



# Islington Wharf Phase 4, Ancoats

## Remediation Verification Report

*For Morgan Sindall Group Plc.*

---

Date: 5 July 2022

Doc ref: 10042-HYD-XX-XX-RP-GE-0008

## DOCUMENT CONTROL SHEET

|              |                                                                                                             |                                           |
|--------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Issued by    | Hydrock Consultants Limited<br>Northern Assurance Buildings<br>9-21 Princess Street<br>Manchester<br>M2 4DN | Tel: 0161 804 5550<br><br>www.hydrock.com |
| Client       | Morgan Sindall Group Plc.                                                                                   |                                           |
| Project name | Islington Wharf Phase 4, Ancoats                                                                            |                                           |
| Title        | Remediation Verification Report                                                                             |                                           |
| Doc ref      | 10042-HYD-XX-XX-RP-GE-0008                                                                                  |                                           |
| Project no.  | 10042                                                                                                       |                                           |
| Status       | First Issue                                                                                                 |                                           |
| Date         | 05/07/2022                                                                                                  |                                           |

| Document Production Record |                                                  |      |
|----------------------------|--------------------------------------------------|------|
| Issue Number               | P02                                              | Name |
| Prepared by                | Jason Bradley BSc (Hons) MSc FGS                 |      |
| Checked by                 | Danny Hope BSc (Hons) MSc MCIWEM C.WEM CEnv SiLC |      |
| Approved by                | Danny Hope BSc (Hons) MSc MCIWEM C.WEM CEnv SiLC |      |

| Document Revision Record |        |            |                                                |
|--------------------------|--------|------------|------------------------------------------------|
| Issue Number             | Status | Date       | Revision Details                               |
| P01                      | S2     | 05/07/2022 | First Issue.                                   |
| P02                      | S2     | 04/07/2023 | Updated following installation of Cover System |
|                          |        |            |                                                |

Hydrock Consultants Limited has prepared this report in accordance with the instructions of the above-named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

# CONTENTS

|     |                                                                                                                                                                                                                                 |    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1.  | INTRODUCTION.....                                                                                                                                                                                                               | 1  |
| 1.1 | Terms of Reference.....                                                                                                                                                                                                         | 1  |
| 1.2 | Background.....                                                                                                                                                                                                                 | 1  |
| 1.3 | Objectives .....                                                                                                                                                                                                                | 1  |
| 1.4 | Parties Involved in Remedial Works.....                                                                                                                                                                                         | 1  |
| 1.5 | List of Previous Reports .....                                                                                                                                                                                                  | 2  |
| 2.  | REMEDIATION STRATEGY.....                                                                                                                                                                                                       | 3  |
| 2.1 | Background.....                                                                                                                                                                                                                 | 3  |
| 2.2 | Key Issues requiring remedial activities .....                                                                                                                                                                                  | 5  |
| 2.3 | Summary of Remediation Requirements.....                                                                                                                                                                                        | 6  |
| 3.  | REMEDIATION WORKS UNDERTAKEN.....                                                                                                                                                                                               | 7  |
| 3.1 | Task 1: Project setup and management, including liaison with the Local Authority, Environment Agency and Health and Safety Executive, where necessary, with appropriate permits / licences / consents / approvals granted ..... | 7  |
| 3.2 | Task 2: Appointment of contractors .....                                                                                                                                                                                        | 7  |
| 3.3 | Task 3: Air quality boundary monitoring.....                                                                                                                                                                                    | 7  |
| 3.4 | Task 4: Break out hardstanding, below ground obstructions and old drainage systems, processing of the arisings for re-use. ....                                                                                                 | 7  |
| 3.5 | Task 5: Earthworks including Hotspot Removal .....                                                                                                                                                                              | 8  |
| 3.6 | Task 6: Testing of stockpiled soils and on-site re-use or off-site disposal.....                                                                                                                                                | 10 |
| 3.7 | Task 7: Placement of Service Corridor .....                                                                                                                                                                                     | 12 |
| 3.8 | Task 8: Installation of cover system in landscaped areas.....                                                                                                                                                                   | 13 |
| 3.9 | Task 9: Supervision, Verification and Reporting.....                                                                                                                                                                            | 13 |
| 4.  | CONCLUSION .....                                                                                                                                                                                                                | 14 |

# Appendices

|            |                                                 |
|------------|-------------------------------------------------|
| Appendix A | Drawings                                        |
| Appendix B | Laboratory Results                              |
| Appendix C | Earthworks Information                          |
| Appendix D | Correspondence with local authority             |
| Appendix E | Air Monitoring Certification                    |
| Appendix F | Waste Consignment Notes                         |
| Appendix G | Progress Photographs and Watching Brief reports |

## 1. INTRODUCTION

### 1.1 Terms of Reference

In May 2022, Hydrock Consultants Limited (Hydrock) was commissioned by Morgan Sindall Group Plc. to produce a Verification Report for a site known as Islington Wharf Phase 4, Ancoats in accordance with the Remediation Strategy (RS) for the site (ref. 10042-HYD-XX-XX-RP-GE-0004).

### 1.2 Background

The site covers approximately 0.18Ha and was vacant land for more than 10 years, and was recently used as a construction compound for the adjacent Islington Wharf Phases of development. The majority of the site was surfaced with asphalt hardstanding with some areas of exposed sub base material and relic concrete base/floors.

The site is being developed for mixed commercial and residential end-use comprising a high-rise apartment block varying in height between 16 storeys and 11 storeys high.

Planning permission Ref. 126669/FO/2020 (included in Appendix D) has been issued by Manchester City Council. Land contamination is covered by condition 7, as follows:

*7) b) When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority.*

*In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.*

*Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to policies DM1 and EN18 of the Core Strategy.*

The Planning Decision Notice (126669/FO/2020) is included in Appendix D.

### 1.3 Objectives

This verification report is the final report of a series that is required to discharge planning conditions relating to contamination and is based on the tasks set out in the Remediation Strategy (RS) prepared by Hydrock in October 2020. The overall objective is to demonstrate that the agreed remediation strategy has been complied with and that the site has been rendered Suitable for Use.

### 1.4 Parties Involved in Remedial Works

Remedial works mainly involved the excavation and re-use of materials on site in accordance with the approved remediation strategy. The main bulk earthworks and civils contractor for the development is Chartrange Ltd.

Hydrock was appointed to undertake a part-time oversight role of the earthworks movements relating to the chemical characteristics of the soils only (not geotechnical). Hydrock undertook watching brief visits on the following dates which are included in Appendix G:

Visit 1 - 06/09/2021

Visit 2 - 14/09/2021

Visit 3 - 01/10/2021

## 1.5 List of Previous Reports

A list of relevant previous reports is as follows:

- Hydrock, Ground Conditions Desk Study, Islington Wharf Phase 4, October 2018, ref. IW4-HYD-XXXX-RP-GE-0001\_Desk\_Study.
- Hydrock, Ground Investigation Report, Islington Wharf Phase 4, June 2020, ref. 10042-HYD-XX-XXRP-GE-0002\_S02\_P03.
- Hydrock, Technical Design Note: Investigation of PAH, Arsenic and Lead impacted soils, June 2020, ref. 10042-HYD-XX-XX-RP-GE-0003.
- Hydrock, Piling Risk Assessment, Islington Wharf Phase 4, October 2020, ref. 10042-HYD-XX-XX-RP-GE-0005-S02-P01.
- Hydrock, Remediation Strategy, Islington Wharf Phase 4, October 2020, 0042-HYD-XX-XX-RP-GE-0004-S2-P01.

## 2. REMEDIATION STRATEGY

### 2.1 Background

Hydrock Report reference 10042-HYD-XX-XXRP-GE-0002\_S02\_P03 dated June 2020 summarised the main risks onsite are Significantly elevated concentrations of arsenic, lead and PAH in the Made Ground. Visible asbestos containing material (ACM) and non visible (asbestos loose fibres) were also detected in Made Ground. Consequently, the Made Ground soils were deemed to pose an unacceptable risk to human health and required remediation in order to mitigate the risk.

The Made Ground contamination is not considered to pose a significant risk to Controlled Waters.

The proposed development is not considered to be at significant risk from ground gases.

The above reports (section 1.5) were submitted to the Local Authority and were deemed sufficient to obtain discharge of planning Condition four. The remediation strategy which, if implemented, would render the site suitable for its proposed end use.

Full details of the remedial requirements are provided in the RS (ref. 10042-HYD-XX-XX-RP-GE-0004) and associated documents referred to therein. A summary of the risk assessment findings and outcomes are presented in Table 2.1 below.

Table 1-0: Risk Assessment Summary

| Contaminant Linkage |                                                                  |                                                                                    |                                                                                               | Comments                                                                                                                                        |                                                                                                                                                                                                                                  |
|---------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pollutant Linkage   | Sources                                                          | Pathways                                                                           | Receptors                                                                                     | General                                                                                                                                         | Mitigation                                                                                                                                                                                                                       |
| PL1.                | Significantly elevated concentrations of PAH in the Made Ground. | Ingestion or direct contact.                                                       | Human health.                                                                                 | The additional trial pitting established the presence of impacted material in the north east of the site, in significant exceedance of the GAC. | The proposed development will see the introduction of hard standing across the majority of the site footprint. Acting as a barrier between the Made Ground and end user to sever the pathway between source and receptor.        |
|                     |                                                                  | Temporary Vertical Migration through the superficial deposits during piling works. | Controlled water of the Secondary A Aquifer (Glacial Till) and Principal Aquifer (Sandstone). |                                                                                                                                                 | The piling risk assessment has identified low risk to the underlying aquifers during piling operations. However, due to the significant PAH concentrations, hotspot removal is required as a matter of betterment of site soils. |
| PL2.                | Significantly elevated                                           | Ingestion or direct contact.                                                       | Human health.                                                                                 | The additional trial pitting established                                                                                                        | The proposed development will see                                                                                                                                                                                                |

| Contaminant Linkage |                                                                                                     |                                                                                    |                                                                                                | Comments                                                                                                            |                                                                                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pollutant Linkage   | Sources                                                                                             | Pathways                                                                           | Receptors                                                                                      | General                                                                                                             | Mitigation                                                                                                                                                                                                                                                                                                                |
|                     | concentrations of arsenic and lead in the Made Ground.                                              |                                                                                    |                                                                                                | the presence of impacted material north east corner of the proposed building, in significant exceedance of the GAC. | the introduction of hard standing across the majority of the site footprint. Acting as a barrier between the Made Ground and end user to sever the pathway between source and receptor.                                                                                                                                   |
|                     |                                                                                                     | Temporary Vertical Migration through the superficial deposits during piling works. | Controlled waters of the Secondary A Aquifer (Glacial Till) and Principal Aquifer (Sandstone). |                                                                                                                     | The piling risk assessment has identified low risk to the underlying aquifers during piling operations. However, due to the significant arsenic and lead concentrations, hotspot removal is required as a matter of betterment of site soils.                                                                             |
| PL3.                | Asbestos fibres in the Made Ground at BH02, TP03 and TP01 and one asbestos cement fragment at TP05. | Inhalation                                                                         | Human health.                                                                                  | Loose Fibres identified in WS02 at concentration of <0.001% and ACM is hard cement bound material.                  | The proposed development will see the introduction of hard standing across the majority of the site footprint. Acting as a barrier between the Made Ground and end user to sever the pathway between source and receptor. The proposed strip of soft landscaping along the western perimeter will require a cover system. |
| PL4.                | Elevated concentrations of petroleum hydrocarbons at BH02.                                          | Ingestion or direct contact.                                                       | Human health.                                                                                  | Exceedance of the GAC.                                                                                              | Located in the area of proposed soft landscaping. A cover system is required in areas of soft landscaping.                                                                                                                                                                                                                |
| PL5.                | Elevated concentrations of metals, inorganics, PAH and petroleum hydrocarbons in                    | Temporary Vertical Migration through the superficial deposits                      | Controlled water of the Secondary A Aquifer (Glacial Till) and Principal Aquifer (Sandstone).  | Significant Exceedance of the EQS.                                                                                  | There is no evidence of any free phase hydrocarbons being present at BH02, therefore there is a low possibility of an                                                                                                                                                                                                     |

| Contaminant Linkage |                                  |                      |           | Comments |                                                                                                                                  |
|---------------------|----------------------------------|----------------------|-----------|----------|----------------------------------------------------------------------------------------------------------------------------------|
| Pollutant Linkage   | Sources                          | Pathways             | Receptors | General  | Mitigation                                                                                                                       |
|                     | the perched groundwater at BH02. | during piling works. |           |          | additional pathway being created. The risk to underlying aquifers during piling works is low. No further mitigation is required. |

## 2.2 Key Issues requiring remedial activities

The exploratory works completed to date indicate the presence of loose asbestos fibres, one occurrence of ACM, a hotspot of elevated petroleum hydrocarbons, and localised, significantly elevated concentrations of arsenic, lead and PAHs in the Made Ground. There remains the potential for sporadic occurrences of fragments of ACM throughout the Made Ground, which largely comprises demolition rubble in a gravel, cobbly or sandy matrix.

Due to the nature of asbestos contamination on sites where demolition works have taken place, it has to be assumed that all of the Made Ground at the site may have been impacted, and therefore the whole site will require remediation to break the pollutant linkage between the asbestos-contaminated soils and the site end users.

The objectives of the remediation works will be as follows:

1. to break the linkage between the contamination in soils and future site users (including users of neighbouring properties);
2. to create a geotechnically suitable development platform (subject to a fixed masterplan and detailed design requirements);
3. to import a suitable growing medium for landscaping and planting (if required);
4. to minimise the impact of the off-site disposal requirement;
5. to not create a new contaminant pathway to groundwater via the proposed foundation solution (addressed within the piling risk assessment).

The short-list of options presented below in Table 4.2 represents the remedial approaches which have been selected to treat the pollutant linkages identified above.

Table 2-0: Remedial approaches

| Remedial Approach - Pollutant Linkage                                                                                                                                                                                                                   | Pollution Linkages Treated |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| The Introduction of hardstanding cover across the majority of the site footprint, which will sever the linkage between the source and the end user.                                                                                                     | PL1, PL2, PL3, PL4         |
| Materials management, comprising excavation, screening (including ACM hand picking), and re-use of suitable soils / off-site disposal of unsuitable soils in accordance with an approved MMP and utilising a cover system in areas of soft-landscaping. | PL1, PL2, PL3, PL4         |

Note that pollutant linkage 5 (PL5) was discounted from requiring remedial mitigation on the basis that the Piling Risk Assessment produced by Hydrock identified that the source posed a low risk to the Secondary A Aquifer (Glacial Till) and Principal Aquifer (Sandstone).

### 2.3 Summary of Remediation Requirements

Based upon the findings of the previous site investigations, risk assessments and a Remediation Options Appraisal, the remedial actions were undertaken to create a site which is suitable for its proposed end use.

Due to the proposed volume of Made Ground and natural soils to be reused at the site (<600m<sup>3</sup>) then a Materials Management Plan (MMP) was not required on this occasion. On this basis the earthworks contractor registered the earthworks under a U1 exemption, a copy of this registration is provided in Appendix C.

The remediation works were designed to maximise the re-use of soils on site and minimise off-site disposal, whilst recognising the end goals of the various specifications.

The following remedial activities were undertaken to deliver the site Suitable for Use (SFU) for the defined residential end use.

- Task 1: Project setup and management, including liaison with the Local Authority, Environment Agency and Health and Safety Executive, where necessary, with appropriate permits / licences / consents / approvals granted.
- Task 2: Appointment of contractors.
- Task 3: Pre-works air quality boundary monitoring for dust and asbestos, before earthworks commence and during the earthworks.
- Task 4: Break out of any areas of relict hardstanding, below ground obstructions and old drainage systems, processing of the arisings for re-use and inspection.
- Task 5: Earthworks (including hotspot removal).
- Task 6: Stockpile testing and re-use on-site or disposal off-site of excess soils to appropriate waste management facilities.
- Task 7: Placement of Service Corridor.
- Task 8: Installation of a cover system for landscaping areas.
- Task 9: Supervision, Verification and Reporting.

### 3. REMEDIATION WORKS UNDERTAKEN

#### 3.1 Task 1: Project setup and management, including liaison with the Local Authority, Environment Agency and Health and Safety Executive, where necessary, with appropriate permits / licences / consents / approvals granted

The project management team Morgan Sindall Group Plc. appointed Chartrange Ltd. as the main bulk earthworks and civils contractor for the Islington Wharf Phase 4 commission. Hydrock were appointed by Morgan Sindall Group Plc. to undertake a periodic watching brief of the enablement phase remediation works, specifically relating to overseeing hotspot removal and liaising with Chartange to ensure management of material placement.

#### 3.2 Task 2: Appointment of contractors

Chartrange was appointed as Principal Contractor by Morgan Sindall Group Plc. to undertake the bulk earthworks and enablement phase remedial works relating to planning application reference 126669/FO/2020. All permits and licenses were obtained by Chartrange and are available upon request.

#### 3.3 Task 3: Air quality boundary monitoring

##### 3.3.1 *Asbestos Air Monitoring*

APEC Environmental were appointed to undertake air quality monitoring during the works. Due to previous ground investigations finding non-visible asbestos loose fibres at <0.001% w/w within the Made Ground. Four days of air monitoring were undertaken, one pre-commencement and three during excavation work and material movement activities, undertaken on the following dates:

- 16/08/2021
- 06/09/2021
- 13/09/2021
- 20/09/2021

Readings taken were below the predefined control limit <0.01f/ml within the Hydrock Remediation Strategy. The measured respirable airborne fibre concentrations are below the limit of quantification and no further measures were considered necessary. As such the control measures in place by Chartrange were deemed to be satisfactory.

For details refer to APEC reports, which contain the monitoring records and certification, these are provided in Appendix E.

#### 3.4 Task 4: Break out hardstanding, below ground obstructions and old drainage systems, processing of the arisings for re-use.

All hardstanding, below ground obstructions, and drainage were broken out by Chartrange, and as a result of space constraints on site the material was exported to an off site processing facility. Immediately following breaking out the material was placed into wagons rather than stockpiling due to the aforementioned space constraints. Chartange processed and crushed the oversized material and then reimported to site for reuse once it had been processed to the required specification.

Hydrock witnessed this task being undertaken during a site visit on 06/09/2021, and can confirm it was completed in accordance with the Remediation Strategy. A selection of photographs provided as evidence are presented in Appendix G.

### 3.5 Task 5: Earthworks including Hotspot Removal

To create a suitable and level development platform the Made Ground was turned over (excavated, inspected, screened and replaced in engineered layers). As part of this process, the material being turned over was:

- Inspected;
- Screened for obstructions, unsuitable material and contaminated material; and
- Recompact in engineered layers to achieve the compaction criteria specified.

Cobbles, boulders, rock and waste fragments whose largest dimension was greater than two thirds of the loose layer thickness or 125mm were removed from the material destined for use as fill.

Topographic surveys provided by Chartrange including level checks on the base formation and finished surface are included within Appendix C.

Excavated materials were stockpiled, moved and recorded in accordance with the Chartrange Material Movements Tracker provided in Appendix C.

In order to create the proposed development platform a total volume of 1,818m<sup>3</sup> material was excavated and deemed surplus. The waste was transported by a registered waste carrier and disposed at a licensed disposal site. Copies of Waste Consignment Notes are included in Appendix F.

Stockpiled material to be re-used on site below the cover system or areas of hardstanding/buildings were inspected for suitability by Hydrock during each watching brief visit and also by CEGl. No visual evidence of contamination (oil staining, asbestos etc.) was noted and no significant quantities of deleterious material (organics, wood, metal etc.) were encountered.

No unexpected evidence of contamination was encountered during the earthworks.

#### 3.5.1 Hotspot Removal - Lead, Arsenic and PAH

Although it has now been identified the risk is low of additional pathways being created to human health (via direct contact) or to the underlying aquifers by piling operations, it was recommended by Hydrock that the arsenic, lead and PAH hotspot is removed. Due to the significantly elevated concentrations of arsenic, lead and PAH within the hotspot it is considered good practice to remove this material as a matter of betterment of site soils.

##### *Excavation and off site disposal*

The removal of impacted soils was carried out under the supervision of CEGl (Geo environmental consultant) who were also responsible for the sampling and assessment, Hydrock also witnessed the hotspot removal during watching brief visit 14/09/21, as evidenced by Hydrock watching brief reports provided in Appendix G.

Hydrock can confirm that soils were excavated from hotspot locations defined in the Remediation Strategy, and then temporarily stockpiled before being loaded into wagons for off site disposal at a suitably permitted waste management facility. The waste was transported by a registered waste carrier and disposed at a licensed disposal site. Copies of Waste Consignment Notes are included in Appendix F.





Figure 2-0 Validation at Hotspot 'H3'

CEGL scheduled the 15 validation samples for analysis of a suite comprising cyanide, phenols, speciated PAH, Total petroleum hydrocarbons and heavy metals as specified within the remediation strategy.

The results of the laboratory analysis for the validation samples have been screened against the remedial targets specified within the remediation strategy. Hydrock can confirm that all of the recorded concentrations for each hotspot were below their respective Remedial Target Values (RTVs).

Copies of the laboratory analysis certificates are included in Appendix B.

### 3.5.2 Earthworks – Asbestos

There was no visible ACM identified during the Hydrock watching brief visits, or during the CEGL supervision role.

## 3.6 Task 6: Testing of stockpiled soils and on-site re-use or off-site disposal

Prior to earthworks commencing Morgan Sindall opted against managing the reuse of material at the site in accordance with a DoW CoP Materials Management Plan (MMP) as it was proposed that the volume of material reused on site would be <600m<sup>3</sup>. Hydrock consulted Morgan Sindall on this matter and advised that a U1 Waste Exemption registration would be required. The U1 registration was made by CEGL on behalf of Morgan Sindall (U1 registration ref. WEX284226), a copy of the registration is provided in Appendix C.

### 3.6.1 Testing

The soils to be re-used on site below the cover system and areas of hardstanding/buildings were inspected for suitability. No visual evidence of contamination (oil staining, asbestos etc.) was noted by Hydrock or CEGl. Where deleterious material (organics, wood, metal etc.) was encountered Chartrange separated out this material on site and disposed of any unsuitable material.

A total of 10 samples of the Made Ground reused as placed fill were collected by CEGl at spot locations across the site (F1-F10 and HEFILL and H3FILL) once the material had been placed, as shown on Figure 1-0 above. The samples were analysed for a suite including cyanide, phenols, speciated PAH, Total petroleum hydrocarbons and heavy metals as specified within the remediation strategy.

When screened against the remedial target values (RTV's) specified in the remediation strategy, the concentrations detected in 5 of the 10 samples were found to be below the RTV's. In 5 of the samples several exceedances of the RTV's were identified in the samples of the reused fill material, summarised below:

- Asbestos was identified in one sample (F6) as Amosite sheeting board/debris at 0.089% w/w when screened against the RTV of 0.01%;
- four samples (F1, F4, F7, F8) exceeded the RTV for Benzo(a)pyrene to a maximum concentration of 12mg/kg when screened against the RTV of 4.8mg/kg;
- one sample (F8) exceeded the RTV for lead at a concentration of 1700mg/kg when screened against the RTV of 766mg/kg;
- one sample (F8) exceeded the remedial target for total petroleum hydrocarbons (TPH) at a concentration of 510mg/kg when screened against the RTV of 500mg/kg.

Although the asbestos identified in F6 does exceed the RTV, this sample of the fill material was taken from an area beneath the pile mat and future hard standing. As asbestos was detected in only one sample and is an isolated occurrence and on the basis that there will be no viable pathway between the source and future site users, Hydrock believes this represents a low risk.

In terms of the samples where exceedances of Benzo(a)pyrene and lead have been identified, these too are also located beneath areas of hard standing, which is expected to sever the exposure pathways to future site users. These concentrations are also not expected to pose a risk to the underlying aquifers, for the reasons and rationale previously discussed within the Hydrock Piling works Risk Assessment.

The one occurrence of elevated TPH in F8 is marginally above the RTV threshold and is located beneath an area of hard standing which is expected to sever the exposure pathways to future site users. This concentration is also not expected to pose a risk to the underlying aquifers, for the reasons and rationale previously discussed within the Hydrock Piling Risk Assessment.

Hydrock can confirm that the soils that have been reused on site are suitable for use under the current development proposals, and have been managed in general accordance with the approved remediation strategy.

### 3.6.2 Imported Material

At the time of writing the only material imported to site is 6F5 for construction of the piling mat. CEGl collected 5 samples of the material for chemical analysis prior to import. The samples were analysed for

a suite including cyanide, phenols, speciated PAH, Total petroleum hydrocarbons and heavy metals as specified within the remediation strategy.

When screened against the remedial target values (RTV's) specified in the remediation strategy, there were no exceedances of the RTV and the materials were considered suitable for import and use.

The material proposed to be imported to site for use in the cover system was subject to chemical analysis prior to import at source in March 2023. The chemical analysis results are shown on EnviroLab analysis report 23/01874 provided in Appendix H. Hydrock reviewed the EnviroLab analysis report prior to import and screened the values against the RTV's specified in the remediation strategy, and confirmed to Morgan Sindall that the material is suitable for import and use.

Delivery notes for the imported material are provided in Appendix H.

### 3.7 Task 7: Placement of Service Corridor

During the enablement phase the Made Ground was turned over to remove obstructions and deleterious material so that it could be processed and reused on site. In addition, and as detailed in section 3.5.1 above, as part of this process the PAH hotspot was excavated and disposed off site.

Following processing of the Made Ground and hotspot removal, the Made Ground was sampled and sent for chemical analysis in order to validate and confirm its suitability. This was undertaken by the earthworks contractor's geo-environmental engineer (Geoenvironmental Consulting Ltd) who has made the following statement regards to the installation of a service corridor:

*'the requirement in the remediation strategy relates to protection of workers who may come into contact with made ground during maintenance activities on the services. The validation report details the residual level of contaminants remaining in the made ground after removal of hotspots and re-use of arisings. These are all below the assessment criteria for a commercial end use so the risk to maintenance workers should be low, providing sensible precautions such as PPE and basic dust suppression are used based on a RAMS provided by the contractor. One sample out of 25 detected asbestos at low levels. This sample was below the building footprint so will not be disturbed during the lifetime of the building. All the other samples were non-detects for asbestos.*

*Provided barrier pipe has been installed for water supply, there is no risk to end users.*

*There's no need to break up the hard landscaping to check whether there's a 300mm surround to the services. I'd recommend that:*

*the validation report and the site investigation reports are saved into the site health and safety file and handed over to the management company responsible for running & maintaining the property*

*any contractor maintaining the services in the future reviews the information in the H&S file and provides a suitable RAMS before exposing the soils.'*

A copy of the email correspondence is provided as evidence in Appendix D.

In terms of the installation of Barrier Pipe, Ameon who are the utilities contractor working on behalf of Hanon (utilities consultant) have confirmed via email from Stewart Brunton to Paul Guilfoyle (MS) dated 29 June 2023 that Barrier Pipe has been installed. A copy of the email correspondence is provided as evidence in Appendix D.

### 3.8 Task 8: Installation of cover system in landscaped areas

Once the imported material had arrived on site Morgan Sindall contacted Hydrock on 12 June 2023, and Hydrock attended site on 14 June 2023 to collect five environmental samples of the material for chemical analysis. The chemical analysis results are shown on i2 Analytical analysis report 23-39404 provided in Appendix H. Hydrock reviewed the i2 Analytical analysis report, and screened the values against the RTV's specified in the remediation strategy, as evidenced by the Hydrock Assessment of Chemicals of Potential Concern to Human Health report, provided in Appendix H. Hydrock confirmed to Morgan Sindall that the material was suitable for use.

Following confirmation of the material suitability Morgan Sindall commenced the installation of the cover system, firstly by placing the high-visibility geotextile membrane, followed by placement of the approved topsoil cover to a thickness of 450mm. This is evidenced by photographs of several hand-dug pits (as shown in Appendix H) which were dug on 29 June 2023 to prove the specified 450mm depth of the cover system, and presence of the geotextile membrane at the base.

Hydrock confirmed to Morgan Sindall that the Cover System had been installed in accordance with the approved remediation strategy.

### 3.9 Task 9: Supervision, Verification and Reporting

CEGL on behalf of Chartrange provided a qualified and experienced geo-environmental engineer to oversee the works on a part-time basis. Hydrock attended site on three occasions, one of those visits was to witness the hotspot removal and areas of hotspot backfilling. Photographs and watching brief visit reports from the site visits are provided in Appendix G.

## 4. CONCLUSION

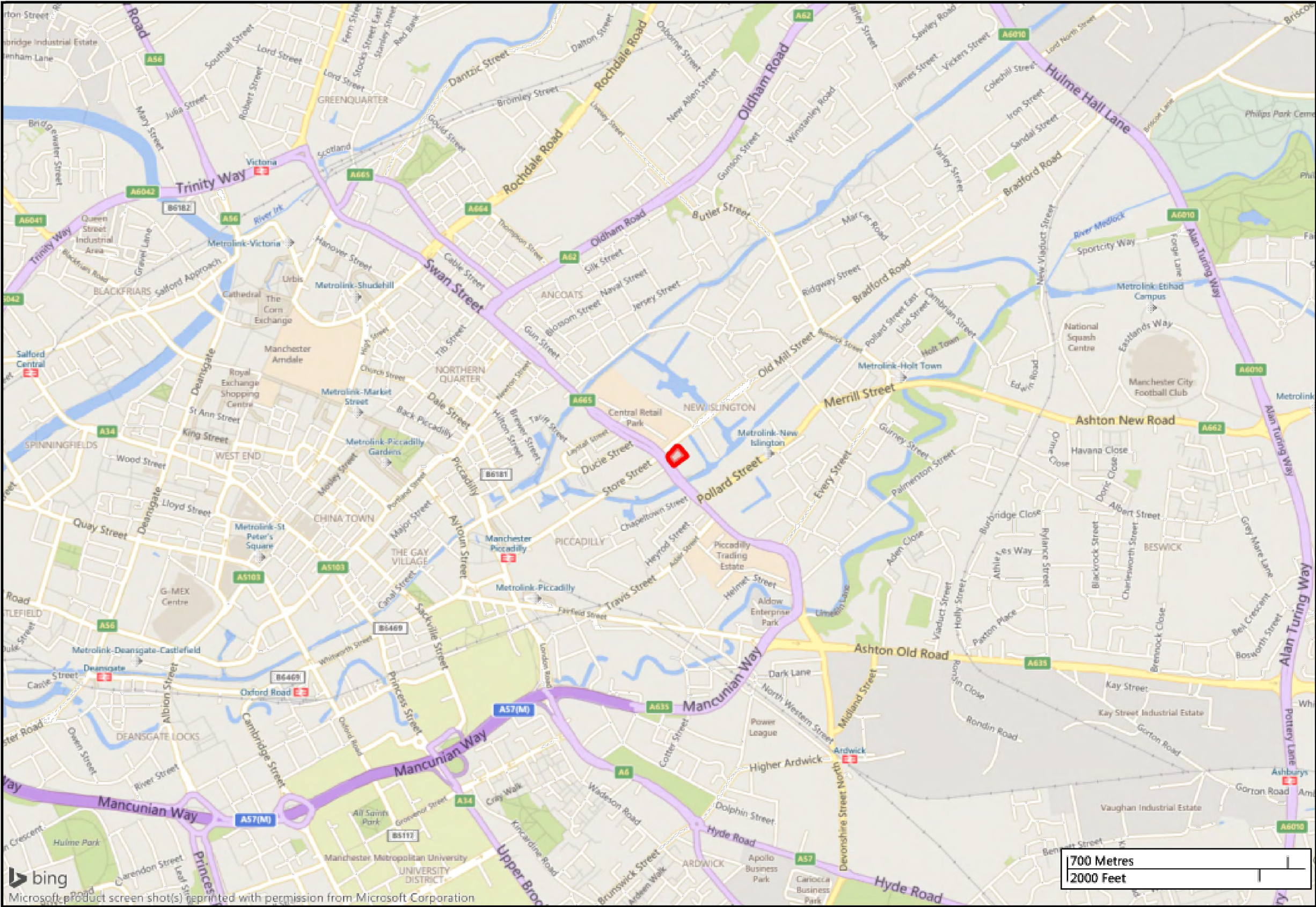
Hydrock can confirm that remediation works for the Islington Wharf Phase 4 under the approved planning permission (Application Reference. 126669/FO/2020) have been conducted in accordance with the approved Hydrock Remediation Strategy. The works involved:

- air monitoring for asbestos fibres, which proved readings below the control limit, as such the control measures in place by Chartrange were deemed to be satisfactory;
- adequate tracking of the fate of stockpiled soils, including surveying and testing of soils, under a material tracking system;
- successful breaking out of any areas of relict hardstanding, below ground obstructions and old drainage systems, and subsequent processing of the arisings for re-use and inspection;
- successful excavation, testing and disposal of surplus material, remedial hotspots, and record keeping of muckaway tickets for each load removed from site;
- adequate sampling, analysis and rationale for retaining material on site deemed suitable for use, and for imported material; and
- Successful installation of a cover system to landscaped areas.

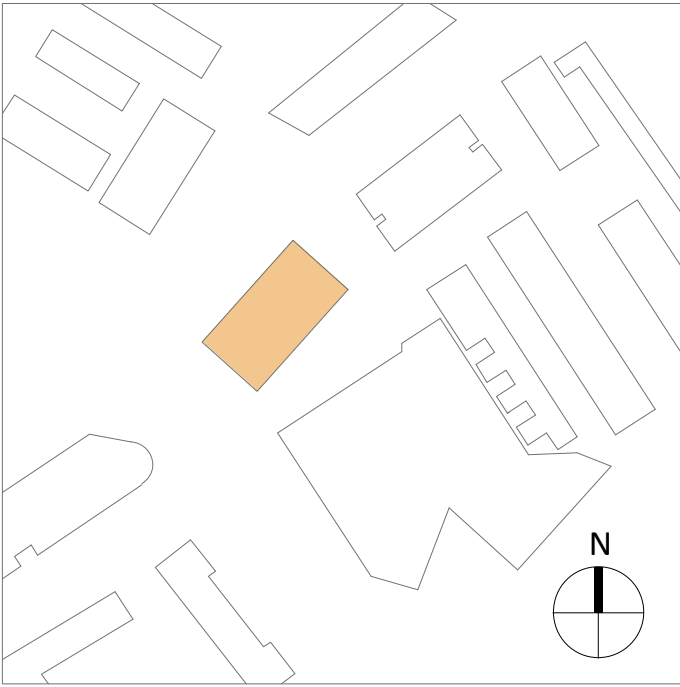
This Verification Report should be submitted to the LPA at the earliest opportunity in order to discharge planning conditions in relation to contaminated land.

# Appendix A

## Drawings



| Rev                                                                                                                                                                                                           | Date    | Description | By       | Ckd        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|----------|------------|
| Architect :                                                                                                                                                                                                   |         |             |          |            |
| <div><div><div>Hydrock Consultants Ltd<br/>4 Lakeside<br/>Festival Park<br/>Stoke-on-Trent<br/>ST1 5RY<br/>T +44 (0)1782 261919<br/>stoke@hydrock.com<br/>www.hydrock.com</div></div><div>Hydrock</div></div> |         |             |          |            |
| Client :                                                                                                                                                                                                      |         |             |          |            |
| MUSE DEVELOPMENTS                                                                                                                                                                                             |         |             |          |            |
| Project Title:                                                                                                                                                                                                |         |             |          |            |
| ISLINGTON WHARF PHASE 4                                                                                                                                                                                       |         |             |          |            |
| Drawing Title:                                                                                                                                                                                                |         |             |          |            |
| Site Location Plan                                                                                                                                                                                            |         |             |          |            |
| Reference:                                                                                                                                                                                                    |         |             |          |            |
| IW4-HYD-XX-XX-DR-GE-0001                                                                                                                                                                                      |         |             |          |            |
| Hydrock Job No:                                                                                                                                                                                               |         |             |          |            |
| C-10042-C                                                                                                                                                                                                     |         |             |          |            |
| Drawn                                                                                                                                                                                                         | Checked | Scale @ A3  | Date     | Issue Date |
| TW                                                                                                                                                                                                            | DH      | As Shown    | 05/10/18 | 08/10/18   |
| Revision:                                                                                                                                                                                                     |         |             | Status:  |            |
| P01                                                                                                                                                                                                           |         |             | S2       |            |



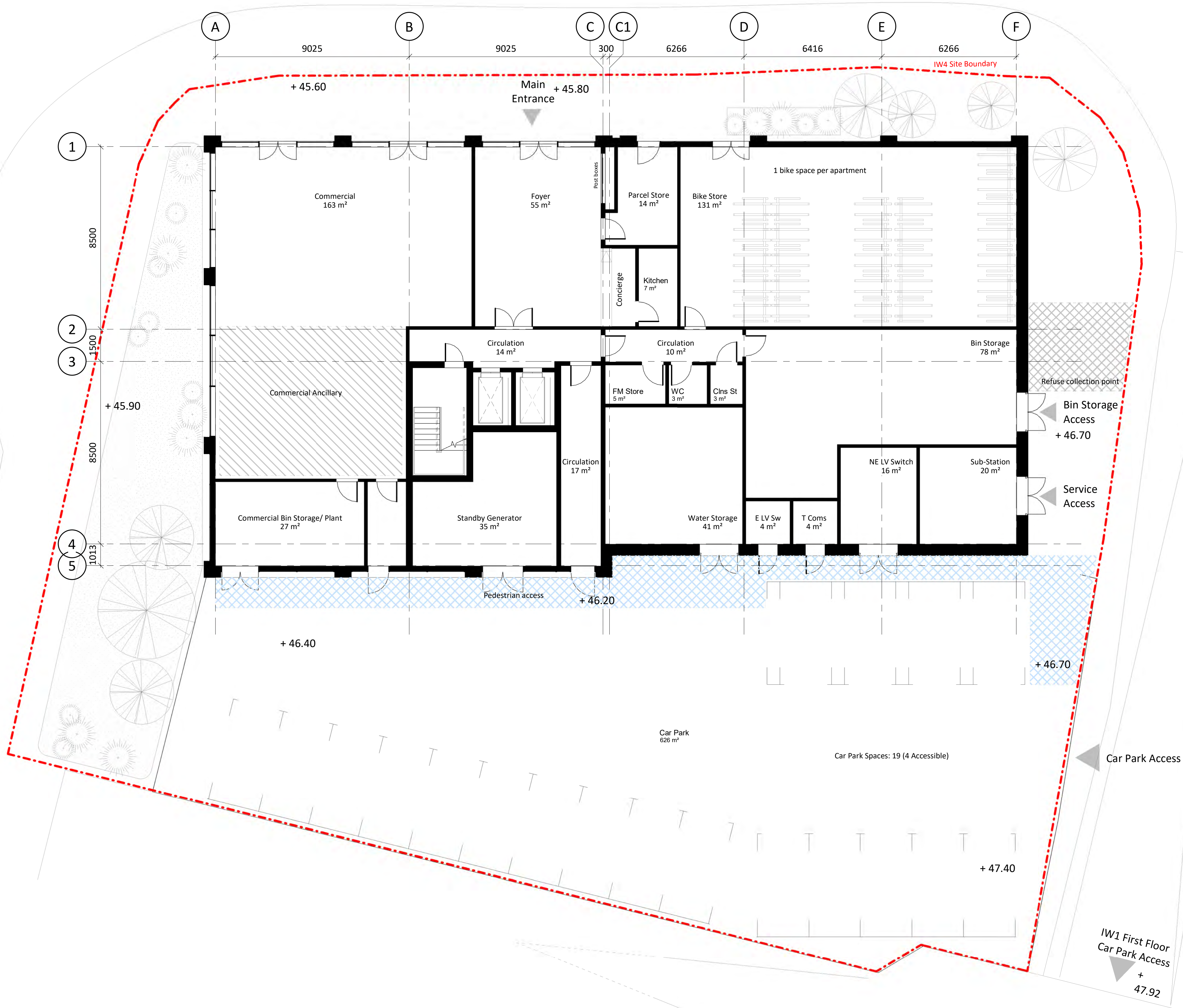
| Flat Type Count and Unit Mix |       |          |
|------------------------------|-------|----------|
| Name                         | Count | Unit Mix |
| 1B2P                         | 33    | 31.1%    |
| 2B4P                         | 73    | 68.9%    |
| Grand total: 106             |       |          |

|                        |                           |
|------------------------|---------------------------|
| Total Car Park Spaces: | 19 (4 accessible)         |
| Total Cycle spaces:    | 106 (1:1 ratio)           |
| Refuse Capacity:       | 12 x 240 L<br>22 x 1110 L |

Note: refuse capacity calculated using the Manchester Residential Quality Guidance

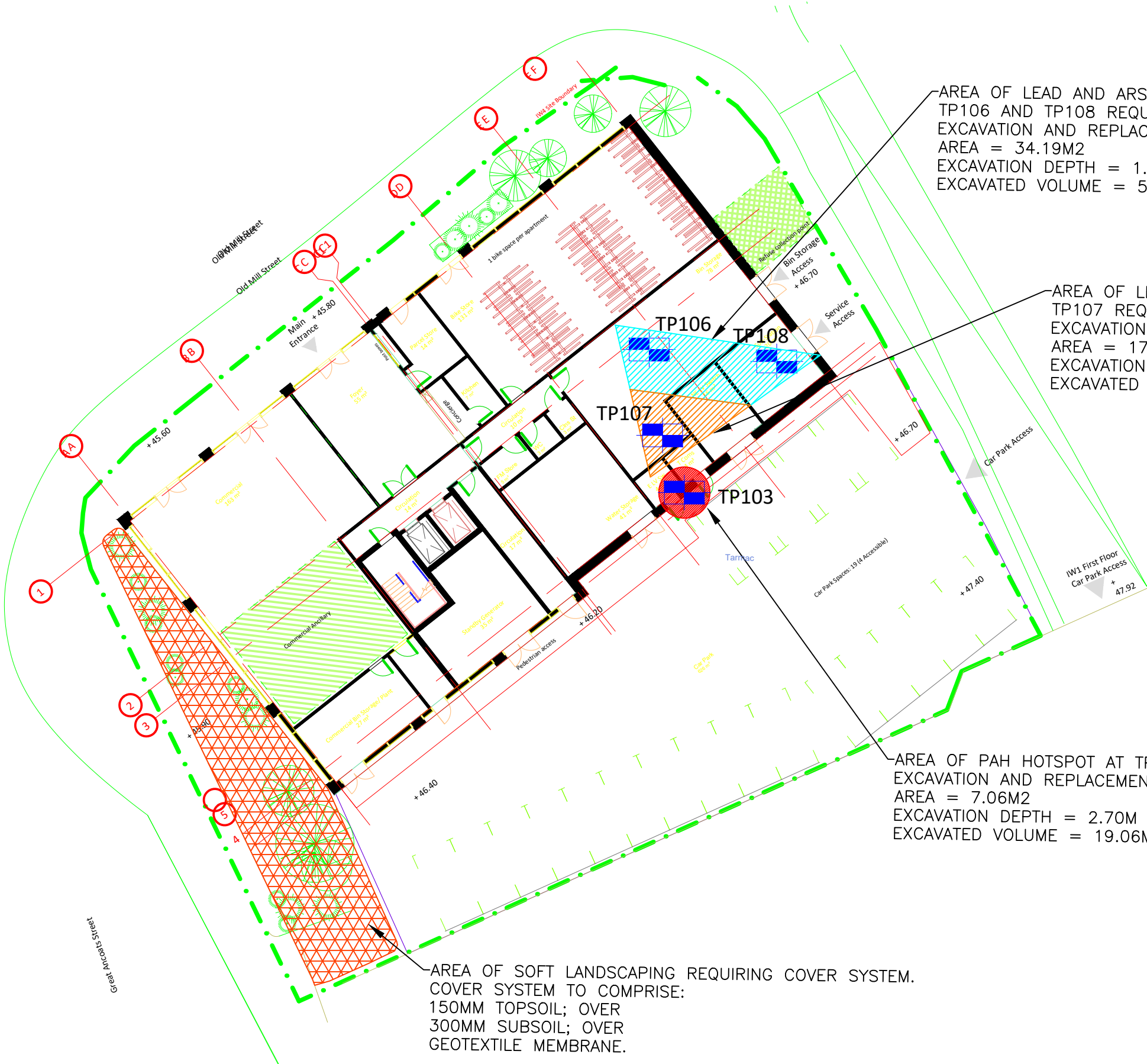
|                                                                                                                                                                         |          |          |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|------------|
| Revision                                                                                                                                                                | Date     | Drawn by | Checked by |
| P03                                                                                                                                                                     | 04.02.20 | AAI      | MSmi       |
| Partition shown between Lobby and Commercial area<br>Concierge kitchen and WC added. Cleaners Store added<br>External doors added to Generator and Commercial Bin Store |          |          |            |
| Revision                                                                                                                                                                | Date     | Drawn by | Checked by |
| P02                                                                                                                                                                     | 27.01.20 | AAI      | MSmi       |
| Updated following Design Review                                                                                                                                         |          |          |            |
| Revision                                                                                                                                                                | Date     | Drawn by | Checked by |
| P01                                                                                                                                                                     | 18.12.19 | HBa      | MSmi       |
| First issue for comment                                                                                                                                                 |          |          |            |
| Amendment                                                                                                                                                               |          |          |            |
| Purpose of issue                                                                                                                                                        |          |          |            |
| Issued for information                                                                                                                                                  |          |          |            |
| Project                                                                                                                                                                 |          |          |            |
| Muse Development<br>Islington Wharf - Phase 4<br>Manchester                                                                                                             |          |          |            |
| Drawing                                                                                                                                                                 |          |          |            |
| Level 00 - GA Plan                                                                                                                                                      |          |          |            |

|                   |             |          |            |          |      |        |
|-------------------|-------------|----------|------------|----------|------|--------|
| Drawing No.       | Originator  | Zone     | Level      | Type     | Role | Number |
| Project ID        | -           | RYD      | -00-00-DR- | A        | -    | 3000   |
| Ryder Project No. | Scale at A1 | Drawn By | Status     | Revision |      |        |
| 2791-04           | As          | HBa      | S2         | P03      |      |        |
| indicated         |             |          |            |          |      |        |



Ramp to First Floor car park

IW1 Car Park



AREA OF LEAD AND ARSENIC HOTSPOT AT TP106 AND TP108 REQUIRING EXCAVATION AND REPLACEMENT.  
AREA = 34.19M2  
EXCAVATION DEPTH = 1.50M  
EXCAVATED VOLUME = 51.28M3

AREA OF LEAD AND ARSENIC HOTSPOT AT TP107 REQUIRING EXCAVATION AND REPLACEMENT.  
AREA = 17.61M2  
EXCAVATION DEPTH = 2.40M  
EXCAVATED VOLUME = 42.26M3

AREA OF PAH HOTSPOT AT TP103 REQUIRING EXCAVATION AND REPLACEMENT.  
AREA = 7.06M2  
EXCAVATION DEPTH = 2.70M  
EXCAVATED VOLUME = 19.06M3

AREA OF SOFT LANDSCAPING REQUIRING COVER SYSTEM.  
COVER SYSTEM TO COMPRISE:  
150MM TOPSOIL; OVER  
300MM SUBSOIL; OVER  
GEOTEXTILE MEMBRANE.

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          |                                                                                                 |                   |                         |  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------|-------------------------|--|
| KEY  | <div>NOTES</div> <div>1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect &amp; Engineer for verification. Figured dimensions only are to be taken from this drawing.</div> <div>2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.</div> <div>3. This drawing has been based on the following drawings and information: xxxxxxx</div> |          |            |          |             | <div>Hydrock</div> <div>4 Lakeside<br/>Festival Way<br/>Stoke-on-Trent<br/>ST1 5RY<br/>t: +44(0) 1782 261919<br/>e: stoke@hydrock.com<br/>or visit www.hydrock.com</div> | TITLE                                                                                           |                   |                         |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | REMEDIATION ZONATION PLAN -<br>PROPOSED LAYOUT                                                  |                   |                         |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | HYDROCK PROJECT NO.<br>C-10042                                                                  | SCALE @ A3<br>NTS |                         |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | PURPOSE OF ISSUE<br>SUITABLE FOR INFORMATION                                                    |                   | STATUS<br>S2            |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)<br>10042-HYD-XX-XX-DR-GE-0009 |                   | REVISION<br>P1          |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | CLIENT                                                                                          |                   | PROJECT                 |  |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |          |             |                                                                                                                                                                          | WATERSIDE PLACES                                                                                |                   | ISLINGTON WHARF PHASE 4 |  |
| P1   | FIRST ISSUE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |            |          |             |                                                                                                                                                                          |                                                                                                 |                   |                         |  |
|      | JB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20/10/20 | DH         | 20/10/20 | DH          | 20/10/20                                                                                                                                                                 |                                                                                                 |                   |                         |  |
| REV. | REVISION NOTES/COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |            |          |             |                                                                                                                                                                          |                                                                                                 |                   |                         |  |
|      | DRAWN BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DATE     | CHECKED BY | DATE     | APPROVED BY | DATE                                                                                                                                                                     |                                                                                                 |                   |                         |  |

## Appendix B

### *Laboratory Results*



**Richard Meredith**  
GeoEnvironmental Consulting Ltd  
15 Wheatley Avenue  
Ilkley  
West Yorkshire  
LS29 8PT

**t:** (07762) 751411

**e:** richard.meredith@geo-env.co.uk

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

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 21-98217**

Replaces Analytical Report Number: 21-98217, issue no. 1  
Additional analysis undertaken.

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Islington Wharf | <b>Samples received on:</b>                            | 26/08/2021 |
| <b>Your job number:</b>     | ISLINGTON WHARF | <b>Samples instructed on/<br/>Analysis started on:</b> | 10/09/2021 |
| <b>Your order number:</b>   |                 | <b>Analysis completed by:</b>                          | 22/09/2021 |
| <b>Report Issue Number:</b> | 2               | <b>Report issued on:</b>                               | 22/09/2021 |
| <b>Samples Analysed:</b>    | 5 soil samples  |                                                        |            |

**Signed:** *A. Czerwińska*

Agnieszka Czerwińska  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

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

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

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

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

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

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

Analytical Report Number: 21-98217  
Project / Site name: Islington Wharf

| Lab Sample Number                    |       |                    |                      | 2004151       | 2004152       | 2004153       | 2004154       | 2004155       |
|--------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                     |       |                    |                      | H1B           | H1N           | H1S           | H1E           | H1W           |
| Sample Number                        |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                            |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                         |       |                    |                      | 24/08/2021    | 24/08/2021    | 24/08/2021    | 24/08/2021    | 24/08/2021    |
| Time Taken                           |       |                    |                      | 1400          | 1400          | 1400          | 1400          | 1400          |
| Analytical Parameter (Soil Analysis) | Units | Limit of detection | Accreditation Status |               |               |               |               |               |
| Stone Content                        | %     | 0.1                | NONE                 | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                     | %     | 0.01               | NONE                 | 13            | 13            | 15            | 13            | 12            |
| Total mass of sample received        | kg    | 0.001              | NONE                 | 1.0           | 1.0           | 1.0           | 1.0           | 1.0           |

| Asbestos in Soil | Type | N/A | ISO 17025 | Not-detected | Not-detected | Not-detected | Not-detected | Not-detected |
|------------------|------|-----|-----------|--------------|--------------|--------------|--------------|--------------|
|------------------|------|-----|-----------|--------------|--------------|--------------|--------------|--------------|

#### General Inorganics

|                                         |       |       |        |        |        |        |        |        |
|-----------------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| Free Cyanide                            | mg/kg | 1     | MCERTS | < 1.0  | < 1.0  | < 1.0  | < 1.0  | < 1.0  |
| Fraction Organic Carbon (FOC) Automated | N/A   | 0.001 | MCERTS | 0.0077 | 0.0083 | 0.0070 | 0.0078 | 0.0061 |

#### Total Phenols

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

#### Speciated PAHs

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

#### Total PAH

|                             |       |     |        |        |        |        |        |        |
|-----------------------------|-------|-----|--------|--------|--------|--------|--------|--------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | < 0.80 | < 0.80 | < 0.80 | < 0.80 | < 0.80 |
|-----------------------------|-------|-----|--------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |       |       |       |       |
|-----------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 11    | 9.3   | 8.5   | 11    | 12    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | < 0.2 | 0.4   | 0.3   | 0.3   | 0.5   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 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 | 30    | 31    | 30    | 31    | 32    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 25    | 25    | 24    | 26    | 26    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 11    | 13    | 11    | 12    | 15    |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 36    | 38    | 35    | 37    | 38    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 63    | 63    | 61    | 65    | 64    |

#### Petroleum Hydrocarbons

|               |       |    |        |    |     |    |    |    |
|---------------|-------|----|--------|----|-----|----|----|----|
| TPH C10 - C40 | mg/kg | 10 | MCERTS | 49 | 110 | 50 | 92 | 50 |
|---------------|-------|----|--------|----|-----|----|----|----|

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-98217**  
**Project / Site name: Islington Wharf**

\* 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 *             |
|-------------------|------------------|---------------|---------------|----------------------------------|
| 2004151           | H1B              | None Supplied | None Supplied | Brown clay.                      |
| 2004152           | H1N              | None Supplied | None Supplied | Brown clay.                      |
| 2004153           | H1S              | None Supplied | None Supplied | Brown clay and loam with gravel. |
| 2004154           | H1E              | None Supplied | None Supplied | Brown clay and loam with gravel. |
| 2004155           | H1W              | None Supplied | None Supplied | Brown clay and loam with gravel. |

**Analytical Report Number : 21-98217**  
**Project / Site name: Islington Wharf**

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

| Analytical Test Name                  | Analytical Method Description                                                                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in soil by ICP-OES             | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                           | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L038-PL       | D                  | MCERTS               |
| Asbestos identification in soil       | Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.                                  | In house method based on HSG 248                                                                                | A001-PL       | D                  | ISO 17025            |
| Boron, water soluble, in soil         | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                 | In-house method based on Second Site Properties version 3                                                       | L038-PL       | D                  | MCERTS               |
| Hexavalent chromium in soil           | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.  | In-house method                                                                                                 | L080-PL       | W                  | MCERTS               |
| Free cyanide in soil                  | Determination of free 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               |
| Moisture Content                      | Moisture content, determined gravimetrically. (30 oC)                                                                                                  | In house method.                                                                                                | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil            | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                 | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | MCERTS               |
| Speciated EPA-16 PAHs in soil         | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. | In-house method based on USEPA 8270                                                                             | L064-PL       | D                  | MCERTS               |
| 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                 |
| TPH Banding in Soil by FID            | Determination of hexane extractable hydrocarbons in soil by GC-FID.                                                                                    | In-house method, TPH with carbon banding and silica gel split/cleanup.                                          | L076-PL       | W                  | MCERTS               |
| Fraction Organic Carbon FOC Automated | Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.              | In house method                                                                                                 | L009          | D                  | 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.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**



**Project / Site name: Islington Wharf**

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name            | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|----------------------|----------|----------------|
| H1B       | None Supplied | S           | 2004151           | c                | Free cyanide in soil | L080-PL  | c              |
| H1E       | None Supplied | S           | 2004154           | c                | Free cyanide in soil | L080-PL  | c              |
| H1N       | None Supplied | S           | 2004152           | c                | Free cyanide in soil | L080-PL  | c              |
| H1S       | None Supplied | S           | 2004153           | c                | Free cyanide in soil | L080-PL  | c              |
| H1W       | None Supplied | S           | 2004155           | c                | Free cyanide in soil | L080-PL  | c              |



**Richard Meredith**  
GeoEnvironmental Consulting Ltd  
15 Wheatley Avenue  
Ilkley  
West Yorkshire  
LS29 8PT

**t:** (07762) 751411

**e:** richard.meredith@geo-env.co.uk

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

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 21-99380**

Replaces Analytical Report Number: 21-99380, issue no. 1  
Additional analysis undertaken.

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Islington Wharf | <b>Samples received on:</b>                            | 14/09/2021 |
| <b>Your job number:</b>     |                 | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/09/2021 |
| <b>Your order number:</b>   | 3345-18-PO-01   | <b>Analysis completed by:</b>                          | 11/10/2021 |
| <b>Report Issue Number:</b> | 2               | <b>Report issued on:</b>                               | 11/10/2021 |
| <b>Samples Analysed:</b>    | 20 soil samples |                                                        |            |

**Signed:** *Karolina Marek*

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

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

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

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

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

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

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



Analytical Report Number: 21-99380  
Project / Site name: Islington Wharf  
Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010793       | 2010794       | 2010795       | 2010796       | 2010797       |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                         | H3B           | H3N           | H3S           | H3E           | H3W           |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
| Stone Content                           | %     | 0.1                | NONE                    | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                        | %     | 0.01               | NONE                    | 12            | 17            | 17            | 17            | 17            |
| Total mass of sample received           | kg    | 0.001              | NONE                    | 1.0           | 1.5           | 1.5           | 1.5           | 1.5           |

| 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

|                                         |       |       |        |        |       |       |       |       |
|-----------------------------------------|-------|-------|--------|--------|-------|-------|-------|-------|
| Free Cyanide                            | mg/kg | 1     | MCERTS | < 1.0  | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Fraction Organic Carbon (FOC) Automated | N/A   | 0.001 | MCERTS | 0.0082 | -     | 0.010 | -     | 0.010 |

#### Total Phenols

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

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | 0.43   | < 0.05 | 0.35   | 0.77   |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS | < 0.05 | 0.37   | 0.32   | 0.35   | 0.43   |
| Fluorene               | mg/kg | 0.05 | MCERTS | < 0.05 | 0.27   | 0.20   | 0.30   | 0.42   |
| Phenanthrene           | mg/kg | 0.05 | MCERTS | < 0.05 | 2.3    | 2.3    | 2.3    | 3.3    |
| Anthracene             | mg/kg | 0.05 | MCERTS | < 0.05 | 0.49   | 0.41   | 0.45   | 0.66   |
| Fluoranthene           | mg/kg | 0.05 | MCERTS | < 0.05 | 3.4    | 2.8    | 2.9    | 4.3    |
| Pyrene                 | mg/kg | 0.05 | MCERTS | < 0.05 | 3.2    | 2.5    | 2.8    | 4.3    |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS | < 0.05 | 1.5    | 1.2    | 1.5    | 2.5    |
| Chrysene               | mg/kg | 0.05 | MCERTS | < 0.05 | 1.5    | 1.0    | 1.3    | 1.6    |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | MCERTS | < 0.05 | 1.2    | 0.84   | 1.2    | 1.9    |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | MCERTS | < 0.05 | 0.94   | 0.85   | 0.69   | 0.92   |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS | < 0.05 | 1.5    | 1.3    | 1.1    | 2.0    |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS | < 0.05 | 0.64   | 0.59   | 0.57   | 0.80   |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.26   |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | 0.93   | 0.76   | 0.65   | 1.0    |

#### Total PAH

|                             |       |     |        |        |      |      |      |      |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | < 0.80 | 18.6 | 15.0 | 16.4 | 25.1 |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |       |       |       |       |
|-----------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 7.8   | 16    | 13    | 10    | 14    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 0.9   | 1.1   | 0.7   | 1.4   | 0.9   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | 0.3   | 0.6   | 0.4   | 0.3   | 0.5   |
| Chromium (hexavalent)             | mg/kg | 4   | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable) | mg/kg | 1   | MCERTS | 29    | 30    | 29    | 29    | 30    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 28    | 46    | 39    | 44    | 48    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 24    | 120   | 75    | 73    | 110   |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 33    | 32    | 33    | 33    | 32    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 74    | 140   | 130   | 97    | 130   |



Analytical Report Number: 21-99380  
 Project / Site name: Islington Wharf  
 Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010793       | 2010794       | 2010795       | 2010796       | 2010797       |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                         | H3B           | H3N           | H3S           | H3E           | H3W           |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
|                                         |       |                    |                         |               |               |               |               |               |
| Petroleum Hydrocarbons                  |       |                    |                         |               |               |               |               |               |
| TPH C10 - C40                           | mg/kg | 10                 | MCERTS                  | < 10          | 36            | 23            | 35            | 54            |

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-99380  
Project / Site name: Islington Wharf  
Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010798       | 2010799       | 2010800       | 2010801       | 2010802       |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                         | HEFill        | H2B           | H2N           | H2S           | H2E           |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
| Stone Content                           | %     | 0.1                | NONE                    | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                        | %     | 0.01               | NONE                    | 12            | 13            | 14            | 15            | 15            |
| Total mass of sample received           | kg    | 0.001              | NONE                    | 1.5           | 1.0           | 1.2           | 1.2           | 1.2           |

| 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

|                                         |       |       |        |       |        |       |        |       |
|-----------------------------------------|-------|-------|--------|-------|--------|-------|--------|-------|
| Free Cyanide                            | mg/kg | 1     | MCERTS | < 1.0 | < 1.0  | < 1.0 | < 1.0  | < 1.0 |
| Fraction Organic Carbon (FOC) Automated | N/A   | 0.001 | MCERTS | -     | 0.0058 | -     | 0.0066 | -     |

#### Total Phenols

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

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluorene               | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.54   |
| Anthracene             | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluoranthene           | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.60   |
| Pyrene                 | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.59   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.32   |
| Chrysene               | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.32   |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.24   |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.13   |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.23   |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |

#### Total PAH

|                             |       |     |        |        |        |        |        |      |
|-----------------------------|-------|-----|--------|--------|--------|--------|--------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | < 0.80 | < 0.80 | < 0.80 | < 0.80 | 2.97 |
|-----------------------------|-------|-----|--------|--------|--------|--------|--------|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |       |       |       |       |
|-----------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 12    | 10    | 12    | 9.7   | 9.5   |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 0.8   | 1.4   | 1.0   | 1.0   | 0.8   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 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 | 39    | 30    | 38    | 35    | 33    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 30    | 25    | 30    | 27    | 24    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 19    | 15    | 19    | 20    | 22    |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 49    | 40    | 45    | 46    | 38    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 78    | 58    | 80    | 65    | 65    |



Analytical Report Number: 21-99380  
 Project / Site name: Islington Wharf  
 Your Order No: 3345-18-PO-01

| Lab Sample Number                       |  |  |  | 2010798       | 2010799            | 2010800              | 2010801       | 2010802       |
|-----------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Sample Reference                        |  |  |  | HEFill        | H2B                | H2N                  | H2S           | H2E           |
| Sample Number                           |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                            |  |  |  | 13/09/2021    | 13/09/2021         | 13/09/2021           | 13/09/2021    | 13/09/2021    |
| Time Taken                              |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |
| Petroleum Hydrocarbons                  |  |  |  |               |                    |                      |               |               |
| TPH C10 - C40                           |  |  |  | mg/kg         | 10                 | MCERTS               | < 10          | < 10          |

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-99380  
Project / Site name: Islington Wharf  
Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010803       | 2010804       | 2010805       | 2010806       | 2010807       |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                         | H2W           | H3Fill        | F1            | F2            | F3            |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
| Stone Content                           | %     | 0.1                | NONE                    | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                        | %     | 0.01               | NONE                    | 15            | 6.6           | 4.7           | 13            | 14            |
| Total mass of sample received           | kg    | 0.001              | NONE                    | 1.2           | 1.2           | 1.2           | 1.2           | 1.2           |

| 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

|                                         |       |       |        |        |       |       |       |        |
|-----------------------------------------|-------|-------|--------|--------|-------|-------|-------|--------|
| Free Cyanide                            | mg/kg | 1     | MCERTS | < 1.0  | < 1.0 | < 1.0 | < 1.0 | < 1.0  |
| Fraction Organic Carbon (FOC) Automated | N/A   | 0.001 | MCERTS | 0.0049 | -     | 0.013 | -     | 0.0071 |

#### Total Phenols

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

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | 0.37   | 1.3    | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS | < 0.05 | 0.60   | 2.4    | < 0.05 | < 0.05 |
| Fluorene               | mg/kg | 0.05 | MCERTS | < 0.05 | 0.53   | 1.8    | < 0.05 | < 0.05 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS | 0.89   | 4.2    | 13     | < 0.05 | 0.36   |
| Anthracene             | mg/kg | 0.05 | MCERTS | < 0.05 | 0.91   | 2.8    | < 0.05 | < 0.05 |
| Fluoranthene           | mg/kg | 0.05 | MCERTS | 1.1    | 6.2    | 14     | < 0.05 | 0.39   |
| Pyrene                 | mg/kg | 0.05 | MCERTS | 1.1    | 5.9    | 13     | < 0.05 | 0.40   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS | 0.49   | 3.0    | 7.8    | < 0.05 | 0.24   |
| Chrysene               | mg/kg | 0.05 | MCERTS | 0.52   | 3.0    | 5.5    | < 0.05 | 0.24   |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | MCERTS | 0.24   | 3.0    | 5.8    | < 0.05 | < 0.05 |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | MCERTS | 0.22   | 1.4    | 3.6    | < 0.05 | < 0.05 |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS | 0.33   | 3.0    | 6.3    | < 0.05 | < 0.05 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS | < 0.05 | 1.2    | 2.6    | < 0.05 | < 0.05 |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS | < 0.05 | 0.33   | 0.94   | < 0.05 | < 0.05 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | 1.6    | 3.3    | < 0.05 | < 0.05 |

#### Total PAH

|                             |       |     |        |      |      |      |        |      |
|-----------------------------|-------|-----|--------|------|------|------|--------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | 4.90 | 35.2 | 84.8 | < 0.80 | 1.63 |
|-----------------------------|-------|-----|--------|------|------|------|--------|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |       |       |       |       |
|-----------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 9.4   | 21    | 25    | 11    | 10    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 0.5   | 0.7   | 1.0   | 0.3   | 0.3   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | < 0.2 | 1.0   | 1.7   | < 0.2 | < 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 | 35    | 23    | 17    | 34    | 36    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 26    | 82    | 70    | 29    | 30    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 31    | 200   | 230   | 18    | 24    |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | < 0.3 | 1.3   | 2.4   | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 44    | 20    | 20    | 38    | 41    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 68    | 140   | 140   | 68    | 75    |



Analytical Report Number: 21-99380  
 Project / Site name: Islington Wharf  
 Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010803       | 2010804       | 2010805       | 2010806       | 2010807       |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                         | H2W           | H3Fill        | F1            | F2            | F3            |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
| <b>Petroleum Hydrocarbons</b>           |       |                    |                         |               |               |               |               |               |
| TPH C10 - C40                           | mg/kg | 10                 | MCERTS                  | < 10          | 210           | 400           | < 10          | < 10          |

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-99380  
 Project / Site name: Islington Wharf  
 Your Order No: 3345-18-PO-01

| Lab Sample Number                    |       |                    |                      | 2010808       | 2010809       | 2010810       | 2010811       | 2010812       |
|--------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                     |       |                    |                      | F4            | F5            | F6            | F7            | F8            |
| Sample Number                        |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                            |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                         |       |                    |                      | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |
| 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                     | %     | 0.01               | NONE                 | 7.0           | 13            | 9.9           | 8.2           | 11            |
| Total mass of sample received        | kg    | 0.001              | NONE                 | 1.2           | 1.2           | 0.80          | 0.80          | 0.80          |

| Asbestos in Soil Screen / Identification Name | Type | N/A   | ISO 17025 | -            | -            | Amosite  | -            | -            |
|-----------------------------------------------|------|-------|-----------|--------------|--------------|----------|--------------|--------------|
| Asbestos in Soil                              | Type | N/A   | ISO 17025 | Not-detected | Not-detected | Detected | Not-detected | Not-detected |
| Asbestos Quantification (Stage 2)             | %    | 0.001 | ISO 17025 | -            | -            | 0.089    | -            | -            |
| Asbestos Quantification Total                 | %    | 0.001 | ISO 17025 | -            | -            | 0.089    | -            | -            |

#### General Inorganics

|                                         |       |       |        |       |        |       |       |       |
|-----------------------------------------|-------|-------|--------|-------|--------|-------|-------|-------|
| Free Cyanide                            | mg/kg | 1     | MCERTS | < 1.0 | < 1.0  | < 1.0 | < 1.0 | < 1.0 |
| Fraction Organic Carbon (FOC) Automated | N/A   | 0.001 | MCERTS | -     | 0.0084 | -     | 0.012 | -     |

#### Total Phenols

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

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | 1.4    | 0.37   | 0.72   | 0.89   | 0.51   |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS | < 0.05 | 0.25   | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS | 3.5    | 0.46   | 0.94   | 1.9    | 3.1    |
| Fluorene               | mg/kg | 0.05 | MCERTS | 2.7    | 0.76   | 0.83   | 1.4    | 2.0    |
| Phenanthrene           | mg/kg | 0.05 | MCERTS | 21     | 4.2    | 6.2    | 11     | 20     |
| Anthracene             | mg/kg | 0.05 | MCERTS | 5.0    | 0.96   | 1.5    | 2.6    | 4.3    |
| Fluoranthene           | mg/kg | 0.05 | MCERTS | 22     | 4.2    | 8.0    | 13     | 25     |
| Pyrene                 | mg/kg | 0.05 | MCERTS | 20     | 4.1    | 7.8    | 12     | 24     |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS | 12     | 2.5    | 4.6    | 7.8    | 14     |
| Chrysene               | mg/kg | 0.05 | MCERTS | 8.7    | 1.7    | 3.4    | 5.4    | 9.6    |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | MCERTS | 9.2    | 2.0    | 4.0    | 6.0    | 11     |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | MCERTS | 5.3    | 0.93   | 1.9    | 3.5    | 5.6    |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS | 9.7    | 1.9    | 4.0    | 6.5    | 12     |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS | 4.1    | 0.85   | 2.1    | 3.0    | 5.1    |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS | 1.4    | < 0.05 | < 0.05 | < 0.05 | 1.5    |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | 5.2    | 1.1    | 2.4    | 3.5    | 6.1    |

#### Total PAH

|                             |       |     |        |     |      |      |      |     |
|-----------------------------|-------|-----|--------|-----|------|------|------|-----|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | 131 | 26.2 | 48.1 | 78.9 | 143 |
|-----------------------------|-------|-----|--------|-----|------|------|------|-----|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |       |       |       |       |
|-----------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 13    | 11    | 17    | 27    | 37    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 0.9   | 0.9   | 0.9   | 0.8   | 0.9   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | 0.6   | < 0.2 | 1.2   | 1.1   | 2.0   |
| Chromium (hexavalent)             | mg/kg | 4   | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable) | mg/kg | 1   | MCERTS | 19    | 33    | 20    | 25    | 25    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 76    | 37    | 110   | 120   | 150   |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 180   | 55    | 220   | 570   | 1700  |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | 1.0   | < 0.3 | 1.3   | 3.1   | 3.6   |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 19    | 36    | 23    | 28    | 30    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 150   | 81    | 190   | 230   | 390   |



Analytical Report Number: 21-99380  
 Project / Site name: Islington Wharf  
 Your Order No: 3345-18-PO-01

| Lab Sample Number                       |       |                    |                         | 2010808       | 2010809       | 2010810       | 2010811       | 2010812       |     |     |     |
|-----------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|-----|-----|-----|
| Sample Reference                        |       |                    |                         | F4            | F5            | F6            | F7            | F8            |     |     |     |
| Sample Number                           |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |     |     |     |
| Depth (m)                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |     |     |     |
| Date Sampled                            |       |                    |                         | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    | 13/09/2021    |     |     |     |
| Time Taken                              |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |     |     |     |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |     |     |     |
|                                         |       |                    |                         |               |               |               |               |               |     |     |     |
| Petroleum Hydrocarbons                  |       |                    |                         |               |               |               |               |               |     |     |     |
| TPH C10 - C40                           |       |                    |                         | mg/kg         | 10            | MCERTS        | 240           | 75            | 320 | 330 | 510 |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number:** 21-99380  
**Project / Site name:** Islington Wharf  
**Your Order No:**

## Certificate of Analysis - Asbestos Quantification

### Methods:

#### Qualitative Analysis

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

#### Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL 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 |
|---------------|-----------|------------------|-------------------|---------------------------------------------------|-------------|---------------------------------------|----------------------------|
| 2010810       | F6        |                  | 152               | Sheeting/Board Debris                             | Amosite     | 0.089                                 | 0.089                      |

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



**Analytical Report Number : 21-99380**  
**Project / Site name: Islington Wharf**

\* 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 *                            |
|-------------------|------------------|---------------|---------------|-------------------------------------------------|
| 2010793           | H3B              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010794           | H3N              | None Supplied | None Supplied | Brown clay and sand with gravel.                |
| 2010795           | H3S              | None Supplied | None Supplied | Brown clay and sand with gravel.                |
| 2010796           | H3E              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010797           | H3W              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010798           | HEFill           | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010799           | H2B              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010800           | H2N              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010801           | H2S              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010802           | H2E              | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010803           | H2W              | None Supplied | None Supplied | Brown clay and sand with vegetation.            |
| 2010804           | H3Fill           | None Supplied | None Supplied | Brown loam and sand with gravel and brick.      |
| 2010805           | F1               | None Supplied | None Supplied | Brown loam and sand with gravel and brick.      |
| 2010806           | F2               | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010807           | F3               | None Supplied | None Supplied | Brown clay and sand.                            |
| 2010808           | F4               | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |
| 2010809           | F5               | None Supplied | None Supplied | Brown clay and sand with gravel and brick.      |
| 2010810           | F6               | None Supplied | None Supplied | Brown loam and clay with gravel and vegetation. |
| 2010811           | F7               | None Supplied | None Supplied | Brown loam and sand with gravel and brick.      |
| 2010812           | F8               | None Supplied | None Supplied | Brown clay and loam with gravel and vegetation. |



**Analytical Report Number : 21-99380**  
**Project / Site name: Islington Wharf**

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

| Analytical Test Name                  | Analytical Method Description                                                                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in soil by ICP-OES             | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                           | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L038-PL       | D                  | MCERTS               |
| Asbestos identification in soil       | Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.                                  | In house method based on HSG 248                                                                                | A001-PL       | D                  | ISO 17025            |
| Boron, water soluble, in soil         | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                 | In-house method based on Second Site Properties version 3                                                       | L038-PL       | D                  | MCERTS               |
| Hexavalent chromium in soil           | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.  | In-house method                                                                                                 | L080-PL       | W                  | MCERTS               |
| Free cyanide in soil                  | Determination of free 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               |
| Moisture Content                      | Moisture content, determined gravimetrically. (30 oC)                                                                                                  | In house method.                                                                                                | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil            | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                 | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | MCERTS               |
| Speciated EPA-16 PAHs in soil         | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. | In-house method based on USEPA 8270                                                                             | L064-PL       | D                  | MCERTS               |
| 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                 |
| TPH Banding in Soil by FID            | Determination of hexane extractable hydrocarbons in soil by GC-FID.                                                                                    | In-house method, TPH with carbon banding and silica gel split/cleanup.                                          | L076-PL       | W                  | MCERTS               |
| 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            |
| Fraction Organic Carbon FOC Automated | Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.              | In house method                                                                                                 | L009          | D                  | 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.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Sample Deviation Report



**Analytical Report Number : 21-99380**  
**Project / Site name: Islington Wharf**

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                     | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|-------------------------------|----------|----------------|
| F6        | None Supplied | S           | 2010810           | b                | Monohydric phenols in soil    | L080-PL  | b              |
| F6        | None Supplied | S           | 2010810           | b                | Speciated EPA-16 PAHs in soil | L064-PL  | b              |
| F7        | None Supplied | S           | 2010811           | b                | Monohydric phenols in soil    | L080-PL  | b              |
| F7        | None Supplied | S           | 2010811           | b                | Speciated EPA-16 PAHs in soil | L064-PL  | b              |
| F8        | None Supplied | S           | 2010812           | b                | Monohydric phenols in soil    | L080-PL  | b              |
| F8        | None Supplied | S           | 2010812           | b                | Speciated EPA-16 PAHs in soil | L064-PL  | b              |



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

**t:** 01923 225404  
**f:** 01923 237404  
**e:** [reception@i2analytical.com](mailto:reception@i2analytical.com)

**e: MURRAYRIX Group**

**Analytical Report Number : 21-13284**

|                             |                        |                                                        |            |
|-----------------------------|------------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Agecroft Commerce Park | <b>Samples received on:</b>                            | 29/09/2021 |
| <b>Your job number:</b>     |                        | <b>Samples instructed on/<br/>Analysis started on:</b> | 29/09/2021 |
| <b>Your order number:</b>   | 21 311                 | <b>Analysis completed by:</b>                          | 06/10/2021 |
| <b>Report Issue Number:</b> | 1                      | <b>Report issued on:</b>                               | 06/10/2021 |
| <b>Samples Analysed:</b>    | 5 soil samples         |                                                        |            |

Signed: *A. Chervinskii*

Agnieszka Czerwińska  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

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

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

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

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

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

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

Analytical Report Number: 21-13284  
 Project / Site name: Agecroft Commerce Park  
 Your Order No: 21 311

| Lab Sample Number                    |       |                    |                      | 2029641              | 2029642              | 2029643              | 2029644              | 2029645              |
|--------------------------------------|-------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sample Reference                     |       |                    |                      | Agecroft Tard 6F5 01 | Agecroft Tard 6F5 02 | Agecroft Tard 6F5 03 | Agecroft Tard 6F5 04 | Agecroft Tard 6F5 05 |
| Sample Number                        |       |                    |                      | 105016               | 105017               | 105018               | 105019               | 105020               |
| Depth (m)                            |       |                    |                      | None Supplied        | None Supplied        | None Supplied        | None Supplied        | None Supplied        |
| Date Sampled                         |       |                    |                      | 29/09/2021           | 29/09/2021           | 29/09/2021           | 29/09/2021           | 29/09/2021           |
| 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                     | %     | 0.01               | NONE                 | 13                   | 13                   | 13                   | 13                   | 14                   |
| Total mass of sample received        | kg    | 0.001              | NONE                 | 1.0                  | 1.0                  | 1.0                  | 1.0                  | 1.0                  |

| Asbestos in Soil | Type | N/A | ISO 17025 | Not-detected | Not-detected | Not-detected | Not-detected | Not-detected |
|------------------|------|-----|-----------|--------------|--------------|--------------|--------------|--------------|
|------------------|------|-----|-----------|--------------|--------------|--------------|--------------|--------------|

#### General Inorganics

|                            |          |     |        |     |     |     |     |     |
|----------------------------|----------|-----|--------|-----|-----|-----|-----|-----|
| pH - Automated             | pH Units | N/A | MCERTS | 8.9 | 9.1 | 8.7 | 9.1 | 9.3 |
| Organic Matter (automated) | %        | 0.1 | MCERTS | 0.9 | 1.0 | 1.0 | 0.8 | 0.9 |

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluorene               | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS | 0.49   | 0.29   | 0.47   | 0.39   | 0.63   |
| Anthracene             | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluoranthene           | mg/kg | 0.05 | MCERTS | 0.69   | 0.43   | 0.71   | 0.79   | 0.98   |
| Pyrene                 | mg/kg | 0.05 | MCERTS | 0.66   | 0.44   | 0.64   | 0.78   | 0.93   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS | 0.42   | 0.26   | 0.41   | 0.55   | 0.65   |
| Chrysene               | mg/kg | 0.05 | MCERTS | 0.38   | 0.25   | 0.26   | 0.30   | 0.40   |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | MCERTS | 0.38   | 0.32   | 0.38   | 0.59   | 0.62   |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | MCERTS | 0.22   | 0.11   | 0.14   | 0.19   | 0.19   |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS | 0.32   | 0.22   | 0.27   | 0.50   | 0.51   |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |

#### Total PAH

|                             |       |     |        |      |      |      |      |      |
|-----------------------------|-------|-----|--------|------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | MCERTS | 3.56 | 2.32 | 3.28 | 4.09 | 4.91 |
|-----------------------------|-------|-----|--------|------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 7.4   | 7.8   | 8.1   | 7.1   | 7.8   |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 0.76  | 0.72  | 0.80  | 0.78  | 0.68  |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 0.7   | 0.6   | 0.4   | 0.5   | 1.0   |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.2   | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (III)                     | mg/kg | 1    | NONE   | 14    | 14    | 16    | 22    | 14    |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 14    | 14    | 16    | 22    | 14    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 17    | 17    | 21    | 18    | 19    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 32    | 31    | 31    | 30    | 38    |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 14    | 13    | 15    | 20    | 14    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 17    | 16    | 18    | 21    | 15    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 61    | 48    | 57    | 58    | 55    |



Analytical Report Number: 21-13284  
 Project / Site name: Agecroft Commerce Park  
 Your Order No: 21 311

| Lab Sample Number                       |       |                    |                      | 2029641              | 2029642              | 2029643              | 2029644              | 2029645              |
|-----------------------------------------|-------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Sample Reference                        |       |                    |                      | Agecroft Tard 6F5 01 | Agecroft Tard 6F5 02 | Agecroft Tard 6F5 03 | Agecroft Tard 6F5 04 | Agecroft Tard 6F5 05 |
| Sample Number                           |       |                    |                      | 105016               | 105017               | 105018               | 105019               | 105020               |
| Depth (m)                               |       |                    |                      | None Supplied        | None Supplied        | None Supplied        | None Supplied        | None Supplied        |
| Date Sampled                            |       |                    |                      | 29/09/2021           | 29/09/2021           | 29/09/2021           | 29/09/2021           | 29/09/2021           |
| Time Taken                              |       |                    |                      | None Supplied        | None Supplied        | None Supplied        | None Supplied        | None Supplied        |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation Status |                      |                      |                      |                      |                      |

#### Monoaromatics & Oxygenates

|                                    |       |   |        |       |       |       |       |       |
|------------------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Benzene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                  |       |       |        |         |         |         |         |         |
|----------------------------------|-------|-------|--------|---------|---------|---------|---------|---------|
| TPH-CWG - Aliphatic >EC5 - EC6   | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aliphatic >EC6 - EC8   | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aliphatic >EC8 - EC10  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aliphatic >EC10 - EC12 | mg/kg | 1     | MCERTS | < 1.0   | < 1.0   | < 1.0   | < 1.0   | < 1.0   |
| TPH-CWG - Aliphatic >EC12 - EC16 | mg/kg | 2     | MCERTS | < 2.0   | < 2.0   | < 2.0   | < 2.0   | < 2.0   |
| TPH-CWG - Aliphatic >EC16 - EC21 | mg/kg | 8     | MCERTS | < 8.0   | < 8.0   | < 8.0   | < 8.0   | < 8.0   |
| TPH-CWG - Aliphatic >EC21 - EC35 | mg/kg | 8     | MCERTS | < 8.0   | < 8.0   | < 8.0   | < 8.0   | < 8.0   |
| TPH-CWG - Aliphatic (EC5 - EC35) | mg/kg | 10    | MCERTS | < 10    | < 10    | < 10    | < 10    | < 10    |

|                                 |       |       |        |         |         |         |         |         |
|---------------------------------|-------|-------|--------|---------|---------|---------|---------|---------|
| TPH-CWG - Aromatic >EC5 - EC7   | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aromatic >EC7 - EC8   | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aromatic >EC8 - EC10  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| TPH-CWG - Aromatic >EC10 - EC12 | mg/kg | 1     | MCERTS | < 1.0   | < 1.0   | < 1.0   | < 1.0   | < 1.0   |
| TPH-CWG - Aromatic >EC12 - EC16 | mg/kg | 2     | MCERTS | < 2.0   | < 2.0   | < 2.0   | < 2.0   | < 2.0   |
| TPH-CWG - Aromatic >EC16 - EC21 | mg/kg | 10    | MCERTS | < 10    | < 10    | < 10    | < 10    | < 10    |
| TPH-CWG - Aromatic >EC21 - EC35 | mg/kg | 10    | MCERTS | 10      | < 10    | < 10    | < 10    | < 10    |
| TPH-CWG - Aromatic (EC5 - EC35) | mg/kg | 10    | MCERTS | 15      | < 10    | < 10    | < 10    | < 10    |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-13284**  
**Project / Site name: Agecroft Commerce Park**

\* 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 *          |
|-------------------|------------------|---------------|---------------|-------------------------------|
| 2029641           | ecroft Tard 6F5  | 105016        | None Supplied | Brown sandy clay with gravel. |
| 2029642           | ecroft Tard 6F5  | 105017        | None Supplied | Brown sandy clay with gravel. |
| 2029643           | ecroft Tard 6F5  | 105018        | None Supplied | Brown sandy clay with gravel. |
| 2029644           | ecroft Tard 6F5  | 105019        | None Supplied | Brown sandy clay with gravel. |
| 2029645           | ecroft Tard 6F5  | 105020        | None Supplied | Brown sandy clay with gravel. |

**Analytical Report Number : 21-13284**

**Project / Site name: Agecroft Commerce Park**

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

| Analytical Test Name                  | Analytical Method Description                                                                                                                          | Analytical Method Reference                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in soil by ICP-OES             | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                           | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil. | L038-PL       | D                  | MCERTS               |
| Asbestos identification in soil       | Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.                                  | In house method based on HSG 248                                                     | A001-PL       | D                  | ISO 17025            |
| Boron, water soluble, in soil         | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                 | In-house method based on Second Site Properties version 3                            | L038-PL       | D                  | MCERTS               |
| 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               |
| Moisture Content                      | Moisture content, determined gravimetrically. (30 oC)                                                                                                  | In house method.                                                                     | L019-UK/PL    | W                  | NONE                 |
| Speciated EPA-16 PAHs in soil         | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. | In-house method based on USEPA 8270                                                  | L064-PL       | D                  | MCERTS               |
| pH in soil (automated)                | Determination of pH in soil by addition of water followed by automated electrometric measurement.                                                      | In house method.                                                                     | L099-PL       | D                  | MCERTS               |
| 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                 |
| 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               |
| Cr (III) in soil                      | In-house method by calculation from total Cr and Cr VI.                                                                                                | In-house method by calculation                                                       | L080-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               |
| Organic matter (Automated) in soil    | Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.                          | In house method.                                                                     | L009-PL       | D                  | MCERTS               |

**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.**

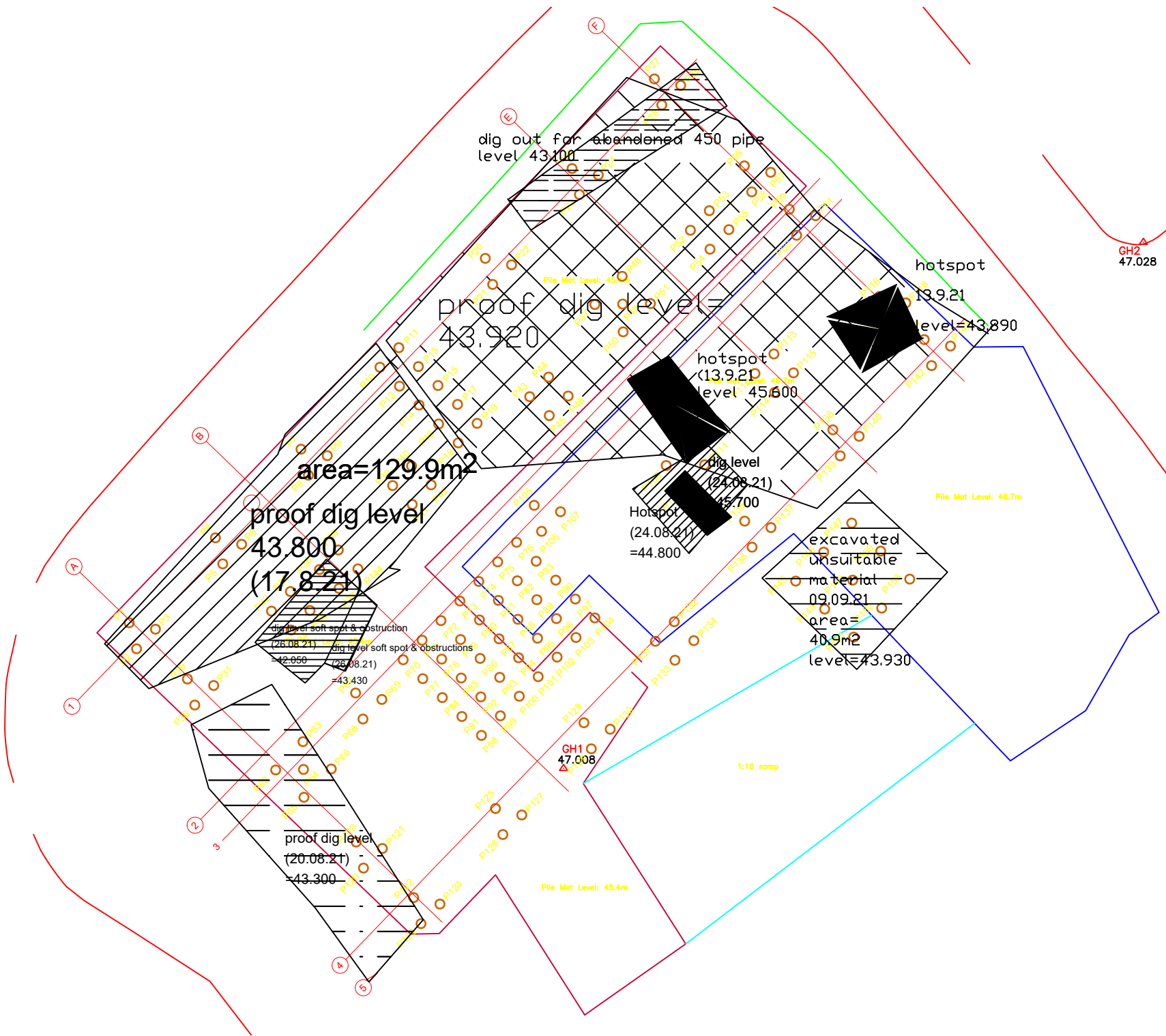
**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Appendix C

### *Earthworks Information*





# Waste exemption registration WEX284226

We confirm that the details you have entered, as shown below, are now on the exemptions register. Your registration should show on the public register within 5 days.

**This document is not a permit. Exemptions may have ceased or been revoked.**

To check whether these exemptions are still valid, check the company's registration WEX284226 on the public register of waste exemptions:

<https://environment.data.gov.uk/public-register/view/search-waste-exemptions>

## Business responsibilities

The business or organisation responsible for carrying out the exempt waste operations agrees to:

- comply with all limits on waste types and quantities
- comply with all conditions governing how waste must be stored, handled and treated
- carry out the operations without endangering human health or harming the environment

For the operations to remain exempt they must be carried out without:

- causing risk to water, air, soil, plants or animals
- causing a nuisance through noise and odours
- negatively affecting the countryside or places of special interest

In sensitive locations, extra controls may be needed over and above those set out in the exemptions to make sure this happens.

## Registration details

### Registration details

|                  |                  |
|------------------|------------------|
| Reference Number | WEX284226        |
| Date registered  | 8 September 2021 |

## Exemptions

|                                  |                             |
|----------------------------------|-----------------------------|
| U1: Use of waste in construction | Expires on 7 September 2024 |
|----------------------------------|-----------------------------|

## Your contact details

|                       |                                |
|-----------------------|--------------------------------|
| Your name             | Richard Meredith               |
| Your telephone number | 07762 751411                   |
| Your email address    | richard.meredith@geo-env.co.uk |

## Waste operator details

|                                                       |                                 |
|-------------------------------------------------------|---------------------------------|
| Business or organisation type                         | Limited company                 |
| Waste operator responsible for these waste operations | Chartrange Ltd                  |
| Address of the Waste operator                         | CHART RANGE LTD<br>WHARF STREET |

## Waste operations contact

|                         |                                             |
|-------------------------|---------------------------------------------|
| <b>Name</b>             | Richard Meredith                            |
| <b>Position</b>         | Cosultant                                   |
| <b>Telephone number</b> | 07762 751411                                |
| <b>Email</b>            | richard.meredith@geo-env.co.uk              |
| <b>Address</b>          | 15<br>WHEATLEY AVENUE<br>ILKLEY<br>LS29 8PT |

## Waste operation details

|                       |                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Grid reference</b> | SJ 85242 98259                                                                                                                          |
| <b>Site details</b>   | Islington Wharf 4 Construction Site Morgan<br>Sindall / Chartrange Junction of Great Ancoats<br>Street and Old Mill Street, Manchester. |

## Appendix D

### *Correspondence*

## **Important – Planning permission & notices of consent**

### **Compliance with conditions**

- Your planning approval or consent is attached. It will contain conditions that you must comply with.
- Please read the conditions and understand their requirements and restrictions, for example submission and approval of details or measures to protect trees.
- Some conditions will require action before you start development and it is imperative that you seek to have these discharged before any work commences.
- Whilst every effort has been made to group conditions logically, it is your responsibility to ensure that you are aware of the requirements and/or restrictions of all conditions.
- If you fail to comply with the conditions this may result in a breach of planning control and this may lead to enforcement action.
- Failure to comply with conditions may also result in the development not being lawful.
- It is in your interests to demonstrate that conditions have been complied with. Failure to do so may cause difficulties if the property is sold or transferred.
- A fee is payable for each request to discharge conditions.
- For advice on any of these matters, please contact Planning, Manchester City Council, PO Box 532, Town Hall, Manchester M60 2LA or email [planning@manchester.gov.uk](mailto:planning@manchester.gov.uk)

## **Town & Country Planning Act 1990 (as amended)**

### **Planning Permission**

#### **Applicant**

Waterside Places Ltd  
C/o Agent

#### **Agent (if used)**

Mr Jay Patel  
Savills UK Ltd  
12 Booth Street  
Manchester  
M2 4AW

### **Part 1 – Particulars of the application/development**

---

**Proposal:** Erection of a Part 16/ Part 11 storey building to form 106 no. apartments (C3 Use Class) together with ground floor commercial uses (Use Class A1, A2 A3 and/or B1), with associated ancillary space, surface car parking, landscaping and associated works

**Location:** Land Bound By Old Mill Street & Great Ancoats Street, Manchester, M4 6EE

**Date of application:** 6 April 2020

**Application number:** 126669/FO/2020

### **Part 2 – Particulars of decision**

---

Manchester City Council gives notice that the development referred to in Part 1 has been **Approved** in accordance with the application and plans submitted subject to the condition(s) listed below (if any).

### **Article 35 Declaration**

---

### **Condition(s) attached to this decision**

---

1) The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason - Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

2) The development hereby approved shall be carried out in accordance with the following drawings and documents:

Drawings:

RYD 00 00 DR A 3000 REV P07 - LEVEL 00 - GA PLAN

RYD 00 01 DR A 3001 REV P07 - LEVEL 01 - GA PLAN

RYD 00 ZZ DR A 3002 REV P06 - LEVEL 02-06 GA PLANS

RYD 00 02 DR A 3007 REV P07 - LEVEL 07-08 GA PLANS

RYD 00 ZZ DR A 3009 REV P03 - LEVEL 09-10 GA PLANS

RYD 00 11 DR A 3011 REV P07 - LEVEL 11 GA PLAN  
RYD 00 ZZ DR A 3012 REV P03 - LEVEL 12-15 GA PLAN  
RYD 00 R16 DR A 3016 REV P02 - ROOF LEVEL GA PLAN  
RYD 00 00 DR A 3500 REV P01 - SITE ACCESS  
RYD 00 XX DR A 3600 REV P1 - STREET ELEVATIONS  
RYD 00 XX DR A 3605 REV P05 - GA ELEVATIONS 01 OF 02  
RYD 00 ZZ DR L 2101 REV P03 - LANDSCAPE MASTERPLAN  
RYD 00 XX DR A 3900 REV P1 - BAY STUDY - REFERENCE SHEET  
RYD 00 XX DR A 3901 REV P03 - BAY STUDY 01  
RYD 00 XX DR A 3902 REV P2 - BAY STUDY 02  
RYD 00 XX DR A 3904 REV P2 - BAY STUDY 04  
RYD 00 00 DR A 3511 REV P01 - Refuse Collection Strategy  
All received by the City Council as local planning authority on the 6th April 2020

RYD 00 XX DR A 3606 REV P06 - GA ELEVATIONS 02 OF 02  
RYD 00 XX DR A 3800 REV P02 - GA SECTIONS  
RYD 00 XX DR A 3903 REV P04 - BAY STUDY 03  
All received by the City Council as local planning authority on the 26th June 2020

Documents:

Air Quality Assessment prepared by Hydrock ISW-HYD-XX-XX-Y-RP-2001-P02  
Broadband Connectivity Assessment prepared by GTech  
Crime Impact Statement prepared by GMP Design for Security 2018/0767/CIS/02  
Version B  
Energy Statement prepared by Hannan Associates 3676-HAN-ZZ-XX-RP-MEP-003  
Issue 02  
Environmental Standards Statement prepared by Hannan Associates 3676-HAN-ZZ-XX-RP-MEP-004 Issue 02  
Planning and Consultation Statement prepared by Savills  
Television and Radio Reception impact Assessment prepared by GTech  
Noise Assessment prepared by AEC  
Ecological Assessment version 3 prepared by TEP  
Daylight and Sunlight report prepared by GIA Chartered Surveyors FIA No:0696  
Flood Risk Assessment prepared by Hydrock ref: 10042-HYD-XX-XX-RP-FR-0001  
Refuse Collection Strategy RYD 00 00 DR A 3511 Rev P01  
Framework Travel Plan prepared by Hydrock ref 10042-HYD-XX-XX-RP-TP-6001-P04  
All received by the City Council as local planning authority on the 6th April 2020

Ground Investigation Report prepared by Hydrock ref:10042-HYD-XX-XX-RP-GE-0002  
received by the City Council as local planning authority on the 6th May 2020

Ground Condition Desk Study prepared by Hydrock ref IW4-YD-XX-XX-RP-GE-0001\_Desk\_Study received by the City Council as local planning authority on the 21st May 2020

Archaeological Desk Based Assessment prepared by University of Salford SA/2020/37  
received by the City Council as local planning authority on the 8th June 2020

Design and Access Statement prepared by Ryder received by the City Council as local planning authority on the 26th June 2020

Reason - To ensure that the development is carried out in accordance with the approved plans. Pursuant to policies SP1 and DM1 of the Core Strategy.

3) No demolition works or vegetation clearance shall take place during the optimum period for bird nesting (March - August inclusive) unless nesting birds have been shown to be absent, or, a method statement for the demolition including for the protection of any nesting birds is agreed in writing by the City Council, Local Planning Authority. Any method statement shall then be implemented for the duration of the demolition works.

Reason - In order to protect wildlife from works that may impact on their habitats pursuant to policy EN15 of the Manchester Core Strategy (2012).

4) Notwithstanding the flood risk and drainage strategy prepared by Hydrock stamped as received by the City Council, as Local Planning Authority, on the 6th April 2020:

- (a) The installation of any drainage for the site shall not commence until a scheme for the drainage of surface water for the development has been submitted for approval in writing by the City Council as the Local Planning Authority. This shall include:
- Evidence that the drainage system has been designed (unless an area is designated to hold and/or convey water as part of the design) so that flooding does not occur during a 1 in 100 year rainfall event with allowance for climate change in any part of a building;
  - Assessment of overland flow routes for extreme events that is diverted away from buildings (including basements). Overland flow routes need to be designed to convey the flood water in a safe manner in the event of a blockage or exceedance of the proposed drainage system capacity including inlet structures. The flood water should be routed away from the buildings and towards the less vulnerable areas i.e. open spaces, car parks and roads. A layout with overland flow routes needs to be presented with appreciation of these overland flow routes with regards to the properties on site and adjacent properties off site.
  - Hydraulic calculations of the proposed drainage system for the entire network;
  - Construction details of flow control and SuDS elements

The development shall then be constructed in accordance with the approved details, within an agreed timescale.

Reason - To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution pursuant to policies SP1, EN14 and DM1 of the Manchester Core Strategy (2012)

5) a) Prior to the commencement of the development, details of a Local Benefit Proposal, in order to demonstrate commitment to recruit local labour for the duration of the construction of the development, shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved document shall be implemented as part of the construction of the development.

In this condition a Local Benefit Proposal means a document which includes:

- i) the measures proposed to recruit local people including apprenticeships
- ii) mechanisms for the implementation and delivery of the Local Benefit Proposal
- iii) measures to monitor and review the effectiveness of the Local Benefit Proposal in achieving the objective of recruiting and supporting local labour objectives

(b) Within one month prior to construction work being completed, a detailed report which takes into account the information and outcomes about local labour recruitment pursuant to items (i) and (ii) above shall be submitted for approval in writing by the City Council as Local Planning Authority.

Reason - The applicant has demonstrated a commitment to recruiting local labour pursuant to policies SP1, EC1 and DM1 of the Manchester Core Strategy (2012).

6) Prior to the commencement of the development, a detailed construction management plan outlining working practices during construction shall be submitted for approval in writing by the City Council, as local planning authority, which for the avoidance of doubt should include:

- Display of an emergency contact number;
- Details of Wheel Washing;
- Dust Management Plan;
- Compound locations where relevant;
- Location, removal and recycling of waste;
- Routing strategy, vehicular access point, vehicular activity associated with construction and swept path analysis; and,
- Parking of construction vehicles and staff.
- A highway dilapidation survey including photographs and commentary on the condition of carriageway/footways on construction vehicle routes surrounding the site.

The development shall be carried out in accordance with the approved construction management plan.

Reason - To safeguard the amenities of nearby residents and businesses, highway safety and air quality, pursuant to policies SP1, EN16, EN19 and DM1 of the Manchester Core Strategy (July 2012).

7) a) Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).

In the event of the Preliminary Risk Assessment identifying risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority.

The measures for investigating the site identified in the Site Investigation Proposal shall be carried out, before the development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.

b) When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority.

In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in

writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.

Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to policies DM1 and EN18 of the Core Strategy.

8) Prior to construction works progressing above ground level, samples and specifications of all material to be used on all external elevations of the development including details of the car park access gate and fence shall be submitted for approval in writing by the City Council, as Local Planning Authority. The specification shall include the agreement of a materials panel which shall include samples and specifications of all materials to be used on all external elevations of the development along with window reveals, soffits, jointing and fixing details, details of the drips to be used to prevent staining, ventilation/louvre details, air bricks and a strategy for quality control management.

The approved materials used shall then be implemented as part of the development.

Reason - To ensure that the appearance of the development is acceptable to the City Council as local planning authority in the interests of the visual amenity of the area within which the site is located, as specified in policies SP1 and DM1 of the Core Strategy.

9) The development hereby approved shall be carried out in accordance with the Environmental Standards Statement and Energy Statement prepared by Hannan Associates stamped as received by the City Council, as Local Planning Authority, on the 6th April 2020. For the avoidance of doubt the development shall achieve an overall a site wide reduction in CO2 over Part L (2010) of the Building Regulations of a minimum of 25%. A post construction review certificate/statement confirming this shall be submitted for approval, within a timescale that has been previously agreed in writing, to the City Council as Local Planning Authority.

Reason - In order to minimise the environmental impact of the development pursuant to policies SP1, T1-T3, EN4-EN7 and DM1 of the Core Strategy and the principles contained within The Guide to Development in Manchester SPD (2007) and the National Planning Policy Framework.

10) Prior to the first occupation of the development, details of the implementation, maintenance and management of the sustainable drainage scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt this shall include:

- Verification reporting providing photographic evidence of construction;
- As built construction drawings if different from design construction drawings;
- Management and maintenance plan for the lifetime of the development which shall include the arrangements adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.
- Timescale for implementation of the scheme.

The implementation of the management and maintenance plan shall be implemented in accordance with the timescales agreed and retained for as long as the development remains in use.

Reason - To manage flooding and pollution and to ensure that a managing body is in place for the sustainable drainage system and there is funding and maintenance mechanism for the lifetime of the development pursuant to policies SP1, EN14 and DM1 of the Manchester Core Strategy (2012).

11) (a) Notwithstanding drawing RYD 00 ZZ DR L 2101 REV P03 - LANDSCAPE MASTERPLAN as received by the City Council, as Local Planning Authority, on the 6th April 2020, prior to the first occupation of the development, details of hard and soft landscaping treatments (including appropriate samples of materials and specification, size and the method of planting of the trees) shall be submitted to and approved in writing by the City Council as local planning authority.

(b) The approved scheme shall be implemented prior to the first occupation of the development. If within a period of 5 years from the date of the planting of any tree or shrub, that tree or shrub or any tree or shrub planted in replacement for it, is removed, uprooted or destroyed or dies, or becomes, in the opinion of the local planning authority, seriously damaged or defective, another tree or shrub of the same species and size as that originally planted shall be planted at the same place.

Reason - To ensure that a satisfactory landscaping scheme for the development is carried out that respects the character and visual amenities of the area, in accordance with policies SP1, EN9 and DM1 of the Core Strategy.

12) (a) Prior to the first occupation of the residential element of the development, details of any externally mounted ancillary plant, equipment and servicing shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt, externally mounted plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5 db (L<sub>aeq</sub>) below the typical background (L<sub>a90</sub>) level at the nearest noise sensitive location.

(b) Prior to the first occupation of the residential element of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason - To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

13) (a) Within three months of the commencement of development a scheme for acoustically insulating the proposed residential accommodation against noise from the local traffic network and surrounding commercial uses together with full details of the ventilation of residential accommodation shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved noise insulation and ventilation scheme shall be completed before the first occupation of the development.

Noise survey data must include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary.

(b) Prior to the first use of the residential element of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason: To secure a reduction in noise from traffic or other sources and to ensure adequate ventilation of the apartments in order to protect future residents from noise disturbance and air pollution pursuant to policies SP1, EN16, H1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

14) (a) Prior to the first use of the commercial unit as indicated on drawing RYD 00 00 DR A 3000 REV P07 as received by the City Council, as Local Planning Authority, on the 6th April 2020, a scheme of acoustic insulation shall be submitted for approval in writing by the City Council, as Local Planning Authority.

Where entertainment noise is proposed the Laeq shall be controlled to 10 dB below the La90 (without entertainment noise) in each octave band at the façade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63Hz and 125 Hz octave bands shall be controlled so as not to exceed (in habitable rooms) 47 and 41 dB, respectively.

The approved scheme shall then be implemented and retained and maintained for as long as the development remains in use.

(b) Prior to the first use of the commercial unit, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason - In order to limit the outbreak of noise from the commercial premises pursuant to policies SP1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

15) The waste management arrangements for the residential element hereby approved shall be carried out in accordance with the waste management proforma and Design and Access Statement and drawing reference RYD 00 00 DR A 3511 REV P01 as received by the City Council, as Local Planning Authority, on the 6th April 2020.

The details shall be implemented prior to the first occupation of the residential element of the development and thereafter retained and maintained in situ.

Reason - To ensure adequate refuse arrangement are put in place for the residential element of the development pursuant to policies EN19 and DM1 of the Manchester Core Strategy.

16) Prior to the first use of the commercial unit as indicated on drawing RYD 00 00 DR A 3000 REV P07 as received by the City Council, as Local Planning Authority, on the 6th April 2020 a waste management strategy and location of waste storage for the commercial unit shall be submitted for approval in writing by the City Council, as Local Planning Authority.

The approved details shall be implemented prior to the first use of the development and thereafter retained and maintained in situ.

Reason - To ensure adequate refuse arrangement are put in place for the commercial element of the development pursuant to policies EN19 and DM1 of the Manchester Core Strategy.

17) Prior to the first use of the commercial unit, as indicated on drawing RYD 00 00 DR A 3000 REV P07 as received by the City Council, as Local Planning Authority, on the 6th April 2020, details of a scheme to extract fumes, vapours and odours from that commercial unit shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved scheme shall then be implemented prior to the first use of the commercial units and thereafter retained and maintained in situ.

Reason - To ensure appropriate fume extraction is provided for the commercial unit pursuant to policies SP1 and DM1 of the Manchester Core Strategy and saved policy DC10 of the Unitary Development Plan for the City of Manchester (1995).

18) Prior to the first use of the commercial unit, as indicated on drawing RYD 00 00 DR A 3000 REV P07 as received by the City Council, as Local Planning Authority, on the 6th April 2020 a schedule of opening hours shall be submitted for approval in writing by the City Council, as Local Planning Authority. The commercial unit shall then be operated in accordance with the agreed hours of opening.

Reason - In the interests of residential amenity pursuant to policy DM1 of the Core Strategy and saved Unitary Development Plan policy DC26.

19) Deliveries, servicing and collections including waste collections shall not take place outside the following hours for the commercial unit only:

- Monday to Saturday 07:30 to 20:00
- Sundays (and Bank Holidays): No deliveries/waste collections

Reason - In the interest of residential amenity pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012).

20) The commercial unit, as indicated on drawing RYD 00 00 DR A 3000 REV P07 as received by the City Council, as Local Planning Authority, on the 6th April 2020, shall be occupied as either an A1, A2, A3, or B1 use and for no other purpose in the Town and Country Planning (Use Classes) Order 1987 or in any provision equivalent to that Class in any statutory instrument revoking and re-enacting that Order with or without

modification. The first use of the commercial unit to be implemented shall thereafter be the permitted use of that unit.

Reason - For the avoidance of doubt and in order to secure a satisfactory form of development due to the particular circumstance of the application site, ensuring the vitality of the units and in the interest of residential amenity, pursuant policy DM1 of the Core Strategy for Manchester.

21) The development hereby approved shall include a building and site lighting scheme and a scheme for the illumination of external areas during the period between dusk and dawn. Full details of such a scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority before the first occupation of the development hereby approved. The approved details shall be implemented in full prior to the first occupation of the development and shall remain in operation for so long as the development is occupied.

Reason - In the interests of amenity, crime reduction and the personal safety of those using the proposed development in order to comply with the requirements of policies SP1 and DM1 of the Core Strategy.

22) If any lighting at the development hereby approved, when illuminated, causes glare or light spillage which in the opinion of the Council as local planning authority causes detriment to adjoining and nearby residential properties, within 14 days of a written request, a scheme for the elimination of such glare or light spillage shall be submitted to the Council as local planning authority and once approved shall thereafter be retained in accordance with details which have received prior written approval of the City Council as Local Planning Authority.

Reason - In order to minimise the impact of the illumination of the lights on the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy.

23) The development hereby approved shall be carried out in accordance with the Crime Impact Statement (version B) prepared by Design for Security at Greater Manchester Police stamped as received by the City Council, as Local Planning Authority, on the 6th April 2020. The development shall only be carried out in accordance with these approved details. The development hereby approved shall not be occupied or used until the Council as local planning authority has acknowledged in writing that it has received written confirmation of a Secured by Design accreditation.

Reason - To reduce the risk of crime pursuant to policies SP1 and DM1 of the Core Strategy and to reflect the guidance contained in the National Planning Policy Framework.

24) Prior to the first occupation of the residential element of the development, a travel plan shall be submitted for approval in writing by the City Council, as Local Planning Authority. In this condition a Travel Plan means a document which includes:

- i) the measures proposed to be taken to reduce dependency on the private car by those living at the development;
- ii) a commitment to surveying the travel patterns of residents/staff during the first three months of the first use of the building and thereafter from time to time
- iii) mechanisms for the implementation of the measures to reduce dependency on the private car
- iv) measures for the delivery of specified travel plan services

v) measures to monitor and review the effectiveness of the Travel Plan in achieving the objective of reducing dependency on the private car

Within six months of the first occupation of the residential element of development, a Travel Plan which takes into account the information about travel patterns gathered pursuant to item (ii) above shall be submitted for approval in writing by the City Council as Local Planning Authority. Any Travel Plan which has been approved by the City Council as Local Planning Authority shall be implemented in full at all times when the development hereby approved is in use.

Reason - To assist promoting the use of sustainable forms of travel for residents, pursuant to policies T1, T2 and DM1 of the Manchester Core Strategy (2012).

25) Prior to the first occupation of the development hereby approved the car parking layout as indicated on drawing RYD 00 ZZ DR L 2101 REV P03 as received by the City Council, as Local Planning Authority, on the 6th April 2020 shall be surfaced, demarcated and made available. The approved car parking layout shall be implemented and thereafter be retained and maintained. The requirement for further accessible car parking spaces to be provided on the site shall be monitored during the first three months of the first use of the building and thereafter from time to time and where further such spaces are identified as being required these shall be demarcated and provided.

Reason - To ensure sufficient car parking is available for the development and that there is adequate provision for disabled people resident at the development pursuant to policies SP1, T1, and DM1 of the Manchester Core Strategy (2012)

26) Prior to the first occupation of the development hereby approved, the cycle spaces shall be implemented and made available in accordance with the approved drawings and documents as received by the City Council, as Local Planning Authority, on the 6th April 2020.

Reason - To ensure there is sufficient cycles provision at the development and the residents in order to support modal shift measures pursuant to policies SP1, T1, T2 and DM1 of the Manchester Core Strategy (2012).

27) Prior to the first use of the development hereby approved, a scheme of highway works and details of footpaths reinstatements removal of redundant crossovers shall be submitted for approval in writing by the City Council, as Local Planning Authority.

The approved scheme shall be implemented and be in place within a timescale previously agreed in writing by the City Council as local planning authority.

Reason - To ensure safe access to the development site in the interest of pedestrian and highway safety pursuant to policies SP1, EN1 and DM1 of the Manchester Core Strategy (2012).

28) Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 2015 (or any order revoking and re-enacting that Order with or without modification) no part of the premises shall be used for any other purpose (including any other purpose in Class C3 of the Schedule to the Town and Country Planning (Use Classes) Order 1987 as amended by The Town and Country Planning (Use Classes) (Amendment) (England) Order 2010, or in any provision equivalent to that Class in any statutory instrument revoking and re-enacting that Order with or

without modification) other than the purpose(s) of C3(a). For the avoidance of doubt, this does not preclude two unrelated people sharing a property.

Reason - In the interests of residential amenity, to safeguard the character of the area and to maintain the sustainability of the local community through provision of accommodation that is suitable for people living as families pursuant to policies DM1 and H11 of the Core Strategy for Manchester and the guidance contained within the National Planning Policy Framework

29) Prior to the first occupation of the residential element of the development hereby approved, details of the number, siting and appearance bird and bat boxes at the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall be implemented and be in place prior to the first occupation of the development hereby approved and shall thereafter be retained and maintained in situ.

Reason - In the interest of providing habitats for birds to improve the ecological value of the application site pursuant to policies SP1 and EN15 of the Manchester Core Strategy (2012).

30) Prior to the first occupation of the residential element of the development, details and specification of the fast charging electric car charging points within the approved car park shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall then be implemented and be in place prior to the first occupation of the residential element of the development.

Reason - In the interest of air quality pursuant to policies SP1 and EN16 of the Manchester Core Strategy (2012).

31) Notwithstanding the General Permitted Development Order 2015 as amended by the Town and Country Planning (Permitted Development and Miscellaneous Amendments) (England) (Coronavirus) Regulations 2020 or any legislation amending or replacing the same, no further development in the form of upward extensions to the building shall be undertaken other than that expressly authorised by the granting of planning permission.

Reason - In the interests of protecting residential amenity and visual amenity of the area in which the development is located pursuant to policies DM1 and SP1 of the Manchester Core Strategy.

## **Informatives**

---

### **Building Regulations 2010**

This permission does not grant approval under Building Regulations.

### **Street Naming & Numbering Requirements**

Manchester City Council is responsible for allocating street naming and numbering within Manchester for new developments or property conversions. Individuals or businesses are not permitted to allocate their own property numbers, building or street names.

If your development includes the creation of new dwellings (either new build or conversion of existing buildings), creation of new commercial properties or the subdivision of existing properties you must ensure that you request new or changes to

addresses through us so they can be officially allocated and registered in accordance with the Public Health Act 1925 Sections 17-19 & Greater Manchester Act 1981 Section 22.

Failure to do this may result in difficulties for the developer/occupier when requiring services such as connections to utilities, phone lines and postal services and may delay your development.

You can apply online at the following address:

[http://www.manchester.gov.uk/info/100011/roads\\_parking\\_and\\_transport/1988/naming\\_and\\_numbering\\_of\\_houses\\_buildings\\_streets\\_and\\_roads/2](http://www.manchester.gov.uk/info/100011/roads_parking_and_transport/1988/naming_and_numbering_of_houses_buildings_streets_and_roads/2)

### **Mining Information**

The proposed development lies within an area which could be subject to current coal mining or hazards resulting from past coal mining. Please read the Standing Advice from the Coal Authority in Appendix A.

Date: 5 August 2020

Signed:



Julie Roscoe  
Director of Planning, Building Control & Licensing

Manchester City Council, P O Box 532, Town Hall, Manchester M60 2LA

## Notes

1. This permission refers only to that required under the Town and Country Planning Act 1990 does not include any consent or approval under any other enactment, byelaw, order or regulation.

2 If the applicant is aggrieved by the decision of the local planning authority to refuse permission or approval for the proposed development, or to grant permission or approval subject to conditions, they may appeal to the Secretary of State in accordance with Section 78(1) of the Town and Country Planning Act 1990 within six months of the date of the notice of the decision.

The Planning Inspectorate have introduced an online appeals service that can be used to make appeals online. This service is available through the gov.uk website – [www.gov.uk/planning-inspectorate](http://www.gov.uk/planning-inspectorate). The Inspectorate will publish details of your appeal on the internet. Alternatively If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

The Secretary of State has power to allow a longer period for the giving of a notice of appeal but they will not normally be prepared to exercise this power unless there are special circumstances that excuse the delay in giving notice of appeal.

If you intend to submit an appeal that you would like examined by inquiry then you must notify the City Council ([planning@manchester.gov.uk](mailto:planning@manchester.gov.uk)) and the Planning Inspectorate ([inquiryappeals@planninginspectorate.gov.uk](mailto:inquiryappeals@planninginspectorate.gov.uk)) at least 10 days before submitting the appeal. Further details are on [GOV.UK](http://GOV.UK).

3. The statutory requirements are those set out in Section 79(6) of the Town and Country Planning Act 1990, namely Sections 70(1) and 72(1) of the Act.

4. If either the local planning authority or the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that they can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990

5. In certain circumstances, a claim may be made against the local planning authority for compensation, where permission is refused or granted subject to conditions by the Secretary of State on appeal or on a reference of the application to them. The circumstances in which such compensation is payable are set out in Section 114 of the Town and Country Planning Act 1990.

## Appendix A



The Coal  
Authority

**Any Planning Enquiries should be directed to:**

Planning and Local Authority Liaison

Telephone: 01623 637 119

Email: [planningconsultation@coal.gov.uk](mailto:planningconsultation@coal.gov.uk)

Website: [www.gov.uk/government/organisations/the-coal-authority](http://www.gov.uk/government/organisations/the-coal-authority)

**STANDING ADVICE - DEVELOPMENT LOW RISK AREA**

The proposed development lies within a coal mining area which may contain unrecorded coal mining related hazards. If any coal mining feature is encountered during development, this should be reported immediately to the Coal Authority on 0345 762 6848.

Further information is also available on the Coal Authority website at:  
[www.gov.uk/government/organisations/the-coal-authority](http://www.gov.uk/government/organisations/the-coal-authority)

*This Standing Advice is valid from 1<sup>st</sup> January 2019 until 31<sup>st</sup> December 2020*

## Jason Bradley

---

**From:** Jason Bradley  
**Sent:** 04 July 2023 10:23  
**To:** Jason Bradley  
**Subject:** RE: Topsoil

Regards

**Jason Bradley**  
Senior Geo-environmental Consultant

[Subscribe for more: climate adaptation, the Building Safety Act, net zero data centres and beyond...](#)



**Hydrock**  
Northern Assurance Buildings, 9-21  
Princess St, Albert Square,  
Manchester M2 4DN

Mob: 07464 547000  
[Hydrock.com](https://www.hydrock.com) | [Follow us on LinkedIn](#)



*Nine consecutive years in the '100 Best Large Companies to Work For' listing.*

Hydrock Consultants Limited, company number 3118932 registered in England and Wales at Over Court Barns, Over Lane, Almondsbury, Bristol, BS32 4DF. Disclaimer: The information in this e-mail is confidential and may be read, copied or used only by the intended recipients. If you are not the intended recipient you are hereby notified that any perusal, use, distribution, copying or disclosure is strictly prohibited. If you have received this e-mail in error please advise us immediately by return e-mail to [bristol@hydrock.com](mailto:bristol@hydrock.com) and delete the e-mail document without making a copy. Whilst every effort has been made to ensure this email is virus free, no responsibility is accepted for loss or damage arising from viruses or changes made to this message after it was sent.

---

**From:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Sent:** 30 June 2023 08:24  
**To:** Jason Bradley <[JasonBradley@hydrock.com](mailto:JasonBradley@hydrock.com)>  
**Subject:** FW: Topsoil

**CAUTION:** This email originated from outside of Hydrock. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Jason

Please see statement from the utility installer Ameen, the assessment by UU was undertaken (as below) and the use of barrier pipe was confirmed. We have installed this product and have a statement from the installer confirming this.

Regards,

**Paul Guilfoyle**  
Senior Project Manager  
Construction North West

**M** 07866788027  
**E** [paul.guilfoyle@morgansindall.com](mailto:paul.guilfoyle@morgansindall.com)

Morgan Sindall Construction & Infrastructure Limited  
6<sup>th</sup> Floor 2 Anchorage Quay  
Salford  
Manchester  
M50 3YW  
T 0161 874 1000 F 0161 874 1001  
Morgansindall.com

---

**From:** Stewart Brunton <[SBrunton@ameon.co.uk](mailto:SBrunton@ameon.co.uk)>  
**Sent:** 29 June 2023 17:00  
**To:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Subject:** RE: Topsoil

Hi Paul,

The below is a screenshot from the UU quotation.

We have installed Barrier Pipe / Protectaline.

## Important information about your survey

### Contaminated land

As the site has shown to have had a degree of contamination present, our proposals involve the laying of service pipes in a way which will protect the water supplies from ingress of any contaminants. An approved barrier system must be used for service pipes and fittings. Service pipes up to 32mm must be laid out in a continuous un-jointed length, leaving sufficient pipe coiled at the boundary to allow an un-jointed connection direct to the water main. Any service pipes greater than 32mm must be installed with as few buried joints as possible and wrapped to the manufacturer's specification where required. If you have chosen an 'internal' AMR meter installation then a suitable product for the external control must be fit for use in contaminated ground.

Regards,

Stewart Brunton  
**Senior Project Manager**



**Ameon Utilities Ltd**, Olympic Court, Boardmans Way, Whitehills Business Park, Blackpool FY4 5GU

**Tel:** 01253 760160 | **Mobile:** 07872 102075

[sbrunton@ameon.co.uk](mailto:sbrunton@ameon.co.uk) | [www.ameon.co.uk](http://www.ameon.co.uk)



Company Registration No. 667 9409 | VAT No. 939 3308 04

---

**From:** Stewart Brunton  
**Sent:** Thursday, June 29, 2023 4:51 PM  
**To:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Subject:** RE: Topsoil

Hi Paul,

We were issued the water quotation by Hanons (Utility Consultant), and we have installed Barrier Pipe.

Regards,

Stewart Brunton  
**Senior Project Manager**



**Ameon Utilities Ltd**, Olympic Court, Boardmans Way, Whitehills Business Park, Blackpool FY4 5GU

**Tel:** 01253 760160 | **Mobile:** 07872 102075

[sbrunton@ameon.co.uk](mailto:sbrunton@ameon.co.uk) | [www.ameon.co.uk](http://www.ameon.co.uk)



Company Registration No. 667 9409 | VAT No. 939 3308 04

---

**From:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Sent:** Thursday, June 29, 2023 4:36 PM  
**To:** Stewart Brunton <[SBrunton@ameon.co.uk](mailto:SBrunton@ameon.co.uk)>  
**Subject:** FW: Topsoil

Stuart

Please can you issue the below, it's a Risk Assessment regards the ground conditions, its to conclude the remediation report. This is urgently needed.

Regards,

**Paul Guilfoyle**  
Senior Project Manager  
Construction North West

M 07866788027  
E [paul.guilfoyle@morgansindall.com](mailto:paul.guilfoyle@morgansindall.com)



**Morgan Sindall Construction & Infrastructure Limited**  
6<sup>th</sup> Floor 2 Anchorage Quay  
Salford  
Manchester  
M50 3YW  
T 0161 874 1000 F 0161 874 1001  
<http://Morgansindall.com>

---

**From:** Jason Bradley <[JasonBradley@hydrock.com](mailto:JasonBradley@hydrock.com)>  
**Sent:** 29 June 2023 16:31  
**To:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Subject:** RE: Topsoil

Paul,  
Was there any correspondence with UU in terms of pipework installation? Usually they would ask for a UU Pipework Risk Assessment to be completed.

Regards

**Jason Bradley**  
Senior Geo-environmental Consultant

[Subscribe for more: climate adaptation, the Building Safety Act, net zero data centres and beyond...](#)



**Hydrock**  
Northern Assurance Buildings, 9-21  
Princess St, Albert Square,  
Manchester M2 4DN

Mob: 07464 547000  
[Hydrock.com](http://Hydrock.com) | [Follow us on LinkedIn](#)



*Nine consecutive years in the '100 Best Large Companies to Work For' listing.*

Hydrock Consultants Limited, company number 3118932 registered in England and Wales at Over Court Barns, Over Lane, Almondsbury, Bristol, BS32 4DF. Disclaimer: The information in this e-mail is confidential and may be read, copied or used only by the intended recipients. If you are not the intended recipient you are hereby notified that any perusal, use, distribution, copying or disclosure is strictly prohibited. If you have received this e-mail in error please advise us immediately by return e-mail to [bristol@hydrock.com](mailto:bristol@hydrock.com) and delete the e-mail document without making a copy. Whilst every effort has been made to ensure this email is virus free, no responsibility is accepted for loss or damage arising from viruses or changes made to this message after it was sent.

---

**From:** Guilfoyle, Paul (MS) <[Paul.Guilfoyle@morgansindall.com](mailto:Paul.Guilfoyle@morgansindall.com)>  
**Sent:** 29 June 2023 16:09  
**To:** Jason Bradley <[JasonBradley@hydrock.com](mailto:JasonBradley@hydrock.com)>  
**Subject:** RE: Topsoil

**CAUTION:** This email originated from outside of Hydrock. Do not click links or open attachments unless you recognise the sender and know the content is safe.

**Subject:** RE: FW: Service trenches

---

**From:** Richard Meredith <richard.meredith@geo-env.co.uk>  
**Sent:** 04 July 2023 08:00  
**To:** David Keating <david.keating@chartrange.com>  
**Subject:** Re: FW: Service trenches

Hello David -

I've taken a look at this. I note this item is designated a developer's task in the validation report as the services would have been placed after the remediation activities and were not carried out under supervision, as far as I'm aware.

However, the requirement in the remediation strategy relates to protection of workers who may come into contact with made ground during maintenance activities on the services. The validation report details the residual level of contaminants remaining in the made ground after removal of hotspots and re-use of arisings. These are all below the assessment criteria for a commercial end use so the risk to maintenance workers should be low, providing sensible precautions such as PPE and basic dust suppression are used based on a RAMS provided by the contractor. One sample out of 25 detected asbestos at low levels. This sample was below the building footprint so will not be disturbed during the lifetime of the building. All the other samples were non-detects for asbestos.

Provided barrier pipe has been installed for water supply, there is no risk to end users.

There's no need to break up the hard landscaping to check whether there's a 300mm surround to the services. I'd recommend that:

- the validation report and the site investigation reports are saved into the site health and safety file and handed over to the management company responsible for running & maintaining the property
- any contractor maintaining the services in the future reviews the information in the H&S file and provides a suitable RAMS before exposing the soils.

Hope this helps but please come back with any queries.

**Regards**

**Richard**

Richard Meredith

Mobile: 07762 751411

[www.geo-env.co.uk](http://www.geo-env.co.uk) [LinkedIn](#)



On Fri, 30 Jun 2023 at 09:53, David Keating <[david.keating@chartrange.com](mailto:david.keating@chartrange.com)> wrote:

Richard

Could you please help us out with a sign off issue Morgan Sandal are having with a service installation on Islington Wharf 4 where we did the site remediation a couple of years ago.

All the services have been installed with a sand surround, If you read the e-mail trail below and the attached e-mails, I believe the issue is that the specification says installing services within made contaminated ground the ducting should have a 300mm surround which MS cannot prove as the areas are now covered with hard landscaping etc.

On the e-mail trail below Hydrock are asking for a statement from Chartrange's Geo-environmental engineer (yourself) that this level of cover would not be required as the site has been remediated, all hotspots removed, etc. I will ring you to discuss.

Regards

David Keating

**Senior Contracts Manager**

**Civils Division**

**Chartrange.**

Wharf Street | Dukinfield | Cheshire | SK16 4NJ

M: 07917082913 | T: 0161 339 4949 |

E: [david.keating@chartrange.com](mailto:david.keating@chartrange.com)

W: [www.chartrange.com](http://www.chartrange.com)



Please consider the environment before printing this email.

This email and any attachments are confidential and intended solely for the use of the individual or entity to which it is addressed. Any views or opinions presented are solely those of the author and do not necessarily represent those of Chartrange Ltd. If you are not the intended recipient, be advised that you have received this email in error and that any use, dissemination, forwarding, printing or copying of this email is strictly prohibited. Messages sent to and from us may be monitored. Internet communications cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. Therefore, we do not accept responsibility for any errors or omissions that are present in this message, or any attachment, that have arisen as a result of e-mail transmission. If verification is required, please request a hard-copy version. If you have received this email in error, please notify the sender either by replying to this email or by telephone on +44(0)161 339 4949.

## Appendix E

### *Air Monitoring*

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/8/16/PM2 | Date of Issue: | 16/08/2021 | Page 1 of 2 |
|--------------------------------|----------------|----------------|------------|-------------|

**Note:** Inspection undertaken in accordance with APEC in-house Methods QCRF2, OH1 and OH2, based on the HSE publication HSG 248 'The Analysts Guide'

|                                                                 |                                                                                |                                                                                |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Site:</b>                                                    | <b>Client:</b>                                                                 | <b>Contractor:</b>                                                             |
| Islington Wharf<br>Great Ancoats Street<br>Manchester<br>M4 6DN | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ |
| <b>Contact:</b> NA                                              | <b>Contact:</b> James Kennedy                                                  | <b>Contact:</b> N/A                                                            |

### Samples taken by (APEC)

|                |             |                         |                                                                                    |             |            |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|
| <b>Analyst</b> | Phil McLean | <b>Signed by (APEC)</b> |  | <b>Date</b> | 16/08/2021 |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|

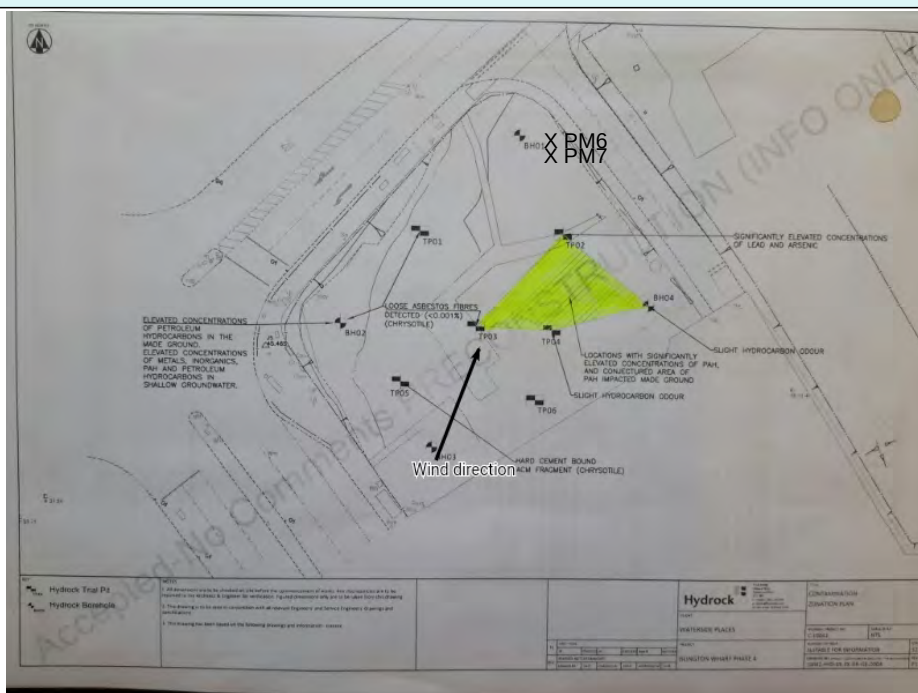
### Air Testing

|                        |                  |                        |          |                         |
|------------------------|------------------|------------------------|----------|-------------------------|
| <b>Purpose of Test</b> | <b>Leak Test</b> | <b>Background Test</b> | <b>X</b> | <b>Reassurance Test</b> |
|------------------------|------------------|------------------------|----------|-------------------------|

### Site Photograph and Additional Site Information

|                                                                                   |                                                                                          |                                             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------|
|  | <b>Area Assessed:</b>                                                                    | External land                               |
|                                                                                   | <b>Description of reason for test (including the nature and extent of ACMs removed):</b> | Background test during excavation works     |
|                                                                                   | <b>Site Specific Risk Assessment:</b>                                                    | <b>Project Information Sheet (if used):</b> |
|                                                                                   | RA/21/8/16/PM3                                                                           | NA                                          |

### Sample Area Layout Plan



9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

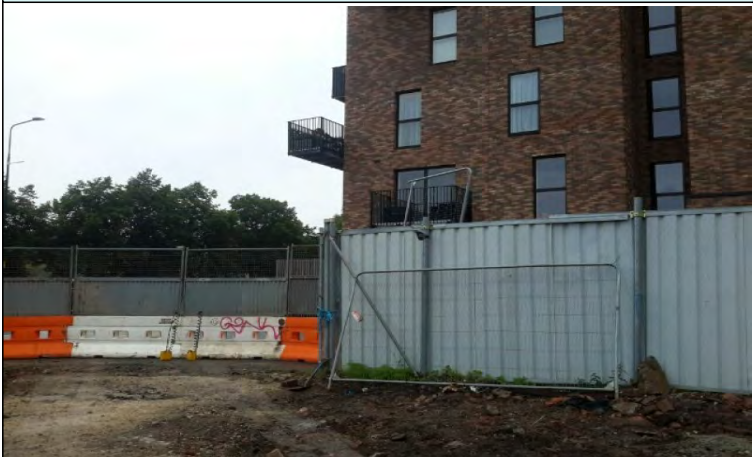
Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/8/16/PM2 | Date of Issue: | 16/08/2021 | Page 2 of 2 |
|--------------------------------|----------------|----------------|------------|-------------|

### Air Test Summary

| Field Blank No. | 21/8/A/16/PM8                        | Fibres            | -      | Fields | 0                               | Head No.                      | 9C                             |
|-----------------|--------------------------------------|-------------------|--------|--------|---------------------------------|-------------------------------|--------------------------------|
| Sample Number   | Sample Location and Description      | Sample Volume (l) | Fibres | Fields | Calculated Concentration (f/ml) | Reported Concentration (f/ml) | Limit of Quantification (f/ml) |
| 21/8/A/16/PM6   | Adjacent to Works/boundary Down wind | 266               | 0½     | 180    | 0                               | <0.01                         | 0.01                           |
| 21/8/A/16/PM7   | Adjacent to Works/boundary Down wind | 266               | 0½     | 180    |                                 |                               |                                |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                    | -                 | -      | -      | -                               | -                             | -                              |

### Additional Site Photographs

| PM6 And PM7                                                                        | Photograph 2 |
|------------------------------------------------------------------------------------|--------------|
|  |              |

The calculated result is derived from the formula published in HSG 248, The Analysts Guide;  $C = 1000 N D^2 / V n d^2$ , where:  
**N** = Number of fibres counted; **D** = Diameter of exposed filter area; **V** = Collected volume of sample; **n** = number of fields counted;  
**d** = measured diameter of Walton Beckett graticule

### Analysts' Comments (Opinions expressed are outside of the scope of our UKAS accreditation)

Weather conditions are overcast with heavy shower's and light wind. Ground conditions are wet.

### Findings of Testing and Analysis

|                                                                                                                                                                      |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| The measured respirable airborne fibre concentrations are below the limit of quantification and no remedial measures are considered necessary                        | ✓ |
| One or more of the measured respirable airborne fibre concentrations are elevated and remedial measures have been advised to the client or contractor representative |   |

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |               |                |            |             |
|--------------------------------|---------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/6/GD1 | Date of Issue: | 06/09/2021 | Page 1 of 3 |
|--------------------------------|---------------|----------------|------------|-------------|

**Note:** Inspection undertaken in accordance with APEC in-house Methods QCRF2, OH1 and OH2, based on the HSE publication HSG 248 'The Analysts Guide'

|                                                                                       |                                                                                |                                                                                |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Site:</b>                                                                          | <b>Client:</b>                                                                 | <b>Contractor:</b>                                                             |
| Islington Wharf Phase 4<br>Great Ancoats Street<br>Manchester<br>Lancashire<br>M4 6DN | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ |
| <b>Contact:</b> N/A                                                                   | <b>Contact:</b> James Kennedy                                                  | <b>Contact:</b> N/A                                                            |

### Samples taken by (APEC)

|                |             |                         |                                                                                    |             |            |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|
| <b>Analyst</b> | Greg Derrig | <b>Signed by (APEC)</b> |  | <b>Date</b> | 06/09/2021 |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|

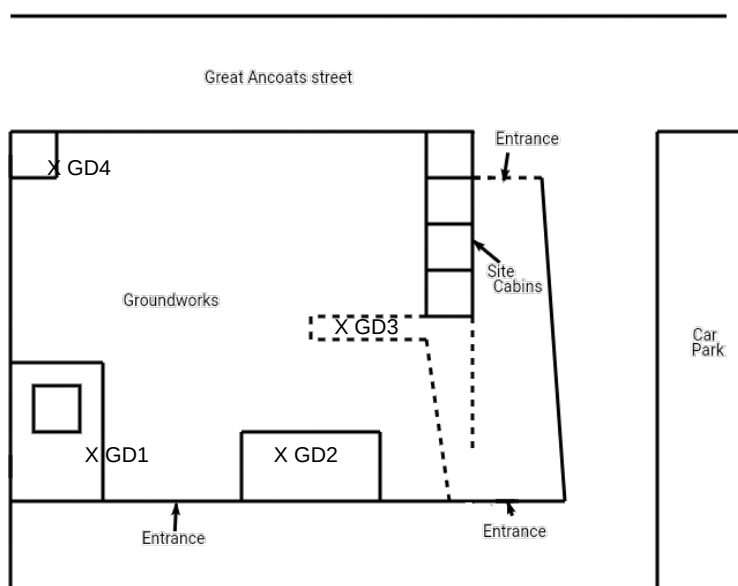
### Air Testing

|                        |                  |                        |          |                         |
|------------------------|------------------|------------------------|----------|-------------------------|
| <b>Purpose of Test</b> | <b>Leak Test</b> | <b>Background Test</b> | <b>X</b> | <b>Reassurance Test</b> |
|------------------------|------------------|------------------------|----------|-------------------------|

### Site Photograph and Additional Site Information

|                                                                                   |                                                                                          |                                                   |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------|
|  | <b>Area Assessed:</b>                                                                    | Islington Wharf phase 4                           |
|                                                                                   | <b>Description of reason for test (including the nature and extent of ACMs removed):</b> | Background air monitoring during excavation works |
|                                                                                   | <b>Site Specific Risk Assessment:</b>                                                    | <b>Project Information Sheet (if used):</b>       |
|                                                                                   | RA/21/9/6/GD1                                                                            | -                                                 |

### Sample Area Layout Plan

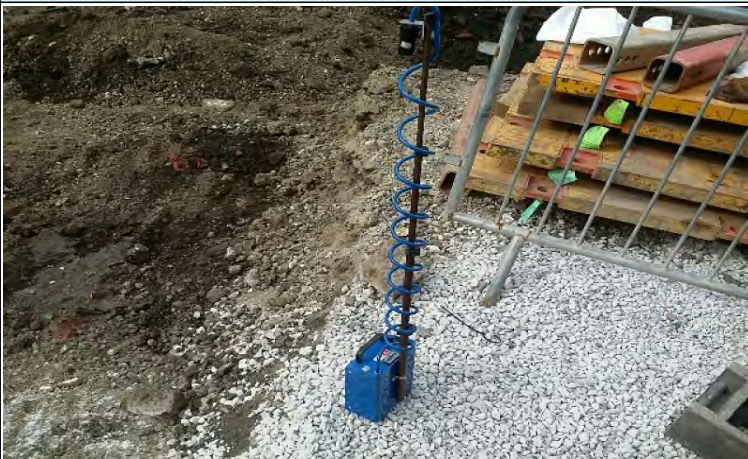


|                                |               |                |            |             |
|--------------------------------|---------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/6/GD1 | Date of Issue: | 06/09/2021 | Page 2 of 3 |
|--------------------------------|---------------|----------------|------------|-------------|

### Air Test Summary

| Field Blank No. | 21/9/A/6/GD5                    | Fibres            | -      | Fields | 0                               | Head No.                      | 4E                             |
|-----------------|---------------------------------|-------------------|--------|--------|---------------------------------|-------------------------------|--------------------------------|
| Sample Number   | Sample Location and Description | Sample Volume (l) | Fibres | Fields | Calculated Concentration (f/ml) | Reported Concentration (f/ml) | Limit of Quantification (f/ml) |
| 21/9/A/6/GD1    | Adjacent to Works               | 488               | 3½     | 197    | 0.002                           | <0.01                         | 0.01                           |
| 21/9/A/6/GD2    | Adjacent to Works               | 488               | 4      | 197    | 0.002                           | <0.01                         | 0.01                           |
| 21/9/A/6/GD3    | Adjacent to Works               | 488               | 2½     | 197    | 0.001                           | <0.01                         | 0.01                           |
| 21/9/A/6/GD4    | Adjacent to Works               | 488               | 1½     | 197    | 0.001                           | <0.01                         | 0.01                           |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                               | -                 | -      | -      | -                               | -                             | -                              |

### Additional Site Photographs

| Adjacent To Works GD1                                                              | Adjacent To Works GD2                                                                |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

Continued on next page.

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |               |                |            |             |
|--------------------------------|---------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/6/GD1 | Date of Issue: | 06/09/2021 | Page 3 of 3 |
|--------------------------------|---------------|----------------|------------|-------------|

| Sample Number | Sample Location and Description | Sample Volume (l) | Fibres | Fields | Calculated Concentration (f/ml) | Reported Concentration (f/ml) | Limit of Quantification (f/ml) |
|---------------|---------------------------------|-------------------|--------|--------|---------------------------------|-------------------------------|--------------------------------|
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |

### Additional Site Photographs

Adjacent To Works GD3



Adjacent To Works GD4



The calculated result is derived from the formula published in HSG 248, The Analysts Guide;  $C = 1000 N D^2 / V n d^2$ , where:  
**N** = Number of fibres counted; **D** = Diameter of exposed filter area; **V** = Collected volume of sample; **n** = number of fields counted;  
**d** = measured diameter of Walton Beckett graticule

### Analysts' Comments (Opinions expressed are outside of the scope of our UKAS accreditation)

### Findings of Testing and Analysis

The measured respirable airborne fibre concentrations are below the limit of quantification and no remedial measures are considered necessary



One or more of the measured respirable airborne fibre concentrations are elevated and remedial measures have been advised to the client or contractor representative

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/13/GD1 | Date of Issue: | 13/09/2021 | Page 1 of 3 |
|--------------------------------|----------------|----------------|------------|-------------|

**Note:** Inspection undertaken in accordance with APEC in-house Methods QCRF2, OH1 and OH2, based on the HSE publication HSG 248 'The Analysts Guide'

|                                                                               |                                                                                |                                                                                |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Site:</b>                                                                  | <b>Client:</b>                                                                 | <b>Contractor:</b>                                                             |
| Great Ancoats Street<br>Islington Wharf<br>Manchester<br>Lancashire<br>M4 6DN | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ |
| <b>Contact:</b> N/A                                                           | <b>Contact:</b> James Kennedy                                                  | <b>Contact:</b> N/A                                                            |

### Samples taken by (APEC)

|                |             |                         |                                                                                    |             |            |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|
| <b>Analyst</b> | Greg Derrig | <b>Signed by (APEC)</b> |  | <b>Date</b> | 13/09/2021 |
|----------------|-------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------|

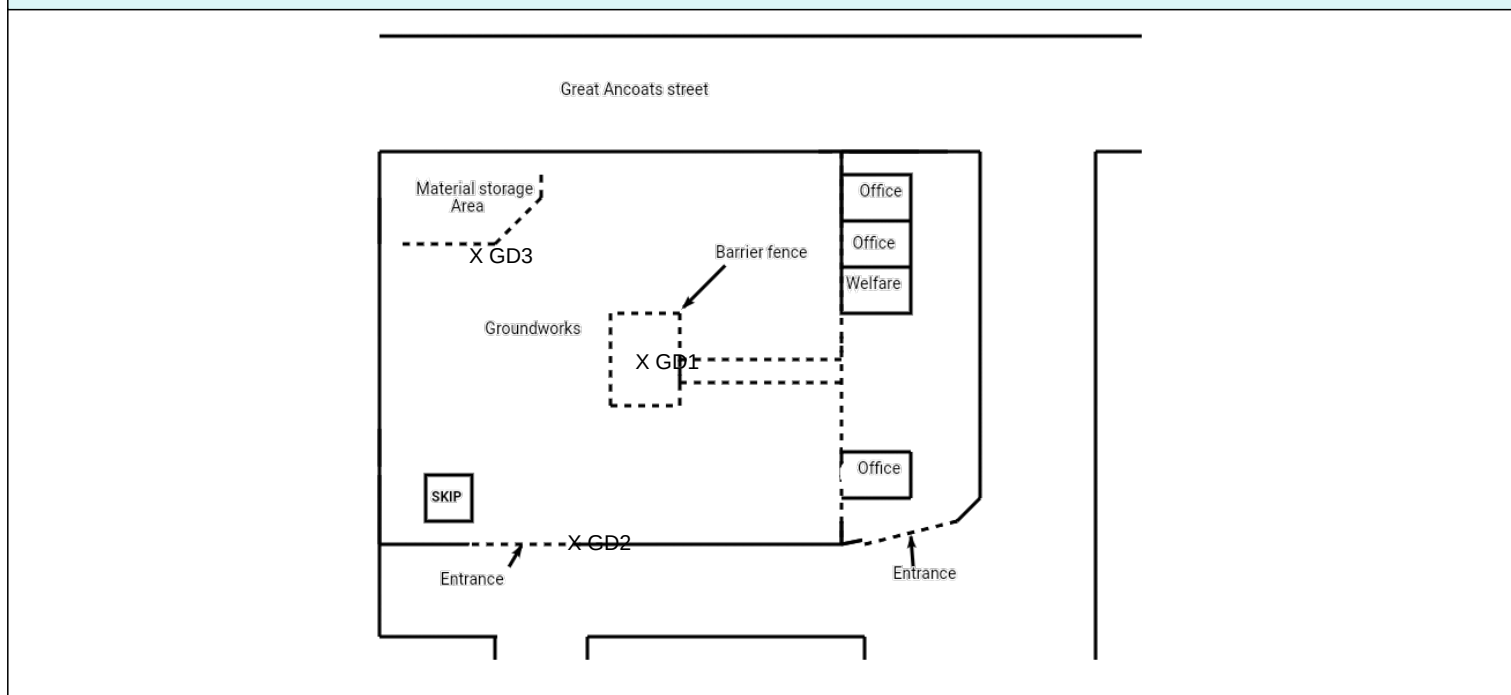
### Air Testing

|                        |                  |                        |          |                         |
|------------------------|------------------|------------------------|----------|-------------------------|
| <b>Purpose of Test</b> | <b>Leak Test</b> | <b>Background Test</b> | <b>X</b> | <b>Reassurance Test</b> |
|------------------------|------------------|------------------------|----------|-------------------------|

### Site Photograph and Additional Site Information

|                                                                                   |                                                                                          |                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
|  | <b>Area Assessed:</b>                                                                    | External land Islington wharf                                      |
|                                                                                   | <b>Description of reason for test (including the nature and extent of ACMs removed):</b> | Background air monitoring during excavation works to external land |
|                                                                                   | <b>Site Specific Risk Assessment:</b>                                                    | <b>Project Information Sheet (if used):</b>                        |
|                                                                                   | RA/21/9/13/GD1                                                                           | -                                                                  |

### Sample Area Layout Plan



9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/13/GD1 | Date of Issue: | 13/09/2021 | Page 2 of 3 |
|--------------------------------|----------------|----------------|------------|-------------|

### Air Test Summary

| Field Blank No. | 21/9/A/13/GD4                           | Fibres            | -      | Fields | 0                               | Head No.                      | 4D                             |
|-----------------|-----------------------------------------|-------------------|--------|--------|---------------------------------|-------------------------------|--------------------------------|
| Sample Number   | Sample Location and Description         | Sample Volume (l) | Fibres | Fields | Calculated Concentration (f/ml) | Reported Concentration (f/ml) | Limit of Quantification (f/ml) |
| 21/9/A/13/GD1   | Adjacent to Works/walkway               | 488               | 3½     | 197    | 0.002                           | <0.01                         | 0.01                           |
| 21/9/A/13/GD2   | Adjacent to Works/perimeter entrance    | 488               | 2      | 197    | 0.001                           | <0.01                         | 0.01                           |
| 21/9/A/13/GD3   | Adjacent to Works/material storage area | 488               | 2½     | 197    | 0.001                           | <0.01                         | 0.01                           |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |
| -               | -                                       | -                 | -      | -      | -                               | -                             | -                              |

### Additional Site Photographs

| Adjacent To Works GD1                                                              | Adjacent To Works GD2                                                                |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

Continued on next page.

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apcuk.org/Chartrange](http://www.apcuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/13/GD1 | Date of Issue: | 13/09/2021 | Page 3 of 3 |
|--------------------------------|----------------|----------------|------------|-------------|

| Sample Number | Sample Location and Description | Sample Volume (l) | Fibres | Fields | Calculated Concentration (f/ml) | Reported Concentration (f/ml) | Limit of Quantification (f/ml) |
|---------------|---------------------------------|-------------------|--------|--------|---------------------------------|-------------------------------|--------------------------------|
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |
| -             | -                               | -                 | -      | -      | -                               | -                             | -                              |

### Additional Site Photographs

| Adjacent To Works GD3                                                              | Photograph 4 |
|------------------------------------------------------------------------------------|--------------|
|  |              |

The calculated result is derived from the formula published in HSG 248, The Analysts Guide;  $C = 1000 N D^2 / V n d^2$ , where:  
**N** = Number of fibres counted; **D** = Diameter of exposed filter area; **V** = Collected volume of sample; **n** = number of fields counted;  
**d** = measured diameter of Walton Beckett graticule

### Analysts' Comments (Opinions expressed are outside of the scope of our UKAS accreditation)

### Findings of Testing and Analysis

The measured respirable airborne fibre concentrations are below the limit of quantification and no remedial measures are considered necessary



One or more of the measured respirable airborne fibre concentrations are elevated and remedial measures have been advised to the client or contractor representative

9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/20/DM1 | Date of Issue: | 20/09/2021 | Page 1 of 4 |
|--------------------------------|----------------|----------------|------------|-------------|

**Note:** Inspection undertaken in accordance with APEC in-house Methods QCRF2, OH1 and OH2, based on the HSE publication HSG 248 'The Analysts Guide'

|                                                                               |                                                                                |                                                                                |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Site:</b>                                                                  | <b>Client:</b>                                                                 | <b>Contractor:</b>                                                             |
| Great Ancoats Street<br>Islington Wharf<br>Manchester<br>Lancashire<br>M4 6DN | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ |
| <b>Contact:</b> N/A                                                           | <b>Contact:</b> James Kennedy                                                  | <b>Contact:</b> N/A                                                            |

### Samples taken by (APEC)

|                |          |                         |                |             |            |
|----------------|----------|-------------------------|----------------|-------------|------------|
| <b>Analyst</b> | D. Mills | <b>Signed by (APEC)</b> | <i>D Mills</i> | <b>Date</b> | 20/09/2021 |
|----------------|----------|-------------------------|----------------|-------------|------------|

### Air Testing

### Purpose of Test

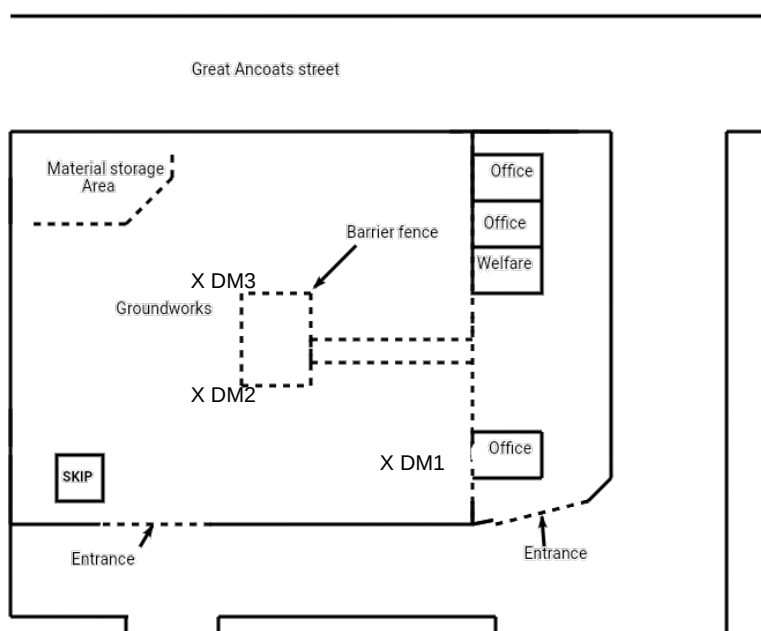
|                     |                      |           |                 |   |                  |
|---------------------|----------------------|-----------|-----------------|---|------------------|
| Far-Source Sampling | Near-Source sampling | Leak Test | Background Test | X | Reassurance Test |
|---------------------|----------------------|-----------|-----------------|---|------------------|

### Site Photograph and Additional Site Information



|                                                                                          |                                                                    |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Area Assessed:</b>                                                                    | External land Islington wharf                                      |
| <b>Description of reason for test (including the nature and extent of ACMs removed):</b> | Background air monitoring during excavation works to external land |
| <b>Site Specific Risk Assessment:</b>                                                    | <b>Project Information Sheet (if used):</b>                        |
| RA/21/9/20/DM2                                                                           | -                                                                  |

### Sample Area Layout Plan





|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/20/DM1 | Date of Issue: | 20/09/2021 | Page 3 of 4 |
|--------------------------------|----------------|----------------|------------|-------------|

### Photographs

Photograph 1



Photograph 2



Photograph 3



Photograph 4



Sampling pump (sample ref: 21/9/A/20/DM1)



Sampling pump (sample ref: 21/9/A/20/DM2)



Sampling pump (sample ref: 21/9/A/20/DM3)



9 Telford Court, Dunkirk Lea, Chester Gates, Chester, CH1 6LT. Tel: 01244 851753 Fax: 01244 851752

Access this document online via your asbestos management portal: [www.apecuk.org/Chartrange](http://www.apecuk.org/Chartrange)

|                                |                |                |            |             |
|--------------------------------|----------------|----------------|------------|-------------|
| Site Air Test Certificate Ref: | ST/21/9/20/DM1 | Date of Issue: | 20/09/2021 | Page 4 of 4 |
|--------------------------------|----------------|----------------|------------|-------------|

**Note:** Inspection undertaken in accordance with APEC in-house Methods QCRF2, OH1 and OH2, based on the HSE publication HSG 248 'The Analysts Guide'

|                                                                               |                                                                                |                                                                                |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Site:</b>                                                                  | <b>Client:</b>                                                                 | <b>Contractor:</b>                                                             |
| Great Ancoats Street<br>Islington Wharf<br>Manchester<br>Lancashire<br>M4 6DN | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ | Chartrange<br>Chartrange<br>Wharf Street<br>Dukinfield<br>Cheshire<br>SK16 4NJ |
| <b>Contact:</b> N/A                                                           | <b>Contact:</b> James Kennedy                                                  | <b>Contact:</b> N/A                                                            |

## Appendix 1 - Additional Air Test Information

### Notes:

- This information supplements the air test results found on page 2 of the Site Air Test Certificate and is only valid in conjunction with those results.
- Temperature is recorded in **Kelvin (K)**, Pressure is recorded in **mmHg**, Flowrates are recorded in **litres per minute (l/min)**, Sample volume is recorded in **litres**
- Interim flow checks are only carried out where the overall sample period exceeds approximately 1 hour
- All testing and analysis is undertaken with reference to APEC' task specific risk assessments TRA 01 and TRA 02

## APEC Analytical Equipment

|                                   |                         |                                                                            |        |                          |            |                              |              |                                |          |          |
|-----------------------------------|-------------------------|----------------------------------------------------------------------------|--------|--------------------------|------------|------------------------------|--------------|--------------------------------|----------|----------|
| Flow Meter                        | FMF                     | Barometer                                                                  | N/A    | Thermometer              | N/A        | Stop Watch                   | SW37         | Effective filter diameter (mm) | 22.60    |          |
| Stage Micrometer No               | SM13                    | Measured Graticule dia.                                                    | 100    | HSE / NPL Test Slide No. | PC16       | No. of bands seen            | 5            | Microscope Number              | APM32    |          |
| Samples counted by (APEC Analyst) | D. Mills                |                                                                            | Signed | D Mills                  |            | Date Analysed                | 20/09/2021   | Analysis Location (Site / Lab) | Site     |          |
| Test Protocol:                    | 1L (Background Airtest) |                                                                            |        |                          |            |                              | Checked by:  | N/A                            |          |          |
| Suitability of Counting Location  |                         | Location assessed and adequate (if not record details in Analyst Comments) |        |                          | ✓          | Counting Location (describe) | Laboratory   |                                |          |          |
| Sample Number                     | Pump No.                | Head No.                                                                   | Temp   | Pressure                 | Start Flow | Start Time                   | Interim Flow | Interim Time                   | End Flow | End Time |
| 21/9/A/20/DM1                     | JD03223                 | 12A                                                                        | N/A    | N/A                      | 8.0        | 13:14                        | -            | --:--                          | 8.0      | 14:15    |
| 21/9/A/20/DM2                     | JD03224                 | 12B                                                                        | N/A    | N/A                      | 8.0        | 13:14                        | -            | --:--                          | 8.0      | 14:15    |
| 21/9/A/20/DM3                     | JD03225                 | 12C                                                                        | N/A    | N/A                      | 8.0        | 13:15                        | -            | --:--                          | 8.0      | 14:16    |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |
| -                                 | -                       | -                                                                          | -      | -                        | -          | -                            | -            | -                              | -        | -        |

## Analysts in Training

To be signed off by the lead analyst where the analyst carrying out the inspection and testing is working under supervision as part of training.

|           |  |                  |  |       |  |
|-----------|--|------------------|--|-------|--|
| Trainer / |  | Signed by (APEC) |  | Date: |  |
| Lead      |  |                  |  |       |  |
| Trainee   |  | Signed by (APEC) |  | Date: |  |
|           |  |                  |  |       |  |

## Appendix F

### *Waste Consignment Notes*

# Delivery Note

Tel: 0161 339 4949 Fax: 0161 339 4437  
Wharf Street, Dukinfield, Cheshire. SK16 4NJ

**D 655565**

Delivered by:

**CHARTRANGE LTD**  
Haulage and Demolition Contractors  
Civil Engineers • Quarry Stone • Landfill Operators

Contract No.

Customer

Site Address:

Date

Type of Material:

Material collected from

Material tipped at:

Drivers Name:

Material

Weight

Vehicle Reg:

Gross

Tare

Daywork

Hours Worked

Travel Time

Net

Total Hours

Consignee's Signature

Print Name

Time:

Conditions of Sale - It is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstances of delivery must be made to the driver of the vehicle and be confirmed in writing direct to the company immediately.

# Delivery Note

D 656955

Tel: 0161 339 4949 Fax: 0161 339 4437  
Wharf Street, Dukinfield, Cheshire, SK16 4NU  
Delivered by:

## CHARTRANGE LTD

Haulage and Demolition Contractors  
Civil Engineers • Quarry Stone • Landfill Operators

Contract No.

Customer

Date 13-9-21

Site Address:

Type of Material:

Material collected from

Material tipped at:

Driver's Name:

Material

Weight

Vehicle Reg:

Gross

Tare

Daywork

Hours Worked

Travel Time

Total Hours

Consignee's Signature

Print Name

Time:

Conditions of Sale - It is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstances of delivery must be made to the driver of the vehicle and be confirmed in writing direct to the company immediately.

**Site Address**  
Lower Green Lane  
Astley  
Tyldesley  
Manchester  
M29 7JZ

**Correspondence Address**  
A1 Services (Manchester) Ltd  
Mayo House, Overman Way  
Agecroft Commerce Park  
Swinton  
Manchester M27 8BQ

**WEIGHBRIDGE TICKET**

**Tel:** 0161 736 2020  
**Email:** info@a1services-manchester.co.uk

Registration : PJ17VNX  
Vehicle Type : 8 Wheeler  
Driver Name :  
Haulier : Chartrange Ltd

Ticket No. : 176926  
Carrier Licence : CB/WP3290BW  
Licence No. : EPR/ZP3433AQ

Customer : A1 MINERA  
Contract No. : 000805  
Order No. : A1 MINERA  
Transfer Note :

A1 SERVICES Ltd (Minerals soils and stones)

Waste : 19 12 09 mineral (for example sand stones)

**Manchester**  
TIPPERS • AGGREGATES

Site Address : A1 MINERA LTD  
Borough (Area) : Salford

Remark : BOWMER KIRKLAND PLOT 3 STADLEY ST NEW BAILEY

Haz Remarks 1 :  
Haz Remarks 2 :

First Weight : 12,500 kg 24/08/2021 14:12:03 0 Auto-Tare  
Second Weight : 29,640 kg 24/08/2021 14:12:03 178,10 MAN  
Net : 17,140 kg

A D.O.T. APPROVED COPY OF THIS TRANSACTION IS AVAILABLE FOR 6 MONTHS FROM THE WEIGHMENT

DRIVER'S SIGNATURE

TONY

WEIGHMAN'S SIGNATURE

[Signature]

Registration: 0117 1111

Client Name:

Harrier Challenge Ltd

Delivery: 14/05/2021

A1 SERVICES MANCHESTER

Waste: 17.05.2021

Waste Transfer No: 1801100002

Source: Man

Driver:

|              |           |            |          |              |
|--------------|-----------|------------|----------|--------------|
| Empty Weight | 14,000 kg | 13/05/2021 | 11:58:24 | 1,028.8 AMPT |
|--------------|-----------|------------|----------|--------------|

|               |           |            |          |              |
|---------------|-----------|------------|----------|--------------|
| Loaded Weight | 15,850 kg | 13/05/2021 | 11:59:42 | 2,139.8 AMPT |
|---------------|-----------|------------|----------|--------------|

Net: 19,000 kg

A D.O.T. APPROVED COPY OF THIS TRANSACTION IS AVAILABLE FOR 6 MONTHS FROM THE WEIGHMENT

DRIVER'S SIGNATURE

*[Signature]*

WEIGHMAN'S SIGNATURE

*[Signature]*

# The Hazardous Waste Regulations 2005: Consignment Note



Environment  
Agency

CARRIER'S COPY

## PART A Notification details

1 Consignment note code: **1SLING102001**

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):  
**Islington Wharf, 153 Great Ancoats, Street, Oldmill, Manchester, M4 6DN**

3 The waste will be taken to (name, address and postcode):  
**Bradley Park Waste Management, Lower Quarry Road, Huddersfield, HD2 1FN**

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):  
**Chartrange Ltd, Wharf Street, Dukinfield, Manchester, SK16 4NJ**

## PART B Description of the waste

If continuation sheet used, tick here: ☐

1 The process giving rise to the waste(s) was: **Segregation**

2 SIC (2007) for the process giving rise to the waste: **43121**

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

| Description of waste              | List of wastes (EWC code)(6 digits) | Quantity (kg)        | The chemical/biological components in the waste and their concentrations are: |                            | Physical form (gas, liquid, solid, powder, sludge or mixed) | Hazard code(s)    | Container type, number and size |
|-----------------------------------|-------------------------------------|----------------------|-------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------|-------------------|---------------------------------|
|                                   |                                     |                      | Component                                                                     | Concentration (% or mg/kg) |                                                             |                   |                                 |
| <b>Excavated soils and stones</b> | <b>170503</b>                       | <b>20,000 Approx</b> | <b>PAH</b>                                                                    | <b>TPH</b>                 | <b>Solid</b>                                                | <b>H310, H314</b> | <b>1x8 wheel Tipper</b>         |

The information given below is to be completed for each EWC identified

| EWC code | UN identification number(s) | Proper shipping name(s) | UN class(es) | Packing group(s) | Special handling requirements |
|----------|-----------------------------|-------------------------|--------------|------------------|-------------------------------|
|          |                             |                         |              |                  |                               |
|          |                             |                         |              |                  |                               |

## PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here: ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are:

**1**

1 Carrier name: **Chartrange Enviro Ltd**

On behalf of (name, address, postcode, telephone, e-mail, facsimile):  
**Chartrange, Wharf Street, Dukinfield, Manchester, SK16 4NJ**

2 Carrier registration no./reason for exemption:

**CBDU177542**

3 Vehicle registration no. (or mode of transport, if not road):

**PS17VNW**

Signature

Date **25/8/21**

Time

**0900**

## PART D Consignor's certificate

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name: **MORGAN SINDALL**

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

**1W4, M4 6DN**

Signature

Date **25/8/21**

Time

**0745**

## PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

| Individual EWC code(s) received | Quantity of each EWC code received (kg) | EWC code accepted/rejected | Waste management operation (R or D code) |
|---------------------------------|-----------------------------------------|----------------------------|------------------------------------------|
| <b>170503</b>                   | <b>13,500</b>                           | <b>✓</b>                   | <b>D5</b>                                |

1 I received this waste at the address given in A3 on:

Date **25/8/21**

Time **0900**

2 Vehicle registration no. (or mode of transport if not road): **PS17VNW**

3 Where waste is rejected please provide details:

Name: **Casim - eda**  
On behalf of (name, address, postcode, telephone, e-mail, facsimile):

**Bradley Park Waste Management  
Lower Quarry Road  
Huddersfield  
HD2 1FN**

Signature

Date **25/8/21**

Time

**0900**

I certify that waste permit/exempt waste operation number:

**LP3434HA**

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of consignments forming the collection are:

**1**

# The Hazardous Waste Regulations 2005: Consignment Note



Environment  
Agency

CARRIER'S COPY

## PART A Notification details

1 Consignment note code: **ISLING100002**

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):  
**Islington Wharf, 153 Great Ancoats, Street, Oldmill, Manchester, M4 6DN**

3 The waste will be taken to (name, address and postcode):  
**Bradley Park Waste Management, Lower Quarry Road, Huddersfield, HD2 1FN**

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):  
**Chartrange Ltd, Wharf Street, Dukinfield, Manchester, SK16 4NT**

## PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: **Segregation**

2 SIC (2007) for the process giving rise to the waste: **43121**

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

| Description of waste       | List of wastes (EWC code)(6 digits) | Quantity (kg) | The chemical/biological components in the waste and their concentrations are: |                            | Physical form (gas, liquid, solid, powder, sludge or mixed) | Hazard code(s) | Container type, number and size |
|----------------------------|-------------------------------------|---------------|-------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------|----------------|---------------------------------|
|                            |                                     |               | Component                                                                     | Concentration (% or mg/kg) |                                                             |                |                                 |
| Excavated soils and stones | 170503                              | 20,000 Approx | PAH                                                                           |                            | Solid                                                       | H410, H14      | 1x8 wheel Tipper                |
|                            |                                     |               | TPH                                                                           |                            |                                                             |                |                                 |

The information given below is to be completed for each EWC identified

| EWC code | UN identification number(s) | Proper shipping name(s) | UN class(es) | Packing group(s) | Special handling requirements |
|----------|-----------------------------|-------------------------|--------------|------------------|-------------------------------|
|          |                             |                         |              |                  |                               |
|          |                             |                         |              |                  |                               |

## PART C Carrier's certificate

## PART D Consignor's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are:

**1**

1 Carrier name: **Chartrange Enviro Ltd**

On behalf of (name, address, postcode, telephone, e-mail, facsimile):  
**Chartrange, Wharf Street, Dukinfield, Manchester, SK16 4NT**

2 Carrier registration no./reason for exemption:

**CBDU177542**

3 Vehicle registration no. (or mode of transport, if not road):

**PJ17VNY**

Signature

Date **13-9-21**

Time **09:45**

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name: **T. Rios**

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

**Morgan Sindall, 1W4, M4-6DN**

Signature

Date **13/9/21**

Time **9:40**

## PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

| Individual EWC code(s) received | Quantity of each EWC code received (kg) | EWC code accepted/rejected | Waste management operation (R or D code) |
|---------------------------------|-----------------------------------------|----------------------------|------------------------------------------|
| 170503                          | 19,040                                  | ✓                          | D5                                       |

1 I received this waste at the address given in A3 on: Date **13/9/21** Time **11:58**

2 Vehicle registration no. (or mode of transport if not road): **PJ17VNY**

3 Where waste is rejected please provide details:

Name: **Caslan-eda**

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

**Bradley Park Waste Management  
Lower Quarry Road  
Huddersfield  
HD2 1FN**

Signature

Date **13/9/21**

Time **11:58**

I certify that waste permit/exempt waste operation number:

**UP3434HA**

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of consignments forming the collection are:

## Appendix G

### *Progress Photographs and Watching Brief reports*

| SITE INSPECTION REPORT                  | SHEET NO.: 1 of 5             |
|-----------------------------------------|-------------------------------|
| <b>Project:</b> Islington Wharf Phase 4 | <b>Date:</b> 06.09.2021       |
| <b>Client:</b> Waterside Places         | <b>Weather:</b> Dry, overcast |
| <b>Contract No.:</b> C-10042            | <b>Engineer:</b> JB           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Persons Present:</b><br>Principal Contractor – Morgan Sindall<br>Earthworks Contractor - Chartrange<br>Geo-environmental / Geotechnical Consultant – Hydrock<br>UXO supervision - Planit Surveys<br>Air monitoring – APEC Environmental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Works Undertaken By Hydrock:</b><br>Hydrock attend site meeting with Morgan Sindall and Chartrange to discuss earthworks progress to date. Hydrock discuss with Chartrange the remediation tasks and geotechnical testing requirements to be undertaken.<br>Hydrock undertake site walkover and inspect excavations, and witness reduced level dig to the top of the Glacial Till (clay).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Works Undertaken by Others:</b><br>Chartrange: Reduced level dig in the central and eastern portion of the site. The excavated Made Ground from reduced level dig is transported to Chartrange recycling facility to be processed.<br>Planit: UXO supervision during excavations.<br>APEC Environmental: Air monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Recommendations Made:</b><br>Hydrock request from Chartrange via email that any available chemical and geotechnical test results be issued to Hydrock.<br>Chartrange advise Hydrock that the hotspot removal is to be undertaken this week, Hydrock advise Chartrange via email that following the hotspot removal the fill placed in the excavations will be subject to the following chemical testing requirements (as detailed in the remediation strategy): <ul style="list-style-type: none"> <li>• Chemical testing of the imported soils will be required once the material arrives at site. For material from a natural source This should be undertaken at a rate of one test per 200m3. If the source of the imported material is not natural, chemical testing should be undertaken at a rate of one test per 50m3.</li> <li>• Site-won material re-used as fill in hotspot removal excavations should be tested a rate of one test per 50m3.</li> <li>• Site-won material re-used as fill within a 1m proximity to pile locations should be tested a rate of one test per 50m3.</li> <li>• A minimum of 5 chemical suites will be undertaken on any individual source material or import round.</li> </ul> |

**Other Comments:**

Hydrock request confirmation from Morgan Sindall that a U1 exemption has been registered. Awaiting response.

**SITE INSPECTION REPORT**

**SHEET NO.: 2 of 5**



Photograph 1: Reduced level dig complete in the west of the site. Compacted 6F2 and Geogrid placed over the Glacial Till.



Photograph 2: Compacted 6F2



Photograph 3: Excavation side of reduced level dig and Geogrid in the west of the site



Photograph 4: Geogrid onto Glacial Till.

SITE INSPECTION REPORT

SHEET NO.: 4 of 5



Photograph 5: Made Ground excavated from reduced level dig.



Photograph 6: Stockpiled Made Ground from the reduced level dig.



Photograph 7: reduced level dig continues in the east of the site.

| SITE INSPECTION REPORT                  | SHEET NO.: 1 of 4               |
|-----------------------------------------|---------------------------------|
| <b>Project:</b> Islington Wharf Phase 4 | <b>Date:</b> 14.09.21           |
| <b>Client:</b> Waterside Places         | <b>Weather:</b> Dry, overcast   |
| <b>Contract No.:</b> C-10042            | <b>Engineer:</b> Russell Sumner |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Persons Present:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Principal Contractor – Morgan Sindall<br>Earthworks Contractor - Chartrange<br>Geo-environmental / Geotechnical Consultant – Hydrock<br>UXO supervision - Planit Surveys<br>Air monitoring – APEC Environmental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Works Undertaken By Hydrock:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Hydrock attended site to undertake a watching brief visit, to discuss progression of the earthworks, remediation tasks and geotechnical testing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Works Undertaken by Others:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>Chartrange were removing obstructions within the north east of the site and proving the natural Glacial Till. Once confirmed a hand shear vane would be undertaken on the clay to confirm a suitable undrained shear strength at formation level before upfilling with engineered fill in accordance with the upfill specification.</li> <li>Drainage chambers were being completed following installation for the sewer diversion in the north east of the site.</li> <li>Adjacent to Great Ancoats Street in the south western area of the site the reduced level dig had been completed and compacted 6F2 and Geogrid placed over the engineered fill or Glacial Till.</li> <li>In the north east corner Geogrid was being placed over compacted 6F2. Following placement of the geogrid the piling working platform would be completed with an imported Type 1 material.</li> <li>Geotechnical testing was being undertaken regularly on finished layers in accordance with the upfill specification. Source approval testing had been undertaken on source materials and was being used to inform the material performance using parameters gained from CBRs and sand replacement density testing.</li> <li>Prior to Hydrock's visit the final hotspot for PAHs, lead and arsenic had been removed with verification samples collected from the sides and base. The material used to fill the excavation had also been chemically tested in line with the RMS. The soils from the hotspot were being removed from site by a licensed waste carrier.</li> <li>Any unsuitable excavated soils containing excessive oversize was being removed from site. Recycled imported 6F2 was predominately being used within the upfill.</li> <li>UXO supervision was ongoing and an engineer was present on site.</li> <li>Continued air monitoring was being undertaken by APEC environmental.</li> </ul> |
| <b>Recommendations Made:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Hydrock requested Morgan Sindall to send chemical testing data, import certification, geotechnical data and the upfill specification for review. Hydrock have received this data and will review the information accordingly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Russell Sumner discussed with Morgan Sindall the RMS requirement for sampling on site won material within 1m of pile locations at a 50m <sup>3</sup> ratio.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Following the discussions Russell Sumner provided the design team with an email discussing the lines off evidence for not undertaking the chemical sampling on site won material within 1m of pile locations at a 50m <sup>3</sup> ratio:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Other Comments:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Morgan Sindall aims to commence piling on the 27 <sup>th</sup> of September 2021.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**SITE INSPECTION REPORT**

**SHEET NO.: 2 of 4**



Photograph 1: Reduced level dig being undertaken in the north east of the site.



Photograph 2: Remaining soils from the final hotspot excavation.

**SITE INSPECTION REPORT**

**SHEET NO.: 3 of 4**



Photograph 3: Natural clay proven at formation level adjacent to the eastern boundary.



Photograph 4: Placing geogrid in the north east of the site.

**SITE INSPECTION REPORT**

**SHEET NO.: 4 of 4**



Photograph 5: Ashy excavated soils remaining from the hotspot excavation.



Photograph 6: Stockpiled soils containing oversize from the reduced level dig.

## Appendix H

### *Cover System*

## FINAL ANALYTICAL TEST REPORT

**Envirolab Job Number:** 23/01874  
**Issue Number:** 1

**Date:** 06 March, 2023

**Client:** S.E.D. Services Ltd  
Landgate Farm  
Landgate Lane  
Bryn  
Wigan  
UK  
WN4 0EJ

**Project Manager:** James Wright  
**Project Name:** Internal Testing

**Project Ref:** N/A  
**Order No:** N/A  
**Date Samples Received:** 01/03/23  
**Date Instructions Received:** 01/03/23  
**Date Analysis Completed:** 06/03/23

**Approved by:**



Gemma Berrisford  
Client Manager

Envirolab Job Number: 23/01874

Client Project Name: Internal Testing

Client Project Ref: N/A

| Lab Sample ID                       | 23/01874/1 | 23/01874/2 | 23/01874/3 | 23/01874/4 | 23/01874/5 |  |  | Units | Limit of Detection | Method ref |
|-------------------------------------|------------|------------|------------|------------|------------|--|--|-------|--------------------|------------|
| Client Sample No                    |            |            |            |            |            |  |  |       |                    |            |
| Client Sample ID                    | BGB        | BGB        | BGB        | BGB        | BGB        |  |  |       |                    |            |
| Depth to Top                        |            |            |            |            |            |  |  |       |                    |            |
| Depth To Bottom                     |            |            |            |            |            |  |  |       |                    |            |
| Date Sampled                        | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  |  |  |       |                    |            |
| Sample Type                         | Soil       | Soil       | Soil       | Soil       | Soil       |  |  |       |                    |            |
| Sample Matrix Code                  | 4AB        | 4AB        | 4AB        | 4A         | 4AB        |  |  |       |                    |            |
| % Stones >10mm <sub>A</sub>         | <0.1       | <0.1       | <0.1       | <0.1       | <0.1       |  |  | % w/w | 0.1                | A-T-044    |
| pH <sub>D</sub> <sup>M#</sup>       | 8.37       | 8.74       | 8.71       | 8.52       | 8.60       |  |  | pH    | 0.01               | A-T-031s   |
| Arsenic <sub>D</sub> <sup>M#</sup>  | 20         | 6          | 18         | 7          | 11         |  |  | mg/kg | 1                  | A-T-024s   |
| Cadmium <sub>D</sub> <sup>M#</sup>  | <0.5       | 0.5        | 0.9        | 0.5        | 0.7        |  |  | mg/kg | 0.5                | A-T-024s   |
| Copper <sub>D</sub> <sup>M#</sup>   | 51         | 20         | 94         | 34         | 46         |  |  | mg/kg | 1                  | A-T-024s   |
| Chromium <sub>D</sub> <sup>M#</sup> | 9          | 20         | 23         | 20         | 23         |  |  | mg/kg | 1                  | A-T-024s   |
| Lead <sub>D</sub> <sup>M#</sup>     | 39         | 28         | 202        | 68         | 64         |  |  | mg/kg | 1                  | A-T-024s   |
| Mercury <sub>D</sub>                | 1.42       | 2.51       | 8.66       | 2.73       | 2.63       |  |  | mg/kg | 0.17               | A-T-024s   |
| Nickel <sub>D</sub> <sup>M#</sup>   | 7          | 14         | 25         | 15         | 20         |  |  | mg/kg | 1                  | A-T-024s   |
| Selenium <sub>D</sub> <sup>M#</sup> | <1         | <1         | <1         | <1         | <1         |  |  | mg/kg | 1                  | A-T-024s   |
| Sodium <sub>D</sub>                 | 260        | 308        | 340        | 394        | 382        |  |  | mg/kg | 50                 | A-T-024s   |
| Zinc <sub>D</sub> <sup>M#</sup>     | 28         | 54         | 156        | 66         | 71         |  |  | mg/kg | 5                  | A-T-024s   |

Envirolab Job Number: 23/01874

Client Project Name: Internal Testing

Client Project Ref: N/A

|                                                                 |            |            |            |            |            |  |  |       |                    |            |
|-----------------------------------------------------------------|------------|------------|------------|------------|------------|--|--|-------|--------------------|------------|
| Lab Sample ID                                                   | 23/01874/1 | 23/01874/2 | 23/01874/3 | 23/01874/4 | 23/01874/5 |  |  | Units | Limit of Detection | Method ref |
| Client Sample No                                                |            |            |            |            |            |  |  |       |                    |            |
| Client Sample ID                                                | BGB        | BGB        | BGB        | BGB        | BGB        |  |  |       |                    |            |
| Depth to Top                                                    |            |            |            |            |            |  |  |       |                    |            |
| Depth To Bottom                                                 |            |            |            |            |            |  |  |       |                    |            |
| Date Sampled                                                    | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  |  |  |       |                    |            |
| Sample Type                                                     | Soil       | Soil       | Soil       | Soil       | Soil       |  |  |       |                    |            |
| Sample Matrix Code                                              | 4AB        | 4AB        | 4AB        | 4A         | 4AB        |  |  |       |                    |            |
| Asbestos in Soil (inc. matrix) ^                                |            |            |            |            |            |  |  |       |                    |            |
| Asbestos in soil <sup>#</sup>                                   | NAD        | NAD        | NAD        | NAD        | NAD        |  |  |       |                    | A-T-045    |
| Asbestos Matrix (visual) <sub>D</sub>                           | -          | -          | -          | -          | -          |  |  |       |                    | A-T-045    |
| Asbestos Matrix (microscope) <sub>D</sub>                       | -          | -          | -          | -          | -          |  |  |       |                    | A-T-045    |
| Asbestos ACM - Suitable for Water Absorption Test? <sub>D</sub> | N/A        | N/A        | N/A        | N/A        | N/A        |  |  |       |                    | A-T-045    |

Envirolab Job Number: 23/01874

Client Project Name: Internal Testing

Client Project Ref: N/A

| Lab Sample ID                                    | 23/01874/1 | 23/01874/2 | 23/01874/3 | 23/01874/4 | 23/01874/5 |  |  | Units | Limit of Detection | Method ref |
|--------------------------------------------------|------------|------------|------------|------------|------------|--|--|-------|--------------------|------------|
| Client Sample No                                 |            |            |            |            |            |  |  |       |                    |            |
| Client Sample ID                                 | BGB        | BGB        | BGB        | BGB        | BGB        |  |  |       |                    |            |
| Depth to Top                                     |            |            |            |            |            |  |  |       |                    |            |
| Depth To Bottom                                  |            |            |            |            |            |  |  |       |                    |            |
| Date Sampled                                     | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  | 23-Feb-23  |  |  |       |                    |            |
| Sample Type                                      | Soil       | Soil       | Soil       | Soil       | Soil       |  |  |       |                    |            |
| Sample Matrix Code                               | 4AB        | 4AB        | 4AB        | 4A         | 4AB        |  |  |       |                    |            |
| <b>PAH-16MS</b>                                  |            |            |            |            |            |  |  |       |                    |            |
| Acenaphthene <sub>A</sub> <sup>M#</sup>          | 0.27       | 0.10       | <0.01      | <0.01      | <0.01      |  |  | mg/kg | 0.01               | A-T-019s   |
| Acenaphthylene <sub>A</sub> <sup>M#</sup>        | 0.01       | 0.01       | <0.01      | <0.01      | <0.01      |  |  | mg/kg | 0.01               | A-T-019s   |
| Anthracene <sub>A</sub> <sup>M#</sup>            | 0.41       | 0.16       | <0.02      | <0.02      | <0.02      |  |  | mg/kg | 0.02               | A-T-019s   |
| Benzo(a)anthracene <sub>A</sub> <sup>M#</sup>    | 0.70       | 0.36       | <0.04      | <0.04      | <0.04      |  |  | mg/kg | 0.04               | A-T-019s   |
| Benzo(a)pyrene <sub>A</sub> <sup>M#</sup>        | 0.56       | 0.31       | <0.04      | <0.04      | <0.04      |  |  | mg/kg | 0.04               | A-T-019s   |
| Benzo(b)fluoranthene <sub>A</sub> <sup>M#</sup>  | 0.69       | 0.39       | <0.05      | <0.05      | <0.05      |  |  | mg/kg | 0.05               | A-T-019s   |
| Benzo(ghi)perylene <sub>A</sub> <sup>M#</sup>    | 0.38       | 0.22       | <0.05      | <0.05      | <0.05      |  |  | mg/kg | 0.05               | A-T-019s   |
| Benzo(k)fluoranthene <sub>A</sub> <sup>M#</sup>  | 0.25       | 0.15       | <0.07      | <0.07      | <0.07      |  |  | mg/kg | 0.07               | A-T-019s   |
| Chrysene <sub>A</sub> <sup>M#</sup>              | 0.74       | 0.41       | <0.06      | <0.06      | <0.06      |  |  | mg/kg | 0.06               | A-T-019s   |
| Dibenzo(ah)anthracene <sub>A</sub> <sup>M#</sup> | 0.09       | <0.04      | <0.04      | <0.04      | <0.04      |  |  | mg/kg | 0.04               | A-T-019s   |
| Fluoranthene <sub>A</sub> <sup>M#</sup>          | 1.57       | 0.82       | 0.10       | <0.08      | <0.08      |  |  | mg/kg | 0.08               | A-T-019s   |
| Fluorene <sub>A</sub> <sup>M#</sup>              | 0.25       | 0.09       | <0.01      | <0.01      | <0.01      |  |  | mg/kg | 0.01               | A-T-019s   |
| Indeno(123-cd)pyrene <sub>A</sub> <sup>M#</sup>  | 0.37       | 0.21       | <0.03      | <0.03      | <0.03      |  |  | mg/kg | 0.03               | A-T-019s   |
| Naphthalene <sub>A</sub> <sup>M#</sup>           | 0.37       | 0.11       | <0.03      | <0.03      | <0.03      |  |  | mg/kg | 0.03               | A-T-019s   |
| Phenanthrene <sub>A</sub> <sup>M#</sup>          | 1.76       | 0.80       | 0.07       | <0.03      | <0.03      |  |  | mg/kg | 0.03               | A-T-019s   |
| Pyrene <sub>A</sub> <sup>M#</sup>                | 1.51       | 0.79       | 0.09       | <0.07      | <0.07      |  |  | mg/kg | 0.07               | A-T-019s   |
| Total PAH-16MS <sub>A</sub> <sup>M#</sup>        | 9.93       | 4.93       | 0.26       | <0.08      | <0.08      |  |  | mg/kg | 0.01               | A-T-019s   |
|                                                  |            |            |            |            |            |  |  |       |                    |            |
| <b>TPH Banded 2</b>                              |            |            |            |            |            |  |  |       |                    |            |
| >C6-C10 <sub>A</sub> <sup>M#</sup>               | <5         | <5         | <5         | <5         | <5         |  |  | mg/kg | 5                  | A-T-007s   |
| >C10-C25 <sub>A</sub> <sup>M#</sup>              | 36         | 13         | 11         | 7          | <5         |  |  | mg/kg | 5                  | A-T-007s   |
| >C25-C40 <sub>A</sub> <sup>M#</sup>              | 63         | 44         | 16         | 11         | 16         |  |  | mg/kg | 5                  | A-T-007s   |
| Total TPH Banded 2 <sub>A</sub> <sup>M#</sup>    | 99         | 57         | 27         | 18         | 16         |  |  | mg/kg | 5                  | A-T-007s   |

## **REPORT NOTES**

### **General**

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

### **Soil chemical analysis:**

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

### **TPH analysis of water by method A-T-007:**

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

### **Electrical Conductivity of water by Method A-T-037:**

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

### **Asbestos:**

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

### **Predominant Matrix Codes:**

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

### **Secondary Matrix Codes:**

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

### **Key:**

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Subscript "A" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

### **EPH CWG GCxGC ID from TPH CWG**

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these

humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

## Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR  
Tel. 0161 368 4921 email. ask@envlab.co.uk

|                            |                                                                             |                                    |                 |
|----------------------------|-----------------------------------------------------------------------------|------------------------------------|-----------------|
| <b>Client:</b>             | S.E.D. Services Ltd, Landgate Farm, Landgate Lane, Bryn, Wigan, UK, WN4 0EJ | <b>Project No:</b>                 | 23/01874        |
| <b>Project:</b>            | Internal Testing                                                            | <b>Date Received:</b>              | 01/03/2023 (am) |
| <b>Clients Project No:</b> | N/A                                                                         | <b>Cool Box Temperatures (°C):</b> | 9.4             |

### NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

## Envirolab Analysis Dates

| Lab Sample ID          | 23/01874/1 | 23/01874/2 | 23/01874/3 | 23/01874/4 | 23/01874/5 |
|------------------------|------------|------------|------------|------------|------------|
| Client Sample No       |            |            |            |            |            |
| Client Sample ID/Depth | BGB        | BGB        | BGB        | BGB        | BGB        |
| Date Sampled           | 23/02/23   | 23/02/23   | 23/02/23   | 23/02/23   | 23/02/23   |
| A-T-007s               | 06/03/2023 | 06/03/2023 | 06/03/2023 | 06/03/2023 | 06/03/2023 |
| A-T-019s               | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 |
| A-T-024s               | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 |
| A-T-031s               | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 |
| A-T-044                | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 | 03/03/2023 |
| A-T-045                | 02/03/2023 | 02/03/2023 | 02/03/2023 | 02/03/2023 | 02/03/2023 |

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

**End of Report**



**WASTE TRANSFER NOTE / DUTY OF CARE**  
Permit : EPR/MP3135DF Permit : EPR/MP3093VU  
Waste Carrier No : CBDU49854

Delivery Ticket No. 250589

|                             |                                        |                         |
|-----------------------------|----------------------------------------|-------------------------|
| Collection Date:<br>26 6 23 | Delivery Date:<br>26 6 23              | Drivers Name:<br>BSM    |
| From:<br>Geo Tern           | Deliver to:<br>ASWICK<br>SLINGTON WARE |                         |
| POC:                        | Stockpile:                             |                         |
| Product:<br>GCB             | EWC:                                   |                         |
| Gross Weight:               | Tare Weight:                           | Net Weight:<br>1 x 1000 |
| Notes:                      |                                        |                         |
| Vehicle:<br>0468 TXL        | Trailer No:                            |                         |

|                                                                            |                      |
|----------------------------------------------------------------------------|----------------------|
| <b>Producer of the Waste:- Goods Collected in Good Order and Condition</b> |                      |
| Signature:<br>                                                             | Print Name:<br>Date: |
| <b>Transfer Station:- Goods Received in Good Order and Condition</b>       |                      |
| Signature:<br>                                                             | Print Name:<br>Date: |

I certify that the "Waste Hierarchy" has been applied as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.



Landgate Farm, Landgate Lane, Bryn, Wigan WN4 0EJ  
Tel: 01942 723479 Fax: 01942 726555  
e-mail: info@sedservices.co.uk  
VAT No: 873841200 Company Registration No: 05602201



**WASTE TRANSFER NOTE / DUTY OF CARE**  
Permit : EPR/MP3135DF Permit : EPR/MP3093VU  
Waste Carrier No : CBDU49854

Delivery Ticket No. 250587

|                             |                                        |                         |
|-----------------------------|----------------------------------------|-------------------------|
| Collection Date:<br>26 6 23 | Delivery Date:<br>26 6 23              | Drivers Name:<br>BSM    |
| From:<br>Geo Tern           | Deliver to:<br>ASWICK<br>SLINGTON WARE |                         |
| POC:                        | Stockpile:                             |                         |
| Product:<br>GCB             | EWC:                                   |                         |
| Gross Weight:               | Tare Weight:                           | Net Weight:<br>1 x 1000 |
| Notes:                      |                                        |                         |
| Vehicle:<br>0468 TXL        | Trailer No:                            |                         |

|                                                                            |                      |
|----------------------------------------------------------------------------|----------------------|
| <b>Producer of the Waste:- Goods Collected in Good Order and Condition</b> |                      |
| Signature:<br>                                                             | Print Name:<br>Date: |
| <b>Transfer Station:- Goods Received in Good Order and Condition</b>       |                      |
| Signature:<br>                                                             | Print Name:<br>Date: |

I certify that the "Waste Hierarchy" has been applied as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.



Landgate Farm, Landgate Lane, Bryn, Wigan WN4 0EJ  
Tel: 01942 723479 Fax: 01942 726555  
e-mail: info@sedservices.co.uk  
VAT No: 873841200 Company Registration No: 05602201



**WASTE TRANSFER NOTE / DUTY OF CARE**  
Permit : EPR/MP3135DF Permit : EPR/MP3093VU  
Waste Carrier No : CBDU49854

Delivery Ticket No. 250593

|                             |                                         |                           |
|-----------------------------|-----------------------------------------|---------------------------|
| Collection Date:<br>27.6.23 | Delivery Date:<br>27.6.23               | Driver's Name:<br>B. Sinn |
| From:<br>Geo Brn            | Deliver to:<br>ASHICA<br>KILINGTON ROAD |                           |
| POC:                        | Stockpile:                              |                           |
| Product:<br>BGS             | EWC:                                    |                           |
| Gross Weight:               | Tare Weight:                            | Net Weight:<br>1x1000     |
| Notes:                      |                                         |                           |
| Vehicle:<br>Duk68 Txl       | Trailer No:                             |                           |

**Producer of the Waste:- Goods Collected in Good Order and Condition**

|            |             |       |
|------------|-------------|-------|
| Signature: | Print Name: | Date: |
|------------|-------------|-------|

**Transfer Station:- Goods Received in Good Order and Condition**

|            |             |       |
|------------|-------------|-------|
| Signature: | Print Name: | Date: |
|------------|-------------|-------|

I certify that the "Waste Hierarchy" has been applied as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.



Landgate Farm, Landgate Lane, Bryn, Wigan WN4 0EJ

Tel: 01942 723479 Fax: 01942 726555

e-mail: [info@sedservices.co.uk](mailto:info@sedservices.co.uk)

VAT No: 873841200 Company Registration No: 05602201



**Jason Bradley**  
Hydrock Consultants Ltd  
4 Lakeside  
Festival Park  
Stoke on Trent  
ST1 5RY

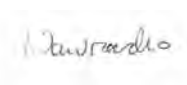
**t:** 01782 261919  
**f:** 01782 262020  
**e:** JasonBradley@hydrock.com

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

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

## **Analytical Report Number : 23-39404**

|                             |                |                                                        |            |
|-----------------------------|----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | IW4            | <b>Samples received on:</b>                            | 14/06/2023 |
| <b>Your job number:</b>     | C-10042-C      | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/06/2023 |
| <b>Your order number:</b>   |                | <b>Analysis completed by:</b>                          | 21/06/2023 |
| <b>Report Issue Number:</b> | 1              | <b>Report issued on:</b>                               | 21/06/2023 |
| <b>Samples Analysed:</b>    | 5 soil samples |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

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

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

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

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

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

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

Analytical Report Number: 23-39404  
Project / Site name: IW4

| Lab Sample Number                       |       |                    |                      | 2714721       | 2714722       | 2714723       | 2714724       | 2714725       |
|-----------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                    |                      | TS01          | TS02          | TS03          | TS04          | TS05          |
| Sample Number                           |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                    |                      | 14/06/2023    | 14/06/2023    | 14/06/2023    | 14/06/2023    | 14/06/2023    |
| Time Taken                              |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of detection | Accreditation Status |               |               |               |               |               |
| Stone Content                           | %     | 0.1                | NONE                 | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                        | %     | 0.01               | NONE                 | 19            | 20            | 21            | 21            | 21            |
| Total mass of sample received           | kg    | 0.001              | NONE                 | 1             | 1             | 1             | 1             | 1             |

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

#### General Inorganics

|                                                                         |          |         |        |       |       |       |       |       |
|-------------------------------------------------------------------------|----------|---------|--------|-------|-------|-------|-------|-------|
| pH - Automated                                                          | pH Units | N/A     | MCERTS | 7.5   | 7.6   | 7.6   | 7.6   | 7.6   |
| Free Cyanide                                                            | mg/kg    | 1       | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Water Soluble SO <sub>4</sub> 16hr extraction (2:1 Leachate Equivalent) | g/l      | 0.00125 | MCERTS | 0.16  | 0.14  | 0.14  | 0.14  | 0.15  |
| Fraction Organic Carbon (FOC) Automated                                 | N/A      | 0.001   | MCERTS | 0.038 | 0.029 | 0.032 | 0.031 | 0.028 |

#### Total Phenols

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

#### Speciated PAHs

|                        |       |      |           |        |        |        |        |        |
|------------------------|-------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluorene               | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 0.23   | 0.15   | 0.62   | 0.15   | 0.3    |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 0.09   | 0.06   | 0.16   | 0.05   | 0.08   |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 0.83   | 0.44   | 1.2    | 0.41   | 0.64   |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 0.8    | 0.42   | 0.92   | 0.41   | 0.56   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 0.44   | 0.25   | 0.49   | 0.28   | 0.3    |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 0.42   | 0.29   | 0.45   | 0.24   | 0.33   |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.58   | 0.52   | 0.7    | 0.47   | 0.45   |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.3    | 0.14   | 0.26   | 0.17   | 0.21   |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 0.53   | 0.41   | 0.56   | 0.37   | 0.4    |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 0.33   | 0.25   | 0.35   | 0.23   | 0.23   |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 0.39   | 0.29   | 0.38   | 0.29   | 0.27   |

#### Total PAH

|                             |       |     |           |      |      |      |      |      |
|-----------------------------|-------|-----|-----------|------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | ISO 17025 | 4.94 | 3.22 | 6.04 | 3.07 | 3.77 |
|-----------------------------|-------|-----|-----------|------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 8.1   | 13    | 14    | 13    | 12    |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 0.3   | 0.43  | 0.34  | 0.39  | 0.39  |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 2     | 2     | 1.8   | 1.7   | 1.8   |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.4   | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Chromium (hexavalent)              | mg/kg | 1.8  | MCERTS | 2.2   | < 1.8 | U/S^^ | U/S^^ | < 1.8 |
| Chromium (III)                     | mg/kg | 1    | NONE   | 7.4   | 12    | U/S^^ | U/S^^ | 9.8   |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 9.6   | 12    | 10    | 11    | 12    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 24    | 35    | 25    | 28    | 28    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 35    | 58    | 46    | 49    | 83    |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | 0.4   | 0.8   | 0.6   | 0.6   | 0.5   |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 7.5   | 11    | 9.2   | 9.7   | 10    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 9.9   | 16    | 13    | 14    | 14    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 54    | 71    | 56    | 62    | 74    |

Analytical Report Number: 23-39404  
Project / Site name: IW4

|                                         |  |  |  |               |                    |                      |               |               |
|-----------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Lab Sample Number                       |  |  |  | 2714721       | 2714722            | 2714723              | 2714724       | 2714725       |
| Sample Reference                        |  |  |  | TS01          | TS02               | TS03                 | TS04          | TS05          |
| Sample Number                           |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                            |  |  |  | 14/06/2023    | 14/06/2023         | 14/06/2023           | 14/06/2023    | 14/06/2023    |
| Time Taken                              |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |

#### Petroleum Hydrocarbons

|                                             |       |    |        |    |     |     |     |     |
|---------------------------------------------|-------|----|--------|----|-----|-----|-----|-----|
| TPH C10 - C40 <small>EH_CU_ID_TOTAL</small> | mg/kg | 10 | MCERTS | 72 | 120 | 120 | 120 | 150 |
|---------------------------------------------|-------|----|--------|----|-----|-----|-----|-----|

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

**Analytical Report Number : 23-39404**

**Project / Site name: IW4**

\* 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 *                            |
|-------------------|------------------|---------------|---------------|-------------------------------------------------|
| 2714721           | TS01             | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |
| 2714722           | TS02             | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |
| 2714723           | TS03             | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |
| 2714724           | TS04             | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |
| 2714725           | TS05             | None Supplied | None Supplied | Brown loam and sand with gravel and vegetation. |

Analytical Report Number : 23-39404

Project / Site name: IW4

Water matrix abbreviations:

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

| Analytical Test Name                               | Analytical Method Description                                                                                                                             | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Sulphate, water soluble, in soil (16hr extraction) | Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent). | In house method.                                                                                                | L038-PL       | D                  | MCERTS               |
| Metals in soil by ICP-OES                          | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                              | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L038-PL       | D                  | MCERTS               |
| Asbestos identification in soil                    | Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.                                    | In house method based on HSG 248                                                                                | A001-PL       | D                  | ISO 17025            |
| Boron, water soluble, in soil                      | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                    | In-house method based on Second Site Properties version 3                                                       | L038-PL       | D                  | MCERTS               |
| Free cyanide in soil                               | Determination of free 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               |
| Moisture Content                                   | Moisture content, determined gravimetrically. (30 oC)                                                                                                     | In house method.                                                                                                | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil                         | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                    | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | MCERTS               |
| Speciated EPA-16 PAHs in soil                      | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.    | In-house method based on USEPA 8270                                                                             | L064-PL       | D                  | MCERTS               |
| pH in soil (automated)                             | Determination of pH in soil by addition of water followed by automated electrometric measurement.                                                         | In house method.                                                                                                | L099-PL       | D                  | MCERTS               |
| 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                 |
| Cr (III) in soil                                   | In-house method by calculation from total Cr and Cr VI.                                                                                                   | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| TPH Banding in Soil by FID                         | Determination of hexane extractable hydrocarbons in soil by GC-FID.                                                                                       | In-house method, TPH with carbon banding and silica gel split/cleanup.                                          | L076-PL       | D                  | MCERTS               |
| Fraction Organic Carbon FOC Automated              | Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.                 | In house method                                                                                                 | L009          | D                  | MCERTS               |

Analytical Report Number : 23-39404

Project / Site name: IW4

Water matrix abbreviations:

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

| Analytical Test Name        | Analytical Method Description                                                                                                     | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------|--------------------|----------------------|
| Hexavalent chromium in soil | Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry. | In-house method             | L080-PL       | W                  | MCERTS               |

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC. Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

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

^^ Unsuitable for analysis due to high colour intensity.

Assessment of Chemicals of Potential Concern to Human Health

|                                                                                                                   |                                                   |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------|------------|------------|--------|--------|--------------------|----------------------------|-------------------------------|--------------------------------|-------------------------|--------|--------|--------|--------|--------|--------|--|--|---------------|--|----------|--|----------|--|----------|--|----------|--|----------|--|--|--|--|--|--|--|--|--|---------|--|--|--|--|--|--|--|--|--|
| <div>Risk parameter:</div> <div>Client:</div> <div>Site:</div> <div>Job no.:</div> <div>Lab. report no(s).:</div> |                                                   | Default - Human Health - residential without home-grown produce (6%SOM)                                                                                                                                                                                                                                                                                                                 |        |             |            |            |        |        |                    |                            |                               | Table 2                        |                         |        |        |        |        |        |        |  |  | Table 3       |  |          |  |          |  |          |  |          |  | Table 4  |  |  |  |  |  |  |  |  |  | Table 5 |  |  |  |  |  |  |  |  |  |
|                                                                                                                   |                                                   | <div>Data Filters</div> <div>Zone</div> <div>0</div> <div>Strata</div> <div>0</div> <div>Depth Min (m bgl)</div> <div>0</div> <div>Depth Max (m bgl)</div> <div>0</div> <div>Dataset mean SOM%</div> <div>5.45</div> <div>Scenario SOM%</div> <div>6</div>                                                                                                                              |        |             |            |            |        |        |                    |                            |                               | <div>Hydrock</div> <div></div> |                         |        |        |        |        |        |        |  |  | Date          |  | 14/06/23 |  | 15/06/23 |  | 16/06/23 |  | 17/06/23 |  | 18/06/23 |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
|                                                                                                                   |                                                   |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  | Zone          |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
|                                                                                                                   |                                                   |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  | Location      |  | TS01     |  | TS02     |  | TS03     |  | TS04     |  | TS05     |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
|                                                                                                                   |                                                   |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  | Depth (m bgl) |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| All values in mg/kg unless otherwise stated                                                                       |                                                   |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| CAS No / P Code                                                                                                   | Chemical of Potential Concern                     | Units                                                                                                                                                                                                                                                                                                                                                                                   | LoD    | No. Samples | Min. Value | Max. Value | Mean   | Median | Standard Deviation | No. Samples >= GAC & > LoD | Soil Saturation Limit @6% SOM | GAC                            | GAC Source              | Strata |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| -                                                                                                                 | Asbestos                                          |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1020                                                                                                             | Asbestos Identified                               | text                                                                                                                                                                                                                                                                                                                                                                                    | Y/N    | 5           | -          | -          | -      | -      | No. of detects:    | 0                          | -                             | -                              | -                       |        | N      | N      | N      | N      | N      |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P188g                                                                                                             | Asbestos Screen Name                              | text                                                                                                                                                                                                                                                                                                                                                                                    |        | 0           | -          | -          | -      | -      | -                  |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1885                                                                                                             | Asbestos Quant. (Stage 2)                         | %                                                                                                                                                                                                                                                                                                                                                                                       | 0.001  | 0           |            |            |        |        | No. > LOD:         |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1935                                                                                                             | Asbestos Quant. Total                             | %                                                                                                                                                                                                                                                                                                                                                                                       | 0.001  | 0           |            |            |        |        | No. > LOD:         |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1826                                                                                                             | Asbestos Quant. (Stage 3)                         | %                                                                                                                                                                                                                                                                                                                                                                                       | 0.001  | 0           |            |            |        |        | No. > LOD:         |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| -                                                                                                                 | Asbestos Quant. Total (Stages 2+3)                | %                                                                                                                                                                                                                                                                                                                                                                                       | 0.001  | 0           |            |            |        |        | No. > LOD:         |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1880                                                                                                             | Asbestos Containing Material Types Detected (ACM) | text                                                                                                                                                                                                                                                                                                                                                                                    |        | 0           | -          | -          | -      | -      | -                  |                            | -                             |                                | -                       |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| o                                                                                                                 | Hydrock Default Suite - FOC / SOM / pH            |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            | -                             |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1085                                                                                                             | FOC (dimensionless)                               | l                                                                                                                                                                                                                                                                                                                                                                                       | 0.001  | 5           | 0.028      | 0.038      | 0.032  | 0.031  | 0.00               |                            | -                             | -                              | -                       |        | 0.038  | 0.029  | 0.032  | 0.031  | 0.028  |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| -                                                                                                                 | SOM (calculated)                                  | %                                                                                                                                                                                                                                                                                                                                                                                       | 0.1724 | 5           | 4.83       | 6.55       | 5.45   | 5.34   | 0.67               |                            | -                             | -                              | -                       |        | 6.5512 | 4.9996 | 5.5168 | 5.3444 | 4.8272 |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1334                                                                                                             | pH (su)                                           | pH Units                                                                                                                                                                                                                                                                                                                                                                                | 0.1    | 5           | 7.50       | 7.60       | 7.58   | 7.60   | 0.04               |                            | -                             | -                              | -                       |        | 7.5    | 7.6    | 7.6    | 7.6    | 7.6    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| -                                                                                                                 | Hydrock Default Suite - Metals & PAH              |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-38-2                                                                                                         | Arsenic                                           | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 8.10       | 14.00      | 12.02  | 13.00  | 2.30               | 0                          | NR                            | 40                             | C4SL - CL:AIRE 2014     |        | 8.1    | 13     | 14     | 13     | 12     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-41-7                                                                                                         | Beryllium                                         | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.06   | 5           | 0.30       | 0.43       | 0.37   | 0.39   | 0.05               | 0                          | NR                            | 1.7                            | Hydrock Derived         |        | 0.3    | 0.43   | 0.34   | 0.39   | 0.39   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-42-8                                                                                                         | Boron                                             | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.2    | 5           | 1.70       | 2.00       | 1.86   | 1.80   | 0.13               | 0                          | NR                            | 11000                          | Hydrock Derived         |        | 2      | 2      | 1.8    | 1.7    | 1.8    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-43-9                                                                                                         | Cadmium                                           | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.2    | 5           | 0.20       | 0.40       | 0.24   | 0.20   | 0.09               | 0                          | NR                            | 150                            | C4SL - CL:AIRE 2014     |        | 0.4    | 0.2    | 0.2    | 0.2    | 0.2    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 16065-83-1                                                                                                        | Chromium (III)                                    | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 3           | 7.40       | 12.00      | 9.73   | 9.80   | 2.30               | 0                          | NR                            | 890                            | Hydrock Derived         |        | 7.4    | 12     |        |        | 9.8    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 18540-29-9                                                                                                        | Chromium (VI)                                     | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1.8    | 3           | 1.80       | 2.20       | 1.93   | 1.80   | 0.23               | 0                          | NR                            | 21                             | C4SL - CL:AIRE 2014     |        | 2.2    | 1.8    |        |        | 1.8    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-47-3                                                                                                         | Chromium (Total)                                  | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 9.60       | 12.00      | 10.92  | 11.00  | 1.11               |                            |                               | -                              |                         |        | 9.6    | 12     | 10     | 11     | 12     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-50-8                                                                                                         | Copper                                            | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 24.00      | 35.00      | 28.00  | 28.00  | 4.30               | 0                          | NR                            | 7100                           | Hydrock Derived         |        | 24     | 35     | 25     | 28     | 28     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7439-92-1                                                                                                         | Lead                                              | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 3           | 46.00      | 83.00      | 59.33  | 49.00  | 20.55              | 0                          | NR                            | 310                            | C4SL - CL:AIRE 2014     |        |        |        | 46     | 49     | 83     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7439-97-6                                                                                                         | Mercury, inorganic                                | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.3    | 5           | 0.40       | 0.80       | 0.58   | 0.60   | 0.15               | 0                          | NR                            | 56                             | Hydrock Derived         |        | 0.4    | 0.8    | 0.6    | 0.6    | 0.5    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-02-0                                                                                                         | Nickel                                            | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 7.50       | 11.00      | 9.48   | 9.70   | 1.29               | 0                          | NR                            | 180                            | Hydrock Derived         |        | 7.5    | 11     | 9.2    | 9.7    | 10     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7782-49-2                                                                                                         | Selenium                                          | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 1.00       | 1.00       | 1.00   | 1.00   | 0.00               | 0                          | NR                            | 430                            | Hydrock Derived         |        | 1      | 1      | 1      | 1      | 1      |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-62-2                                                                                                         | Vanadium                                          | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 9.90       | 16.00      | 13.38  | 14.00  | 2.23               | 0                          | NR                            | 1200                           | Hydrock Derived         |        | 9.9    | 16     | 13     | 14     | 14     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 7440-66-6                                                                                                         | Zinc                                              | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 54.00      | 74.00      | 63.40  | 62.00  | 8.88               | 0                          | NR                            | 40000                          | Hydrock Derived         |        | 54     | 71     | 56     | 62     | 74     |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1095                                                                                                             | Cyanide (free)                                    | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 1.00       | 1.00       | 1.00   | 1.00   | 0.00               | 0                          | NR                            | 24                             | Acute Risk - SoBRA 2020 |        | 1      | 1      | 1      | 1      | 1      |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1186                                                                                                             | Total Phenols (Monohydric)                        | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 1      | 5           | 1.00       | 1.00       | 1.00   | 1.00   | 0.00               | 0                          | 70308                         | 690                            | Hydrock Derived         |        | 1      | 1      | 1      | 1      | 1      |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 83-32-9                                                                                                           | Acenaphthene                                      | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 336                           | 7400                           | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 208-96-8                                                                                                          | Acenaphthylene                                    | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 506                           | 7400                           | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 120-12-7                                                                                                          | Anthracene                                        | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 6.96                          | 38000                          | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 56-55-3                                                                                                           | Benz(a)anthracene                                 | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.25       | 0.49       | 0.35   | 0.30   | 0.11               | 0                          | 10.27                         | 16                             | Hydrock Derived         |        | 0.44   | 0.25   | 0.49   | 0.28   | 0.3    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 50-32-8                                                                                                           | Benzo(a)pyrene                                    | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.37       | 0.56       | 0.45   | 0.41   | 0.09               | 0                          | 5.46                          | 5.3                            | C4SL - CL:AIRE 2014     |        | 0.53   | 0.41   | 0.56   | 0.37   | 0.4    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 205-99-2                                                                                                          | Benzo(b)fluoranthene                              | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.45       | 0.70       | 0.54   | 0.52   | 0.10               | 0                          | 7.29                          | 4.1                            | Hydrock Derived         |        | 0.58   | 0.52   | 0.7    | 0.47   | 0.45   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 191-24-2                                                                                                          | Benzo(ghi)perylene                                | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.27       | 0.39       | 0.32   | 0.29   | 0.06               | 0                          | 0.09                          | 360                            | Hydrock Derived         |        | 0.39   | 0.29   | 0.38   | 0.29   | 0.27   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 207-08-9                                                                                                          | Benzo(k)fluoranthene                              | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.14       | 0.30       | 0.22   | 0.21   | 0.07               | 0                          | 4.12                          | 110                            | Hydrock Derived         |        | 0.3    | 0.14   | 0.26   | 0.17   | 0.21   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 218-01-9                                                                                                          | Chrysene                                          | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.24       | 0.45       | 0.35   | 0.33   | 0.09               | 0                          | 2.64                          | 32                             | Hydrock Derived         |        | 0.42   | 0.29   | 0.45   | 0.24   | 0.33   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 53-70-3                                                                                                           | Dibenz(a,h)anthracene                             | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 0.024                         | 0.32                           | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 206-44-0                                                                                                          | Fluoranthene                                      | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.41       | 1.20       | 0.70   | 0.64   | 0.32               | 0                          | 113                           | 1600                           | Hydrock Derived         |        | 0.83   | 0.44   | 1.2    | 0.41   | 0.64   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 86-73-7                                                                                                           | Fluorene                                          | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 183                           | 5000                           | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 193-39-5                                                                                                          | Indeno(123cd)pyrene                               | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.23       | 0.35       | 0.28   | 0.25   | 0.06               | 0                          | 0.37                          | 46                             | Hydrock Derived         |        | 0.33   | 0.25   | 0.35   | 0.23   | 0.23   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 91-20-3                                                                                                           | Naphthalene                                       | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.05       | 0.05       | 0.05   | 0.05   | 0.00               | 0                          | 432                           | 120                            | Hydrock Derived         |        | 0.05   | 0.05   | 0.05   | 0.05   | 0.05   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 85-01-8                                                                                                           | Phenanthrene                                      | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.15       | 0.62       | 0.29   | 0.23   | 0.19               | 0                          | 214                           | 1600                           | Hydrock Derived         |        | 0.23   | 0.15   | 0.62   | 0.15   | 0.3    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| 129-00-0                                                                                                          | Pyrene                                            | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.05   | 5           | 0.41       | 0.92       | 0.62   | 0.56   | 0.23               | 0                          | 13.2                          | 3800                           | Hydrock Derived         |        | 0.8    | 0.42   | 0.92   | 0.41   | 0.56   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1310                                                                                                             | PAH 16 Total                                      | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 0.8    | 5           | 3.07       | 6.04       | 4.21   | 3.77   | 1.26               |                            |                               | -                              |                         |        | 4.94   | 3.22   | 6.04   | 3.07   | 3.77   |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| o                                                                                                                 | TPH fractions                                     |                                                                                                                                                                                                                                                                                                                                                                                         |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| P1373                                                                                                             | Total TPH >EC5-EC44                               | mg/kg                                                                                                                                                                                                                                                                                                                                                                                   | 10     | 5           | 72.00      | 150.00     | 116.40 | 120.00 | 28.01              |                            |                               | -                              |                         |        | 72     | 120    | 120    | 120    | 150    |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |
| Legend:                                                                                                           |                                                   | <div>&lt;0.02</div> Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate. <div>0.02</div> Value greater than, or equal to, the generic assessment criterion (GAC). <div>64.00</div> Value exceed saturation limit and substance is liquid or solid at ambient temperature |        |             |            |            |        |        |                    |                            |                               |                                |                         |        |        |        |        |        |        |  |  |               |  |          |  |          |  |          |  |          |  |          |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:

Client:

Site:

Job no.:

Lab. report no(s).:

Default - Human Health - residential without home-grown produce (6%SOM)

Morgan Sindall

Islington Wharf Phase 4

10042

23-39404

Data Filters

Zone

0

Strata

0

Depth Min (m bgl)

0

Depth Max (m bgl)

0

Dataset mean SOM%

5.45

Scenario SOM%

6

Hydrock

TS01

TS02

TS03

TS04

TS05

Date

14/06/23

15/06/23

16/06/23

17/06/23

18/06/23

Zone

Location

TS01

TS02

TS03

TS04

TS05

Depth (m bgl)

All values in mg/kg unless otherwise stated

# Cover System Photographs

|                                                                                                         |                                                                                      |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Photograph 1</b>                                                                                     |   |
| <b>Date:</b> 29/06/2023                                                                                 |                                                                                      |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                                                     |                                                                                      |
| <b>Description:</b> Hand-pit HP01, showing full depth of cover system (450mm) over geotextile membrane. |                                                                                      |
| <b>Photograph 2</b>                                                                                     |  |
| <b>Date:</b> 29/06/2023                                                                                 |                                                                                      |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                                                     |                                                                                      |
| <b>Description:</b> Hand-pit HP01, showing full depth of cover system (450mm).                          |                                                                                      |

|                                                                                                         |                                                                                     |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Photograph 3</b>                                                                                     |  |
| <b>Date:</b> 29/06/2023                                                                                 |                                                                                     |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                                                     |                                                                                     |
| <b>Description:</b> Hand-pit HP02, showing full depth of cover system (450mm) over geotextile membrane. |                                                                                     |

|                                                                                |                                                                                      |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Photograph 4</b>                                                            |  |
| <b>Date:</b> 29/06/2023                                                        |                                                                                      |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                            |                                                                                      |
| <b>Description:</b> Hand-pit HP02, showing full depth of cover system (450mm). |                                                                                      |

|                                                                                                         |                                                                                     |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Photograph 5</b>                                                                                     |  |
| <b>Date:</b> 29/06/2023                                                                                 |                                                                                     |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                                                     |                                                                                     |
| <b>Description:</b> Hand-pit HP03, showing full depth of cover system (450mm) over geotextile membrane. |                                                                                     |

|                                                                                |                                                                                      |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Photograph 6</b>                                                            |  |
| <b>Date:</b> 29/06/2023                                                        |                                                                                      |
| <b>Direction</b><br><b>Photograph Taken:</b><br>N/A                            |                                                                                      |
| <b>Description:</b> Hand-pit HP03, showing full depth of cover system (450mm). |                                                                                      |