

Phase II Ground Investigation Report
for
The Residential Development
at
17- 21 Rotherhithe Old Road, London SE16 2PP

for:

KMP Surrey Quays 2 Ltd, Compton House (2nd Floor), 29-33 Church Road, Stanmore HA7 4AR

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1. **EXECUTIVE SUMMARY**

1.1. General

- 1.1.1. This executive summary should be read in addition to the whole report and not on its own.
- 1.1.2. At the time of the investigation, the site was undeveloped, surfaced with a combination of concrete and bound macadam. During the investigation TFL were carrying out structural repairs to the parapet wall along the eastern boundary, using the site as a compound and materials storage area.

1.2. Geology

- 1.2.1. Geological maps indicate that site is underlain by the bedrock formation known as the Thanet Formations, described as fine-grained sand, together with sandy silt, silt, or sandy silty clay.
- 1.2.2. Superficial deposits are recorded as Alluvium, described as clay, silty sand, and peat.

1.3. Contamination

- 1.3.1. As shown within the contamination assessment, elevated levels of lead and various PAH congeners have been recorded on the site. Given the proposed basement covers a large proportion of the site (>80%), it is likely that much of the contaminated soils will be removed. In addition, hardstanding will cover the site; therefore, the source-pathway-receptor linkage will be severed. As such, the risk to the end user is deemed to be very low and no remedial measures are required.
- 1.3.2. If waste is to be removed from site, the waste producer has the responsibility of ensuring that all waste is disposed of appropriately and sent to an appropriately licensed landfill site. Waste Acceptance Criteria (WAC) has been conducted on two soil samples, to determine the appropriate classification of the waste soils. The results indicate that the waste soils can be classified as stable non-reactive hazardous waste in non-hazardous landfill. The final decision on waste acceptance is the responsibility of the landfill operator. Therefore, the appended geochemical results should be provided to the preferred landfill operator, for their assessment of the results and confirmation of their acceptance of the material.
- 1.3.3. The Thanet Formation is recorded as a secondary A aquifer, with the Alluvium deposits recorded as a secondary undifferentiated aquifer. Although

contaminants which have the potential to migrate (PAHs) have been identified, in view of the prevailing ground conditions, it is considered that the risk the site poses to 'controlled' waters can be deemed to be low, as contaminants are unlikely to migrate through the cohesive deposits of alluvium. Upon development the risk to controlled waters will be further reduced, as the source-pathway-receptor linkage will be severed by the hardstanding covering the site.

1.4. Initial Engineering Assessment

- 1.4.1. Made ground has been encountered to depths between 1.00m (WS3) and 2.12m (WS4). The made ground material is not suitable for use as foundation bearing strata since it will consolidate excessively and differentially when subjected to foundation loads.
- 1.4.2. Laboratory testing shows that the cohesive soils beneath the site have a medium to high volume change potential.
- 1.4.3. Traditional strip, trench fill or pad foundations may be adopted below the basement and should bear into the Thanet Formations, at a minimum depth of 4.00m below existing or proposed ground levels. Such foundations may be designed on the basis of an allowable bearing capacity of 350kN/m², with settlement anticipated to be no greater than 10mm. For foundations not beneath the basement, a piled foundation solution will be required, due to the low and variable allowable bearing capacities achievable within the Alluvium deposits. It is recommended that a 15-20m deep rotary borehole is carried out to aid with pile design.
- 1.4.4. Due to the variability in ground conditions and low 'N' values recorded up to a depth of 3.00m, it is recommended that ground floors are suspended, such as beam and block. Within the area of the basement, a ground bearing slab may be feasible.
- 1.4.5. The results of soluble sulphate concentration tests were assessed in accordance with BS8500-1 Table A:2 and accordingly the Design Sulphate Classification of DS-3 can be adopted for the site. An ACEC (Aggressive Chemical Environment for Concrete) classification of AC-3 should be adopted to determine the most appropriate concrete mix for the building foundations and other below ground concrete elements.

2. INTRODUCTION

- 2.1. This report has been prepared by PRP UK Ltd on the instruction of KMP Surrey Quays 2 Ltd who propose to construct a five-storey building with a basement, intended for residential end use, together with areas of hardstanding and raised planters. A proposed site plan is included within the appendix.
- 2.2. The purpose of the investigation was twofold; firstly, to collect samples for contamination testing so that an updated site conceptual model and contamination analysis could be conducted and the risk to the end users could be determined. Secondly, to collect data on the ground conditions at the site so that suitable methods of design and construction might be adopted for the foundations and the ground floor slabs of the proposed development.
- 2.3. The conditions stated in the appendix to this report were applied to this investigation and the report is to be read and constructed accordingly. Terms of Reference are also appended to this document.

3. SITE LOCATION

- 3.1. The site is located to the east of Rotherhithe Old Road, London SE16 2PP. The British National Grid metre coordinates for the approximate centre of the site are easting: 535660, northing: 178884.
- 3.2. The site is approximately rectangular in shape and occupies an area of 0.045ha.
- 3.3. Summary details of the overall site boundaries and adjacent land uses are:

Boundary	Boundary Construction	Adjacent Land Use	Proximal Land Use
North	Fence	Commercial	Commercial/Residential
East	Wall	Railway Track	Commercial/Residential
South	Wall	Residential	Highway/Residential
West	Fence	Highway	Residential

4. FIELDWORK

- 4.1. On Tuesday 22 August 2023 four windowless sampler boreholes were sunk across the site to depths between 4.26m (WS3) and 4.39m (WS1).
- 4.2. The positions of the boreholes are shown on the appended borehole location plan. If required, confirmation of the exact position will need to be verified by dimensional survey work which was outside the scope of this report. It should be noted that this accuracy is not thought to be necessary.
- 4.3. The windowless sampler boreholes were positioned to give full coverage of the site as well as to collect geotechnical and geochemical samples.
- 4.4. Standard penetration tests (SPT), in accordance with BS1377 Part 9, were undertaken at 1m intervals for the full depth of all the boreholes and the results are included in the borehole log appended to this report. The test involves counting the number of blows required to drive a standard 50.8mm diameter split spoon sampler through a distance of 450mm using a 63.5kg weight falling through a distance of 760mm. The results denote the number of blows required to drive the sampler through 300mm. It is standard practice to note each 75mm of penetration and these are shown in the driller's logs. Where the number of blows required to achieve the 450mm penetration exceeds 50, the number is normally indicated as 50 and the actual depth of penetration for the 50 blows is recorded.
- 4.5. Small, disturbed samples of the strata encountered were recovered, placed in amber glass jars or plastic tubs as necessary and taken to I2 Analytical for geochemical and geotechnical testing.

5. **LABORATORY TESTING**

- 5.1. A programme of geochemical and geotechnical testing was scheduled and carried out upon a number of soil samples.
- 5.2. Laboratory testing to determine the geotechnical properties of the soils was conducted by I2 Analytical. Three samples have been submitted for moisture content and Atterberg limit testing, to determine the volume change potential of the cohesive soils.
- 5.3. Laboratory testing to determine the geochemical properties of soil was undertaken by I2 Analytical Ltd. Contamination testing was undertaken upon six soil samples, with six samples from varying depths tested for pH value and sulphate content (BRE Special Digest 1 Concrete in aggressive ground). Below are some of the contaminants tested for.

Arsenic	Chromium
Cadmium	Copper
Chromium (total)	Mercury
Lead	Selenium
Nickel	Zinc
Sulphate (water soluble)	pH
Total cyanide	Sulphide (acid soluble)
Organic matter	PAH
Phenols (total)	TPH CWG
Asbestos	

- 5.4. I2 Analytical follow a quality audit system which has been designed to ensure continual compliance to BSEN ISO/IEC 17025:2005; the laboratory is regularly audited by UKAS and holds accreditation for specific tests identified.
- 5.5. The results of all the laboratory tests are appended.

6. **GENERAL GEOLOGY AND REVEALED STRATA**

- 6.1. Within the accuracy of the available geological information (British Geological Survey (BGS) Geology of Britain at a scale of 1:50,000) the solid geology beneath the site is indicated to comprise the Thanet Formations, described as fine-grained sand, together with sandy silt, silt, or sandy silty clay. Superficial deposits are recorded as Alluvium, described as clay, silty sand, and peat.
- 6.2. The boreholes conducted across the site revealed deposits of made ground consisting of granular soils overlaying deposits of Alluvium. For full details of the strata encountered in the exploratory holes of this investigation, reference should be made to the appended borehole logs. The salient features are, however, summarised below.
- 6.3. **Made ground** – recorded from ground level to depths ranging from 1.00m (WS3) to 2.12m (WS4) as a combination of granular and cohesive soils. Granular soil predominantly comprised gravelly, slightly silty fine to coarse sand, with gravel sized fragments of quartz, flint, and brick. Cohesive soils predominantly comprised firm to stiff slightly sandy, gravelly clay, with gravel sized fragments of quartz, brick, and flint.
- 6.4. **Alluvium** – encountered beneath the made ground to depths between 2.46m (WS2) and 3.89m (WS4) as predominantly cohesive soils. These cohesive soils comprised a combination of firm slightly gravelly silty clay, with gravel sized shell fragments and firm silty clay.
- 6.5. **Thanet Formation** – encountered beneath the Alluvium deposits to the base of all boreholes as a loose through to very dense gravelly slightly silty fine to coarse sand, with gravel sized fragments of flint.
- 6.6. It should be noted that no visual or olfactory evidence of contamination was encountered during the excavation and logging of the borehole samples.
- 6.7. No groundwater was encountered during the sinking of the boreholes, or within the brief time they remained open.

7. ENGINEERING ASSESSMENT AND RECOMMENDATIONS

- 7.1. Made ground has been encountered to depths between 1.00m (WS3) and 2.12m (WS4). The made ground material is not suitable for use as foundation bearing strata since it will consolidate excessively and differentially when subjected to foundation loads.
- 7.2. Laboratory testing shows that the cohesive soils beneath the site have a medium to high volume change potential.
- 7.3. Traditional strip, trench fill or pad foundations may be adopted below the basement. These foundations should bear into the Thanet Formation, at a minimum depth of 4.00m below existing or proposed ground levels, whichever is deeper. Such foundations may be designed on the basis of an allowable bearing capacity of 350kN/m², with settlement anticipated to be no greater than 10mm. For foundations not beneath the basement, a piled foundation solution will be required, due to the low and variable allowable bearing capacities achievable within the Alluvium deposits. It is recommended that a 15-20m deep rotary borehole is carried out to aid with pile design.
- 7.4. Due to the variability in ground conditions and low 'N' values recorded to a depth of 3.00m, it is recommended that ground floors are suspended, such as beam and block. Within the area of the basement, a ground bearing slab may be feasible.
- 7.5. Excavations for foundations are unlikely to be affected by groundwater levels; however, during periods of persistent rainfall or inclement weather, levels may rise sufficiently to cause softening of the bearing strata and instability of excavation sides. Due to the presence of granular soils, excavations may be prone to collapse if groundwater levels rise significantly.
- 7.6. The level of groundwater will also vary depending upon the seasonal rainfall and soil moisture deficit; consequently, groundwater levels are usually at their highest towards the end of winter or early spring. This may have a significant effect on any excavations that are undertaken during this time.
- 7.7. The results of soluble sulphate concentration tests were assessed in accordance with BS8500-1 Table A:2 and accordingly the Design Sulphate Classification of DS-3 can be adopted for the site. An ACEC (Aggressive Chemical Environment for Concrete) classification of AC-3 should be adopted to determine the most appropriate concrete mix for the building foundations and other below ground concrete elements.
- 7.8. The data provided by the Health Protection Agency relating to radon indicated that less than 1% of properties within this area will be affected by radon gas; therefore, no radon protection measures are required.

- 7.9. Should soils be revealed during construction works that are different in any way to those revealed in the boreholes, then the engineer should be consulted prior to proceeding with further excavations.
- 7.10. Where any person is required to enter into a trench or excavation it is recommended that the sides are shored up in accordance with current best practice and as accepted by the Health and Safety Executive which is published in Health and Safety in Construction (HSG 150) which is available to download from www.hse.gov.uk.

8. GUIDANCE ON ASSESSMENT OF ANALYSIS OF CONTAMINATION

- 8.1. The principal numerical criteria currently used in the UK to assess the significance of the results of contamination testing on soil samples are the Soil Guideline Values as published in Contaminated Land Research reports 7-10 inclusive, and the accompanying research and development publications (TOX and SGV series) published by the Department for Environment, Food and Rural Affairs (DEFRA) and the Environment Agency (EA) (2002). Also, between 2002 and 2005 CLEA UK (beta) software was released along with briefing notes 1 to 4. Then in 2006 DEFRA released Soil Guideline Values - The Way Forward in an attempt to clarify matters.
- 8.2. In August 2008 the EA published revised Contaminated Land Exposure Assessment (CLEA) framework guidance in SR2, 3 and 4 along with CLEA v1.03 (beta software); this software was a testing version and comments upon its usefulness were requested. The original SGVs were withdrawn together with CLR7-10 but strangely enough the accompanying TOX reports that were issued at the same time were not.
- 8.3. SGVs have been formulated to represent a combination of authoritative science and policy judgements. The scientific information includes human toxicological information on health effects of different contaminants, and judgement on what is regarded as unacceptable risk. Soil is also only one source of contaminant exposure, and its effects need to be kept in proportion with total exposure from all sources.
- 8.4. Generic SGVs must be capable of use over a wide range of soil conditions and types of sites. They are based on the underlying, albeit incomplete, science of contaminant behaviour, human activity patterns, and contaminant toxicology. Although these make the derivation of generally applicable criteria difficult, use of worst-case assumptions is more likely to result in impracticable or over-conservative criteria.
- 8.5. The SGVs are designed to generate a consistent approach to the investigation of contaminated land and also to assist in focusing resources on situations that require a more detailed assessment. Only the first of the R&D publications addressing individual contaminants have so far been published, and these will be added to in the course of time; as indicated above some have been withdrawn and some have been revised already. Guidance on additional organic contaminants, in particular, has yet to be published.
- 8.6. DEFRA is actively promoting a site-specific risk assessment methodology to support professional judgement. The CLEA model was originally detailed in CLR10 and this is described in the conceptual exposure models for each standard land use used to derive the SGVs; this was replaced by SR3 in August 2008 and then revised again in January

2009. The CLEA model itself was also revised in January 2009 to v1.04 and a handbook (SR4) was also issued.

- 8.7. In late 2009 the LQM/CIEH Generic Assessment Criteria (GAC) for Human Health Risk Assessment Second Edition was published which provides GAC values for the common contaminants based upon the principles published by the EA and uses the CLEA model to define values.
- 8.8. Category 4 screening levels (C4SLs) were prepared by DEFRA under the research project SP1010; these may replace the CLEA soil guideline values but have yet to be published. In July 2013 provisional values for arsenic, benzene, benzo[a]pyrene, cadmium, hexavalent chromium, and lead were released but have not been used in this report, since they were primarily intended for use under part 2A of the EPA 1990.
- 8.9. Contamination in near surface soils needs to be considered with respect to water supply pipes and initially risk guidance was supplied by the Water Regulations Advisor Scheme (WRAS). These have recently been replaced with guidance produced by United Kingdom Water Industry Research (UKWIR) however some local water authorities still use the old guidance. For the purposes of this report, it is assumed that all water supply pipes will be in MDPE however, if other types of pipes are used then lower threshold values may be appropriate.
- 8.10. In early 2015, LQM/CIEH S4ULs for Human Health Risk Assessment was published providing clarification on S4ULs to be used for the assessment of risk posed to human health by contaminants in soil. Concentrations of contaminants above these levels indicate that further assessment of risk is required and not necessarily that a problem exists.

9. CONTAMINATION ASSESSMENT – UPDATED SITE CONCEPTUAL MODEL

- 9.1. For the purposes of this risk assessment, it has been assumed that the new SGV/GACs and C4SLs for residential end use without plant uptake and associated TOX reports (Environment Agency 2002 to 2005) represent the maximum concentrations for the substances assessed which do not represent elevated levels of risk to human targets by any pathway.
- 9.2. Each determinand for which a published SGV/GAC exists has a mean and standard deviation calculated and then t tests carried out (mean value and maximum value tests). Reference is then made to the SGV for the individual determinand in order to assess the level of risk posed.
- 9.3. Assessment of contamination has been based on the guidance given in Guidance on Comparing Soil Contamination Data with a Critical Concentration (Chartered Institute of Environmental Health and Contaminated Land: Application in Real Environments, May 2008), SR2, 3 and 4 inclusive, the soil guidance value (SGV) and human toxicity (TOX) research and development reports (EA, 2002 to 2005).
- 9.4. The samples recovered from the site were found to be relevant, sufficient, reliable, and transparent based upon the requirements indicated in the Guidance on Comparing Soil Contamination Data with a Critical Concentration and as the site is being assessed under the planning scenario the critical question that needs to be answered is, “is there sufficient evidence that the true mean concentration of substance X (U) is less than the critical concentration (C_c).”
- 9.5. Mean concentration of a determinand based on a low number of samples may be a poor indicator of the true mean (population) for the site as a whole. A conclusion about remediation based on a comparison of such a sample mean against the soil guidance value may not be sufficiently health protective. Therefore, the mean value test allows a statement to be made with a given level of confidence (usually 95%) that the population mean is less than the SGV and takes into account the number of samples analysed.
- 9.6. The calculated values of the upper confidence level of the sample group (US_{95}) may be compared with the SGV or GAC and if it is less, then the mean value test has been passed and the site may be considered not to present a significant possibility of harm to human health within the context of part IIA of the Environment Protection Act. Where a result shows the concentration to be less than the limit of detection adopted for the analysis, the value of the limit of detection has been used in the calculation.

- 9.7. The calculation is based on the following equation:

$$US_{95} = \bar{x} + \frac{t \cdot s}{\sqrt{n}}$$

Where:

\bar{x} is the mean

t is a statistical function based on sample size

s is standard deviation

n is the number of samples

- 9.8. Using the t tables included in CLR7, the value of t for two samples ($n=2$) is 6.314 and that for eighteen samples, is 1.74. The results of the statistical analysis are given below. It should be noted that the values for the SGVs shown in the table include the actual soil guidance values cited in CLR8 and also a series of hybrid SGVs adopted for the analysis. These have been derived from the upper limit of concentrations for natural (uncontaminated) soils found within the United Kingdom. The soil guidance values used are those for the category of land use (in this case, proposed land use) residential without plant uptake.
- 9.9. The maximum value test is used to determine whether the maximum value of a determinand from a set of analyses is likely to have come from the same population as other concentrations for that determinand, or whether it is a statistical outlier (hotspot).
- 9.10. If the value of t is smaller than some critical value, determined from statistical tables and based on the number of samples, the maximum value may be accepted (at the prescribed level of confidence) as a member of the underlying population from which the other results were drawn.
- 9.11. If t is greater than the critical value, the maximum value is treated as an outlier. This may indicate a hotspot of contamination requiring additional investigation in order to reveal its extent. The maximum value test uses the relationship:

$$t = \frac{y_{\max} - \bar{y}}{S_y}$$

where:

y_{\max} is the log of the maximum value of a population

\bar{y} is the mean value of the logs of the population

S_y is the standard deviation from the mean of the logs of the population

- 9.12. Soil organic matter testing conducted on all samples recorded values between 1% and 11%, therefore, all the SGV/GAC values derived for 1% SOM will be used within this assessment.
- 9.13. Of the contaminants for which residential SGVs and GACs commercial end user are currently available, beryllium and lead have been recorded above the published guideline values. Elevated beryllium has been recorded within WS1 at 0.50m, with a concentration of 3.2mg/kg, however, as the concentration recorded is above the T_{crit} value, this is deemed to be a localised hotspot and not representative of site wide contamination. The table below shows the concentrations of lead recorded.

Location	Depth (m)	Assessment Criteria (mg/kg) (lead)	Concentration recorded (mg/kg)
WS2	0.60	300	360
WS2	1.00		1300
WS3	0.50		790
WS4	1.20		1400

- 9.14. All concentrations for boron, copper and cyanide have been recorded below the assessment criteria.
- 9.15. All concentrations of cyanide were less than the guidance threshold values and no elevated level of risk is assessed to exist to human targets by any pathway.
- 9.16. The current guidance on polyaromatic hydrocarbons (PAHs) includes only the (generally acknowledged as) most toxic form, benzo[a]pyrene, in the options for risk assessment using CLEA. However, in this instance each individual congener has been considered and assessed in relation to the GAC values shown in the CIEH/LQM publication S4ULs for Human Health Risk Assessment. Various PAH congeners have been recorded above the assessment criteria within the sample taken from WS1 at 0.50m. The table below shows the elevated PAH congeners recorded.

PAH Congener	Assessment Criteria (mg/kg)	Recorded Concentration (mg/kg)
Benzo(a)anthracene	11.0	84
Chrysene	30.0	72
Benzo(b)fluoranthene	3.9	130
Benzo(a)pyrene	3.2	110
Indeno(123-cd)pyrene	45	70
Dibenzo(ah)anthracene	0.31	21
Total (US EPA 16) PAH	40	959

- 9.17. The samples were also tested for TPH CWG testing. In summary no TPH congeners have been recorded above the assessment criteria within the samples tested.
- 9.18. The samples tested were screened for the presence of asbestos fibres. No asbestos fibres have been recorded within any of the samples submitted for testing.

10. CONTAMINATION RECOMMENDATIONS

- 10.1. As shown within the contamination assessment, elevated levels of lead and various PAH congeners have been recorded on the site. Given that the proposed basement covers a large proportion of the site (>80%), it is likely that much of the contaminated soils will be removed. In addition, hardstanding will cover the site and therefore the source-pathway-receptor linkage will be severed; as such the risk to the end user is deemed to be very low and no remedial measures required.
- 10.2. If waste is to be removed from site, the waste producer has the responsibility of ensuring that all waste is disposed of appropriately and sent to an appropriately licensed landfill site. Waste Acceptance Criteria (WAC) has been conducted on two soil samples, to determine the appropriate classification of the waste soils. The results indicate that the waste soils can be classified as stable non-reactive hazardous waste in non-hazardous landfill. The final decision on waste acceptance is the responsibility of the landfill operator. Therefore, the appended geochemical results should be provided to the preferred landfill operator, for their assessment of the results and conformation of their acceptance of the material.
- 10.3. The Thanet Formation is recorded as a secondary A aquifer, with the Alluvium deposits recorded as a secondary undifferentiated aquifer. Although contaminants which have the potential to migrate (PAHs) have been recorded, in view of the prevailing ground conditions it is considered that the risk the site poses to 'controlled' waters can be deemed to be low. Upon development the risk to controlled waters will be further reduced, as the source-pathway-receptor linkage will be severed by the hardstanding covering the site.

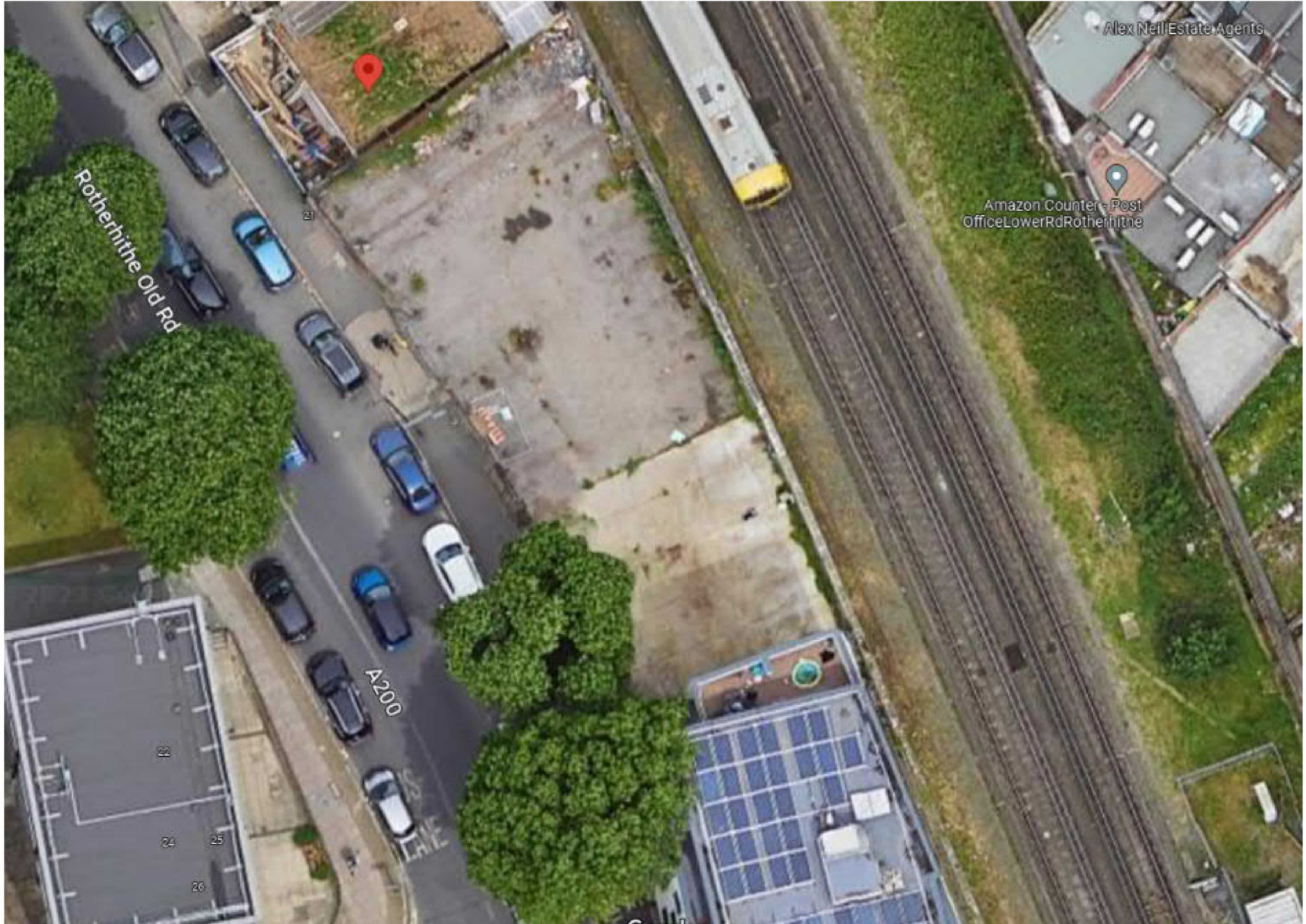
10.4. Since significant concentrations of source contaminants have been identified on site, the risk associated with construction workers and site visitors is considered to be moderate to high; this should be minimized by undertaking the following precautions:

- Wearing protective clothing including gloves to limit direct contact with soil
- The site should be kept damp which will keep the dust concentrations to a minimum, but if this is not possible and dust is generated then dust masks should be worn by workers and visitors
- It is outside the brief of this report to provide guidance on site working practices however the appendices provide some references

10.5. Care should be taken during excavation work on the site to investigate any soils which seem by appearance or odour to be of different or unusual character. Should materials of this nature be uncovered then it is likely that further testing will need to be undertaken to validate levels of contamination.

APPENDIX I

SITE PLANS



Alex Neil Estate Agents

Rotherhithe Old Rd

Amazon Counter - Post Office Lower Rd Rotherhithe

A200

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APPENDIX II

BOREHOLE LOCATION PLAN

Alex Neil Estate Agents

Amazon Counter - Post Office Lower Rd Rotherhithe

Rotherhithe Old Rd

⊕ WS4

⊕ WS3

⊕ WS2

⊕ WS1

Buffer Zone (TFL and services)

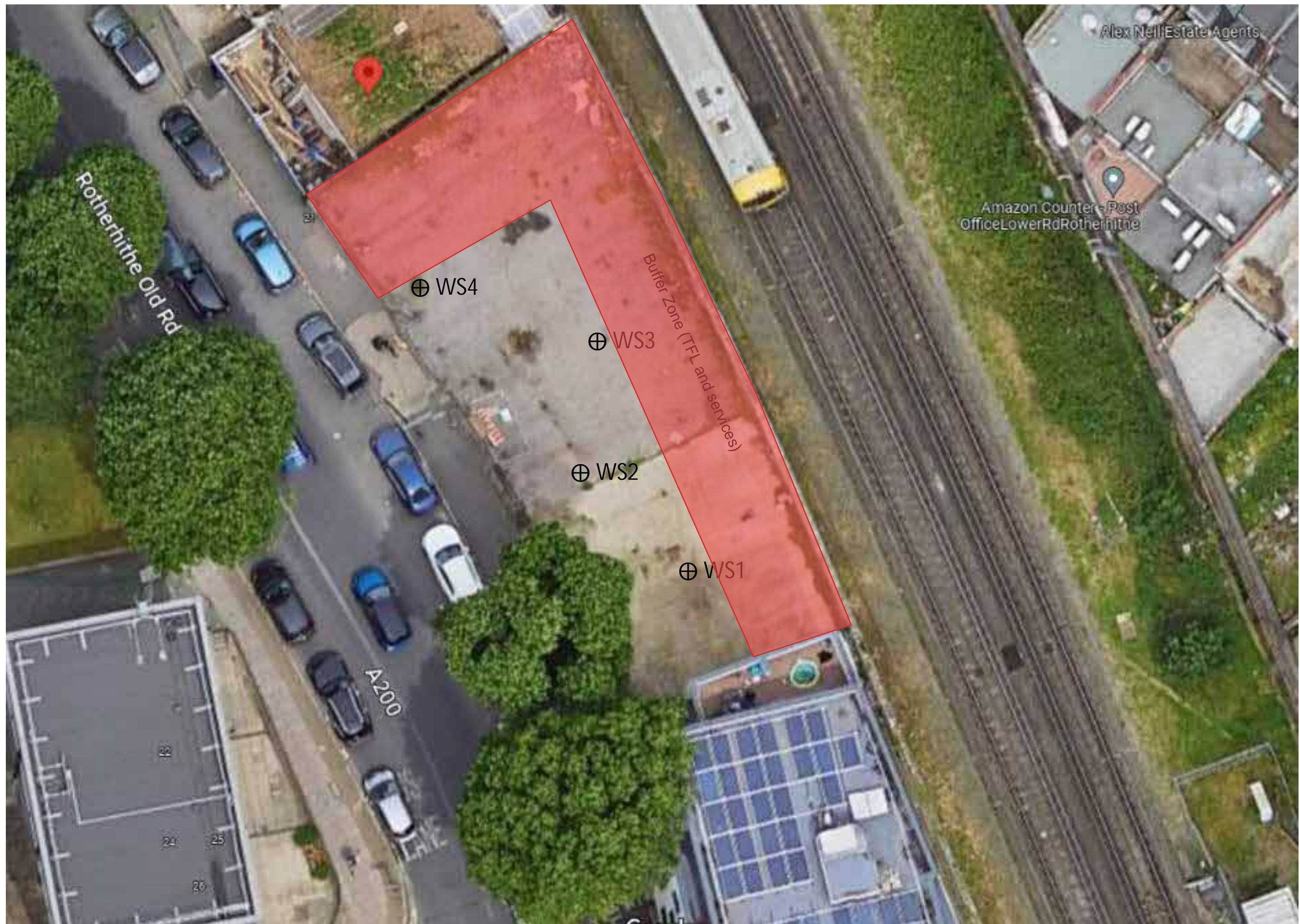
A200

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APPENDIX III

BOREHOLE LOGS

Well

Well

Well

Well

APPENDIX IV

LABORATORY TEST RESULTS



Hole Identifier				WS1	WS2	WS2	WS3	WS4	WS4				
Sample Identifier				1	2	3	4	5	6				
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023				
Sample Depth (mbgl)				0.50	0.60	1.00	0.50	1.20	0.60				
Determinand	Assessment Criteria Source	Detec Limit (mg/kg)	Assessment Criteria (mg/kg) (Rw@HP)	MADE GROUND	MADE GROUND	MADE GROUND	MADE GROUND	MADE GROUND	MADE GROUND				
Group A : In-organic Contaminants Hazardous to Human Health													
Arsenic - Inorganic	LQM/CIEH S4UL	1	40	13	12	15	17	19	17	US ₉₅ =	17.69193969	T =	1.228309304
Beryllium - Total	LQM/CIEH S4UL	0.2	2	3.2	0.76	0.97	0.84	1	1.2	US ₉₅ =	2.092731609	T =	1.947882533
Boron - Total	LQM/CIEH S4UL	0.2	1000	0.6	0.2	2.5	0.9	1.8	2.9	US ₉₅ =	2.377558561	T =	0.991638988
Cadmium - Total	LQM/CIEH S4UL	0.2	85	0.6	0.2	0.2	0.2	0.2	0.2	US ₉₅ =	0.401	T =	2.041241452
Chromium - VI	LQM/CIEH S4UL	1	6	1.8	1.8	1.8	1.8	1.8	1.8	US ₉₅ =	1.8	T =	
Chromium - Total (III)	LQM/CIEH S4UL	1	910	290	23	19	20	26	29	US ₉₅ =	157.4187871	T =	2.017788057
Copper - Total	LQM/CIEH S4UL	1	7100	41	35	88	97	160	100	US ₉₅ =	124.3845462	T =	1.274652883
Lead - Total	CL-AIRE CASL	1	300	94	360	1300	790	1400	190	US ₉₅ =	1154.389395	T =	1.021990413
Mercury - Inorganic	LQM/CIEH S4UL	0.3	56	0.3	0.3	2.4	3.6	1.2	1	US ₉₅ =	2.535017902	T =	1.250790837
Nickel - Total	LQM/CIEH S4UL	1	180	16	14	21	15	25	26	US ₉₅ =	23.81385727	T =	1.181009284
Selenium - Total	LQM/CIEH S4UL	1	430	1	1	1	1	1	1	US ₉₅ =	1	T =	#DIV/0!
Vanadium - Total	LQM/CIEH S4UL	1	1200	100	36	45	45	59	59	US ₉₅ =	76.03897868	T =	1.730298493
Zinc - Total	LQM/CIEH S4UL	1	40000	87	150	66	100	110	110	US ₉₅ =	126.9161041	T =	1.45670681
Non Metals:													
Phenols - Monohydric (SOM dependent: @ 1%)	LQM/CIEH S4UL	1	440	1	1	1	1	1	1	US ₉₅ =	1	T =	
Cyanide - Free	Dutch Int	1	20	1	1	1	1	1	1	US ₉₅ =	1	T =	
Sulphide	ICRCL	1	1000	190	5.7	4.9	7.2	2.3	4.8	US ₉₅ =	97.96634483	T =	1.978952385
Organics : Hazardous to Health													
* Naphthalene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	2.3	1.7	0.05	0.06	0.1	0.05	0.05	US ₉₅ =	0.885326221	T =	2.003038963
Acenaphthylene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	2900	23	0.05	0.05	0.05	0.05	0.05	US ₉₅ =	11.582375	T =	2.041241452
Acenaphthene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	3000	2.4	0.05	0.05	0.1	0.05	0.05	US ₉₅ =	1.236022203	T =	2.008269307
Fluorene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	2800	4.1	0.05	0.05	0.11	0.05	0.05	US ₉₅ =	2.091238707	T =	2.008317976
* Phenanthrene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	1300	45	0.17	0.97	1.5	0.05	0.05	US ₉₅ =	22.89293955	T =	1.698569398
* Anthracene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	31000	29	0.05	0.18	0.27	0.05	0.05	US ₉₅ =	14.63248466	T =	1.947852404
* Fluoranthene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	1500	120	0.41	2.3	2.4	0.05	0.05	US ₉₅ =	60.82820858	T =	1.652624218
Pyrene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	3700	110	0.37	1.9	1.9	0.05	0.05	US ₉₅ =	55.7067234	T =	1.685672762
* Benzo[a]anthracene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	11.0	84	0.27	1.5	1.4	0.05	0.05	US ₉₅ =	42.54056078	T =	1.717488989
* Chrysene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	30.0	72	0.28	1.5	1.4	0.05	0.05	US ₉₅ =	36.51240819	T =	1.702929637
Benzo[b]fluoranthene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	3.9	130	0.35	1.6	1.7	0.05	0.05	US ₉₅ =	65.7024354	T =	1.726147219
* Benzo[k]fluoranthene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	110	48	0.16	0.74	0.85	0.05	0.05	US ₉₅ =	24.30668164	T =	1.789060312
* Benzo[a]pyrene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	3.2	110	0.27	1.3	1.3	0.05	0.05	US ₉₅ =	55.5736343	T =	1.758484277
* Indeno[1,2,3-cd]pyrene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	45.0	70	0.17	0.71	0.76	0.05	0.05	US ₉₅ =	35.34960559	T =	1.827676789
Dibenz[ah]anthracene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	0.31	21	0.05	0.22	0.22	0.05	0.05	US ₉₅ =	10.61153964	T =	1.940508464
* Benzo[ghi]perylene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.05	360	83	0.17	0.64	0.76	0.05	0.05	US ₉₅ =	41.87479433	T =	1.845384152
Total (US EPA 16) PAH	DUTCH INT	0.8	40	959	2.67	13.6	14.7	0.8	0.8	US ₉₅ =	485.179951	T =	1.785863266
C5 - C6 (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	42	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C6 - C8 (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	100	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C8-C10 (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	27	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C10-C12 (SOM dependent: @ 1%)	LQM/CIEH GAC	1	130	1.2	1	1	1	1	1	US ₉₅ =	1.1005	T =	2.041241452
C12-C16 (SOM dependent: @ 1%)	LQM/CIEH GAC	2	1100	11	2	2	2	2	2	US ₉₅ =	6.5225	T =	2.041241452
C16-C21 (SOM dependent: @ 1%)	LQM/CIEH GAC	8	32500	47	8	8	8	8	8	US ₉₅ =	27.5975	T =	2.041241452
C21-C35 (SOM dependent: @ 1%)	LQM/CIEH GAC	8	32500	510	8	8	8	8	8	US ₉₅ =	260.255	T =	2.041241452
C5-C7 (Benzene) (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	370	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C7 - C8 (Toluene) (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	860	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C8-C10 (SOM dependent: @ 1%)	LQM/CIEH GAC	0.001	47	0.1	0.1	0.1	0.1	0.1	0.1	US ₉₅ =	0.1	T =	
C10-C12 (SOM dependent: @ 1%)	LQM/CIEH GAC	1	250	1	1	1	1	1	1	US ₉₅ =	1	T =	
C12-C16 (SOM dependent: @ 1%)	LQM/CIEH GAC	2	1800	18	2	2	2	2	2	US ₉₅ =	10.04	T =	2.041241452
C16-C21 (SOM dependent: @ 1%)	LQM/CIEH GAC	10	1900	320	10	10	10	10	10	US ₉₅ =	165.775	T =	2.041241452
C21-C35 (SOM dependent: @ 1%)	LQM/CIEH GAC	10	1900	1700	10	12	10	10	10	US ₉₅ =	859.4243816	T =	2.039990084
Total Petroleum Hydrocarbons - C10-C40 (TPH)	DUTCH INT	10	5000	3300	18	25	31	10	10	US ₉₅ =	1667.624051	T =	1.995417799
Benzene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.001	0.38	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	
Ethylbenzene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.001	83	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	
MTBE (SOM dependent: @ 1%)	CL-AIRE CASL	0.001	73.00	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	2.041241452
Toluene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.001	880	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	2.041241452
M&P Xylene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.001	79	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	2.041241452
O-Xylene (SOM dependent: @ 1%)	LQM/CIEH S4UL	0.001	88	0.005	0.005	0.005	0.005	0.005	0.005	US ₉₅ =	0.005	T =	
BRE SD1 - Brownfield													
pH	BRE SD1		5.5	8.8	9.7	7.7	8.2	8	8.1	Where required, 1% SOM is assumed unless SOM% dictates other.			
Total Sulphate as SO ₄ %	BRE SD1		0.24%	0.545%	0.354%	0.394%	1.270%	0.183%	0.199%	Statistical assessment is calculated in accordance with CLR7, 2002.			
Sulphate (H ₂ O soluble) - mg/l	BRE SD1	1.25	500	107	373	1320	1560	210	184	NB Where site-specific soil screening values (SSSV) given, based on Environment Agency CLEA methodology.			
Others:													
Total Organic Carbon (%)	None	0.1	None	6.5%	0.6%	1.7%	1.1%	1.8%	2.6%				
Soil Organic Matter (%)	None	0.1	None	11%	1%	3%	2%	3%	5%				
Moisture Content (%)	None	0.01	None	8%	11%	12%	20%	17%	19%				
VOC Detected	None		None										
SVOC Detected	None		None										
Asbestos ID	None		None	ND	ND	ND	ND	ND	ND				

Above lowest BRE SD1 category
 Not Detected ND
 Result greater than the GAC
 LoD higher than criterion



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Analytical Report Number : 23-54871

Project / Site name:	Rotherhithe Old Road	Samples received on:	05/09/2023
Your job number:	82099	Samples instructed on/ Analysis started on:	05/09/2023
Your order number:	82099	Analysis completed by:	18/09/2023
Report Issue Number:	1	Report issued on:	18/09/2023
Samples Analysed:	6 soil samples		

Signed: _____

Joanna Szwagrak
Junior Reporting Specialist
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: 23-54871
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number				2802182	2802183	2802184	2802185	2802186
Sample Reference				WS1	WS2	WS2	WS3	WS4
Sample Number				1	2	3	4	5
Depth (m)				0.50	0.60	1.00	0.50	1.20
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				0900	0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.2	11	12	20	17
Total mass of sample received	kg	0.001	NONE	0.6	0.3	0.3	0.3	0.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MLO	JBH	JBH	MLO	JBH

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.8	9.7	7.7	8.2	8
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	1300	3300	3300	12000	1100
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	210	750	2600	3100	420
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.107	0.373	1.32	1.56	0.21
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	107	373	1320	1560	210
Total Potential Sulphate	mg/kg	30	NONE	5400	3500	3900	13000	1800
Total Potential Sulphate	%	0.003	NONE	0.545	0.354	0.394	1.27	0.183
Sulphide	mg/kg	1	MCERTS	190	5.7	4.9	7.2	2.3
Total Sulphur	mg/kg	50	MCERTS	1800	1200	1300	4200	610
Organic Matter (automated)	%	0.1	MCERTS	11	1	2.9	2	3.1
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	6.5	0.6	1.7	1.1	1.8

Total Phenols

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

Naphthalene	mg/kg	0.05	MCERTS	1.7	< 0.05	0.06	0.1	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	23	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	2.4	< 0.05	< 0.05	0.1	< 0.05
Fluorene	mg/kg	0.05	MCERTS	4.1	< 0.05	0.05	0.11	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	45	0.17	0.97	1.5	< 0.05
Anthracene	mg/kg	0.05	MCERTS	29	< 0.05	0.18	0.27	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	120	0.41	2.3	2.4	< 0.05
Pyrene	mg/kg	0.05	MCERTS	110	0.37	1.9	1.9	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	84	0.27	1.5	1.4	< 0.05
Chrysene	mg/kg	0.05	MCERTS	72	0.28	1.5	1.4	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	130	0.35	1.6	1.7	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	48	0.16	0.74	0.85	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	110	0.27	1.3	1.3	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	70	0.17	0.71	0.76	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	21	0.05	0.22	0.22	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	83	0.17	0.64	0.76	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	959	2.67	13.6	14.7	< 0.80
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Analytical Report Number: 23-54871
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number	2802182	2802183	2802184	2802185	2802186
Sample Reference	WS1	WS2	WS2	WS3	WS4
Sample Number	1	2	3	4	5
Depth (m)	0.50	0.60	1.00	0.50	1.20
Date Sampled	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken	0900	0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Element	Unit	Limit of detection	Accreditation Status	2802182	2802183	2802184	2802185	2802186
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	12	15	17	19
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	3.2	0.76	0.97	0.84	1
Boron (water soluble)	mg/kg	0.2	MCERTS	0.6	< 0.2	2.5	0.9	1.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	< 0.2	< 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	290	23	19	20	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	41	35	88	97	160
Lead (aqua regia extractable)	mg/kg	1	MCERTS	94	360	1300	790	1400
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	2.4	3.6	1.2
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	14	21	15	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	100	36	45	45	59
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	87	150	66	100	110

Monoaromatics & Oxygenates

Compound	Unit	Limit of detection	Accreditation Status	2802182	2802183	2802184	2802185	2802186
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

Parameter	Unit	Limit of detection	Accreditation Status	2802182	2802183	2802184	2802185	2802186
TPH C10 - C40 _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	3300	18	25	31	< 10
TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	1.2	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	11	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	47	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	510	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	570	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	MCERTS	18	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	320	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	1700	< 10	12	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	2000	< 10	18	14	< 10

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

Analytical Report Number: 23-54871
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number	2802187			
Sample Reference	WS4			
Sample Number	6			
Depth (m)	0.60			
Date Sampled	30/08/2023			
Time Taken	0900			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	19
Total mass of sample received	kg	0.001	NONE	0.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JBH

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	930
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	370
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.184
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	184
Total Potential Sulphate	mg/kg	30	NONE	2000
Total Potential Sulphate	%	0.003	NONE	0.199
Sulphide	mg/kg	1	MCERTS	4.8
Total Sulphur	mg/kg	50	MCERTS	660
Organic Matter (automated)	%	0.1	MCERTS	4.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.6

Total Phenols

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

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80
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Analytical Report Number: 23-54871
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number		2802187		
Sample Reference		WS4		
Sample Number		6		
Depth (m)		0.60		
Date Sampled		30/08/2023		
Time Taken		0900		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Heavy Metals / Metalloids				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	100
Lead (aqua regia extractable)	mg/kg	1	MCERTS	190
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	59
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110

Monoaromatics & Oxygenates

Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-xylene	µg/kg	5	MCERTS	< 5.0
o-xylene	µg/kg	5	MCERTS	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0

Petroleum Hydrocarbons

TPH C10 - C40 _{EH,CU,1D,TOTAL}	mg/kg	10	MCERTS	< 10
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TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.1	NONE	< 0.10
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	MCERTS	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	< 10

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

Analytical Report Number : 23-54871

Project / Site name: Rotherhithe Old Road

* 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 *
2802182	WS1	1	0.5	Brown gravelly sand.
2802183	WS2	2	0.6	Brown sand with gravel.
2802184	WS2	3	1	Brown clay and sand with gravel and brick.
2802185	WS3	4	0.5	Brown clay and sand with gravel.
2802186	WS4	5	1.2	Brown clay and sand with gravel.
2802187	WS4	6	0.6	Brown clay and sand with gravel.

Analytical Report Number : 23-54871
Project / Site name: Rotherhithe Old Road

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
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
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 (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
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.	L019-UK/PL	D	NONE
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.	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Total potential sulphate in soil	Determination of total potential sulphate in soil by calculation from total sulphur.	By calculation - In-house method based on TRL 447 report.	L038-PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	MCERTS

Analytical Report Number : 23-54871
Project / Site name: Rotherhithe Old Road

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
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Total potential sulphate in soil (Percentage)	Determination of total potential sulphate in soil by calculation from total sulphur - expressed as a percentage.	By calculation - In-house method based on TRL 447 report.	L038-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	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 300C.

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



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Analytical Report Number : 23-54840

Project / Site name:	Rotherhithe Old Road	Samples received on:	05/09/2023
Your job number:	82099	Samples instructed on/ Analysis started on:	05/09/2023
Your order number:	82099	Analysis completed by:	15/09/2023
Report Issue Number:	1	Report issued on:	15/09/2023
Samples Analysed:	2 wac multi samples		

Signed: _____

Joanna Wawrzeczko
Reporting Specialist
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.

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Waste Acceptance Criteria Analytical Results							
Report No:	23-54840						
Client:	PRPLTD						
Location	Rotherhithe Old Road						
Lab Reference (Sample Number)	2801972						
Sampling Date	30/08/2023						
Sample ID	WS1 1						
Depth (m)	0.50						
Landfill Waste Acceptance Criteria Limits							
	Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill				
Solid Waste Analysis							
TOC (%)**	4.3				3%	5%	6%
Loss on Ignition (%) **	8.4				--	--	10%
BTEX (µg/kg)#	< 10				6000	--	--
Sum of PCBs (mg/kg)**	< 0.30				1	--	--
Mineral Oil (mg/kg) <small>EH,1D,CU,AL</small>	800				500	--	--
Total PAH (WAC-17) (mg/kg)	985				100	--	--
pH (units)**	8.0				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	2.0				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.010	< 0.010		< 0.050	0.5	2	25
Barium *	0.031	0.016		0.18	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	0.011	0.0037		0.047	0.5	10	70
Copper *	0.026	0.019		0.20	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	0.010	< 0.0030		0.040	0.5	10	30
Nickel *	0.0020	0.0011		0.012	0.4	10	40
Lead *	< 0.0050	< 0.0050		0.047	0.5	10	50
Antimony *	0.018	0.0084		0.096	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	0.012	0.0089		0.093	4	50	200
Chloride *	5.8	< 4.0		17	800	15000	25000
Fluoride*	1.0	0.41		4.9	10	150	500
Sulphate *	56	7.8		140	1000	20000	50000
TDS*	160	53		670	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	16	13		140	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.60						
Dry Matter (%)	92						
Moisture (%)	8.1						
Stage 1							
Volume Eluate L2 (litres)	0.34						
Filtered Eluate VE1 (litres)	0.23						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results							
Report No:	23-54840						
				Client: PRPLTD			
Location	Rotherhithe Old Road						
Lab Reference (Sample Number)	2801973			Landfill Waste Acceptance Criteria			
Sampling Date	30/08/2023			Limits			
Sample ID	WS4 4			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)	1.20						
Solid Waste Analysis							
TOC (%)**	1.8				3%	5%	6%
Loss on Ignition (%) **	6.8				--	--	10%
BTEX (µg/kg)#	< 10				6000	--	--
Sum of PCBs (mg/kg)**	< 0.30				1	--	--
Mineral Oil (mg/kg) <small>EH,1D,CU,AL</small>	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	2.8				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.010	< 0.010		0.076	0.5	2	25
Barium *	0.026	0.011		0.13	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	< 0.0010	< 0.0010		< 0.0050	0.5	10	70
Copper *	0.024	0.020		0.21	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	0.035	0.012		0.14	0.5	10	30
Nickel *	0.0025	0.0025		0.025	0.4	10	40
Lead *	< 0.0050	< 0.0050		< 0.020	0.5	10	50
Antimony *	0.0066	0.0078		0.077	0.06	0.7	5
Selenium *	0.016	< 0.010		< 0.040	0.1	0.5	7
Zinc *	0.013	0.0045		0.053	4	50	200
Chloride *	13	< 4.0		34	800	15000	25000
Fluoride*	0.18	0.15		1.5	10	150	500
Sulphate *	140	22		340	1000	20000	50000
TDS*	310	96		1200	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	11	16		150	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.50						
Dry Matter (%)	73						
Moisture (%)	27						
Stage 1							
Volume Eluate L2 (litres)	0.29						
Filtered Eluate VE1 (litres)	0.18						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 23-54840
 Project / Site name: Rotherhithe Old Road

* 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 *
2801972	WS1	1	0.5	Brown sand with gravel.
2801973	WS4	4	1.2	Brown clay with gravel.

Analytical Report Number : 23-54840
 Project / Site name: Rotherhithe Old Road

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. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Preparation WAC leachate		In-house method	L043-PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	ISO 17025
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L031-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil in Soil C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS

Analytical Report Number : 23-54840
 Project / Site name: Rotherhithe Old Road

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 organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L023-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457-3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025

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.

- Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

Sample Deviation Report



Analytical Report Number : 23-54840

Project / Site name: Rotherhithe Old Road

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS1	1	M	2801972	b	BTEX (Sum of BTEX compounds) in soil	L073B-PL	b
WS1	1	M	2801972	b	Mineral Oil in Soil C10 - C40	L076-PL	b
WS1	1	M	2801972	b	PCB's by GC-MS in soil	L027-PL	b
WS1	1	M	2801972	b	Speciated WAC-17 PAHs in soil	L064-PL	b
WS4	4	M	2801973	b	BTEX (Sum of BTEX compounds) in soil	L073B-PL	b
WS4	4	M	2801973	b	Mineral Oil in Soil C10 - C40	L076-PL	b
WS4	4	M	2801973	b	PCB's by GC-MS in soil	L027-PL	b
WS4	4	M	2801973	b	Speciated WAC-17 PAHs in soil	L064-PL	b



Dominic Larkins
PRP Limited
22 Warren Park Way
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e: dominic.larkins@prp.uk.com

Analytical Report Number : 23-54839

Project / Site name:	Rotherhithe Old Road	Samples received on:	05/09/2023
Your job number:	82099	Samples instructed on/ Analysis started on:	05/09/2023
Your order number:	82099	Analysis completed by:	14/09/2023
Report Issue Number:	1	Report issued on:	14/09/2023
Samples Analysed:	6 soil samples		

Signed: 

Joanna Szwagrak
Junior Reporting Specialist
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.

Analytical Report Number: 23-54839
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number				2801966	2801967	2801968	2801969	2801970
Sample Reference				WS1	WS1	WS2	WS2	WS3
Sample Number				1	1	2	2	3
Depth (m)				1.00	3.50	0.50	2.00	1.50
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
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	< 0.1	27	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	4	15	22	29
Total mass of sample received	kg	0.001	NONE	0.5	0.6	0.5	0.5	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.8	8.3	8.5	7.9	7.7
Total Sulphate as SO4	%	0.005	MCERTS	0.146	0.032	1.08	0.067	0.159
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.124	1.66	0.213	0.973
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	170	124	1660	213	973
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	41	9	15	9.1	14
Total Sulphur	%	0.005	MCERTS	0.068	0.017	0.445	0.04	0.076
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	3.5	< 2.0	< 2.0	9

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	8.4	8.5	13	12	55
Magnesium (leachate equivalent)	mg/l	2.5	NONE	4.2	4.3	6.6	5.9	27

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

Analytical Report Number: 23-54839
 Project / Site name: Rotherhithe Old Road
 Your Order No: 82099

Lab Sample Number	2801971			
Sample Reference	WS4			
Sample Number	4			
Depth (m)	1.50			
Date Sampled	30/08/2023			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	26
Total mass of sample received	kg	0.001	NONE	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.8
Total Sulphate as SO ₄	%	0.005	MCERTS	0.104
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.29
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	290
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	17
Total Sulphur	%	0.005	MCERTS	0.083
Ammoniacal Nitrogen as NH ₄	mg/kg	0.5	MCERTS	< 0.5
Ammonium as NH ₄ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	15

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	11
Magnesium (leachate equivalent)	mg/l	2.5	NONE	5.5

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

Analytical Report Number : 23-54839

Project / Site name: Rotherhithe Old Road

* 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 *
2801966	WS1	1	1	Brown clay and sand with brick.
2801967	WS1	1	3.5	Brown sand with gravel and stones.
2801968	WS2	2	0.5	Brown sand with gravel.
2801969	WS2	2	2	Brown clay and sand with gravel.
2801970	WS3	3	1.5	Brown clay.
2801971	WS4	4	1.5	Brown clay and sand with gravel.

Analytical Report Number : 23-54839
Project / Site name: Rotherhithe Old Road

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
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	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	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
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.	L019-UK/PL	D	NONE
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	L082-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	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 Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	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.



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
 Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
 Unit 8 Harrowden Road
 Brackmills Industrial Estate
 Northampton NN4 7EB



4041

Client: PRP Limited
 Client Address: 22 Warren Park Way, Enderby,
 Leicester, LE19 4SA

Client Reference: 82099
 Job Number: 23-55158-1
 Date Sampled: 30/08/2023
 Date Received: 05/09/2023
 Date Tested: 15/09/2023
 Sampled By: Client - PRP

Contact: Dominic Larkins
 Site Address: Rotherhithe Old Road

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

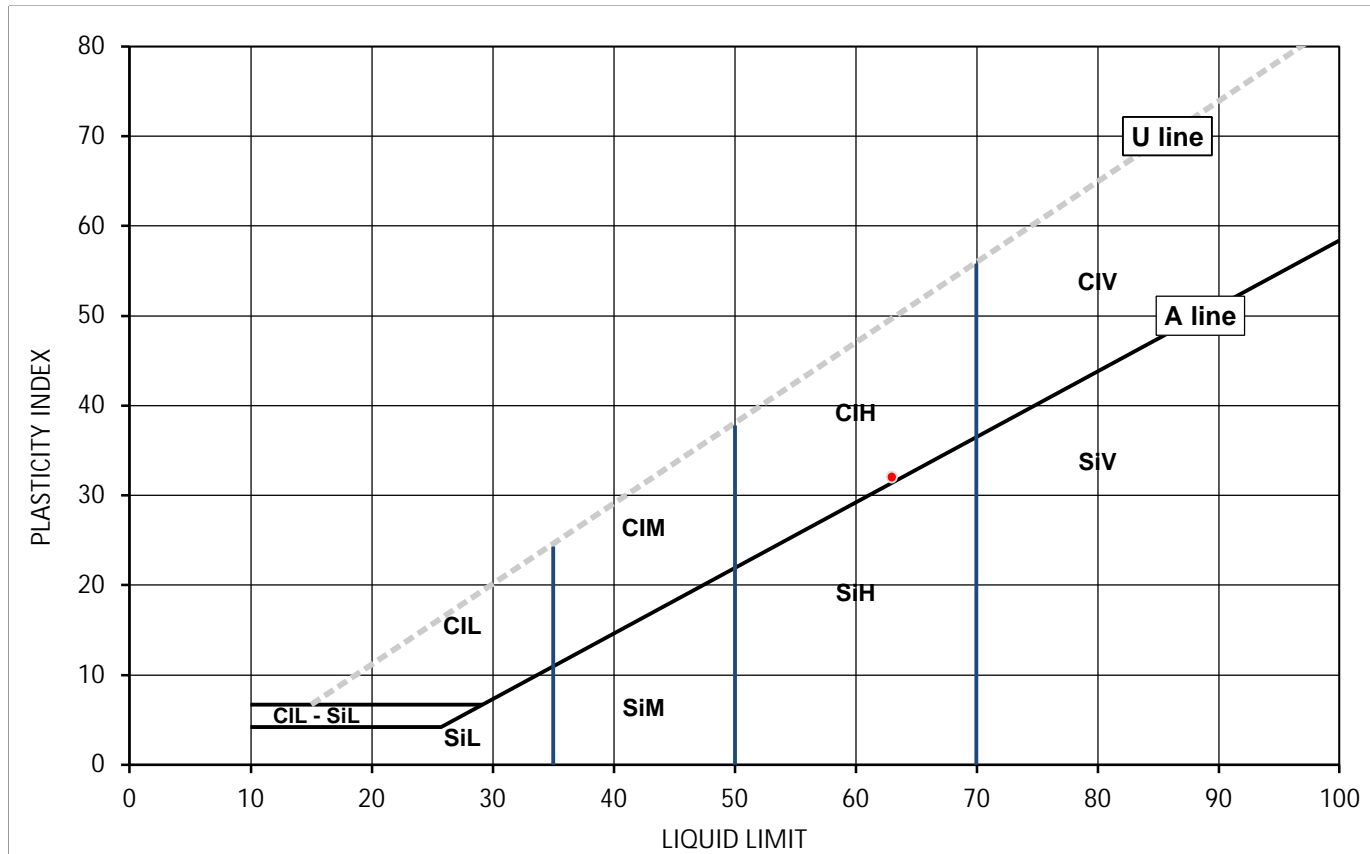
Test Results:

Laboratory Reference: 2803658
 Hole No.: WS1
 Sample Reference: Not Given
 Sample Description: Brown silty CLAY

Depth Top [m]: 2.50
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
38	63	31	32	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	below 35
		M	35 to 50
		H	50 to 70
		V	exceeding 70
		O	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Janoszek
 PL Environmental & Geotechnical Lab Production Specialist
 for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
 Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
 Unit 8 Harrowden Road
 Brackmills Industrial Estate
 Northampton NN4 7EB



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 Sampled By: Client - PRP

Contact: Dominic Larkins
 Site Address: Rotherhithe Old Road

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

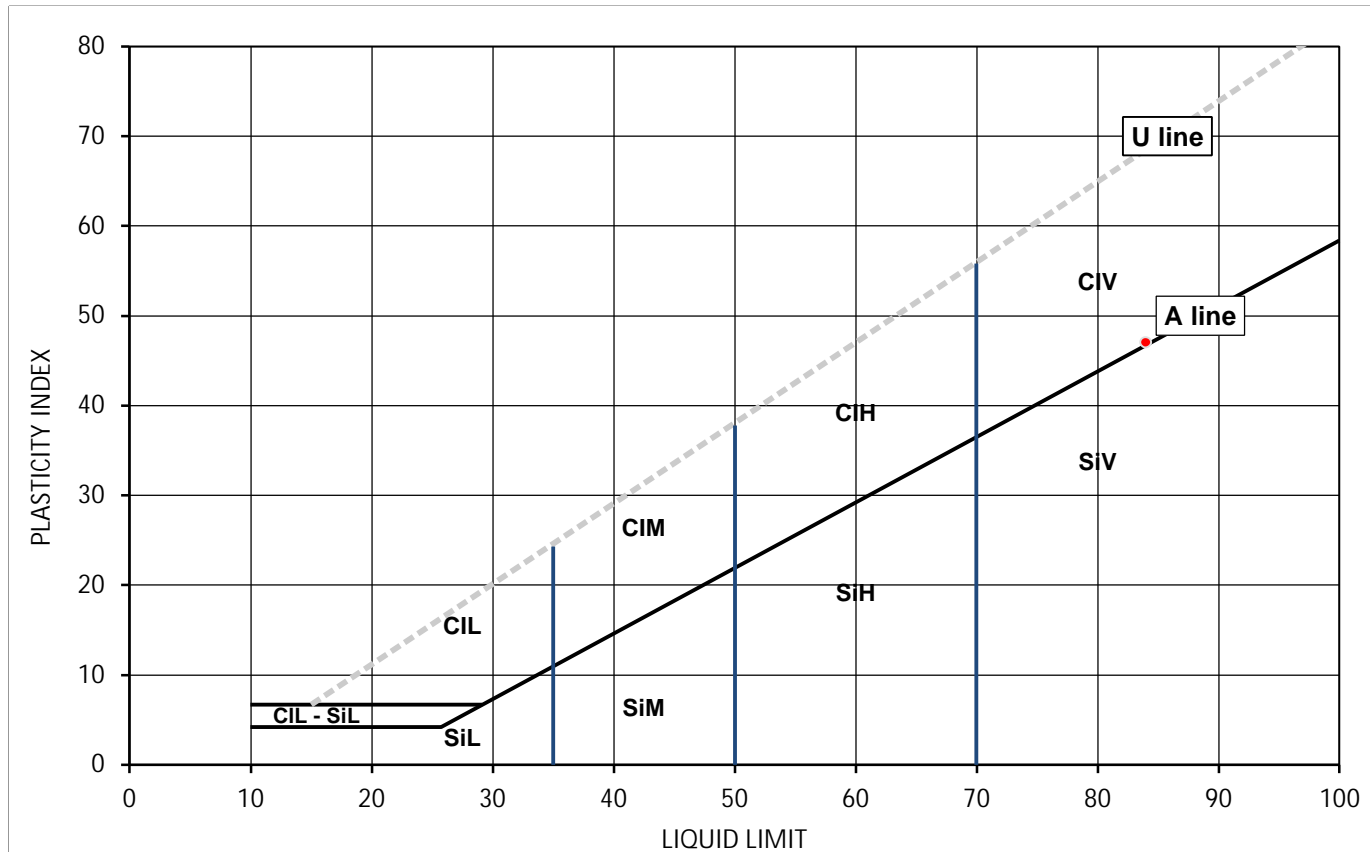
Test Results:

Laboratory Reference: 2803659
 Hole No.: WS3
 Sample Reference: Not Given
 Sample Description: Brown silty CLAY

Depth Top [m]: 1.00
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
45	84	37	47	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	below 35
		M	35 to 50
		H	50 to 70
		V	exceeding 70
		O	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Janoszek
 PL Environmental & Geotechnical Lab Production Specialist
 for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
 Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
 Unit 8 Harrowden Road
 Brackmills Industrial Estate
 Northampton NN4 7EB



4041

Client: PRP Limited
 Client Address: 22 Warren Park Way, Enderby,
 Leicester, LE19 4SA

Client Reference: 82099
 Job Number: 23-55158-1
 Date Sampled: 30/08/2023
 Date Received: 05/09/2023
 Date Tested: 15/09/2023
 Sampled By: Client - PRP

Contact: Dominic Larkins
 Site Address: Rotherhithe Old Road

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

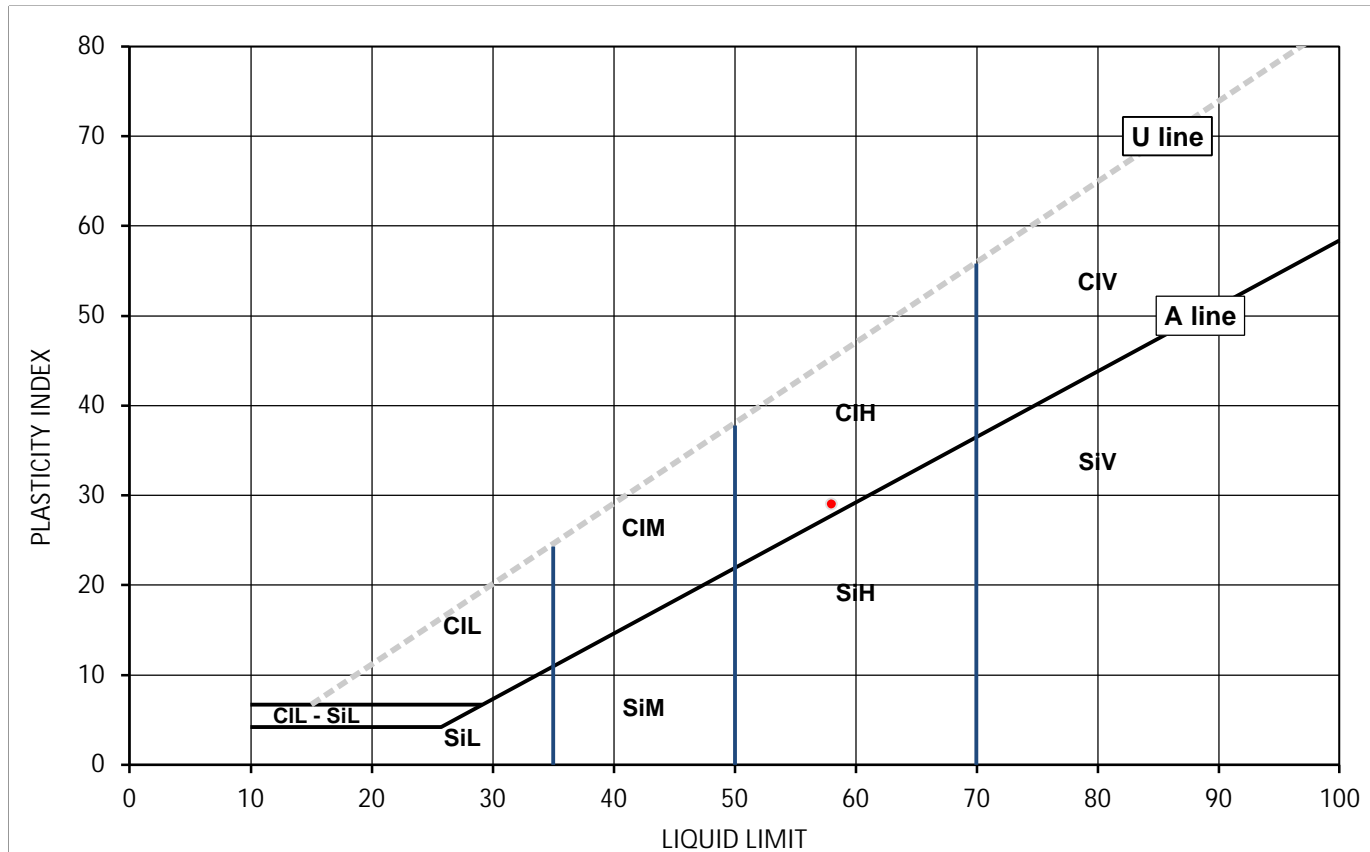
Test Results:

Laboratory Reference: 2803660
 Hole No.: WS3
 Sample Reference: Not Given
 Sample Description: Brown slightly sandy silty CLAY

Depth Top [m]: 2.00
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
43	58	29	29	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	below 35
		M	35 to 50
		H	50 to 70
		V	exceeding 70
		O	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Janoszek
 PL Environmental & Geotechnical Lab Production Specialist
 for and on behalf of i2 Analytical Ltd

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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: PRP Limited
Client Address: 22 Warren Park Way, Enderby,
Leicester, LE19 4SA

Water Content by BS 1377-2:1990: Clause 3.2
Atterberg by BS 1377-2: 1990:
Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5

Client Reference: 82099
Job Number: 23-55158-1
Date Sampled: 30/08/2023
Date Received: 05/09/2023
Date Tested: 15/09/2023
Sampled By: Client - PRP

Contact: Dominic Larkins
Site Address: Rotherhithe Old Road

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W] %	Water Content BS EN ISO 17892-1 [W] %	Atterberg				Density			Total Porosity# %	
		Reference	Depth Top m	Depth Base m	Type					% Passing 425um	WL %	Wp %	Ip %	bulk Mg/m3	dry Mg/m3	PD Mg/m3		
2803658	WS1	Not Given	2.50	Not Given	D	Brown silty CLAY	Atterberg 1 Point	38		100	63	31	32					
2803659	WS3	Not Given	1.00	Not Given	D	Brown silty CLAY	Atterberg 1 Point	45		100	84	37	47					
2803660	WS3	Not Given	2.00	Not Given	D	Brown slightly sandy silty CLAY	Atterberg 1 Point	43		100	58	29	29					

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Monika Janoszek
PL Environmental & Geotechnical Lab Production Specialist
for and on behalf of i2 Analytical Ltd

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SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: PRP Limited
Client Address: 22 Warren Park Way, Enderby,
Leicester, LE19 4SA

Contact: Dominic Larkins
Site Address: Rotherhithe Old Road

Client Reference: 82099
Job Number: 23-55158-1
Date Sampled: 30/08/2023
Date Received: 05/09/2023
Date Tested: 15/09/2023
Sampled By: Client - PRP

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC %	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type							
2803658	WS1	Not Given	2.50	Not Given	D	Brown silty CLAY		38	Sample was quartered, oven dried at 106.6 °C			
2803659	WS3	Not Given	1.00	Not Given	D	Brown silty CLAY		45	Sample was quartered, oven dried at 106.6 °C			
2803660	WS3	Not Given	2.00	Not Given	D	Brown slightly sandy silty CLAY		43	Sample was quartered, oven dried at 106.6 °C			

Comments:

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Signed:

Monika Janoszek
PL Environmental & Geotechnical Lab Production Specialist
for and on behalf of i2 Analytical Ltd

APPENDIX VI**GENERAL CONDITIONS**

1. This report has been prepared and written specifically for the client named in the introduction and is exclusively for his/her/their benefit. No reliance may be placed in the contents of this report by any third party except with the express agreement of the original client and the written agreement of PRP. Such written agreement may require the payment of an additional fee.
2. The recommendations sections of this report only provide an overview of the guidance and should not be specifically relied upon in their own right but should be considered in relation to the whole report and the development described in this report.
3. This report has been prepared and written in the context of the proposals for the development of the site as stated by the client and will not be valid in a differing context. Furthermore, new information, improved practices, or legislation may necessitate alterations to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of this report, it should be referred to us for reassessment.
4. The assessment and interpretation of contamination and associated risks are based upon the scope of the work described in the fee proposal and agreed with the client, the report may not be sufficient to fully address the contamination or allow a detailed remediation scheme to proceed without further investigation or analysis.
5. Any assessments made in this report are based on the ground conditions and as revealed by the test pits and boreholes together with the results of any field or laboratory testing undertaken and where appropriate other relevant data which may have been obtained for the site. The sources of such information are detailed in this report and while PRP use only such sources as are believed to be reliable, PRP will not be liable for the authenticity or reliability of information obtained from others.
6. Notwithstanding that factual reports from third parties concerning asbestos or mould of any kind may have been included for information purposes in this report, PRP will have no liability whatsoever for any claim or claims arising related to asbestos or mould of any kind.
7. There may also be special conditions appertaining to the site which were not revealed by the investigation and which will not, therefore, have been considered in this report. Any assessments may be subject to amendment in the light of additional information becoming available.
8. Whilst an opinion may be expressed or implied in this report on possible configurations of strata between or beyond test pit or borehole locations, or on the possible presence of features based on either visual, verbal or published evidence, this is for guidance only and no liability can be accepted for the accuracy of such opinions.
9. Comments on groundwater conditions will have been based on observations made only at the time of the investigation unless otherwise stated. It should be noted, however, that groundwater levels vary due to seasonal and other effects.
10. This report is not a site categorisation, and hazards could occur which have not been detected.
11. Where data has been provided or is made available to PRP and this has been used in the report, it has been assumed that the information is correct. No responsibility can be accepted by PRP for inaccuracies within the data supplied.
12. The copyright in this report and other related plans and documents prepared by PRP is owned by them and no such report, plan or document may be reproduced, published, or adapted without their written consent. Complete copies of the report may however be made and distributed by the client as an expedient in dealing with matters related to its commission.
13. This report has been prepared solely for the client's purposes in obtaining planning permission and discharge of the planning conditions related to the proposed development indicated in the report. The discharge of these conditions does not constitute that the site could be determined under Part IIA of the Environmental Protection Act 1990.

APPENDIX VII

REFERENCES

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