Human Health Risk Assessment Report
Rye Bank Fields

Reference:13-533-R3-2
Date: June 2020

HUMAN HEALTH RISK ASSESSMENT REPORT

Rye Bank Fields
Ryebank Road,
Manchester,
Chorlton
M21 9LU

Prepared for:

Manchester Metropolitan University

Report Ref: 13-533-R3-2
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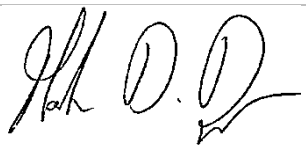
SIGNATURE			

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1. INTRODUCTION

1.1. BACKGROUND

E3P have previously completed a ground investigation at the subject site, Rye Bank Fields, Chorlton, between 3rd and 5th December 2019 on behalf of Manchester Metropolitan University. The investigation comprised 30 mechanically excavated trial pits, 12 window sample probeholes, two cable percussion boreholes, ten Dynamic Cone Penetrometers and the installation of environmental monitoring installations. The detailed findings of the ground investigation are recorded in the E3P Phase II Geoenvironmental Site Assessment (Ref, 13-533-R2, dated March 2020).

Historically the site comprised clay pits associated with a brick works which was subsequently backfilled. As part of the E3P Phase II Geoenvironmental Site Assessment (Ref, 13-533-R2, dated March 2020) a Tier 1 Human Health Risk Assessment was undertaken to determine if any potential contaminants within the underlying soils and groundwater pose an unacceptable level of risk to the identified receptors. The assessment was undertaken against criteria for residential end use with plant uptake. However, the site is currently used by local resident for recreational activities including walking, foraging and more recently the planting of fruit trees; therefore Manchester Metropolitan University have requested E3P assess the data obtained during the initial site investigation in relation to current activities.

The aim of this Human Health Risk Assessment Report is to produce a Tier 1 Human Health Risk Assessments of soil data obtained by E3P (Ref, 13-533-R2, dated March 2020) during the ground investigation, comparing the data against screening criteria for Public Open Space and Allotment end use.

1.2. PROPOSED DEVELOPMENT

E3P understands that Manchester Metropolitan University (MMU) are considering the proposed divestment of their asset at Rye Bank Fields, Chorlton which is deemed to be surplus to requirement. As part of the divestment a Development Framework was approved by Manchester City Council in June 2019 that promotes a high quality residential development across the site with associated gardens, estate roads and infrastructure. A proposed development plan has not yet been made available to E3P.

1.3. PREVIOUS REPORTS

The following phases of geoenvironmental investigations have previously been carried out at the site:

- **E3P** – Phase I Geoenvironmental Site Assessment, Ref 13-533-R1-1, dated March 2020
- **E3P** – Phase II Geoenvironmental Site Assessment, Ref 13-533-R2-1, dated March 2020
- **WSP Parsons Brinckerhoff** – Environmental Input Report, Ref 70014100, dated October 2015
- **WSP Parsons Brinckerhoff** – Geo-Environmental Appraisal, Ref 70014100, dated 18th September 2015;

1.4. OBJECTIVES

The objectives of the geoenvironmental assessment are as follows:

- Undertake a Human Health Tier 1 Assessment on soil samples obtained by E3P (Ref, 13-533-R2, dated March 202) during the ground investigation, comparing the data against screening criteria for Public Open Space and Allotment end use.

- Provide recommendations regarding future works required.

1.5. LIMITATIONS

The limitations of this report are presented in Appendix I.

1.6. CONFIDENTIALITY

E3P has prepared this report solely for the use of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from E3P; a charge may be levied against such approval.

2. TIER I QUALITATIVE CONTAMINATED LAND RISK ASSESSMENT

E3P has undertaken a Tier 1 qualitative risk assessment to determine if any potential contaminants within the underlying soils pose an unacceptable level of risk to the identified receptors.

At Tier 1 stage, the long term (chronic) human health toxicity of the soil has been assessed by comparing the on-site concentrations of organic and inorganic compounds with reference values published in LQM/CIEH S4UL (S4UL3267).

In the first instance, Table 2.1 details the comparison of soil data against allotment end use criteria.

TABLE 2.1 SUMMARY OF INORGANIC AND HYDROCARBON TOXICITY ASSESSMENT FOR AN ALLOTMENT END USE

DETERMINANT	UNIT	GAC	N	MC	LOC. OF EX	PATH WAY	ASSESSMENT
Arsenic	mg/kg	43	16	34	-	1	No Further Action
Cadmium	mg/kg	1.9	16	3.3 2.0	WS102 3.20 m WS112 2.30 m	1	**Further Action**
Chromium (VI)	mg/kg	1.8	7	36 26 23 43 6.0 24	TP105 0.10 m TP115 1.60 m TP116 1.50 m WS102 3.20 m WS105 3.80 m TP120 2.10 m	1	**Further Action**
Lead	mg/kg	200	16	820 230 460 1100 220 1000 660 230	TP105 0.10 m TP127 1.80 m TP128 0.80 m WS102 3.20 m TP101 0.10 m TP119 0.10 m TP120 2.10 m TP125 0.10 m	1	**Further Action**
Mercury	mg/kg	21	16	2.8	-	3	No Further Action
Nickel	mg/kg	53	16	58 80	WS102 3.20 m WS112 2.30 m	1	**Further Action**
Selenium	mg/kg	88	16	3.8	-	1	No Further Action
Copper	mg/kg	520	16	26005 20	TP128 0.80 m TP119 0.10 m	1	**Further Action**
Zinc	mg/kg	620	16	760 16002 500 1000	TP128 0.80 m WS102 3.20 m WS112 2.30 m TP119 0.10 m	1	**Further Action**
Cyanide - Total	mg/kg	791	16	120	-	1	No Further Action
Phenols - Total.	mg/kg	210	7	47	-	1	No Further Action
Asbestos	Fibres	NFD	17	1.183 % 0.036 % 0.014 % <0.001 %	WS101 1.80 m WS102 3.20 m WS112 2.30 m WS110 0.50 m	4	**Further Action**
Naphthalene	mg/kg	4.1	12	5.1	TP127 1.80 m	3	No Further Action
Acenaphthylene	mg/kg	28	12	11	-	2	No Further Action
Acenaphthene	mg/kg	34	12	2.8	-	1	No Further Action
Fluorene	mg/kg	27	12	17	-	1	No Further Action
Phenanthrene	mg/kg	15	12	19 150	TP128 0.80 m TP119 0.10 m	2	**Further Action**
Anthracene	mg/kg	380	12	46	-	2	No Further Action

DETERMINANT	UNIT	GAC	N	MC	LOC. OF EX	PATH WAY	ASSESSMENT
Fluoranthene	mg/kg	52	12	150	TP119 0.10 m	2	Further Action
Pyrene	mg/kg	110	12	130	TP119 0.10 m	2	Further Action
Benzo(a)Anthracene	mg/kg	2.9	12	3.1 3.4 10 4.4	TP103 1.30 m TP105 0.10 m TP128 0.80 m TP119 0.10 m	2	Further Action
Chrysene	mg/kg	4.1	12	8.7 37	TP128 0.80 m TP119 0.10 m	2	Further Action
Benzo(b)Fluoranthene	mg/kg	0.99	12	3.0 2.8 11 3.0 1.1 50 3.3	TP103 1.30 m TP105 0.10 m TP128 0.80 m TP101 0.10 m TP113 0.10 m TP119 0.10 m TP125 0.10 m	2	Further Action
Benzo(k)Flouranthene	mg/kg	37	12	15	-	2	No Further Action
Benzo(a)Pyrene	mg/kg	0.97	12	2.7 2.7 8.9 2.5 1.1 45 2.8	TP103 1.30 m TP105 0.10 m TP128 0.80 m TP101 0.10 m TP113 0.10 m TP119 0.10 m TP125 0.10 m	2	Further Action
Indeno(123-cd)Pyrene	mg/kg	9.5	12	30	TP119 0.10 m	2	Further Action
Dibenzo(a,h)Anthracene	mg/kg	0.14	12	0.42 0.39 1.1 0.44 0.2 7.2 0.42	TP103 1.30 m TP105 0.10 m TP128 0.80 m TP101 0.10 m TP113 0.10 m TP119 0.10 m TP125 0.10 m	2	Further Action
Benzo(ghi)Perylene	mg/kg	290	12	25	-	2	No Further Action
TPH C5-C6 (aliphatic)	mg/kg	730	3	<0.001	-	3	No Further Action
TPH C6-C8 (aliphatic)	mg/kg	2300	3	<0.001	-	3	No Further Action
TPH C8-C10 (aliphatic)	mg/kg	320	3	<0.001	-	3	No Further Action
TPH C10-C12 (aliphatic)	mg/kg	2200	3	13	-	3	No Further Action
TPH C12-C16 (aliphatic)	mg/kg	11000	3	20	-	1	No Further Action
TPH C16-C35 (aliphatic)	mg/kg	260000	3	76	-	1	No Further Action
TPH C5-C7 (aromatic)	mg/kg	13	3	<0.001	-	1	No Further Action
TPH C7-C8 (aromatic)	mg/kg	22	3	<0.001	-	3	No Further Action
TPH C8-C10 (aromatic)	mg/kg	8.6	3	<0.001	-	3	No Further Action
TPH C10-C12 (aromatic)	mg/kg	13	3	7.9	-	3	No Further Action

DETERMINANT	UNIT	GAC	N	MC	LOC. OF EX	PATH WAY	ASSESSMENT
TPH C12-C16 (aromatic)	mg/kg	23	3	200 34	TP116 1.50 m WS102 3.20 m	3	Further Action
TPH C16-C21 (aromatic)	mg/kg	46	3	1100, 110 180	TP116 1.50 m TP127 1.80 m WS102 3.20 m	1	Further Action
TPH C21-C35 (aromatic)	mg/kg	370	3	910 250 510	TP116 1.50 m TP127 1.80 m WS102 3.20 m	1	Further Action
TPH C5-C6 (aliphatic)*	mg/kg	730	14	<1.0	-	3	No Further Action
TPH C6-C8 (aliphatic)*	mg/kg	2300	14	<0.1	-	3	No Further Action
TPH C8-C10 (aliphatic)*	mg/kg	320	14	<0.1	-	3	No Further Action
TPH C10-C12 (aromatic)*	mg/kg	13	14	40	TP103 1.30 m	3	Further Action
TPH C12-C16 (aromatic)*	mg/kg	23	14	220	TP119 0.10 m	3	Further Action
TPH C16-C21 (aromatic)*	mg/kg	46	14	67 47 150 51 1700 140	TP103 1.30 m TP105 0.10 m TP128 0.80 m TP113 0.10 m TP119 0.10 m TP120 2.10 m	1	Further Action
TPH C21-C35 (aromatic)*	mg/kg	370	14	460, 1300	TP128 0.80 m TP119 0.10 m	1	Further Action

Notes
Main exposure pathways: 1 = soil ingestion, 2 = dermal contact and ingestion, 3 = vapour inhalation (indoor), 4 = dust inhalation.
Abbreviations: GAC = general assessment criteria, n = number of samples, MC = maximum concentration; Loc of Ex = location of exceedance; NFD = no fibres detected.

Referring to Table 2.1, the results of this direct comparison indicates that the data exceeds the screening criteria for allotment end use for the following contaminants:

- Cadmium;
- Chromium (VI);
- Lead;
- Nickel;
- Copper;
- Zinc;
- Asbestos;
- Naphthalene;
- Phenanthrene;

- Fluoranthene;
- Pyrene;
- Benzo(a)Anthracene;
- Chrysene;
- Benzo(b)Fluoranthene;
- Benzo(a)Pyrene;
- Indeno(123-cd)Pyrene;
- Dibenzo(a,h)Anthracene;
- TPH C10-C12 (aromatic);
- TPH C12-C16 (aromatic);
- TPH C16-C21 (aromatic);
- TPH C12-C16 (aromatic);
- TPH C16-C21 (aromatic); and
- TPH C21-C35 (aromatic).

The laboratory analysis confirms the assessment within the initial conceptual site model that the main constituents of concern were likely to be heavy metals, asbestos, PAHs, and hydrocarbon compounds.

In relation to these exceedances, the following can be determined:

- The main exposure pathways based on the Tier I exceedances are:
  - Soil ingestion;
  - Vapour inhalation (indoor);
  - Dust inhalation;
  - Dermal contact and ingestion; and,
  - Consumption of homegrown vegetables.

A comparison against soil analysis against Public Open Space end use criteria has been completed and summarised within Table 2.2.

TABLE 2.2 SUMMARY OF INORGANIC AND HYDROCARBON TOXICITY ASSESSMENT FOR A PUBLIC OPEN SPACE END USE

DETERMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATH WAY	ASSESSMENT
Arsenic	mg/kg	170	16	34	-	1	No Further Action
Cadmium	mg/kg	532	16	1.8	-	1	No Further Action
Chromium (VI)	mg/kg	220	7	43	-	1	No Further Action
Lead	mg/kg	200	16	820 230 460 1100 220 1000 680 230	TP105 0.10 m TP1271.80 m TP128 0.80 m WS102 3.20 m TP101 0.10 m TP119 0.10 m TP120 2.10 m TP125 0.10 m	1	**Further Action**
Mercury**	mg/kg	30	16	2.8	-	3	No Further Action
Nickel	mg/kg	800	16	80	-	1	No Further Action
Selenium	mg/kg	1800	16	3.8	-	1	No Further Action
Copper	mg/kg	44000	16	2600	-	1	No Further Action
Zinc	mg/kg	170000	16	2500	-	1	No Further Action
Cyanide - Total	mg/kg	791	16	120	-	1	-
Phenols - Total.	mg/kg	210	7	47	-	1	-
Asbestos	Fibres	NFD	17	1.18%, 0.036 %, 0.014 %, <0.001 %	WS101 1.80 m WS102 3.20 m WS112 2.30 m WS110 0.50 m	4	**Further Action**
Naphthalene	mg/kg	1200	12	0.94	-	3	No Further Action
Acenaphthylene	mg/kg	29000	12	11	-	2	No Further Action
Acenaphthene	mg/kg	29000	12	2.8	-	1	No Further Action
Fluorene	mg/kg	20000	12	17	-	1	No Further Action
Phenanthrene	mg/kg	6200	12	150	-	2	No Further Action
Anthracene	mg/kg	150000	12	46	-	2	No Further Action
Fluoranthene	mg/kg	6300	12	150	-	2	No Further Action
Pyrene	mg/kg	15000	12	130	-	2	No Further Action
Benzo(a)Anthracene	mg/kg	49	12	44	-	2	No Further Action
Chrysene	mg/kg	93	12	37	-	2	No Further Action

DETERMINANT	UNITS	GAC	N	MC	LOC. OF EX	PATH WAY	ASSESSMENT
Benzo(b)Fluoranthene	mg/kg	13	12	50	TP119 0.10 m	2	Further Action
Benzo(k)Fluoranthene	mg/kg	370	12	15	-	2	No Further Action
Benzo(a)Pyrene	mg/kg	11	12	45	TP119 0.10 m	2	Further Action
Indeno(123-cd)Pyrene	mg/kg	150	12	30	-	2	No Further Action
Dibenzo(a,h)Anthracene	mg/kg	1.1	12	1.1 7.2	TP128 0.80 m TP119 0.10 m	2	Further Action
Benzo(ghi)Perylene	mg/kg	1400	12	25	-	2	No Further Action
TPH C5-C6 (aliphatic)	mg/kg	95000	3	<0.001	-	3	No Further Action
TPH C6-C8 (aliphatic)	mg/kg	150000	3	<0.001	-	3	No Further Action
TPH C8-C10 (aliphatic)	mg/kg	14000	3	<0.001	-	3	No Further Action
TPH C10-C12 (aliphatic)	mg/kg	21000	3	13	-	2	No Further Action
TPH C12-C16 (aliphatic)	mg/kg	25000	3	20	-	1	No Further Action
TPH C16-C35 (aliphatic)	mg/kg	450000	3	76	-	1	No Further Action
TPH C5-C7 (aromatic)	mg/kg	76000	3	<0.001	-	1	No Further Action
TPH C7-C8 (aromatic)	mg/kg	87000	3	<0.001	-	3	No Further Action
TPH C8-C10 (aromatic)	mg/kg	7200	3	<0.001	-	3	No Further Action
TPH C10-C12 (aromatic)	mg/kg	9200	3	7.9	-	3	No Further Action
TPH C12-C16 (aromatic)	mg/kg	10000	3	200	-	3	No Further Action
TPH C16-C21 (aromatic)	mg/kg	7600	3	1100	-	1	No Further Action
TPH C21-C35 (aromatic)	mg/kg	7800	3	910	-	1	No Further Action
TPH C5-C6 (aliphatic)*	mg/kg	95000	14	<1.0	-	3	No Further Action
TPH C6-C8 (aliphatic)*	mg/kg	150000	14	<0.1	-	3	No Further Action
TPH C8-C10 (aliphatic)*	mg/kg	14000	14	<0.1	-	3	No Further Action
TPH C10-C12 (aromatic)*	mg/kg	9200	14	40	-	3	No Further Action
TPH C12-C16 (aromatic)*	mg/kg	10000	14	220	-	3	No Further Action
TPH C16-C21 (aromatic)*	mg/kg	7600	14	1700	-	1	No Further Action
TPH C21-C35 (aromatic)*	mg/kg	7800	14	1300	-	1	No Further Action

Notes
Main exposure pathways: 1 = soil ingestion, 2 = dermal contact and ingestion, 3 = vapour inhalation (indoor), 4 = dust inhalation.
Abbreviations: GAC = general assessment criteria, n = number of samples, MC = maximum concentration; Loc of Ex = location of exceedance; NFD = no fibres detected.

Referring to Table 2.2 the results of this direct comparison indicates that the data exceeds the screening criteria for a Public Open Space (POS) end use for the following contaminants:

- Lead;
- Asbestos;
- Benzo(b)Fluoranthene;
- Benzo(a)Pyrene;
- Dibenzo(a,h)Anthracene;

Asbestos was identified in four samples out of seventeen submitted for analysis. Asbestos in the form of Chrysotile and Amosite loose fibrous debris, loose fibres, bitumen and hard / cement type material was identified. Asbestos was identified within WS102 at 3.20 m bgl, WS112 at 2.30 m bgl, WS110 at 0.50 m bgl and WS101 a 1.80 m bgl. Asbestos piping and sheeting were visually identified in TP116 and TP119 respectively.

There have been no VOCs identified above the laboratory LOD of 1.0 µg/kg. The SVOC 2-Methylnaphthalene was identified above the limit of detection in TP116 at 1.50 m bgl (0.5 mg/kg), TP127 (4.0 mg/kg) and WS102 (3.20 mg/kg) which was identified in the Made Ground deposits associated with the infilling of the clay pits.

The laboratory analysis confirms the assessment within the initial conceptual site model that the main constituents of concern were likely to be heavy metals, asbestos and PAHs.

In relation to these exceedances, the following can be determined:

- The main exposure pathways based on the Tier I exceedances are:
  - Soil ingestion;
  - Vapour inhalation (indoor);
  - Dust inhalation
  - Dermal contact and ingestion;
  - Consumption of homegrown vegetables; and
- Exceedances have been identified between 0.10 m and 3.20 m bgl within the Made Ground deposits associated with the infilling of former clay pits.

HUMAN HEALTH RISK ASSESSMENT AND MITIGATION

Laboratory analysis of the soils across the site has indicated the presence of asbestos, elevated heavy metals, non-volatile PAHs, and non-volatile TPH compounds within the Made Ground.

The majority of the identified elevated concentrations have primary exposure pathways related to dermal contact and ingestion, soil ingestion and consumption of homegrown produce.

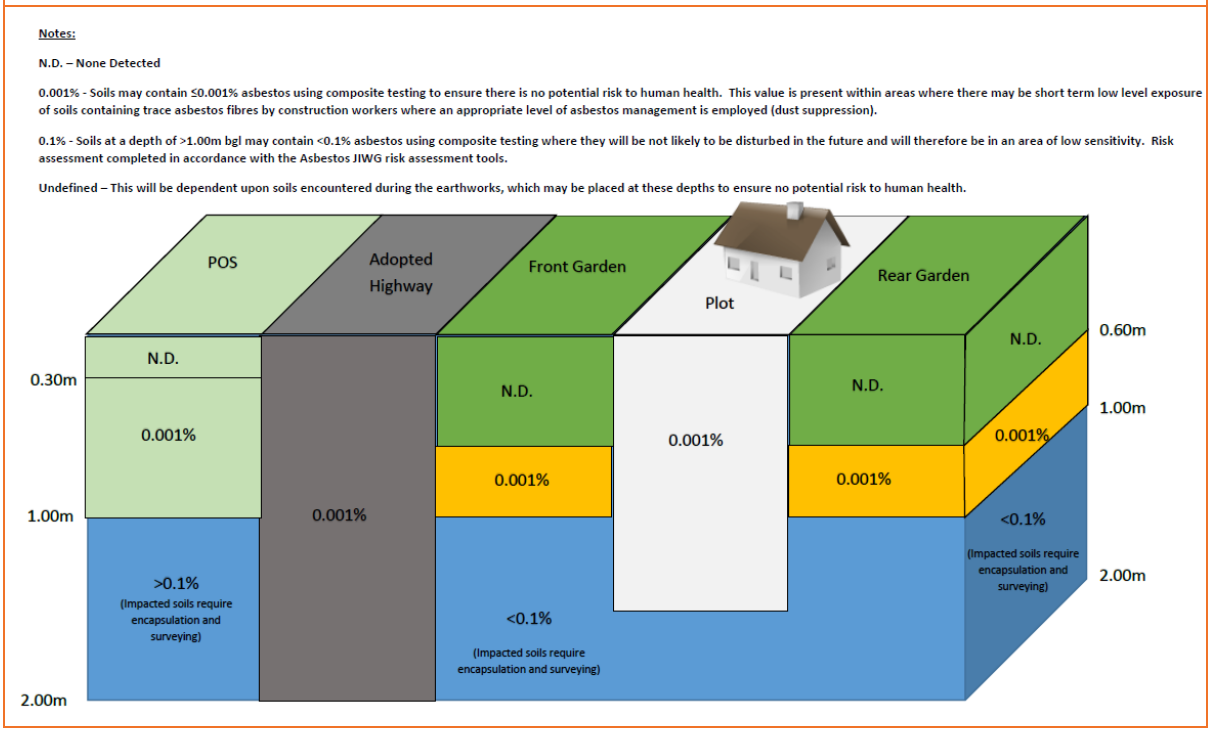
With regards to the elevated SVOCs, naphthalene and volatile TPHs, these present a potential volatilisation to indoor air risk. At present there are no buildings on site in which vapour could accumulate and therefore this risk can be negated to those currently utilising the site.

Asbestos has been identified in four locations across the site. Asbestos quantification has been completed which has identified concentrations to be <0.001% by hand picking weight in WS110 at 0.50 mbgl. However, concentrations above <0.001% by hand picking weight have been identified in WS101 at 1.80 mbgl at 1.183%, WS102 at 3.20 mbgl at 0.036% and WS112 at 2.30 mbgl at 0.014%.

It should be assumed that asbestos fibres are present throughout the Made Ground on site, and therefore materials should be managed according to the E3P Asbestos Risk Mitigation Conceptual Site Model shown in Figure 2.1.

Visual pieces of asbestos have been identified within the site. These should be handpicked, suitably bagged and removed off-site by a licensed waste contractor to a suitable site.

FIGURE 2.1 ASBESTOS RISK MITIGATION CONCEPTUAL SITE MODEL



USE OF THE SITE FOR ALLOTMENT END USE

When comparing the soil analysis against the criteria for allotment end use, there are multiple determinants that are considered to be exceeding. A number of these (Cadmium, Chromium (VI), Lead, Nickel, Copper, Zinc, Phenanthrene, Fluoranthene, Pyrene, Benzo (a)Anthracene, Chrysene, Benzo(b)Fluoranthene, Benzo(a)Pyrene, Indeno(123-cd)Pyrene, Dibenzo(a,h)Anthracene, TPH C16-C21 (aromatic), TPH C21-C35 (aromatic)) have the main exposure pathways of soil ingestion, dermal contact and ingestion and consumption of homegrown vegetables. The exceedances have been identified within both shallower and deeper Made Ground soils. It is understood that fruit trees have been planted in the south-eastern corner of the northern sector of the field. Although soils in this area have not been specifically tested as of yet, due to the homogenous nature of the Made Ground on site, it is highly likely that these exceedances are present where fruit trees have been planted. Therefore, from this high level comparison there is considered to be a theoretical long term risk to current users of the site from the identified determinants when cultivating vegetables and fruits.

USE OF THE SITE FOR PUBLIC OPEN SPACE END USE

When looking at the criteria for use of the site as POS, exceedances of determinants (lead, Benzo(b)Fluoranthene, Benzo(a)Pyrene, Dibenzo(a,h)Anthracene) have been identified against the criteria, where the main exposure pathways are soil ingestion and dermal contact and ingestion. Asbestos has also been identified within the soils. As with the allotment assessment the exceedances have been identified within both shallow and deep Made Ground underlying the site. Providing the soils are not disturbed there is deemed to be minimal risk to the general public. However as described above this has occurred during the planting of fruit trees and any other plants that has previously been undertaken.

A Joint Industry Working Group (JIWG) Receptor Ranking decision tool has been completed (Appendix V) in order to assess the risk-rank activities and receptors as part of a preliminary risk assessment under CLR11 at the site. The assessment has been completed using worst case scenario for the site and identified a medium overall ranking.

A further JIWG Receptor Ranking decision tool has been completed for adjacent properties next to the site which has identified a very low overall ranking. The very low risk is considered when there is no land disturbance on site.

The viability for trace asbestos fibres to enter ambient air is considered low with a significant dispersal rate suggesting that the potential for fibres to represent a risk to chronic human health of off site receptors is unlikely. Furthermore, Environmental Essentials have undertaken reassurance air monitoring and personal assessment samples on behalf of Manchester Metropolitan University during recent works on site. This testing concluded that all results proved to be satisfactory being below the limit of quantification and below the mask protection factor of the OPS operative(s) and OPS estimated exposure levels in the plan of work. Therefore, asbestos fibres are not considered to be entering the ambient air.

If the site is to be retained in its current configuration, mitigation measures are required to ensure no soil disturbance. If disturbed there is a risk to users of the site, it is recommended that measures are put in place to reduce and remove any potential of exposure to the site users.

3. CONTINUED AND FUTURE USE OF THE SITE.

From the analysis completed by E3P against allotment and POS screening criteria there are exceedances of determinants which represent a theoretical unacceptable degree of risk to chronic human health when assessing the viable exposure to a critical receptor.

The primary exposure would be attributed to consumption of fruits harvested from trees on-site, albeit this is a highly conservative assessment as the modelling scenario utilised is based on toxicology data derived from the cultivation of vegetables within an impacted soil.

It is recommended that members of the public are deterred from disturbing ground soils and planting plants or crops for human consumption.

Direct exposure to impacted materials within the context of a public open space use for a prolonged period of time is identified as a complete pollutant linkage, therefore mitigation measures should be considered to minimise direct exposure by dermal contact with the soils where significant anthropogenic material is present.

The E3P risk assessment is based on the assessment of chronic exposure / risk to human health of the critical receptor to ensure no unacceptable level of risk through disturbance of the site. It is important to note that the Tier 1 Generic Qualitative Risk Assessment completed to assess the potential for unacceptable degree of exposure as documented herein does not classify the site a ‘contaminated’.

END OF REPORT

APPENDIX I
LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between E3P and the client as indicated in Section 1.3.

2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information it has been assumed it is correct. No attempt has been made to verify the information.

3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.

4. During the site walkover, reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.

6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.

7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and do not constitute or replace full and proper surveys.

8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.

9. E3P cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by E3P is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by E3P in this connection without their explicit written agreement there to by E3P.

10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II
GLOSSARY

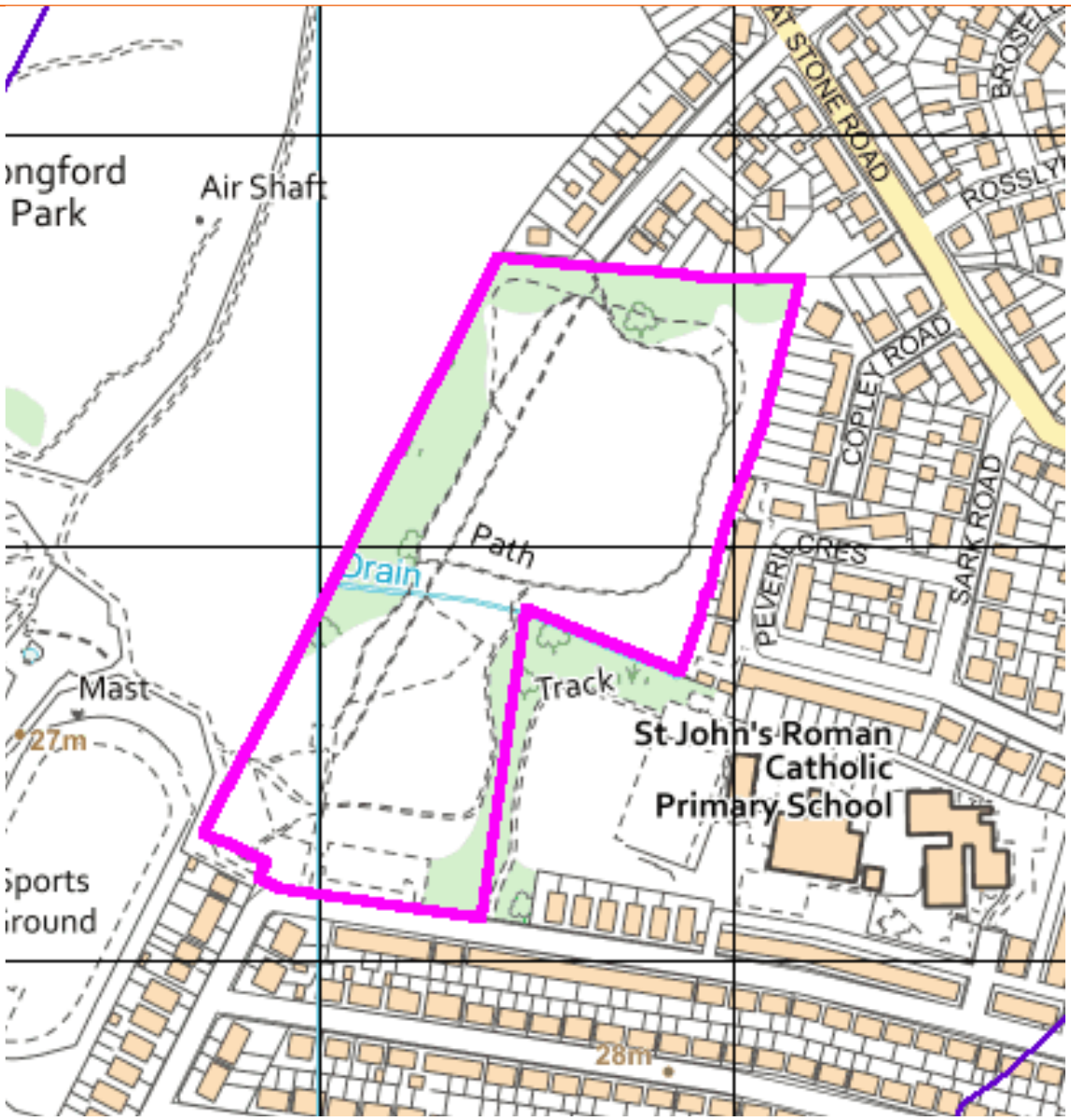
TERMS

ACM	Asbestos-containing material	**MMP**	Materials management plan
ADS	Acoustic design statement	**ND**	Not detected
AST	Above-ground storage tank	**NDP**	Nuclear density probe
BGS	British Geological Survey	**NMP**	Noise management plan
BSI	British Standards Institute	**NPSE**	Noise policy statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	**NR**	Not recorded
CA	Coal Authority	**PAH**	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	**PCB**	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	**PI**	Plasticity index
CIRIA	Construction Industry Research Association	**PID**	Photo ionisation detector
CLEA	Contaminated land exposure assessment	**POS**	Public open space
CML	Council of Mortgage Lenders	**PPE**	Personnel protective equipment
CoC	Contaminants of concern	**ProPG**	Professional practice guidance
CSM	Conceptual site model	**QA**	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	**SGV**	Soil guideline value
DWS	Drinking water standard	**SPH**	Separate-phase hydrocarbon
EA	Environment Agency	**SPT**	Standard penetration test
EQS	Environmental quality standard	**SVOC**	Semi-volatile organic compound
FFL	Finished floor level	**TPH**	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	**TPH CWG**	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	**UKWIR**	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	**UST**	Underground storage tank
HCV	Health criteria value	**VCC**	Vibro-concrete column
ICSM	Initial conceptual site model	**VOC**	Volatile organic compound
LEL	Lower explosive limit	**VRSC**	Vibro-replacement stone columns
LMRL	Lower method reporting limit	**VSC**	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	**WHO**	World Health Organisation
MCV	Moisture condition value	**WRAP**	Waste and Resources Action Programme
MIBK	Methyl isobutyl ketone	**WTE**	Water table elevation

m	Metres	**ppm**	Parts per million
km	Kilometres	**mg/m^3**	Milligram per metre cubed
% v/v	Percent volume in air	**m bgl bgl**	Metres below ground level
mb	Millibars (atmospheric pressure)	**m bcl**	Metre below cover level
l/hr	Litres per hour	**mAOD**	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	**kN/m^2**	Kilonewtons per metre squared
ppb	Parts per billion	**µm**	Micrometre
mg/kg	Milligrams per kilogram (parts per million)	**SSRT**	Site Specific Remediation Target
PSD	Particle Size Distribution	**DD**	Dry Density
CL:AIRE	Contaminated Land: Applications in Real Environments	**Mc**	Moisture Content
ρ	Bulk Density	**GPR**	Ground Penetrating Radar
NDP	Nuclear Density Probe	**FFL**	Finished Floor Level
LEL	Lower Explosive Limit	**UKWIR**	UK Water Industry Research
CIRIA	Construction Industry Research and Information Association	**LOD**	Limit of Detection

APPENDIX III
DRAWINGS

DRAWING 13-533-001 – SITE LOCATION PLAN



rsdd

Location Symbols

- WS101 — Approximate Window Sample Probehole Location
- TP101 — Approximate Trial Pit Location
- CP101 — Approximate Cable Percussive Borehole Location
- DCP101 — Approximate Dynamic Cone Penetrometer Test Location
- WS101(MW) — Approximate Window Sample Probehole Location with Install

Notes:

Client:
Manchester Metropolitan University

Job No: 13-533

Date: 27.02.2020

Drawing No: 004

Scale: NTS

Phase	Revision	Date	Issue	Drawn	Checked
P1	-	27.02.2020	DRAFT	LM	RH

Job Title:
Rye Bank Road, Chorlton

Drawing Title:
Exploratory Hole Location Plan

Environmental Engineering Partnerships Ltd
City Heliport & Business Centre
Eccles, Manchester, M30 7RU
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

Location Symbols

- Approximate Window Sample Probehole Location
- Approximate Window Sample Probehole Location with Install
- Approximate Trial Pit Location
- Approximate Cable Percussive Borehole Location
- Approximate Dynamic Cone Penetrometer Test Location

Historical Features

- Small Building Pre 1981 - Pre 2019
- Former Pond Pre 1848 - Pre 1951 / Pre 1934 - Pre 1938
- Former Houses Pre 1907 - Pre 1938
- Former Road Pre 1907 - Pre 1938
- Unspecified Building Pre - 1848 - Pre 1894
- Unspecified Boundary (Met) Pre 1978 - Pre 2019
- Former Clay Pits Pre 1934 - Pre 1938
- Road/Hardstanding Pre 1978 - Present
- Longford Brook Pre 1848 - Pre 1951
- Former Field Boundary Pre 1848 - Pre 1896
- Former Drain Pre 1848 - Present
- Former Embankment Pre 1951 - Pre 2000
- Former Clay pit/embankment Pre 1934 - Pre 1938

Notes:

P1	-	27.02.2020	DRAFT	LM	EM
Phase	Revision	Date	Issue	Drawn	Checked

Client: Manchester Metropolitan University

Job No: 13-533

Date: 27.02.2020

Drawing No: 005

Scale: NTS

Job Title: Rye Bank Road, Chorlton

Drawing Title: Exploratory Hole Location Plan with Historical Features

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Tel: 0161 707 9612
E-mail: info@e3p.co.uk
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APPENDIX IV
CHEMICAL TESTING RESULTS

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Combine Report Ryebank Chorlton

Project / Site name:	Ryebank Chorlton	**Samples received on:**	06/12/2019
Your job number:	13533	**Samples instructed on:**	09/12/2019
Your order number:	34146	**Analysis completed by:**	16/12/2019
Report Issue Number:	1	**Report issued on:**	09/01/2020
Samples Analysed:	4 leachate samples - 17 soil samples		

Signed:

Zina Abdul Razzak
Senior Quality 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.

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
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	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	13	25	33	23	14
Total mass of sample received	kg	0.001	NONE	0.39	0.44	0.30	0.35	0.39
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	-	9.0	-	12.3	11.2
Total Cyanide	mg/kg	1	MCERTS	1	< 1	< 1	< 1	1
Total Sulphate as SO_4	mg/kg	50	MCERTS	-	650	-	3200	770
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	0.046	-	0.15	0.11
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	91	-	300	220
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	45.6	-	152	111
Sulphide	mg/kg	1	MCERTS	-	7.0	-	91	36
Total Sulphur	mg/kg	50	MCERTS	-	610	-	1600	1100
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.8	-	-	-	2.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	-	1.2	< 1.0

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.35	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	0.59	0.76	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	0.59	0.53	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	4.0	5.1	< 0.05	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	0.93	1.0	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	5.8	5.9	< 0.05	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	5.2	5.8	< 0.05	< 0.05	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	3.1	3.4	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	2.8	2.8	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.0	2.8	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.5	1.5	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.7	2.7	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	1.2	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.42	0.39	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.5	1.5	< 0.05	< 0.05	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	33.7	35.4	< 0.80	< 0.80	-

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	21	< 1.0	< 1.0	20
Barium (aqua regia extractable)	mg/kg	1	MCERTS	290	-	12	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	-	0.67	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	0.8	< 0.2	< 0.2	1.8
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	36	-	26	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	99	120	10	14	160
Lead (aqua regia extractable)	mg/kg	1	MCERTS	180	820	7.4	4.8	180
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.3	0.6	< 0.3	< 0.3	2.8
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	23	3.9	4.6	40
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.7
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	32	-	5.7	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	230	310	6.0	58	530

Combine Report Ryebank Chorlton

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Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Petroleum Hydrocarbons								

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	8.1
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	35
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	67
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	110
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	7.9
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	200
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	1100
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	910
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	2200
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
TPH (C6 - C8)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	-
TPH (C8 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	-
TPH (C10 - C12)	mg/kg	2	MCERTS	40	3.8	< 2.0	< 2.0	-
TPH (C12 - C16)	mg/kg	4	MCERTS	21	14	< 4.0	< 4.0	-
TPH (C16 - C21)	mg/kg	1	MCERTS	67	47	< 1.0	10	-
TPH (C21 - C35)	mg/kg	1	MCERTS	170	110	< 1.0	78	-
TPH (C35 - C40)	mg/kg	10	MCERTS	42	22	< 10	< 10	-
TPH Total C5 - C40	mg/kg	10	MCERTS	390	200	< 10	91	-

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
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	MCERTS	-	-	-	-	< 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	MCERTS	-	-	-	-	< 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
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
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	MCERTS	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	0.5
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	0.62
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	5.7
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	3.6
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	9.1
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	55
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	17
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	4.1
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	1.8
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	53
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	42
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	19
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	16
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	14
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	6.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	13
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	7.5
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	2.1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	7.9

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
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Lab Sample Number				1386182	1386183	1386184	1386186	1386187
Sample Reference				TP103	TP105	TP111	TP115	TP116
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.30	0.10	1.20	1.60	1.50
Date Sampled				04/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
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	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	13	13	23	22	36
Total mass of sample received	kg	0.001	NONE	0.39	0.38	0.30	0.41	0.31
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile & Amosite	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	1.183	0.036	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	1.18	0.036	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	-	-	U/S	9.0	12.4
Total Cyanide	mg/kg	1	MCERTS	1	6	2	1	3
Total Sulphate as SO_4	mg/kg	50	MCERTS	-	-	U/S	4900	3500
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	U/S	0.97	0.055
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	-	U/S	1900	110
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	-	U/S	966	55.3
Sulphide	mg/kg	1	MCERTS	-	-	U/S	470	19
Total Sulphur	mg/kg	50	MCERTS	-	-	U/S	17000	1600
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.9	-	U/S	3.2	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	47

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	0.45	-	-	0.61
Acenaphthylene	mg/kg	0.05	MCERTS	-	0.47	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	2.8	-	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	2.7	-	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	-	19	-	-	0.23
Anthracene	mg/kg	0.05	MCERTS	-	5.4	-	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	25	-	-	0.33
Pyrene	mg/kg	0.05	MCERTS	-	21	-	-	0.29
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	10	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	8.7	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	11	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	3.9	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	8.9	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	3.8	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	1.1	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	4.4	-	-	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	127	-	-	1.46

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Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	18	U/S	34	1.4
Barium (aqua regia extractable)	mg/kg	1	MCERTS	350	380	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	0.98	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5	1.2	U/S	3.3	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	U/S	43	6.0
Copper (aqua regia extractable)	mg/kg	1	MCERTS	130	2600	U/S	400	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	230	460	U/S	1100	16
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.6	U/S	1.0	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	25	U/S	58	6.2
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.1	U/S	2.1	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	34	28	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	260	760	U/S	1600	23

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Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0	-

Petroleum Hydrocarbons

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Project / Site name: Ryebank Chorlton
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Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	2.5	-	-	13	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	11	-	-	20	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	25	-	-	76	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	49	-	-	450	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	88	-	-	560	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	5.5	-	-	6.2	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	41	-	-	34	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110	-	-	180	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	250	-	-	510	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	410	-	-	730	-
TPH (C5 - C6)	mg/kg	1	NONE	-	< 1.0	< 1.0	-	< 1.0
TPH (C6 - C8)	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
TPH (C8 - C10)	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	< 0.1
TPH (C10 - C12)	mg/kg	2	MCERTS	-	2.3	U/S	-	< 2.0
TPH (C12 - C16)	mg/kg	4	MCERTS	-	22	U/S	-	< 4.0
TPH (C16 - C21)	mg/kg	1	MCERTS	-	150	U/S	-	7.9
TPH (C21 - C35)	mg/kg	1	MCERTS	-	460	U/S	-	85
TPH (C35 - C40)	mg/kg	10	MCERTS	-	47	U/S	-	< 10
TPH Total C5 - C40	mg/kg	10	MCERTS	-	680	< 10	-	95

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Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	< 1.0	< 1.0	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	< 1.0	< 1.0	-

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	U/S	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	U/S	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	U/S	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	U/S	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	5.1	-	U/S	1.4	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	U/S	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	U/S	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	4.0	-	U/S	0.7	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	U/S	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	2.4	-	U/S	0.61	-
Acenaphthene	mg/kg	0.05	MCERTS	4.6	-	U/S	3.0	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	3.0	-	U/S	1.1	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	U/S	< 0.3	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	5.7	-	U/S	3.6	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	U/S	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	24	-	U/S	19	-
Anthracene	mg/kg	0.05	MCERTS	7.5	-	U/S	5.6	-
Carbazole	mg/kg	0.3	MCERTS	2.3	-	U/S	1.1	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	U/S	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	U/S	0.9	-
Fluoranthene	mg/kg	0.05	MCERTS	27	-	U/S	25	-
Pyrene	mg/kg	0.05	MCERTS	22	-	U/S	21	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	U/S	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	12	-	U/S	9.6	-
Chrysene	mg/kg	0.05	MCERTS	9.2	-	U/S	9.9	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	10	-	U/S	8.5	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	5.9	-	U/S	4.8	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	9.7	-	U/S	7.6	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.1	-	U/S	4.4	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	-	U/S	1.4	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.6	-	U/S	4.6	-

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386189	1386190	1386191	1386192	1386193
Sample Reference				TP127	TP128	WS101	WS102	WS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.80	0.80	1.80	3.20	3.80
Date Sampled				05/12/2019	05/12/2019	04/12/2019	04/12/2019	04/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
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	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	14	39	23	14	17
Total mass of sample received	kg	0.001	NONE	0.41	0.33	0.31	0.34	0.36
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.014	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.014	-	-	-	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	-	-	-	-	10.3
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	2	120	2
Total Sulphate as SO_4	mg/kg	50	MCERTS	-	-	-	-	1100
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	250
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	0.13
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	125
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	-	-	-	-
Sulphide	mg/kg	1	MCERTS	-	-	-	-	2.3
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-	1300
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.1	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-	< 1.0

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.94	0.54	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	11	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.35	< 0.05	2.4	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.39	< 0.05	17	-
Phenanthrene	mg/kg	0.05	MCERTS	0.54	3.1	0.81	150	-
Anthracene	mg/kg	0.05	MCERTS	0.11	0.90	0.25	46	-
Fluoranthene	mg/kg	0.05	MCERTS	0.51	5.1	1.7	150	-
Pyrene	mg/kg	0.05	MCERTS	0.54	5.2	1.8	130	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.29	2.4	0.91	44	-
Chrysene	mg/kg	0.05	MCERTS	0.27	2.3	1.0	37	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.31	3.0	1.1	50	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.14	0.98	0.59	15	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.22	2.5	1.1	45	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.3	0.51	30	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.44	0.20	7.2	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.5	0.58	25	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3.87	30.0	10.6	763	-

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	13	17	23	32
Barium (aqua regia extractable)	mg/kg	1	MCERTS	780	200	150	440	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	5.0	0.64	0.79	1.2	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.0	0.7	0.4	1.6	0.4
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	320	150	72	620	160
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	220	180	1000	680
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.5	0.7	1.4	1.0
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	80	14	17	27	33
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	3.8	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	100	16	21	32	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	2500	320	130	1000	280

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Petroleum Hydrocarbons

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12)	mg/kg	2	MCERTS	4.4	5.6	3.7	6.3	12
TPH (C12 - C16)	mg/kg	4	MCERTS	9.6	13	16	220	40
TPH (C16 - C21)	mg/kg	1	MCERTS	33	44	51	1700	140
TPH (C21 - C35)	mg/kg	1	MCERTS	85	110	110	1300	230
TPH (C35 - C40)	mg/kg	10	MCERTS	< 10	19	20	40	18
TPH Total C5 - C40	mg/kg	10	MCERTS	140	200	200	3300	460

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
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	MCERTS	-	-	-	-	< 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	MCERTS	-	-	-	-	< 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
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	0.61
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	MCERTS	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	0.7
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	0.72
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	0.94
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	0.5
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	1.5
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	11
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	2.0
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	0.4
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	14
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	14
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	6.8
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	5.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	6.6
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	2.5
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	5.6
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	2.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	1.0
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	3.6

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1386194	1389778	1389779	1389780	1389781
Sample Reference				WS112	TP101	TP113	TP119	TP120
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.30	0.10	0.10	0.10	2.10
Date Sampled				05/12/2019	04/12/2019	05/12/2019	05/12/2019	05/12/2019
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	30	11			
Total mass of sample received	kg	0.001	NONE	0.38	0.36			
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001			
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	-	-			
Total Cyanide	mg/kg	1	MCERTS	< 1	-			
Total Sulphate as SO_4	mg/kg	50	MCERTS	-	-			
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-			
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-			
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	-			
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	-			
Sulphide	mg/kg	1	MCERTS	-	-			
Total Sulphur	mg/kg	50	MCERTS	-	-			
Total Organic Carbon (TOC)	%	0.1	MCERTS	-	1.6			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-			

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.32			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.24			
Phenanthrene	mg/kg	0.05	MCERTS	3.1	1.3			
Anthracene	mg/kg	0.05	MCERTS	0.90	0.36			
Fluoranthene	mg/kg	0.05	MCERTS	5.8	1.7			
Pyrene	mg/kg	0.05	MCERTS	5.7	1.5			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.5	1.2			
Chrysene	mg/kg	0.05	MCERTS	2.6	0.82			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.3	0.77			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.50			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.8	0.66			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.5	0.33			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.42	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.7	0.40			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	31.3	10.0			

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	-			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	250	-			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.0	-			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	-			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	-			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	110	-			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	230	-			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.9	-			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	-			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	28	-			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	200	-			

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Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	-			
Toluene	µg/kg	1	MCERTS	-	-			
Ethylbenzene	µg/kg	1	MCERTS	-	-			
p & m-xylene	µg/kg	1	MCERTS	-	-			
o-xylene	µg/kg	1	MCERTS	-	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-			

Petroleum Hydrocarbons

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-			
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0			
TPH (C6 - C8)	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH (C8 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH (C10 - C12)	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH (C12 - C16)	mg/kg	4	MCERTS	< 4.0	8.2			
TPH (C16 - C21)	mg/kg	1	MCERTS	15	27			
TPH (C21 - C35)	mg/kg	1	MCERTS	27	44			
TPH (C35 - C40)	mg/kg	10	MCERTS	< 10	< 10			
TPH Total C5 - C40	mg/kg	10	MCERTS	43	81			

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-			
Chloroethane	µg/kg	1	NONE	-	-			
Bromomethane	µg/kg	1	ISO 17025	-	-			
Vinyl Chloride	µg/kg	1	NONE	-	-			
Trichlorofluoromethane	µg/kg	1	NONE	-	-			
1,1-Dichloroethene	µg/kg	1	NONE	-	-			
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-			
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-			
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloromethane	µg/kg	1	MCERTS	-	-			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-			
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-			
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-			
Benzene	µg/kg	1	MCERTS	-	-			
Tetrachloromethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloroethene	µg/kg	1	MCERTS	-	-			
Dibromomethane	µg/kg	1	MCERTS	-	-			
Bromodichloromethane	µg/kg	1	MCERTS	-	-			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Toluene	µg/kg	1	MCERTS	-	-			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-			
Dibromochloromethane	µg/kg	1	ISO 17025	-	-			
Tetrachloroethene	µg/kg	1	NONE	-	-			
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-			
Chlorobenzene	µg/kg	1	MCERTS	-	-			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Ethylbenzene	µg/kg	1	MCERTS	-	-			
p & m-Xylene	µg/kg	1	MCERTS	-	-			
Styrene	µg/kg	1	MCERTS	-	-			
Tribromomethane	µg/kg	1	NONE	-	-			
o-Xylene	µg/kg	1	MCERTS	-	-			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Isopropylbenzene	µg/kg	1	MCERTS	-	-			
Bromobenzene	µg/kg	1	MCERTS	-	-			
n-Propylbenzene	µg/kg	1	ISO 17025	-	-			
2-Chlorotoluene	µg/kg	1	MCERTS	-	-			
4-Chlorotoluene	µg/kg	1	MCERTS	-	-			
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
tert-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
sec-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-			
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-			
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-			
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-			
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-			
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-			

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
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	MCERTS	-	-			
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	MCERTS	-	-			
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	-	-			
Naphthalene	mg/kg	0.05	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	MCERTS	-	-			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-			
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	MCERTS	-	-			
Acenaphthylene	mg/kg	0.05	MCERTS	-	-			
Acenaphthene	mg/kg	0.05	MCERTS	-	-			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-			
Dibenzofuran	mg/kg	0.2	MCERTS	-	-			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-			
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-			
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-			
Fluorene	mg/kg	0.05	MCERTS	-	-			
Azobenzene	mg/kg	0.3	MCERTS	-	-			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-			
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-			
Phenanthrene	mg/kg	0.05	MCERTS	-	-			
Anthracene	mg/kg	0.05	MCERTS	-	-			
Carbazole	mg/kg	0.3	MCERTS	-	-			
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-			
Anthraquinone	mg/kg	0.3	MCERTS	-	-			
Fluoranthene	mg/kg	0.05	MCERTS	-	-			
Pyrene	mg/kg	0.05	MCERTS	-	-			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-			
Chrysene	mg/kg	0.05	MCERTS	-	-			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-			

Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton
Your Order No: 34146

Lab Sample Number				1389782	1389783			
Sample Reference				TP125	WS110			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.10	0.50			
Date Sampled				05/12/2019	05/12/2019			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					

Analytical Report : Combine Report Ryebank Chorlton
Project / Site name: Ryebank Chorlton
Your Order No: 34146

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
1386191	WS101	1.80	80	Loose Fibrous Debris	**Chrysotile & Amosite**	1.183	**1.18**
1386192	WS102	3.20	120	Bitumen	**Chrysotile**	0.036	**0.036**
1386194	WS112	2.30	133	Hard/ Cement Type Material	**Chrysotile**	0.014	**0.014**
1389783	WS110	0.50	118	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

Analytical Report : Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton

Your Order No: 34146

Lab Sample Number				1386195	1386196	1386197	1386198	
Sample Reference				TP103	TP106	WS106	WS111	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.10	1.50	0.80	2.70	
Date Sampled				04/12/2019	04/12/2019	04/12/2019	05/12/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	12.6	8.2	8.3	12.6	
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	7.4	< 1.0	1.5	5.2	
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	22	4.6	2.0	8.9	
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Total PAH								
Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	1.1	ISO 17025	12	5.5	2.0	4.4	
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	20	< 5.0	< 5.0	
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.5	0.7	3.1	0.6	
Copper (dissolved)	µg/l	0.7	ISO 17025	14	110	9.0	13	
Lead (dissolved)	µg/l	1	ISO 17025	1.5	9.8	26	< 1.0	
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	
Nickel (dissolved)	µg/l	0.3	ISO 17025	11	7.1	2.0	5.3	
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	
Zinc (dissolved)	µg/l	0.4	ISO 17025	6.4	73	13	2.7	

Analytical Report : Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton

Your Order No: 34146

Lab Sample Number				1386195	1386196	1386197	1386198	
Sample Reference				TP103	TP106	WS106	WS111	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				2.10	1.50	0.80	2.70	
Date Sampled				04/12/2019	04/12/2019	04/12/2019	05/12/2019	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	
Petroleum Hydrocarbons								
TPH1 (C10 - C40)	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	

Analytical Report : Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton

* 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 *
1386182	TP103	None Supplied	1.30	Brown loam and sand with gravel.
1386183	TP105	None Supplied	0.10	Brown clay and sand with vegetation.
1386184	TP111	None Supplied	1.20	Grey clay.
1386186	TP115	None Supplied	1.60	Grey clay.
1386187	TP116	None Supplied	1.50	Brown clay and sand with gravel.
1386189	TP127	None Supplied	1.80	Brown clay and sand with gravel.
1386190	TP128	None Supplied	0.80	Brown sand with gravel and clinker
1386191	WS101	None Supplied	1.80	Brown clay and sand.
1386192	WS102	None Supplied	3.20	Brown sand with clinker.
1386193	WS105	None Supplied	3.80	Grey clay.
1386194	WS112	None Supplied	2.30	Brown sand with clinker.
1389778	TP101	None Supplied	0.10	Brown loam and clay with vegetation.
1389779	TP113	None Supplied	0.10	Brown loam with vegetation.
1389780	TP119	None Supplied	0.10	Brown loam and sand with gravel.
1389781	TP120	None Supplied	2.10	Brown clay and sand with clinker.
1389782	TP125	None Supplied	0.10	Brown loam and clay with vegetation.
1389783	WS110	None Supplied	0.50	Brown sand with clinker.

Analytical Report : Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
Monohydric phenols in leachate - LOW LEVEL 1 ug/l	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
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
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	NONE

Analytical Report : Combine Report Ryebank Chorlton

Project / Site name: Ryebank Chorlton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
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
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 based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-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 cyanide in leachate - 1µg/l	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
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 based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-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 based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	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 based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' 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.

APPENDIX V
JIWG RECEPTOR RANKING ASSESSMENT

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)	Loose fibrous asbestos debris	3
Extent of degradation of ACMs	Degraded (Significant degradation in ACM; material has lost its basic integrity)	3
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs	1
Asbestos fibre type	Mainly chrysotile and trace amphibole (no crocidolite)	1
Sub-total		8
Hazard ranking		Low

Stage 2

Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Large quantities - ≥0.1 %wt/wt	4
Respirable fibre index for ACM - RIVM report 711701034 (2003)	High	4
Activity type and effect on deterioration of ACMs	Minimal disturbance, no deterioration expected	1
Best description of primary host material matrix	Coarse to Fine Gravel	3
Sub-total		12
Exposure ranking		Medium

Stage 3

Pathway and Receptor Sensitivity		Score	
Receptor category	Public open space or building	No score required	
Age of Receptor	School age (>5 and <16)	3	
Duration of exposure/site occupancy	<1 hour in any week (e.g. short duration work or equivalent infrequent exposure event when exposure aggregated over 1 yr)	0	
Receptor ranking		3	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	surface	E	
Pathway ranking		4E	High
Overall ranking			Medium

Project Reference	13-533
Site Name	Rye Bank Fields
Client	Manchester Metropolitan University
Run by	R. Hodnett
Date	08-Jun-20
Reviewed by	M. Dyer
Characterisation of scenario being evaluated	Public Open Space utilised by members of the public for walking, foraging and planting, in particular of fruit trees.Evaluation completed to determine fate of the site and risk to those utilising the site.
Interpretation of scenario ranking by DST	Overall high ranking. Assessment completed using worst case scenario.

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	Degraded (Significant degradation in ACM; material has lost its basic integrity)	3
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs	1
Asbestos fibre type	Mainly chrysotile and trace amphibole (no crocidolite)	1
Sub-total		7
Hazard ranking		Low

Stage 2

Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Large quantities - ≥0.1 %wt/wt	4
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Very low	1
Activity type and effect on deterioration of ACMs	No disturbance activity	0
Best description of primary host material matrix	Coarse to Fine Gravel	3
Sub-total		8
Exposure ranking		Low

Stage 3

Pathway and Receptor Sensitivity		Score	
Receptor category	Residential	No score required	
Age of Receptor	School age (>5 and <16)	3	
Duration of exposure/site occupancy	> 1hr <10 hr daily exposure (e.g. part-time to full time occupational exposure or extended daily recreational exposure)	3	
Receptor ranking		6	Medium
Combined hazard, exposure and receptor ranking			Low
Pathway: Distance of Receptor from Source	>10m of edge of area of disturbance	3	
Pathway: Depth to impacted material	Material buried at shallow depth, potential to be disturbed by excavation	C	
Pathway ranking		3C	Low
Overall ranking			Very Low

Project Reference	13-533
Site Name	Rye Bank Fields
Client	Manchester Metropolitan University
Run by	R. Hodnett
Date	15-Jun-20
Reviewed by	M. Dyer
Characterisation of scenario being evaluated	Public Open Space utilised by members of the public for walking, foraging and planting, in particular of fruit trees.Evaluation completed to determine fate of the site and risk to those utilising the site.
Interpretation of scenario ranking by DST	Overall Medium Ranking. Based on disturbance on site and worse case scenario.