	0.00	1.2	1.0	24.0	4.0	4.0	9.3	9.3	0.0	0.0	0.0	0.0	0.0040	0.0012	1000	-	N	N/A	N/A	NGW
WS03	0.0	0.0	0.00	0.0	0.0	0.0	1.3	1.2	15.2	15.2	0.0	0.0	0.0	0.0	0.0013	0.0000	999	-	N	N/A	N/A	1.39

Notes:

APPENDIX 7 - Generalised Ground Model



GROUNDTECH CONSULTING

CLIENT	ONE HERITAGE PLC
PROJECT TITLE	OLD MILL STREET, NEW ISLINGTON
PLAN TITLE	GENERALISED GROUND MODEL
DATE	JUNE 2024
SCALE	NTS
PLAN NUMBER	GRO-24102-P04

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

APPENDIX 8 - Generic Screening Values (Residential Without Plant Uptake End Use)

Remedial Target Values - Residential Without Plant Uptake

Proposed End Use	Unit	Residential without Plant Uptake			Source
SOM	%	1	2.5	6	
Arsenic	mg/kg	*40*	*40*	*40*	*SGVs*
Beryllium	mg/kg	*1.7*	*1.7*	*1.7*	*LQM S4ULs*
Boron (water soluble)	mg/kg	*11000*	*11000*	*11000*	*LQM S4ULs*
Cadmium	mg/kg	*85*	*85*	*85*	*SGVs*
Chromium (Total)	mg/kg	*910*	*910*	*910*	*LQM S4ULs*
Chromium (VI)	mg/kg	*21*	*21*	*21*	*DEFRA C4SLs*
Copper	mg/kg	*7100*	*7100*	*7100*	*LQM S4ULs*
Lead	mg/kg	*310*	*310*	*310*	*DEFRA C4SLs*
Organic Mercury	mg/kg	*1.2*	*1.2*	*1.2*	*LQM S4ULs*
Nickel	mg/kg	*180*	*180*	*180*	*LQM S4ULs*
Selenium	mg/kg	*430*	*430*	*430*	*SGVs*
Vanadium	mg/kg	*1200*	*1200*	*1200*	*LQM S4ULs*
Zinc	mg/kg	*40000*	*40000*	*40000*	*LQM S4ULs*
Aliphatic EC 5 - 6	mg/kg	*42*	*78*	*160*	*LQM S4ULs*
Aliphatic EC 6 - 8	mg/kg	*100*	*230*	*530*	*LQM S4ULs*
Aliphatic EC 8 - 10	mg/kg	*27*	*65*	*150*	*LQM S4ULs*
Aliphatic EC 10 - 12	mg/kg	*130 (48) vap*	*330 (118) vap*	*770 (283) vap*	*LQM S4ULs*
Aliphatic EC 12 - 16	mg/kg	*1100 (24) sol*	*2400 (59) sol*	*4400 (142) sol*	*LQM S4ULs*
Aliphatic EC 16 - 35	mg/kg	*65000 (8.48) f,sol*	*92000 (21) f,sol*	*110000 f*	*LQM S4ULs*
Aliphatic EC 35 - 44	mg/kg	*65000*	*92000 (21) f,sol*	*110000 f*	*LQM S4ULs*
Aromatic EC 5 - 7	mg/kg	*370*	*690*	*1400*	*LQM S4ULs*
Aromatic EC 7 - 8	mg/kg	*860*	*1800*	*3900*	*LQM S4ULs*
Aromatic EC 8 - 10	mg/kg	*47*	*110*	*270*	*LQM S4ULs*
Aromatic EC 10 - 12	mg/kg	*250*	*590*	*1200*	*LQM S4ULs*
Aromatic EC 12 -16	mg/kg	*1800*	*2300*	*2500*	*LQM S4ULs*
Aromatic EC 16 - 21	mg/kg	*1900*	*1900*	*1900*	*LQM S4ULs*
Aromatic EC 21 - 35	mg/kg	*1900*	*1900*	*1900*	*LQM S4ULs*
Aromatic EC 35 - 44	mg/kg	*1900*	*1900*	*1900*	*LQM S4ULs*
Benzene	mg/kg	*0.38*	*0.7*	*1.4*	*SGVs*
Toluene	mg/kg	*880*	*1900*	*3900*	*SGVs*
Ethyl Benzene	mg/kg	*83*	*190*	*440*	*SGVs*
Xylene - o	mg/kg	*88*	*210*	*480*	*SGVs*
Xylene - m	mg/kg	*82*	*190*	*450*	*SGVs*
Xylene - p	mg/kg	*79*	*180*	*430*	*SGVs*
MTBE (methyl tert-butyl	mg/kg	*49*	*84*	*160*	*CL:AIRE 2010*
Acenaphthene	mg/kg	*3000*	*4700*	*6000*	*LQM SAULs*
Acenaphthylene	mg/kg	*2900*	*4600*	*6000*	*LQM S4ULs*
Anthracene	mg/kg	*31000*	*35000*	*37000*	*LQM S4ULs*
Benz(a)anthracene	mg/kg	*11*	*14*	*15*	*LQM S4ULs*
Benzo(a)pyrene	mg/kg	*3.2*	*3.2*	*3.2*	*DEFRA C4SL*/LQM S4ULs*
Benzo(b)fluoranthene	mg/kg	*3.9*	*4*	*4*	*LQM S4ULs*
Benzo(ghi)perylene	mg/kg	*360*	*360*	*360*	*LQM S4ULs*
Benzo(k)fluoranthene	mg/kg	*110*	*110*	*110*	*LQM S4ULs*
Chrysene	mg/kg	*30*	*31*	*32*	*LQM S4ULs*
Dibenz(ah)anthracene	mg/kg	*0.31*	*0.32*	*0.32*	*LQM S4ULs*
Fluoranthene	mg/kg	*1500*	*1600*	*1600*	*LQM S4ULs*
Fluorene	mg/kg	*2800*	*3800*	*4500*	*LQM S4ULs*
Indeno(123-cd)pyrene	mg/kg	*45*	*46*	*46*	*LQM S4ULs*
Naphthalene	mg/kg	*2.3*	*5.6*	*13*	*LQM S4ULs*
Phenanthrene	mg/kg	*1300*	*1500*	*1500*	*LQM S4ULs*
Pyrene	mg/kg	*3700*	*3800*	*3800*	*LQM S4ULs*
Phenol	mg/kg	420	420	420	SGVs
Asbestos	No fibres detected				

APPENDIX 9 - CIRIA Risk Assessment Methodology

Contaminated Land Risk Assessment

Contaminated Land Risk Assessment is a technique that identifies and considers the associated risk, determines whether the risks are significant and whether action needs to be taken. The four main stages of risk assessment are:

Hazard Identification ⇨ Hazard Assessment ⇨ Risk Estimation ⇨ Risk Evaluation

LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. The starting point of the risk assessment is to identify the context of the problem and the objectives of the process.

Formulating and developing a conceptual model for the site is an important requirement of risk assessment, this supports the identification and assessment of pollutant linkages. Development of the conceptual model forms the main part of preliminary risk assessment, and the model is subsequently refined or revised as more information and understanding is obtained through the risk assessment process.

Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk.

The risk assessment process needs to take into account the degree of confidence required in decisions. Identification of uncertainties is an essential step in risk assessment.

The likelihood of an event is classified on a four-point system using the following terms and definitions from CIRIA C552:

- High likelihood: There is a pollution linkage and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;

- Likely: There is a pollution linkage and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;

- Low likelihood: There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place, and is less likely in the short term;

- Unlikely: There is a pollution linkage but circumstances are such that it is improbable the event would occur even in the long term.

The severity is also classified using a system based on CIRIA C552. The terms and definitions are:

- Severe: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
  Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse;

- Medium: Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
  Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve;

- Mild: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures, services or the environment;
  Examples – Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.

- Minor: harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.
  Examples – Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

Once the likelihood and severity have been determined, a risk category can be assigned using the table below.

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very Low	Very low

Definitions of the risk categories obtained from the above table are as follows together with an assessment of the further work that might be required:

- Very high: There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability. Urgent investigation and remediation are likely to be required;

- High: Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the longer term;

- Moderate: It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it would be more likely to be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term;

- Low: It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild;

- Very Low: There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

APPENDIX 10 - JIWG Receptor Decision Tool

JIWG
Joint Industry Working Group
Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for the Qualitative Risk Ranking of Work Activities and Receptors Involved in or Exposed to Asbestos in Soil and Construction & Demolition Materials

VERSION 2

February 2017

CL:AIRE

This spreadsheet tool provides the user with a decision support platform designed by the Joint Industry Working Group for Asbestos in Soil and Construction & Demolition Materials (JIWG) to assist in the risk-rank activities and receptors as part of a preliminary risk assessment under CLR11. The aim of developing this tool is to provide industry with a consistent decision making format that is aligned with UK health & safety and environmental regulatory policies, and is consistent with the wider objectives of the JIWG.

This is Version 2 of this tool, and has been amended following industry feedback on the BETA version released in 2016. The JIWG would welcome feedback from users of this version on its applicability and validity to the wide range of scenarios that may be encountered when assessing the potential risk from asbestos and asbestos-containing materials in the ground.

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Acknowledgements

CL:AIRE and the JIWG would like to gratefully acknowledge Simon Cole - AECOM, Stephen Forster - Remedia Group and Garry Burdett - Health and Safety Laboratory for the design and development of this decision support tool.

Disclaimer

CL:AIRE and the JIWG will not be responsible for any loss, however arising, the use of, or reliance on, the information contained in this decision support tool and associated user guide, nor do they assume responsibility or liability for errors or omissions contained within. Users are advised to use the information contained herein purely as a guide and to take appropriate professional advice where necessary.

JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for Receptor Risk Ranking

Stage 1

Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
Extent of degradation of ACMs	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Asbestos fibre type	Mainly chrysotile and trace amphibole (no crocidolite)	1
Sub-total		11
Hazard ranking		Medium

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Version 2, February 2017

Stage 2

Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Trace quantities - <0.0001 to <0.001 %wt/wt	0
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible	0
Activity type and effect on deterioration of ACMs	High disturbance, significant deterioration expected	4
Best description of primary host material matrix	Ceramics - Concrete, Bricks, Mortar, Tiles, Clayware (crushed or not)	4
Sub-total		**8**
Exposure ranking		**Low**

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Stage 3

Pathway and Receptor Sensitivity		Score	
Receptor category	Public open space or building	No score required	
Age of Receptor	Adult (>24 and <60)	1	
Duration of exposure/site occupancy	< 1 hour in any single day (e.g. frequent but short exposure event)	1	
Receptor ranking		2	Very Low
Combined hazard, exposure and receptor ranking			Low
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4	
Pathway: Depth to impacted material	Material buried at shallow depth, potential to be disturbed by excavation	C	
Pathway ranking		4C	Low
Overall ranking			Very Low

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Project Reference	GRO-20287

Site Name	ALDI MAFON ROAD, TREHARRIS
Client	

Run by	REBECCA ROWLINSON
Date	20-Dec-23
Reviewed by	

Characterisation of scenario being evaluated	

Interpretation of scenario ranking by DST	

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JIWG
Joint Industry Working Group
Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for the Categorisation of Work Activities Involving Asbestos in Soil and Construction & Demolition Materials in accordance with the Control of Asbestos Regulations 2012.

VERSION 2.1

March 2017

CL:AIRE

This spreadsheet tool provides the user with a decision support platform designed by the Joint Industry Working Group for Asbestos in Soil and Construction & Demolition Materials (JIWG) to assist in the categorisation of work with asbestos under CAR2012, and supports the JIWG Industry Guidance on the Control of Asbestos Regulations 2012: Interpretation for Managing and Working with Asbestos in Soil and Construction & Demolition Materials (CAR-SOIL™, 2016). The spreadsheet should be used by **competent persons** in conjunction with the guidance in this publication.

The tool, which has been refined as part of the development of the JIWG CAR-SOIL™ guidance and incorporates changes based on comments received on the earlier BETA version, has been made available to industry practitioners for the purpose of applying its use on real-life situations.

The JIWG would welcome feedback from users of this version on its applicability and validity to the wide range of scenarios that may be encountered when assessing the potential risk from and asbestos licensing status of work with asbestos and asbestos-containing materials in the ground.

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JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	GRO-24102
Site Name	OLD MILL STREET, NEW ISLINGTON
Client	ONE HERITAGE LPC
Run by	REBECCA ROWLINSON
Date	12-Jun-24
Scenario details	

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
Extent of degradation of ACMs at outset of work	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Very Low quantities - <0.001 to 0.01 %wt/wt	1
Sub-total		**11**

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking **Medium**

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

Stage 2

Exposure Factors

		Score
Anticipated airborne fibre concentration - Control Limit or SALI?	<0.01 fibres/ml	1
Anticipated duration of exposure to asbestos	< 2 hours in a 7 day period for all persons involved (e.g. Short Duration Work)	1
Activity type and effect on deterioration of ACMs during work	Sampling, manual or mechanical (significant deterioration expected)	2
Best description of primary host material matrix (soil/made ground)	Coarse to Fine Sand	2
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible	0
Sub-total		**6**
Exposure ranking		Low
Combined hazard and exposure ranking	**17**	Low

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Stage 3

Risk Assessment Outputs

Probable Licensing Status	Non-Licensed Work
RPE*	EN149 type FFP3 disposable
Dust Suppression**	Manual/localised dust suppression
Hygiene/Decontamination***	Localised and basic personal decontamination facilities

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.
**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)
***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

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APPENDIX 11 - Waste Classification Report

Waste Classification Report

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

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

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

BVUAG-7HPSZ-D90H7

Job name

24-019996_HWOL

Description/Comments

Waste Classification for Phase 2 site investigation.

Project

GRO-24102

Site

Old Mill Street, New Islington

Classified by

Name:
Connor Hastings
Date:
12 Jun 2024 13:53 GMT
Telephone:

Company:
Groundtech Consulting Limited
First Floor, Lloyd House, Orford Court, Greenfold Way, WN7 3XJ

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: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Old Mill Street, New Islington **Post Code** N/A

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Construction of apartment block.

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

Waste classification for phase 2 site investigation.

Description of the waste

Made Ground.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP102--13042024-1.35		Non Hazardous		3
2	TP109--13042024-0.35		Non Hazardous		8
3	TP105--13042024-0.40		Non Hazardous		10
4	TP108--13042024-0.50		Non Hazardous		14
5	TP110--13042024-0.40		Non Hazardous		16
6	TP107--13042024-0.50		Non Hazardous		18
7	TP106--13042024-0.45		Non Hazardous		20
8	WS105--13042024-0.30		Hazardous	HP 7	22
9	WS103--13042024-0.45		Non Hazardous		24

Related documents

#	Name	Description
1	24-019996_HWOL.hwol	i2 Analytical .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Connor Hastings

Created date: 12 Jun 2024 13:53 GMT

Appendices	Page
Appendix A: Classifier defined and non EU CLP determinands	26
Appendix B: Rationale for selection of metal species	30
Appendix C: Version	30

Classification of sample: TP102--13042024-1.35

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

Sample details

Sample name:
TP102--13042024-1.35
Moisture content:
25%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 25% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14 mg/kg	1.32	13.863 mg/kg	0.00139 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<**LOD**
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		23 mg/kg	1.462	33.616 mg/kg	0.00336 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		63 mg/kg	1.126	53.198 mg/kg	0.00532 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	210 mg/kg	1.56	245.671 mg/kg	0.0158 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<**LOD**
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		15 mg/kg	2.976	33.483 mg/kg	0.00335 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		32 mg/kg	2.774	66.58 mg/kg	0.00666 %	✓	
11	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
12	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
13	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
14	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**
15	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
17		pH				11.1	pH		11.1	pH	11.1 pH		
				PH									
18		naphthalene				0.35	mg/kg		0.263	mg/kg	0.0000263 %	✓	
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				0.08	mg/kg		0.06	mg/kg	0.000006 %	✓	
			205-917-1	208-96-8									
20		acenaphthene				0.84	mg/kg		0.63	mg/kg	0.000063 %	✓	
			201-469-6	83-32-9									
21		fluorene				0.86	mg/kg		0.645	mg/kg	0.0000645 %	✓	
			201-695-5	86-73-7									
22		phenanthrene				7.5	mg/kg		5.625	mg/kg	0.000563 %	✓	
			201-581-5	85-01-8									
23		anthracene				1.5	mg/kg		1.125	mg/kg	0.000112 %	✓	
			204-371-1	120-12-7									
24		fluoranthene				5.9	mg/kg		4.425	mg/kg	0.000442 %	✓	
			205-912-4	206-44-0									
25		pyrene				5.3	mg/kg		3.975	mg/kg	0.000398 %	✓	
			204-927-3	129-00-0									
26		benzo[a]anthracene				2.2	mg/kg		1.65	mg/kg	0.000165 %	✓	
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				2.1	mg/kg		1.575	mg/kg	0.000158 %	✓	
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				1.9	mg/kg		1.425	mg/kg	0.000143 %	✓	
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				0.99	mg/kg		0.743	mg/kg	0.0000742 %	✓	
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				1.7	mg/kg		1.275	mg/kg	0.000127 %	✓	
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				0.78	mg/kg		0.585	mg/kg	0.0000585 %	✓	
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				0.35	mg/kg		0.263	mg/kg	0.0000263 %	✓	
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				0.89	mg/kg		0.668	mg/kg	0.0000668 %	✓	
			205-883-8	191-24-2									
34		phenol				0.4	mg/kg		0.3	mg/kg	0.00003 %	✓	
		604-001-00-2	203-632-7	108-95-2									
35		1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
			203-458-1, 200-863-5	107-06-2, 75-34-3									
36		tetrachloroethylene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-028-00-4	204-825-9	127-18-4									
37		carbon tetrachloride; tetrachloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-008-00-5	200-262-8	56-23-5									
38		trichloroethylene; trichloroethene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-027-00-9	201-167-4	79-01-6									
39		vinyl chloride; chloroethylene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-023-00-7	200-831-0	75-01-4									
40		hexachlorobenzene				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		602-065-00-6	204-273-9	118-74-1									
41		bromodichloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
			200-856-7	75-27-4									
42		bromobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-060-00-9	203-623-8	108-86-1									
43		bromomethane; methylbromide				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-002-00-2	200-813-2	74-83-9									

#		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									
44		1,2,4-trichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-087-00-6	204-428-0	120-82-1									
45		mesitylene; 1,3,5-trimethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-025-00-5	203-604-4	108-67-8									
46	●	n-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			203-209-7	104-51-8									
47		1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]									
48		chlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-033-00-1	203-628-5	108-90-7									
49		chloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-009-00-0	200-830-5	75-00-3									
50		chloromethane; methyl chloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-001-00-7	200-817-4	74-87-3									
51		1,2-dibromoethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-010-00-6	203-444-5	106-93-4									
52	●	dibromochloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			204-704-0	124-48-1									
53		1,2-dibromo-3-chloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-021-00-6	202-479-3	96-12-8									
54		dibromomethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-003-00-8	200-824-2	74-95-3									
55		1,1-dichloroethylene; vinylidene chloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-025-00-8	200-864-0	75-35-4									
56	●	2,2-dichloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			209-832-0	594-20-7									
57		1,1-dichloropropene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-031-00-0	209-253-3	563-58-6									
58	●	1,3-dichloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			205-531-3	142-28-9									
59	●	hexachlorobutadiene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			201-765-5	87-68-3									
60		Cumene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-024-00-X	202-704-5	98-82-8									
61	●	4-isopropyltoluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			202-796-7	99-87-6									
62		1,3-dichlorbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-067-00-7	208-792-1	541-73-1									
63		Propylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-097-00-8	203-132-9	103-65-1									
64		1,2-dichlorobenzene; o-dichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-034-00-7	202-425-9	95-50-1									
65		1,4-dichlorobenzene; p-dichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-035-00-2	203-400-5	106-46-7									
66		1,2-dichloropropane; propylene dichloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-020-00-0	201-152-2	78-87-5									
67	●	sec-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			205-227-0	135-98-8									
68		styrene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-026-00-0	202-851-5	100-42-5									
69	●	tert-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			202-632-4	98-06-6									
70		bromoform; tribromomethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-007-00-X	200-854-6	75-25-2									
71		1,1,1-trichloroethane; methyl chloroform				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-013-00-2	200-756-3	71-55-6									
72	●	1,2,3-trichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			201-757-1	87-61-6									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
73		trichlorofluoromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			200-892-3	75-69-4									
74		1,1,2,2-tetrachloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-015-00-3	201-197-8	79-34-5									
75		chloroform; trichloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-006-00-4	200-663-8	67-66-3									
76		trans-1,3-dichloropropene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			431-460-4	10061-02-6									
77		1,1,1,2-tetrachloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			211-135-1	630-20-6									
78		1,2,4-trimethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-043-00-3	202-436-9	95-63-6									
79		1,1,2-trichloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-014-00-8	201-166-9	79-00-5									
80		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				P1186									
81		aniline				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		612-008-00-7	200-539-3	62-53-3									
82		anthraquinone				0.5	mg/kg		0.375	mg/kg	0.0000375 %	✓	
		606-151-00-4	201-549-0	84-65-1									
83		azobenzene				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		611-001-00-6	203-102-5	103-33-3									
84		BBP; benzyl butyl phthalate				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		607-430-00-3	201-622-7	85-68-7									
85		bis(2-chloroethyl) ether				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		603-029-00-2	203-870-1	111-44-4									
86		bis(2-chloroethoxy)methane				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
			203-920-2	111-91-1									
87		4-bromophenylphenylether				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
			202-952-4	101-55-3									
88		carbazole				0.4	mg/kg		0.3	mg/kg	0.00003 %	✓	
			201-696-0	86-74-8									
89		chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		604-014-00-3	200-431-6	59-50-7									
90		2-chloronaphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			202-079-9	91-58-7									
91		dibenzofuran				0.7	mg/kg		0.525	mg/kg	0.0000525 %	✓	
			205-071-3	132-64-9									
92		2,4-dichlorophenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		604-011-00-7	204-429-6	120-83-2									
93		diethyl phthalate				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
			201-550-6	84-66-2									
94		dibutyl phthalate; DBP				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		607-318-00-4	201-557-4	84-74-2									
95		dimethyl phthalate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-011-6	131-11-3									
96		3,4-xylenol; [1] 2,5-xylenol; [2] 2,4-xylenol; [3] 2,3-xylenol; [4] 2,6-xylenol; [5] xylenol; [6] 2,4(or 2,5)-xylenol [7]				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		604-006-00-X	202-439-5 [1] 202-461-5 [2] 203-321-6 [3] 208-395-3 [4] 209-400-1 [5] 215-089-3 [6] 276-245-4 [7]	95-65-8 [1] 95-87-4 [2] 105-67-9 [3] 526-75-0 [4] 576-26-1 [5] 1300-71-6 [6] 71975-58-1 [7]									
97		2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		609-007-00-9	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [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									
98		hexachloroethane				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			200-666-4	67-72-1									
99		3,5,5-trimethylcyclohex-2-enone; isophorone				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		606-012-00-8	201-126-0	78-59-1									
100		2-methyl naphthalene				0.4	mg/kg		0.3	mg/kg	0.00003 %	✓	
			202-078-3	91-57-6									
101		nitrobenzene				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		609-003-00-7	202-716-0	98-95-3									
102		2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]									
103		2-nitrophenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
			201-857-5	88-75-5									
104		4-chloroaniline				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		612-137-00-9	203-401-0	106-47-8									
105		4-chlorophenylphenylether				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
			230-281-7	7005-72-3									
106		o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3]				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]	88-74-4 [1] 99-09-2 [2] 100-01-6 [3]									
107		2,4,5-trichlorophenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		604-017-00-X	202-467-8	95-95-4									
108		2,4,6-trichlorophenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		604-018-00-5	201-795-9	88-06-2									
109		2,6-dinitrotoluene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		609-049-00-8	210-106-0	606-20-2									
110		magnesium { magnesium phosphide; trimagnesium diphosphide }				<5	mg/kg	1.85	<9.248	mg/kg	<0.000925 %		<**LOD**
		015-005-00-3	235-023-7	12057-74-8									
111		1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]									
112		2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]									
113		m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]									
										Total:	0.041 %		

Key

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

Classification of sample: TP109--13042024-0.35

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

Sample details

Sample name:
TP109--13042024-0.35
Moisture content:
7.9%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 7.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17 mg/kg	1.32	20.672 mg/kg	0.00207 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.526 mg/kg	0.0000526 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		27 mg/kg	1.462	39.462 mg/kg	0.00395 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		68 mg/kg	1.126	70.512 mg/kg	0.00705 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	340 mg/kg	1.56	488.441 mg/kg	0.0313 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21 mg/kg	2.976	57.564 mg/kg	0.00576 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2.8 mg/kg	2.554	6.586 mg/kg	0.000659 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		83 mg/kg	2.774	212.064 mg/kg	0.0212 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
12	pH			PH		10.5 pH		10.5 pH	10.5 pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		3.2 mg/kg		2.947 mg/kg	0.000295 %	✓	
14	acenaphthylene		205-917-1	208-96-8		0.99 mg/kg		0.912 mg/kg	0.0000912 %	✓	
15	acenaphthene		201-469-6	83-32-9		31 mg/kg		28.551 mg/kg	0.00286 %	✓	

#		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		fluorene				22	mg/kg		20.262	mg/kg	0.00203 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				330	mg/kg		303.93	mg/kg	0.0304 %	✓	
			201-581-5	85-01-8									
18		anthracene				50	mg/kg		46.05	mg/kg	0.0046 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				290	mg/kg		267.09	mg/kg	0.0267 %	✓	
			205-912-4	206-44-0									
20		pyrene				230	mg/kg		211.83	mg/kg	0.0212 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				87	mg/kg		80.127	mg/kg	0.00801 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				92	mg/kg		84.732	mg/kg	0.00847 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				85	mg/kg		78.285	mg/kg	0.00783 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				37	mg/kg		34.077	mg/kg	0.00341 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				65	mg/kg		59.865	mg/kg	0.00599 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				35	mg/kg		32.235	mg/kg	0.00322 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				13	mg/kg		11.973	mg/kg	0.0012 %	✓	
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				37	mg/kg		34.077	mg/kg	0.00341 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
30		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.203 %		

Key

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

Classification of sample: TP105--13042024-0.40

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

Sample details

Sample name:
TP105--13042024-0.40
Moisture content:
19%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		19 mg/kg	1.32	20.32 mg/kg	0.00203 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30 mg/kg	1.462	43.847 mg/kg	0.00438 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		58 mg/kg	1.126	52.894 mg/kg	0.00529 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140 mg/kg	1.56	176.883 mg/kg	0.0113 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		31 mg/kg	2.976	74.734 mg/kg	0.00747 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		74 mg/kg	2.774	166.282 mg/kg	0.0166 %	✓	
11	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
12	benzene	601-020-00-8	200-753-7	71-43-2		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
13	toluene	601-021-00-3	203-625-9	108-88-3		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
14	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
15	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
17		pH			PH		8.3	pH		8.3	pH	8.3 pH		
18		naphthalene	601-052-00-2	202-049-5	91-20-3		0.05	mg/kg		0.0405	mg/kg	0.00000405 %	✓	
19		acenaphthylene		205-917-1	208-96-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
20		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
21		fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
22		phenanthrene		201-581-5	85-01-8		0.45	mg/kg		0.365	mg/kg	0.0000365 %	✓	
23		anthracene		204-371-1	120-12-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
24		fluoranthene		205-912-4	206-44-0		0.58	mg/kg		0.47	mg/kg	0.000047 %	✓	
25		pyrene		204-927-3	129-00-0		0.58	mg/kg		0.47	mg/kg	0.000047 %	✓	
26		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
27		chrysene	601-048-00-0	205-923-4	218-01-9		0.33	mg/kg		0.267	mg/kg	0.0000267 %	✓	
28		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.4	mg/kg		0.324	mg/kg	0.0000324 %	✓	
29		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.13	mg/kg		0.105	mg/kg	0.0000105 %	✓	
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.31	mg/kg		0.251	mg/kg	0.0000251 %	✓	
31		indeno[123-cd]pyrene		205-893-2	193-39-5		0.17	mg/kg		0.138	mg/kg	0.0000138 %	✓	
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
33		benzo[ghi]perylene		205-883-8	191-24-2		0.26	mg/kg		0.211	mg/kg	0.0000211 %	✓	
34		1,1-dichloroethane and 1,2-dichloroethane (combined)		203-458-1, 200-863-5	107-06-2, 75-34-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
35		tetrachloroethylene	602-028-00-4	204-825-9	127-18-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
36		carbon tetrachloride; tetrachloromethane	602-008-00-5	200-262-8	56-23-5		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
37		trichloroethylene; trichloroethene	602-027-00-9	201-167-4	79-01-6		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
38		vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
39		bromodichloromethane		200-856-7	75-27-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
40		bromobenzene	602-060-00-9	203-623-8	108-86-1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
41		bromomethane; methylbromide	602-002-00-2	200-813-2	74-83-9		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
42		1,2,4-trichlorobenzene	602-087-00-6	204-428-0	120-82-1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
43		mesitylene; 1,3,5-trimethylbenzene	601-025-00-5	203-604-4	108-67-8		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
44		n-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			203-209-7	104-51-8									
45		1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]									
46		chlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-033-00-1	203-628-5	108-90-7									
47		chloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-009-00-0	200-830-5	75-00-3									
48		chloromethane; methyl chloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-001-00-7	200-817-4	74-87-3									
49		1,2-dibromoethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-010-00-6	203-444-5	106-93-4									
50		dibromochloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			204-704-0	124-48-1									
51		1,2-dibromo-3-chloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-021-00-6	202-479-3	96-12-8									
52		dibromomethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-003-00-8	200-824-2	74-95-3									
53		1,1-dichloroethylene; vinylidene chloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-025-00-8	200-864-0	75-35-4									
54		2,2-dichloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			209-832-0	594-20-7									
55		1,1-dichloropropene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-031-00-0	209-253-3	563-58-6									
56		1,3-dichloropropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			205-531-3	142-28-9									
57		hexachlorobutadiene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			201-765-5	87-68-3									
58		Cumene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-024-00-X	202-704-5	98-82-8									
59		4-isopropyltoluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			202-796-7	99-87-6									
60		1,3-dichlorbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-067-00-7	208-792-1	541-73-1									
61		Propylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-097-00-8	203-132-9	103-65-1									
62		1,2-dichlorobenzene; o-dichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-034-00-7	202-425-9	95-50-1									
63		1,4-dichlorobenzene; p-dichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-035-00-2	203-400-5	106-46-7									
64		1,2-dichloropropane; propylene dichloride				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-020-00-0	201-152-2	78-87-5									
65		sec-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			205-227-0	135-98-8									
66		styrene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-026-00-0	202-851-5	100-42-5									
67		tert-butylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			202-632-4	98-06-6									
68		bromoform; tribromomethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-007-00-X	200-854-6	75-25-2									
69		1,1,1-trichloroethane; methyl chloroform				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-013-00-2	200-756-3	71-55-6									
70		1,2,3-trichlorobenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			201-757-1	87-61-6									
71		trichlorofluoromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
			200-892-3	75-69-4									
72		1,1,2,2-tetrachloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		602-015-00-3	201-197-8	79-34-5									

#		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									
73		chloroform; trichloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-006-00-4	200-663-8	67-66-3									
74	●	trans-1,3-dichloropropene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
			431-460-4	10061-02-6									
75	●	1,1,1,2-tetrachloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
			211-135-1	630-20-6									
76		1,2,4-trimethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-043-00-3	202-436-9	95-63-6									
77		1,1,2-trichloroethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		602-014-00-8	201-166-9	79-00-5									
78	●	monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
79		1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]									
80		2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]									
										Total:	0.0485 %		

Key

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

Classification of sample: TP108--13042024-0.50

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

Sample details

Sample name:
TP108--13042024-0.50
Moisture content:
18%
(wet weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		29 mg/kg	1.32	31.397 mg/kg	0.00314 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		22 mg/kg	1.462	32.154 mg/kg	0.00322 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		97 mg/kg	1.126	89.553 mg/kg	0.00896 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	520 mg/kg	1.56	665.105 mg/kg	0.0426 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.8 mg/kg	1.353	0.888 mg/kg	0.0000888 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		25 mg/kg	2.976	61.013 mg/kg	0.0061 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1.6 mg/kg	2.554	3.351 mg/kg	0.000335 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		200 mg/kg	2.774	454.96 mg/kg	0.0455 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
12	pH			PH		8.6 pH		8.6 pH	8.6 pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		0.17 mg/kg		0.139 mg/kg	0.0000139 %	✓	
14	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
15	acenaphthene		201-469-6	83-32-9		0.23 mg/kg		0.189 mg/kg	0.0000189 %	✓	

#		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		fluorene				0.19	mg/kg		0.156	mg/kg	0.0000156 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				2.2	mg/kg		1.804	mg/kg	0.00018 %	✓	
			201-581-5	85-01-8									
18		anthracene				0.49	mg/kg		0.402	mg/kg	0.0000402 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				3.7	mg/kg		3.034	mg/kg	0.000303 %	✓	
			205-912-4	206-44-0									
20		pyrene				3.9	mg/kg		3.198	mg/kg	0.00032 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				2.1	mg/kg		1.722	mg/kg	0.000172 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				2.2	mg/kg		1.804	mg/kg	0.00018 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				2.6	mg/kg		2.132	mg/kg	0.000213 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				0.63	mg/kg		0.517	mg/kg	0.0000517 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				2.1	mg/kg		1.722	mg/kg	0.000172 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				1.1	mg/kg		0.902	mg/kg	0.0000902 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				1.4	mg/kg		1.148	mg/kg	0.000115 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.113 %		

Key

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

Classification of sample: TP110--13042024-0.40

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

Sample details

Sample name:
TP110--13042024-0.40
Moisture content:
18%
(wet weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		29	mg/kg	1.32	31.397	mg/kg	0.00314 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	23.385	mg/kg	0.00234 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		58	mg/kg	1.126	53.547	mg/kg	0.00535 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	230	mg/kg	1.56	294.181	mg/kg	0.0189 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1	mg/kg	1.353	1.11	mg/kg	0.000111 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16	mg/kg	2.976	39.049	mg/kg	0.0039 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		140	mg/kg	2.774	318.472	mg/kg	0.0318 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
12	pH			PH		8.7	pH		8.7	pH	8.7 pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		0.13	mg/kg		0.107	mg/kg	0.0000107 %	✓	
14	acenaphthylene		205-917-1	208-96-8		0.1	mg/kg		0.082	mg/kg	0.0000082 %	✓	
15	acenaphthene		201-469-6	83-32-9		0.11	mg/kg		0.0902	mg/kg	0.00000902 %	✓	

#		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		fluorene				0.09	mg/kg		0.0738	mg/kg	0.00000738 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				1.1	mg/kg		0.902	mg/kg	0.0000902 %	✓	
			201-581-5	85-01-8									
18		anthracene				0.24	mg/kg		0.197	mg/kg	0.0000197 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				1.7	mg/kg		1.394	mg/kg	0.000139 %	✓	
			205-912-4	206-44-0									
20		pyrene				1.8	mg/kg		1.476	mg/kg	0.000148 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				0.91	mg/kg		0.746	mg/kg	0.0000746 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				1.1	mg/kg		0.902	mg/kg	0.0000902 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				1.1	mg/kg		0.902	mg/kg	0.0000902 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				0.41	mg/kg		0.336	mg/kg	0.0000336 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				0.94	mg/kg		0.771	mg/kg	0.0000771 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				0.52	mg/kg		0.426	mg/kg	0.0000426 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				0.68	mg/kg		0.558	mg/kg	0.0000558 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
30		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0684 %		

Key

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

Classification of sample: TP107--13042024-0.50

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

Sample details

Sample name:
TP107--13042024-0.50
Moisture content:
16%
(wet weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		36 mg/kg	1.32	39.927 mg/kg	0.00399 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		40 mg/kg	1.462	58.462 mg/kg	0.00585 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		170 mg/kg	1.126	160.777 mg/kg	0.0161 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	960 mg/kg	1.56	1257.835 mg/kg	0.0806 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		2.6 mg/kg	1.353	2.956 mg/kg	0.000296 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34 mg/kg	2.976	85.002 mg/kg	0.0085 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1.8 mg/kg	2.554	3.861 mg/kg	0.000386 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		220 mg/kg	2.774	512.662 mg/kg	0.0513 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
12	pH			PH		8 pH		8 pH	8pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		0.56 mg/kg		0.47 mg/kg	0.000047 %	✓	
14	acenaphthylene		205-917-1	208-96-8		0.82 mg/kg		0.689 mg/kg	0.0000689 %	✓	
15	acenaphthene		201-469-6	83-32-9		1.1 mg/kg		0.924 mg/kg	0.0000924 %	✓	

#		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		fluorene				1.7	mg/kg		1.428	mg/kg	0.000143 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				11	mg/kg		9.24	mg/kg	0.000924 %	✓	
			201-581-5	85-01-8									
18		anthracene				2.7	mg/kg		2.268	mg/kg	0.000227 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				15	mg/kg		12.6	mg/kg	0.00126 %	✓	
			205-912-4	206-44-0									
20		pyrene				16	mg/kg		13.44	mg/kg	0.00134 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				7.1	mg/kg		5.964	mg/kg	0.000596 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				8.6	mg/kg		7.224	mg/kg	0.000722 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				8.6	mg/kg		7.224	mg/kg	0.000722 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				2.9	mg/kg		2.436	mg/kg	0.000244 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				8.4	mg/kg		7.056	mg/kg	0.000706 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				3.9	mg/kg		3.276	mg/kg	0.000328 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				1.4	mg/kg		1.176	mg/kg	0.000118 %	✓	
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				4.8	mg/kg		4.032	mg/kg	0.000403 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
30		asbestos				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.177 %		

Key

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

Classification of sample: TP106--13042024-0.45

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

Sample details

Sample name:
TP106--13042024-0.45
Moisture content:
7.7%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 7.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	15.843	mg/kg	0.00158 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2	mg/kg	1.142	<0.228	mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	36.539	mg/kg	0.00365 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		44	mg/kg	1.126	45.725	mg/kg	0.00457 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140	mg/kg	1.56	201.559	mg/kg	0.0129 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20	mg/kg	2.976	54.942	mg/kg	0.00549 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		78	mg/kg	2.774	199.722	mg/kg	0.02 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
12	pH			PH		10.4	pH		10.4	pH	10.4 pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		0.1	mg/kg		0.0923	mg/kg	0.00000923 %	✓	
14	acenaphthylene		205-917-1	208-96-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
15	acenaphthene		201-469-6	83-32-9		0.11	mg/kg		0.102	mg/kg	0.0000102 %	✓	

#		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		fluorene				0.08	mg/kg		0.0738	mg/kg	0.00000738 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				0.93	mg/kg		0.858	mg/kg	0.0000858 %	✓	
			201-581-5	85-01-8									
18		anthracene				0.19	mg/kg		0.175	mg/kg	0.0000175 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				1.6	mg/kg		1.477	mg/kg	0.000148 %	✓	
			205-912-4	206-44-0									
20		pyrene				1.5	mg/kg		1.384	mg/kg	0.000138 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				0.8	mg/kg		0.738	mg/kg	0.0000738 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				0.75	mg/kg		0.692	mg/kg	0.0000692 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				0.88	mg/kg		0.812	mg/kg	0.0000812 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				0.36	mg/kg		0.332	mg/kg	0.0000332 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				0.81	mg/kg		0.748	mg/kg	0.0000748 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				0.48	mg/kg		0.443	mg/kg	0.0000443 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				0.09	mg/kg		0.0831	mg/kg	0.00000831 %	✓	
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				0.55	mg/kg		0.508	mg/kg	0.0000508 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.0501 %		

Key

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

Classification of sample: WS105--13042024-0.30

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

Sample details

Sample name:
WS105--13042024-0.30
Moisture content:
19%
(wet weight correction)

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

Hazard properties

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

Hazard Statements hit:

Carc. 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:

lead chromate: (Note 1 conc.: 0.105%)

Determinands

Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		61 mg/kg	1.32	65.237 mg/kg	0.00652 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		120 mg/kg	1.126	109.436 mg/kg	0.0109 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	1300 mg/kg	1.56	1642.485 mg/kg	0.105 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		53 mg/kg	2.976	127.771 mg/kg	0.0128 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1.6 mg/kg	2.554	3.31 mg/kg	0.000331 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		58 mg/kg	2.774	130.329 mg/kg	0.013 %	✓	
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD

#		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									
12		pH		PH		8.1	pH		8.1	pH	8.1 pH		
13		naphthalene				0.23	mg/kg		0.186	mg/kg	0.0000186 %	✓	
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-917-1	208-96-8									
15		acenaphthene				0.06	mg/kg		0.0486	mg/kg	0.00000486 %	✓	
			201-469-6	83-32-9									
16		fluorene				0.09	mg/kg		0.0729	mg/kg	0.00000729 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				0.46	mg/kg		0.373	mg/kg	0.0000373 %	✓	
			201-581-5	85-01-8									
18		anthracene				0.15	mg/kg		0.122	mg/kg	0.0000121 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				0.36	mg/kg		0.292	mg/kg	0.0000292 %	✓	
			205-912-4	206-44-0									
20		pyrene				0.38	mg/kg		0.308	mg/kg	0.0000308 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				0.23	mg/kg		0.186	mg/kg	0.0000186 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				0.22	mg/kg		0.178	mg/kg	0.0000178 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				0.19	mg/kg		0.154	mg/kg	0.0000154 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				0.14	mg/kg		0.113	mg/kg	0.0000113 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.154 %		

Key

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

Classification of sample: WS103--13042024-0.45

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

Sample details

Sample name:
WS103--13042024-0.45
Moisture content:
6.6%
(wet weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 6.6% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	12.332	mg/kg	0.00123 %	✓	
2		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8	mg/kg	1.142	0.854	mg/kg	0.0000854 %	✓	
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	36.539	mg/kg	0.00365 %		
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1.8	mg/kg	2.27	<4.086	mg/kg	<0.000409 %		<LOD
5		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		35	mg/kg	1.126	36.805	mg/kg	0.00368 %	✓	
6		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	180	mg/kg	1.56	262.236	mg/kg	0.0168 %	✓	
7		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
8		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		18	mg/kg	2.976	50.037	mg/kg	0.005 %	✓	
9		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
10		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		67	mg/kg	2.774	173.601	mg/kg	0.0174 %	✓	
11		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
12		pH			PH		9.1	pH		9.1	pH	9.1 pH		
13		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
14		acenaphthylene		205-917-1	208-96-8		0.17	mg/kg		0.159	mg/kg	0.0000159 %	✓	
15		acenaphthene		201-469-6	83-32-9		0.32	mg/kg		0.299	mg/kg	0.0000299 %	✓	

#		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		fluorene				0.27	mg/kg		0.252	mg/kg	0.0000252 %	✓	
			201-695-5	86-73-7									
17		phenanthrene				1.9	mg/kg		1.775	mg/kg	0.000177 %	✓	
			201-581-5	85-01-8									
18		anthracene				0.66	mg/kg		0.616	mg/kg	0.0000616 %	✓	
			204-371-1	120-12-7									
19		fluoranthene				4.8	mg/kg		4.483	mg/kg	0.000448 %	✓	
			205-912-4	206-44-0									
20		pyrene				4.9	mg/kg		4.577	mg/kg	0.000458 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				2.4	mg/kg		2.242	mg/kg	0.000224 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				2.5	mg/kg		2.335	mg/kg	0.000233 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				4.1	mg/kg		3.829	mg/kg	0.000383 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				1.3	mg/kg		1.214	mg/kg	0.000121 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				4	mg/kg		3.736	mg/kg	0.000374 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				1.8	mg/kg		1.681	mg/kg	0.000168 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				2.1	mg/kg		1.961	mg/kg	0.000196 %	✓	
			205-883-8	191-24-2									
29		monohydric phenols				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
				P1186									
										Total:	0.0517 %		

Key

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

Appendix A: Classifier defined and non EU CLP determinands

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

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

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

EU CLP index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

EU CLP 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):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

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

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- **1,1-dichloroethane and 1,2-dichloroethane (combined)** (EC Number: 203-458-1, 200-863-5, CAS Number: 107-06-2, 75-34-3)

Description/Comments: Combines the hazard statements and risk phrases for 1,1-dichloroethane and 1,2-dichloroethane
Data source: N/a
Data source date: 14 Oct 2016
Hazard Statements: Flam. Liq. 2; H225 , Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 1B; H350 , Aquatic Chronic 3; H412

- **bromodichloromethane** (EC Number: 200-856-7, CAS Number: 75-27-4)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Dam. 1; H318 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 1A; H360

- **n-butylbenzene** (EC Number: 203-209-7, CAS Number: 104-51-8)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **dibromochloromethane** (EC Number: 204-704-0, CAS Number: 124-48-1)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 4; H312 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 4; H332 , STOT SE 3; H335 , STOT SE 3; H336 , Muta. 2; H341 , Aquatic Chronic 2; H411

- **2,2-dichloropropane** (EC Number: 209-832-0, CAS Number: 594-20-7)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H332 , Flam. Liq. 2; H225 , Acute Tox. 4; H302 , Acute Tox. 4; H312 , Eye Irrit. 2; H319

- **1,3-dichloropropane** (EC Number: 205-531-3, CAS Number: 142-28-9)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H332 , Flam. Liq. 2; H225 , Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335

- **hexachlorobutadiene** (EC Number: 201-765-5, CAS Number: 87-68-3)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 3; H301 , Acute Tox. 2; H310 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Irrit. 2; H319 , Acute Tox. 2; H330 , Carc. 2; H351 , Repr. 2; H361 , STOT SE 2; H371 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **4-isopropyltoluene** (EC Number: 202-796-7, CAS Number: 99-87-6)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Chronic 2; H411

- **sec-butylbenzene** (EC Number: 205-227-0, CAS Number: 135-98-8)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Aquatic Chronic 2; H411

- **tert-butylbenzene** (EC Number: 202-632-4, CAS Number: 98-06-6)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Flam. Liq. 3; H226 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 3; H331 , Acute Tox. 4; H332 , STOT SE 3; H335 , Asp. Tox. 1; H304 , Aquatic Chronic 2; H411

- **1,2,3-trichlorobenzene** (EC Number: 201-757-1, CAS Number: 87-61-6)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , STOT SE 3; H336 , Aquatic Acute 1; H400 , Aquatic Chronic 3; H410

- **trichlorofluoromethane** (EC Number: 200-892-3, CAS Number: 75-69-4)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H312 , Ozone 1; H420

- **trans-1,3-dichloropropene** (EC Number: 431-460-4, CAS Number: 10061-02-6)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Flam. Liq. 3; H226 , Acute Tox. 3; H301 , Asp. Tox. 1; H304 , Acute Tox. 3; H311 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Irrit. 2; H319 , Acute Tox. 4; H332 , STOT SE 3; H335 , Aquatic Chronic 1; H410

- **1,1,1,2-tetrachloroethane** (EC Number: 211-135-1, CAS Number: 630-20-6)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , Acute Tox. 3; H331 , Eye Dam. 1; H318 , Acute Tox. 4; H332 , Carc. 2; H351 , Acute Tox. 4; H312 , Aquatic Chronic 3; H412 , Skin Irrit. 2; H315

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

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

- **bis(2-chloroethoxy)methane** (EC Number: 203-920-2, CAS Number: 111-91-1)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 3; H301 , Acute Tox. 4; H312 , Acute Tox. 1; H330 , Acute Tox. 2; H330 , STOT SE 1; H370 , STOT RE 2; H373

- **4-bromophenylphenylether** (EC Number: 202-952-4, CAS Number: 101-55-3)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Dam. 1; H318 , Eye Irrit. 2; H319 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **carbazole** (EC Number: 201-696-0, CAS Number: 86-74-8)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Muta. 2; H341 , Carc. 2; H351 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , Acute Tox. 3; H301

- **2-chloronaphthalene** (EC Number: 202-079-9, CAS Number: 91-58-7)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **dibenzofuran** (EC Number: 205-071-3, CAS Number: 132-64-9)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 4; H312 , Acute Tox. 4; H332 , Aquatic Chronic 2; H411

- **diethyl phthalate** (EC Number: 201-550-6, CAS Number: 84-66-2)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Skin Irrit. 2; H315 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , STOT SE 3; H335 , STOT RE 2; H373 , Repr. 2; H361 , Acute Tox. 4; H302 , STOT SE 3; H336 , Skin Sens. 1; H317 , Aquatic Chronic 1; H410

- **dimethyl phthalate** (EC Number: 205-011-6, CAS Number: 131-11-3)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 3; H331 , STOT SE 3; H335 , STOT SE 3; H336 , Repr. 2; H361 , Aquatic Chronic 3; H412

- **hexachloroethane** (EC Number: 200-666-4, CAS Number: 67-72-1)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , STOT RE 2; H373

- **2-methyl naphthalene** (EC Number: 202-078-3, CAS Number: 91-57-6)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , STOT SE 3; H336 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **2-nitrophenol** (EC Number: 201-857-5, CAS Number: 88-75-5)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 4; H312 , Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , Acute Tox. 4; H332 , STOT SE 3; H335 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **4-chlorophenylphenylether** (EC Number: 230-281-7, CAS Number: 7005-72-3)

Description/Comments: VOC; Data from C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Acute Tox. 4; H302 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Eye Dam. 1; H318 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **magnesium phosphide; trimagnesium diphosphide** (EC Number: 235-023-7, CAS Number: 12057-74-8)

EU CLP index number: 015-005-00-3
Description/Comments:
Additional Hazard Statement(s): Water-react. 1; H260 >= 0.3 % , EUH032 >= 0.3 % , EUH029 >= 0.3 %
Reason for additional Hazards Statement(s):
14 Dec 2015 - Water-react. 1; H260 >= 0.3 % hazard statement sourced from: WM3, Table C3.2
14 Dec 2015 - EUH032 >= 0.3 % hazard statement sourced from: WM3, Table C12.2
14 Dec 2015 - EUH029 >= 0.3 % hazard statement sourced from: WM3, Table C12.2

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

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

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

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

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

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

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

magnesium {magnesium phosphide; trimagnesium diphosphide}

worst case

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2024.158.6092.11254 (06 Jun 2024)
HazWasteOnline Database: 2024.158.6092.11254 (06 Jun 2024)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
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 2019 - UK: 2019 No. 720 of 27th March 2019
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
17th ATP - Regulation (EU) 2021/849 of 11 March 2021

APPENDIX 12 - Contaminated Land Legislative Background

Legislative Background

Environmental liabilities and risks have been evaluated in terms of a source -pathway - target relationship in accordance with the approach set out in:

- The 1995 Environment Act;
- The Contaminated Land (England) Regulations 2000;
- The DETR circular 02/2000 Environmental Protection Act 1990: Part IIA Contaminated Land.

Contaminated land is defined within the legislative framework as land which is in such condition by reason of substances in, on or under the land that:

1) Significant harm is being caused or there is a significant possibility of such harm being caused;
2) Significant pollution of controlled waters is being or is likely to be caused.

The potential for harm is based on the presence of three factors:

- **Source** - substances that are potential contaminants or pollutants that may cause harm;
- **Pathway** - a potential route by which contaminants can move from the source to the receptor;
- **Receptor** - a receptor that may be harmed, for example the water environment, humans and water.

Where a source, pathway and target are all present a pollutant linkage exists and there is potential for harm to be caused. The presence of a source does not automatically imply that a contamination problem exists, since contamination must be defined in terms of pollutant linkages and unacceptable risk of harm. The nature and importance of both pathways and receptors are site specific and will vary according to the intended end use of the site, its characteristics and its surroundings.

The key principle which supports the SPR approach is 'suitable for use' criteria. This requires remedial action only where contamination is considered to pose unacceptable actual or potential risks to health or the environment and, taking into account the proposed use of the site.

Relevant Guidance Documents

This report has been prepared in accordance with the list of guidance below however the list is not exhaustive:

- LCRM – Model Procedures;
- Contamination and Environmental Matters - Their implications for Property Professionals (2nd Edition RICS Nov 2003);
- Brownfields – Managing the development of previously developed land – A client's guide, CIRIA 2002;
- DEFRA and Environment Agency publications CLR7 – 10, supported by the TOX guides and SGV guides, dated March 2002;
- DETR Circular 02/2000, Contaminated Land: Implementation of Part IIA of the Environmental Protection Act 1990;
- Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the EPA1990, May 2002;

Relevant Legislative Documents

The following is a non-exhaustive list of legislative framework documents that has been considered in the production of this report:

- The Environment Act (1995);
- The Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance (2012);
- The Environment Protection Act (1990);
- The Contaminated Land (England) Act (2000);
- Contaminated Land (England) Regulations (2012);
- The Water Resources Act (1991);
- The Pollution Prevention and Control (England and Wales) Regulations (2000);
- The Landfill Regulations (England and Wales) Regulations (2002);
- The Landfill (England and Wales) (Amendment) Regulations (2004);
- Health and Safety at Work Act;

APPENDIX 13 - Limitations

Limitations

This report (Report) forms part of the Services and if applicable Additional Services undertaken by Groundtech Consulting Ltd pursuant to a written contract (Agreement) which contains detailed provisions including express limitations of the liability of Groundtech Consulting Ltd.

This Report was prepared using reasonable skill and care as stated in the Agreement for the purpose including intended end use stated by the Client (Purpose) and the liability of Groundtech Consulting Ltd in respect of the form and content of this Report is no greater than its liability under the Agreement. All records, measurements notes, or any other data (Data) obtained by or for the benefit of the Consultant were obtained at a specific point in time and it may not be assumed by the Client or any person relying on this Report that the Data will remain unaffected by the passage of time, the seasons, weather conditions, changes in the water table or the carrying out and completion of works at the Site.

Unless otherwise agreed this Report has been prepared exclusively for the use and reliance of the Client and may not be relied upon, by any other party except as provided for in the Agreement. A third party who relies on this Report, does so at their own and sole risk and Groundtech Consulting Ltd has no liability to such parties.

Groundtech Consulting Ltd that this Report is to be used for the Purpose. The Purpose was instrumental in determining the scope and of the Services provided. If the Purpose should change, the Client may not be able to rely on the Report without the separate agreement of Groundtech Consulting Ltd.

Since the Report was written, later changes in legislation, statutory requirements and industry best practices have not been considered and this should be allowed for. Ground conditions can also change (see below) and should be investigated if there is any significant delay in acting on the findings of this Report. The period of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the Report inaccurate or unreliable. The information and conclusions in this Report should not be relied upon in the future without written confirmation from Groundtech Consulting Ltd that it is safe to do so.

The observations and conclusions outlined in this Report are based exclusively on the services that were provided as set out in the agreement between the client and Groundtech Consulting Ltd.

Groundtech Consulting Ltd is not liable for the existence of any condition, the discovery of which would require additional investigation outside the agreed scope of works or core competency. The Report is based upon Groundtech Consulting Ltd's observations of existing physical conditions at the Site gained from site reconnaissance together with interpretation of information including documentation, obtained from third parties and from the Client on the history and usage of the Site. The findings and recommendations contained in this Report are based in part upon information provided by third parties, and Groundtech Consulting Ltd have relied upon such information assuming it to be correct.

Groundtech Consulting Ltd accepts no responsibility for errors or inaccuracies in third party information presented in this Report. Groundtech Consulting Ltd was not authorised to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services or Additional Services. Groundtech Consulting Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, which may inform the scope of investigation undertaken by Groundtech Consulting Ltd and forms the contract with the client.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions may also vary due to the ground's heterogeneous properties and because investigation exploratory locations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this Report, particularly between exploratory holes. The extent of the limited area depends on the soil and groundwater conditions, together with other constraints such as the position of any existing structures and underground utilities. If so stipulated in the Agreement, geo-environmental testing was carried out for a limited number of parameters based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

Any groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The groundwater level often has not had time to reach equilibrium and a monitoring period is required. Furthermore, groundwater levels are subject to seasonal variation or changes in local drainage conditions and groundwater levels may occur at other times of the year which are higher than were recorded during this investigation.

Any site drawings provided in this Report are preliminary and used to present the general relative locations of features on, and surrounding, the Site.

