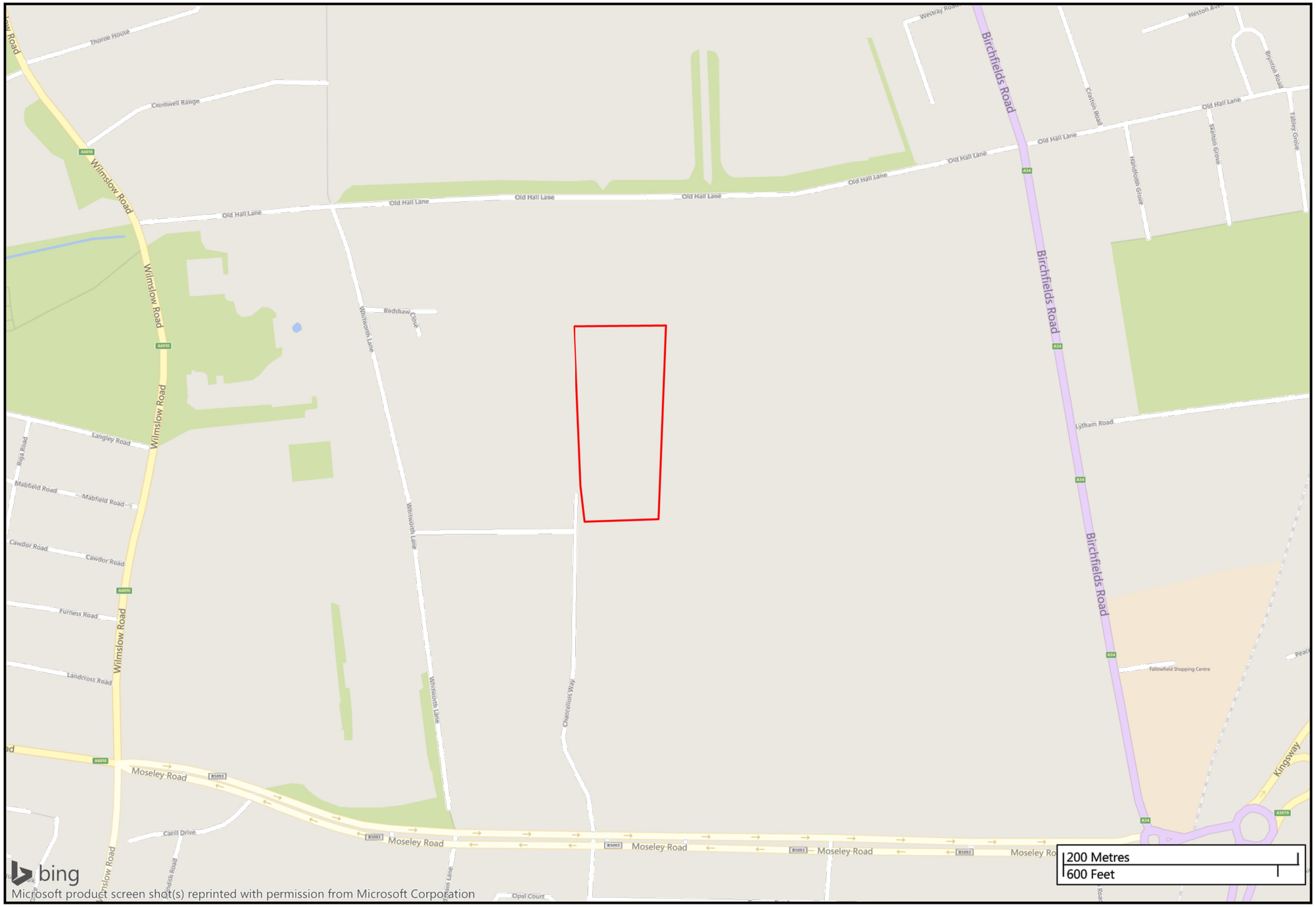




Rev	Date	Description	By	Ckd

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Client :

UNIVERSITY OF MANCHESTER

Project Title:

UNIVERSITY OF MANCHESTER, FALLOWFIELD CAMPUS

Drawing Title:

Site Location Plan

Reference:

UOM-HYD-XX-ZZ-DR-G-0001

Hydrock Job No:

C-05139-C

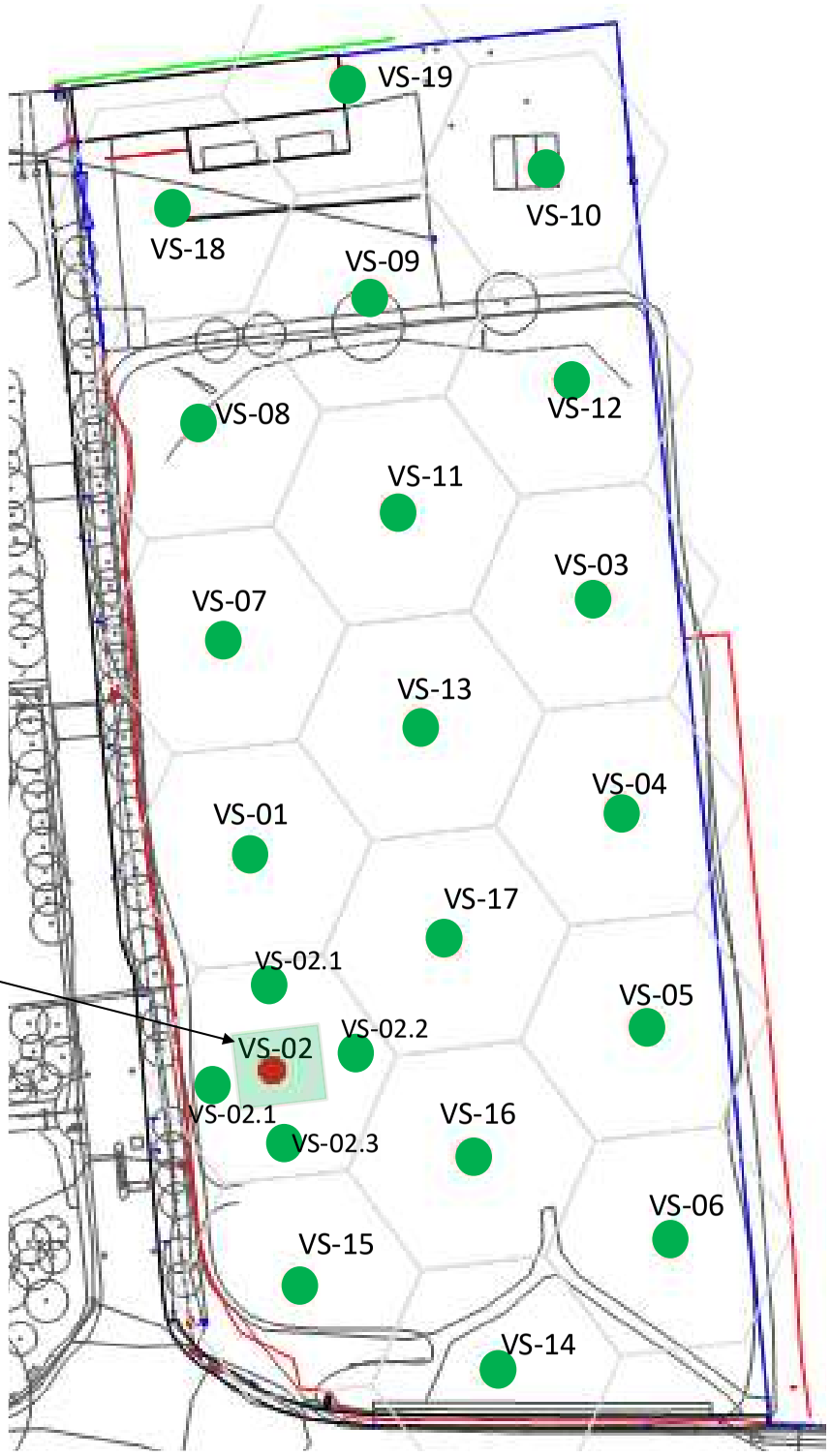
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AS	DH	As Shown	21/11/16	21/11/16

Revision: P1.1

Status: S0

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A4



5x5m excavation of soils where VS02 failed. Additional testing undertaken around failure.

Key

- Sample Pass <0.001%w/w
- Sample Pending
- Sample Fail >0.001%w/w

Rev	Description	Revised by	Date

Vertase FLI

□ Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

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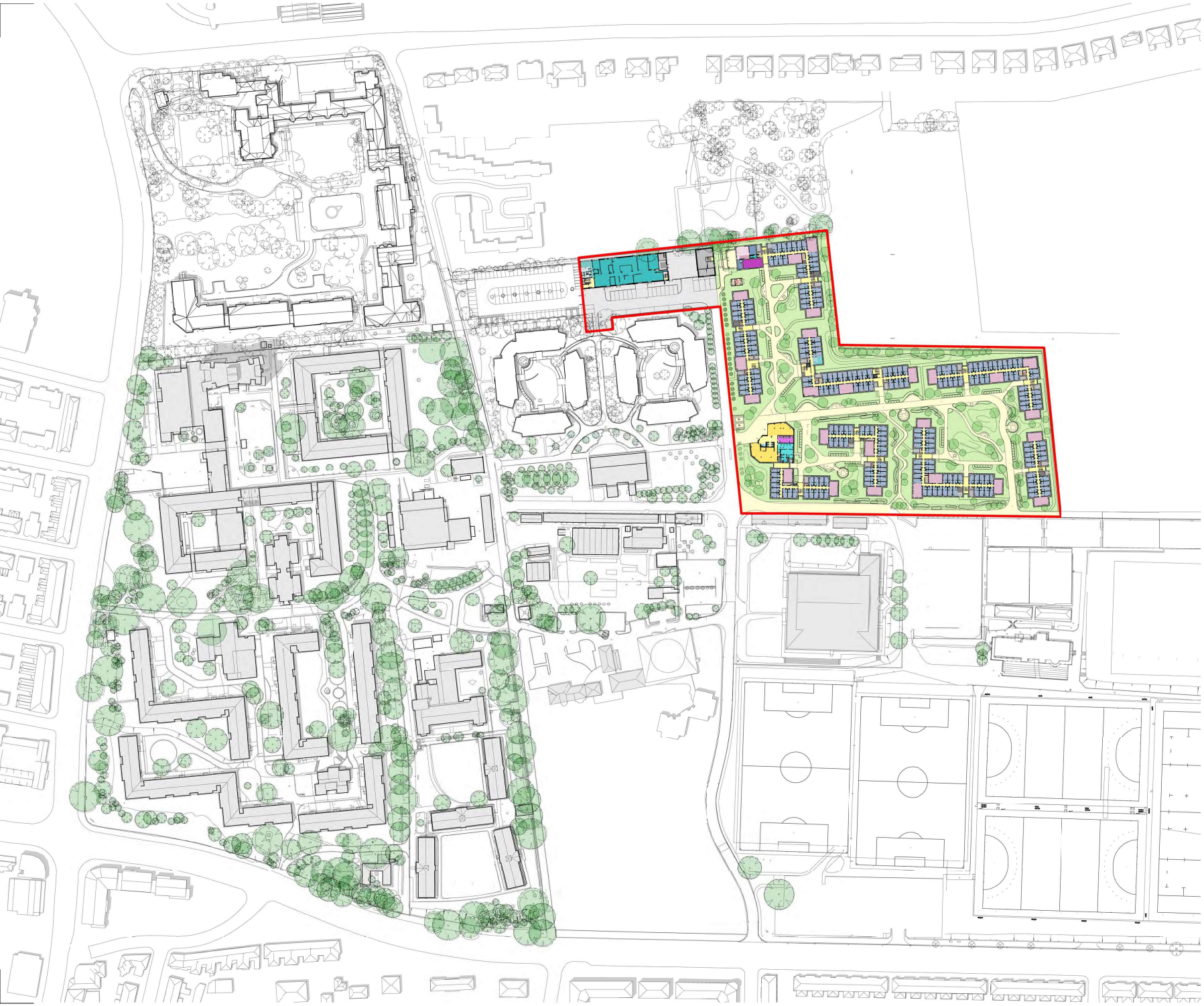
Site Address:

University of Manachester, Fallowfield Campus, Chancellors Way, Manchester

Title Asbestos Validation Location Plan

Client: University of Manchester

Drawn: CL	Approved: CL
Sketch: SK1706 06	Contract: 1706UOM



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NOTES

To be read in conjunction with

- All relevant Surveys, such as Topographical and Tree survey
- All other architectural drawings
- Architectural Specification
- Landscape Architecture Drawings and Specifications
- Civil and Structural Engineering Drawings and Specifications
- MEP Engineering Drawings and Specifications
- Acoustic Report
- Lighting Report
- Fire Strategy Report
- Room Data Sheet

Planning application boundary

REVISION / DESCRIPTION	DRAWN	CHECKED	DATE
P06 - Drawing updated to take into account boundary alterations	JD	MS	06/09/16
P05 - Issued for planning	MS	MS	25/09/15



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PROJECT TITLE
Owens Park, Fallowfield
Campus Redevelopment

P2006665

DRAWING TITLE
Masterplan Phasing Sequence - Phase 1

SCALE @ A1
1 : 1000

DATE
Mar '15

DRAWING NO.
P00_00_(0-)_Z0_A_911

REVISION
P06

Fallowfield Residential Campus, University of Manchester

Remediation Verification Report

Final Report for

July 2017

Hydrock Ref: UOM-HYD-XX-VER-RP-GE-0004

DOCUMENT CONTROL SHEET

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Project: UNIVERSITY OF MANCHESTER, FALLOWFIELD RESIDENTIAL CAMPUS

Title: VERIFICATION REPORT

Status: FINAL

Date: JULY 2017

Document Production Record

Status:	**S2** / **P1**	**Name**	**Signature**
Prepared		Adam Cheers BSc (Hons) CSci MIEnvSc FGS	
Checked		Danny Hope SiLC	
Approved		Danny Hope SiLC	

Document Revision Record

Revision	Status Code	Date	Revision details
P1	S2	31st July 2017	Original issue.

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.

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1.0 INTRODUCTION

1.1 Background and Terms of Reference

In October 2016, Hydrock Consultants Limited (Hydrock) along with our partners Japanese Knotweed Solutions Ltd (JKSL) was commissioned by the University of Manchester (UoM) (the Client) to undertake a watching brief during the remediation works (by Vertase FLI Ltd (VFLI)) and prepare a verification report, in line with the Remediation Method Statement (RMS) (Hydrock Report UOM-HYD-XX-XX-RP-G-001), for a site known as Fallowfield Residential Campus at the University of Manchester.

The site comprised a disused, heavily vegetated mound and is roughly rectangular in shape, extending to approximately 1ha.

The proposed development will include the erection of a multi-storey residential complex for housing university students.

A Site Location Plan (Drawing UOM-HYD-XX-XX-DR-G-001) and a proposed development layout (Drawing P00_00_(0-)_Z0_A_911) produced by BDP and provided by the Client are presented in Appendix A.

Planning permission for new residential developments at the campus were approved by Manchester City Council in December 2015 (Application No. 110184/FO/2015/S1). Contamination is covered by condition 5, as follows:

5) No development shall commence within each phase of development until:

a) 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. 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.

In addition, Condition 21 covers invasive species as follows:

21) Prior to the commencement of development (including vegetation clearance and demolition) details of the methodology for the control of invasive species present on site shall be submitted to and approved in writing by the City Council as local planning authority. The development shall be subsequently undertaken in accordance with the agreed details.

It should be noted that this report relates to remediation of the mound site only (see site location plan in Appendix A) and not the wider proposed development site. This report also relates only to the earthworks documented herein and in the Hydrock RMS and does not cover the follow-on works required by the client/developer/contractor to make the site suitable for the final end-use.

1.2 Objectives

The purpose of this report is to provide a record of the remediation undertaken at the site. The data collected is presented as verification of compliance with the remediation objectives in accordance with the RMS. This report includes:

- The provision of background information;
- Changes to the design;
- Descriptions of the works undertaken by the Contractor and their sub-Contractors;
- Records of unforeseen conditions encountered and how they were dealt with;
- Records of Hydrock inspections and site watching brief visits; and
- Residual risks.

1.3 Sources of Information

In preparing this Verification Report the following documents were consulted:

1. Geotechnics, Ground Investigation Factual Report Stage 2A, Ref PN153327, dated June 2015.
2. Geotechnics, Ground Investigation Factual Report Stage 2B, Ref PN153349, dated August 2015.
3. Japanese Knotweed Solutions. Drawing: Japanese Knotweed excavation extents. Ref: JK15-0868-003 Rev D. 27th January 2015.
4. Environmental Essentials. Compilation Report for Activities at Fallowfield Sports Ground. 10th March 2016.

5. Environmental Essentials Report titled, 'Soil Analysis Spreadsheet – Asbestos', dated March 2016.
6. Hydrock. July 2017, 'Fallowfield Residential Campus, University of Manchester' – 'The Mound' further ground investigation. Reference: C-05139-C/002-Rev B.
7. Hydrock. February 2017, 'Fallowfield Residential Campus, University of Manchester', Remediation Strategy. Reference: UOM-HYD-XX-XX-RP-G-001.
8. Vertase FLI. 31st July 2017,' Fallowfield Campus Remediation Project' – Contract Completion Report (Draft). Reference: 1706UOM CR Rev A.
9. Lucion Environmental Ltd. May 2017, 'Air Monitoring for Fallowfield Campus Project' – Asbestos Analysts Job Summary Report. Reference: 186971.

2.0 RISK ASSESSMENT SUMMARY AND PROPOSED REMEDIATION

2.1 Risk Assessment Summary

Full details of the remedial requirements are provided in the Hydrock report UOM-HYD-XX-XX-RP-G-001 (and the associated documents referred to therein).

The Source-Pathway-Receptor linkages for Chemicals of Potential Concern (CoPC) are shown in

Table 2.1 are those which, following the risk evaluation process, required further consideration and or remediation.

Table 2.1: Final Conceptual Model and Residual Risks Following Risk Evaluation

Contaminant Linkage			Comments	
Sources	**Pathways**	**Receptors**	**General**	**Mitigation**
Asbestos fibres and PAH in the Made Ground	Inhalation of fugitive dust	Human health	Asbestos fibres measured in soil samples	Risk posed to ground and demolition workers and any future below ground maintenance operatives. Remedial Works including the excavation, segregation, processing and disposal of the mound of asbestos contaminated soils. Appropriate consideration (CAR2012) needs to be undertaken by groundworkers with regards to movement and reuse of soils.
	Direct dermal contact	Human Health	Elevated concentrations of PAHs measured in soil samples	Residual risk posed to construction workers, and to future site users in areas of soft landscaping. Remedial works including the excavation of made ground where asbestos are identified below FFL. Made ground will still exist across the majority of the site. Mitigation required in the form of a cover system and all utility services to be laid in clean soils, following this phase of remediation
Invasive weeds in the form of Japanese Knotweed	N/A	New Buildings	Japanese Knotweed Contaminated soils pose a risk posed to new buildings	Removal of Japanese Knotweed, both the plants themselves and the rhizome impacted soils from beneath and surrounding.

2.2 Proposed Remediation Works

Additional detail is presented in the RMS, which should be referred to for further details. However, a summary of the proposed remediation works is presented below:

- Task 1: Appointment of an appropriately experienced and qualified remediation contractor
- Task 2: Project setup and management including liaison with the local authority, Environment Agency, Health and Safety Executive and interested stakeholders within the University of Manchester estate. Where necessary, appropriate permits / licences / consents and approvals will need to be sought and granted
- Task 3: Air quality boundary monitoring for dust and asbestos, before earthworks commence and during the earthworks.
- Task 4: Demolition/decommissioning of the maintenance compound at the north of the site.
- Task 5: Disposal of Japanese Knotweed impacted materials
- Task 6: Disposal of asbestos impacted materials.
- Task 7: Excavations to the required formation level to create the development platform. Disposal of excess soils to appropriate off-site facilities.
- Task 8: Supervision, verification and reporting.

3.0 CHANGES TO THE OUTLINE DESIGN

This section of the report details changes to the design due to unforeseen findings during the investigations and additional assessments during the works.

3.1 Japanese Knotweed Barrier

Japanese Knotweed was encountered beyond the eastern boundary in both the Manchester Grammar School and UoM land, the initial design was to install an impermeable Japanese Knotweed barrier. However a barrier would add further ground constraints to the foundation design of the future development. As such, further investigation works were undertaken and the resulting conclusion was to excavate Japanese Knotweed rhizomes to their full extent beyond the eastern boundary.

The RMS indicates the design of a root barrier using a geotextile to be installed along the boundary of rhizome extents on a 1:1 graded slope, with the root barrier to be installed at 2.0mbgl extending to 7.0m away from the nearest knotweed surface growth.

Due to site constraints, the Knotweed barrier was installed as a light weight steel vertical sheet pile wall to an average depth of 3.0mbgl with 100mm upstand to prevent future growth pathways for rhizome migration.

Knotweed barrier design was altered due to the potential obstruction the original sloped barrier may have presented during piling operation in the construction phase.

3.2 Validation Sampling

The RMS indicated that once formation level was reached, trial pits were to be dug to 1.0mbgl on a 25m grid (19 pits in total). This is to provide reassurance that asbestos and/or Japanese Knotweed no longer exist beneath finished floor levels (refer to VFLI location plan provided in Appendix A).

All validation samples returned a result of non-detect and did not exceed <0.001% w/w (the criteria as outlined in the RMS), however one exception to this was VS02 which contained 0.016% w/w chrysotile fibres.

In order to confirm the chrysotile detection as an isolated instance, an area of 5m x 5m was excavated around VS02 from formation level to natural ground. Four additional validation trial pits were excavated within the 25m grid of VS02 to increase confidence that the detection of asbestos was an isolated instance. All other samples from these excavations did not contain asbestos above <0.001% w/w.

3.3 Unexpected Asbestos Cement

The VFLI Report refers to a dense ‘nest’ of asbestos cement fragments encountered in the north western portion of the site at formation level (44.5mAOD). This area was over excavated to natural clay formation and soils processed to remove asbestos cement sheeting. An

inspection of the sides and base of the resulting excavation confirmed the removal of the gross asbestos. Due to the dense nature of asbestos fragments this area was spread and handpicked twice to ensure all ACM were recovered and disposed of.

The remaining excavated soils were loaded to wagons for offsite disposal in accordance with standard methodologies. The excavated ground within this area was backfilled with imported clean clay material.

4.0 REMEDIATION WORKS UNDERTAKEN

All works were undertaken by VFLI, or their nominated sub-contractors.

Nominated sub-contractors are:

- Asbestos Specialist – Kaefer

Hydrock undertook a part time visiting site watching brief. Watching brief reports during the works are provided in Appendix B.

Under the instruction of Hydrock, Lucion Environmental Ltd. (Lucion) undertook asbestos air monitoring works for the duration of the project.

A summary of the remediation work undertaken is presented below.

4.1 Remediation Works

4.1.1 Task 1: Appointment of an appropriately experienced and qualified remediation contractor

VFLI was appointed by UoM to undertake remedial works including the segregation, processing and disposal of a mound (17,800m^3) of asbestos, and Japanese knotweed contaminated soils. These works were undertaken between 24th April 2017 and 28th July 2017 and were completed to the satisfaction of Hydrock.

For details refer to Vertase FLI. July 2017 Contract Completion Report (Draft), a copy of which can be made available if required.

4.1.2 Task 2: Project setup and management including liaison with regulators

Hydrock was appointed by UoM as Principal Designer and NEC Supervisor. In this role, Hydrock reviewed all relevant Health and Safety documents including RAMS and asbestos management plans produced by VFLI. Hydrock had ongoing contact with the regulators and the UoM Asbestos Manager for the duration of the works.

4.1.3 Task 3: Air quality boundary monitoring for dust and asbestos, before earthworks commence and during the earthworks

Lucion was the appointed subcontractor to undertake air quality monitoring during the works. This included a number of days monitoring before the remediation works began to establish baseline conditions. These works were undertaken between 28th April 2017 and 19th July 2017 and were completed to the satisfaction of Hydrock. All readings taken throughout the remediation works were below the Control Limit. As such the control measures put in place by VFLI were deemed to be satisfactory.

For details refer to Lucion Environmental Ltd. May 2017, Asbestos Analysts Job Summary Report. Reference: 186971 and monitoring certification provided in Appendix E.

4.1.4 Task 4: Demolition / decommissioning of the maintenance compound at the north of the site

VFLI were appointed by UoM to undertake licenced asbestos removal of asbestos containing materials from the former maintenance building and subsequent demolition of the buildings.

VFLI employed a licensed asbestos removal company Kaefer for the controlled removal of the licensed asbestos products from the building prior to demolition. This work was undertaken between the 03 May and 07 May 2017 under an ASB5 notification of Asbestos works.

Further details can be found in Section 8 of the VFLI Completion Report.

These works were completed to the satisfaction of Hydrock.

4.1.5 Task 5: Disposal of Japanese Knotweed impacted materials

VFLI were appointed by the UoM to undertake controlled excavation and removal of Japanese knotweed vegetation and Japanese Knotweed contaminated soils. The near surface material was carefully stripped for disposal at a facility licenced to receive Japanese Knotweed waste. These works were undertaken as part of the VFLI remediation package between and were completed to the satisfaction of Hydrock.

Based on the visible crowns and investigative drawings, selective excavation of JK impacted soils was undertaken and supervised by a VFLI Japanese knotweed specialist to target below ground plant matter and rhizomes of Japanese Knotweed. The rhizomes and associated contaminated soils were carefully stockpiled on site and disposed of at a suitably licenced facility. Large rhizomes were handpicked and disposed of in a dedicated skip.

Due to the presence of asbestos within the soils that the Japanese Knotweed was growing in, all works fell under the asbestos plan of work (POW). All personnel working on the site used the boot wash and decontamination unit when entering and leaving the site thereby making the risk of cross contamination from both Japanese Knotweed and asbestos negligible.

Further details can be found in Section 5 of the VFLI Completion Report.

4.1.6 Task 6: Disposal of asbestos impacted materials

Kaefer was the appointed subcontractor to VFLI for ACM hand picking operations, which was undertaken on all excavated soils. Operatives hand-picked ACM from soils and disposed into red asbestos bags, secured at the neck and double bagged prior to placement within a designated asbestos skip. The soils were then loaded into wagons for offsite disposal.

The hotspot area around BH6/1A was isolated and the soils excavated in bulk under controlled conditions directly to large tonne sacks for off-site disposal to a hazardous landfill. During the works the surface of the soils were slowly scraped and loaded to bags. As the surface was scraped it became clear where the borehole had been drilled as it had been backfilled. The area around the borehole was excavated to natural clay. A full watching brief was undertaken

during the works by Kaefer. No evidence of bulk lagging was observed during the controlled excavation, however all potentially impacted soils were removed from the location.

For details refer to section 4 of the VFLI completion report, which includes the methods used and waste transfer details.

During the main asbestos removal works small localised pockets of asbestos were encountered throughout the mound and were dealt with in accordance with the POW, however a variation to this was a cache of asbestos cement fragments encountered in the northwest of the site at the proposed formation level.

This area was over excavated to natural clay formation and the soils processed to remove asbestos cement. Due to the density of the cement fragments the Asbestos contaminated soil form this area was spread and handpicked twice to ensure that all pieces of asbestos containing materials were recovered and placed within sealed bags for disposal. The remaining soils were loaded to wagons for offsite disposal to landfill in accordance with the standard methodology.

4.1.7 Task 7: Excavations to the required formation level to create the development platform. Disposal of excess soils to appropriate off-site facilities

Final formation levels were revised during the works as shown on BDP drawing P1A 00(9-) Z0 L214 contained in Appendix A of the VFLI completion report.

All processed soils were loaded into wheeled road tippers and sent off site for disposal at non-hazardous landfill by Roy Braidwood & Sons Transport Ltd. These works were undertaken during May, June and July 2017 and were completed to the satisfaction of Hydrock. For details refer to waste transfer notes and tickets provided in the VFLI Completion Report.

4.1.8 Task 8: Supervision, verification and reporting

VFLI have produced a completion report, reference 1706UOM CR Rev A, dated 31st July 2017. This refences the tasks completed as part of the remediation works and any other pertinent information as described in the RMS.

Hydrock completed a part time supervisor role for the project which included weekly site visits to log progress and provide any feedback / defects to the overarching NEC project manager and client. Documentation and details of Supervisor weekly reports are provided in Appendix B.

5.0 HYDROCK WATCHING BRIEF VISITS

Hydrock undertook a part time, visiting watching brief throughout the works, which indicated that the works were being undertaken in accordance with the RMS.

A record of Hydrock's watching briefs are reported in the weekly Hydrock NEC Supervisors Reports included in Appendix B.

In addition, a daily record of works undertaken at the site was recorded by Lucion for the first 8 weeks. At this point as no samples had breached the 0.01 f/ml control limit and the bulk of the earthworks were complete, it was agreed that the air monitoring could be relaxed down to twice per week. The Lucion air monitoring details are included in Appendix D.

6.0 CONCLUSIONS/RESIDUAL RISKS

Hydrock can confirm that remediation works at the site have been conducted in accordance with the Hydrock RMS. The works involved:

- the removal of contaminated soils to the proposed formation levels;
- testing of the soils at the formation level for the presence of asbestos;
- confirmation that the testing undertaken at the formation shows that asbestos is absent or below 0.001% w/w.
- Removal of Japanese Knotweed plants and rhizomes;
- Installation of Japanese Knotweed barrier along the northern and southern boundaries to prevent the potential for re-infestation of the site from adjacent sites.

No ongoing maintenance and monitoring is required with regards to the remediation works documented herein. However, it should be noted that:

- A layer of made ground still exists on site. Investigations found that soils beneath the post-remediation formation level (43.7 to 44.8mAOD) contain pervasive PAHs and Arsenic. As such, if excavation works are undertaken at the site in the future, the ground worker will need to take appropriate (and normal) Health and Safety precautions to mitigate the risks.
- It is recommended that if any future excavation works are undertaken on the site that a watching brief by the ground worker for unexpected contamination and standard good hygiene practices such as no smoking on site and washing hands prior to eating is undertaken. In addition, the Contractor will need to undertake an assessment of risk with regards to the potential for asbestos fibres in future excavated soils and implement appropriate mitigation as necessary.
- Mitigation measures will be required to be installed by the main contractor to protect the end users of the site from the residual contamination, this may include (but is not limited to) the following:
    - clean soil cover system in landscaped areas;
    - gas protection measures; and
    - clean backfill of service trenches.

7.0 VERTASE FLI WORKS AND REPORT VERIFICATION

The remediation strategy compiled by Hydrock outlined three contamination risks:

- contaminated soils including asbestos containing material;
- Japanese Knotweed infestation; and
- maintenance outbuilding containing asbestos materials.

VFLI were appointed by UoM to undertake the remedial works which included the excavation, segregation, processing and disposal of a mound (17,800m^3) of asbestos contaminated soils; removal and treatment of Japanese knotweed contaminated soils; and removal of asbestos within the maintenance building and the structures subsequent to demolition.

Hydrock confirm that all aspects of the Fallowfield Campus remediation project and completion report delivered by Vertase FLI have been completed to the satisfaction of the RMS.

8.0 UNCERTAINTIES AND LIMITATIONS

This verification report details the findings of work carried out between May 2017 and July 2017. The report has been prepared by Hydrock on the basis of available information obtained during this period and information provided by the Contractor. Although every reasonable effort has been made to gather all relevant information, all potential environmental constraints or liabilities associated with the site may not have been revealed.

The report has been prepared for the exclusive benefit of the University of Manchester and those parties designated by them for the purpose of providing geo-environmental verification for the site. The report contents should only be used in that context. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

The works were undertaken on a design and build basis by Vertase FLI Ltd. and this report has been compiled based on information provided to Hydrock by others.

After the remediation completed to the proposed formation level, there will be inherent variation in ground conditions across the site and it is possible that potentially contaminated soils may remain undetected.

Information provided by third parties has been used in good faith and is taken at face value; Whilst Hydrock undertook a visiting site watching brief, Hydrock cannot guarantee its accuracy or completeness. Liability remains with the Contractor.

Where the phrase “suitable for use” is used in this report, it is in keeping with the terminology used in planning control and does not imply any specific warranty or guarantee offered by Hydrock.

The reports provided may identify potential risks to future site users. However, consideration of occupational health and safety issues is beyond the scope of this report.

Any site boundary line depicted on plans does not imply legal ownership of land.

This report does not include any Health and Safety information or Method Statements used by the Contractor during the works. If required, please refer to the Site Health and Safety File, which is available on request to Vertase FLI Ltd.

Appendix A

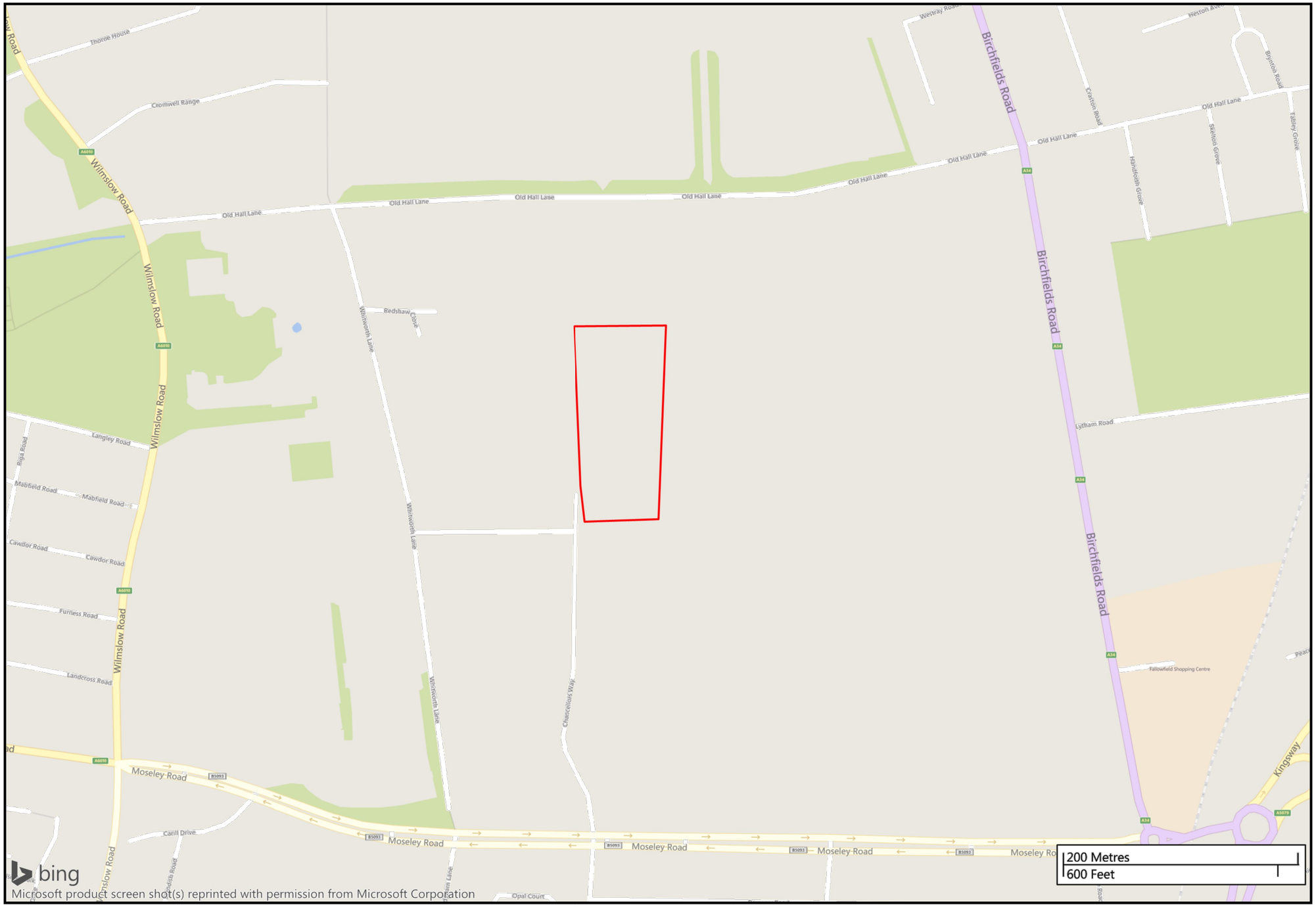
Drawings

Drawings included in this report:

UOM-HYD-XX-ZZ-DR-G-0001, Site Location Plan. University of Manchester Fallowfield Campus

P00_00_(0-)_Z0_A_911 BDP Masterplan Phasing Sequence – Phase 1. Owens Park, Fallowfield Campus Redevelopment

1706UOM SK170606 Asbestos Validation Location Plan. University of Manchester, Fallowfield Campus, Chancellors Way, Manchester





Rev	Date	Description	By	Ckd

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Client :

UNIVERSITY OF MANCHESTER

Project Title:

UNIVERSITY OF MANCHESTER, FALLOWFIELD CAMPUS

Drawing Title:

Site Location Plan

Reference:

UOM-HYD-XX-RMS-DR-G-0001

Hydrock Job No:

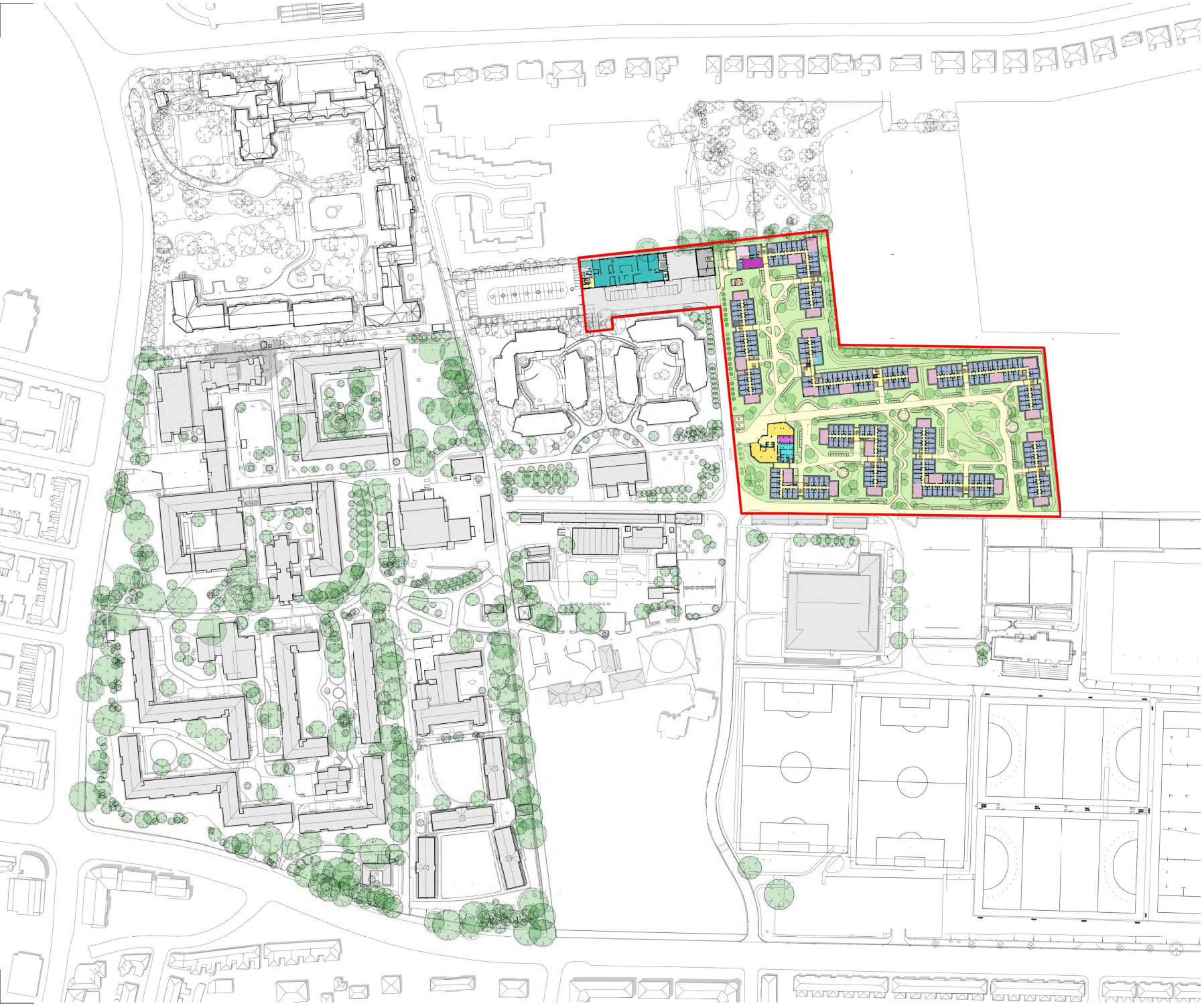
C-05139-C

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AS	DH	As Shown	21/11/16	21/11/16

Revision: P1.1

Status: S0

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Planning application boundary

P06 - Drawing updated to take into account boundary alterations	JD	MS	06/09/16
P05 - Issued for planning	MS	MS	25/09/15



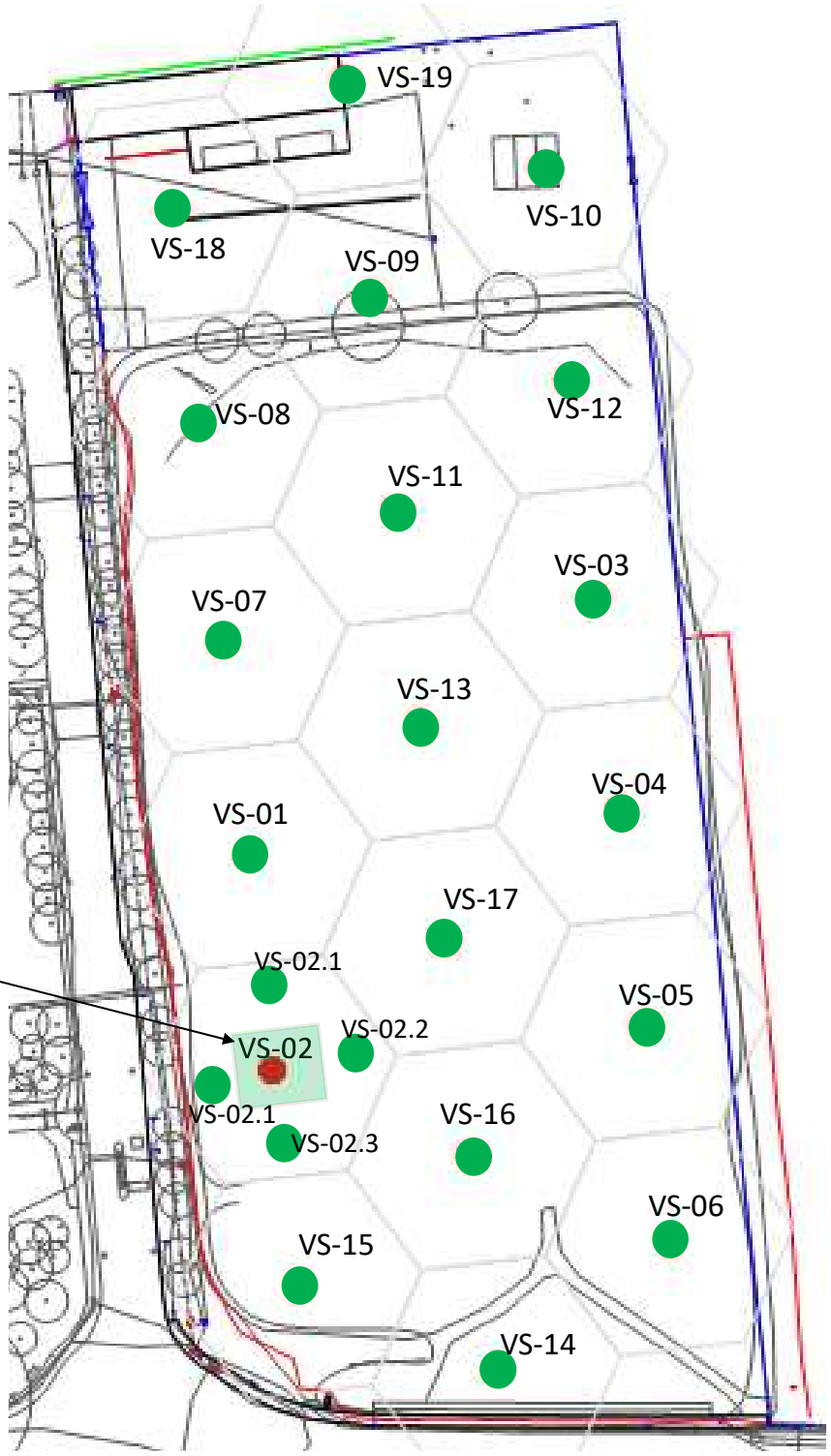
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www.bdp.com

Owens Park, Fallowfield Campus Redevelopment	
P2006665	
Masterplan Phasing Sequence - Phase 1	@ A1 1 : 1000
	Mar '15
P00_00_(0-)_Z0_A_911	P06

A4



5x5m excavation of soils where VS02 failed. Additional testing undertaken around failure.

Key

- Sample Pass <0.001%w/w
- Sample Pending
- Sample Fail >0.001%w/w

Rev	Description	Revised by	Date

Vertase FLI

□ Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

■ Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

University of Manachester, Fallowfield Campus, Chancellors Way, Manchester

Title Asbestos Validation Location Plan

Client: University of Manchester

Drawn: CL	Approved: CL
Sketch: SK1706 06	Contract: 1706UOM

Appendix B

Hydrock Site Inspection Photographs



Figure 1: Visit 1 (03/05/2017)



Figure 2: Visit 1 (03/05/2017)



Figure 3: Visit 2 (09/05/2017)



Figure 4: Visit 2 (09/05/2017)



Figure 5: Visit 3 (15/05/2017)



Figure 6: Visit 3 (15/05/2017)



Figure 7: Visit 4 (17/05/2017)



Figure 8: Visit 4 (17/05/2017)



Figure 9: Visit 5 (30/05/2017)



Figure 10: Visit 5 (30/05/2017)



Figure 11: Visit 6 (06/06/2017)



Figure 12: Visit 6 (06/06/2017)



Figure 13: Visit 7 (13/06/2017)



Figure 14: Visit 7 (13/06/2017)



Figure 15: Visit 8 (22/06/2017)



Figure 16: Visit 8 (22/06/2017)



Figure 17: Visit 8 (22/06/2017)



Figure 18: Visit 8 (22/06/2017)



Figure 19: Visit 9 (04/07/2017)



Figure 20: Visit 9 (04/07/2017)



Figure 21: Visit 10 (17/07/2017)



Figure 22: Visit 10 (17/07/2017)



Figure 23: Visit 11 (19/07/2017)



Figure 24: Visit 11 (19/07/2017)



Figure 25: Visit 11 (19/07/2017)



Figure 26: Visit 11 (19/07/2017)

Appendix C

Vertase FLI Verification Report

This appendix is not included in this compiled report to reduce the document size, but is included in the issued package of information.

Appendix D

Lucion Asbestos Air Monitoring Daily Reports and Certificates

This appendix is not included in this compiled report to reduce the document size, but is included in the issued package of information.

Appendix E

Japanese Knotweed Remediation Inspection Notes

This appendix is not included in this compiled report to reduce the document size, but is included in the issued package of information.

Appendix F

Hydrock Watching Brief Reports

This appendix is not included in this compiled report to reduce the document size, but is included in the issued package of information.

Appendices

Appendix A **Drawings**

Appendix B **Hydrock Site Inspection Photographs**

Appendix C **Vertase FLI Verification Report**

Appendix D **Lucion Asbestos Air Monitoring Daily Reports and Certificates**

Appendix E **Japanese Knotweed Remediation Inspection Notes**

Appendix F **Hydrock Watching Brief Reports**

Appendix A

Drawings

Drawings included in this report:

UOM-HYD-XX-ZZ-DR-G-0001, Site Location Plan. University of Manchester Fallowfield Campus

P00_00_(0-)_Z0_A_911 BDP Masterplan Phasing Sequence – Phase 1. Owens Park, Fallowfield Campus Redevelopment

1706UOM SK170606 Asbestos Validation Location Plan. University of Manchester, Fallowfield Campus, Chancellors Way, Manchester

Appendix B

Hydrock Site Inspection Photographs



Figure 1: Visit 1 (03/05/2017)



Figure 2: Visit 1 (03/05/2017)



Figure 3: Visit 2 (09/05/2017)



Figure 4: Visit 2 (09/05/2017)



Figure 5: Visit 3 (15/05/2017)



Figure 6: Visit 3 (15/05/2017)



Figure 7: Visit 4 (17/05/2017)



Figure 8: Visit 4 (17/05/2017)



Figure 9: Visit 5 (30/05/2017)



Figure 10: Visit 5 (30/05/2017)



Figure 11: Visit 6 (06/06/2017)



Figure 12: Visit 6 (06/06/2017)



Figure 13: Visit 7 (13/06/2017)



Figure 14: Visit 7 (13/06/2017)



Figure 15: Visit 8 (22/06/2017)



Figure 16: Visit 8 (22/06/2017)



Figure 17: Visit 8 (22/06/2017)



Figure 18: Visit 8 (22/06/2017)



Figure 19: Visit 9 (04/07/2017)



Figure 20: Visit 9 (04/07/2017)



Figure 21: Visit 10 (17/07/2017)



Figure 22: Visit 10 (17/07/2017)



Figure 23: Visit 11 (19/07/2017)



Figure 24: Visit 11 (19/07/2017)



Figure 25: Visit 11 (19/07/2017)



Figure 26: Visit 11 (19/07/2017)

Appendix C

Vertase FLI Verification Report

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Appendix D

Lucion Asbestos Air Monitoring Daily Reports and Certificates

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Appendix E

Japanese Knotweed Remediation Inspection Notes

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Appendix F

Hydrock Watching Brief Reports

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	JK Solutions Comments	VFLI Response	Hydrock Comment
Inspection visit: 03rd July 2017			
1	The main areas of JK situated along the eastern and southern boundaries of site, appeared to have been excavated and removed. Due to restricted access JKSL could only inspect the remediated areas from the edge of the working area/site, so they cannot guarantee any of these remediated areas to be 100% free of JK material/rhizome.	VFLI have completed removing JK along the Eastern and Southern boundary. It is not JKS's remit to guarantee VFLI work.	Agreed. No Further Comment.
2	An area of JK infestation situated within south-western corner of the site hadn't been excavated/removed during the site inspection. VFLI weren't able to previously locate this small area of JK, however were made aware of the infestation and have stated that they will be removing this area of infestation as part of the remediation works moving forward (please note that this area of infestation is marked up on the original JK excavation drawing).	During Prestart survey and during the works this area has been surveyed for JK plant on a number of occasions and there had not been any visual identification of JK. VFLI have removed the small plant identified during the walkover and removed all associated rhizomes. VFLI are satisfied this area has been verified and checked.	Agreed. Hydrock have seen the resulting excavation.
3	The areas of infestation within the central area of the site appeared to have been excavated/removed, however as mentioned above JKSL cannot guarantee these areas to be 100% free of JK material/rhizome	VFLI have completed removing JK from the central mound locations. It is not JKS's remit to guarantee VFLI work.	Agreed. No Further Comment.
4	VFLI are currently remediating the northern edge of the mound and also the hardstanding directly north of the mound (around the maintenance building which has now been demolished). Where there had been tree clearance works around the maintenance building, there was evidence of broken pieces of JK crowns and rhizome on the ground. This area did not appear to be cordoned-off in relation to the remainder of the site so potential cross-contamination could occur. There was more JK situated behind the maintenance building - this seems to have become more apparent during the demolition of the building. VFLI and JKSL concur that that the JK surface growth begins circa 6m east from the western edge of the demolished maintenance building. The location and extent of the proposed vertical root barrier, as mentioned in point 7 below should take this into account.	The northern area was fenced widely to segregate the tree clearance works, and the JK materials were contained within. This area is yet to be cleared of JK rhizome and crowns, post which it will be validated by VFLI. The location and extent of the root barrier will be the full extent (70m) of the original VFLI Remediation Northern boundary. The crowns reported are beyond the site boundary (which is the back of the outbuilding), these stands have been previously treated and not above ground.	Agreed. No Further Comment.
5	Appropriate signage such as "loading areas", "area of JK infestation", "foot wash facility" etc, did not appear to be present on site. There was a jet wash situated at the main access of the site but the use of individual foot wash facilities did not appear to be implemented when site operatives were walking around site from contaminated areas to remediated areas. VFLI did state that they were going to undertake a final surface scrape of the site to remove any residual JK material upon completion of the overall	VFLI has a waste route in place for JK impacted soils. JKSL were not permitted to enter the site due to a lack of adequate training and certification for entry to asbestos controlled areas. As part of the asbestos controls a boot wash is present via the decontamination unit. All JK contaminated soils have been stockpiled above the formation layer therefore providing a buffer of material to be exported to landfill preventing	JKSL now have the necessary training allowing them to enter the site.

	JK Solutions Comments	VFLI Response	Hydrock Comment
	remediation works, however this could potentially compromise the waste disposal classification already in place for waste material going off-site, if waste materials are being potentially cross-contaminated.	cross contamination with soils that are to remain onsite. As a final 'cleaning' exercise VFLI will scrape the site to ensure that any cross contamination of JK is dealt with.	Agreed. No further comment.
6	The make-up of the internal temporary haul route on site could have had more clean material in it (e.g. clean 6F2) as it was getting mixed up with site mud etc. It is therefore unknown whether this mud was a result of potential cross-contamination.	At the time of inspection all materials loading to the internal haulage road (turning circle) were not from areas impacted by JK. The area has been validated and inspected for contamination. A road sweeper is employed to maintain adjacent roads and prevent cross contamination.	Agreed. No further comment.
7	Vertical root barriers are still required to be installed along the southern boundary of the site and also along the northern boundary of the site (north of the demolished maintenance area). There is no longer the requirement for a proposed vertical root barrier to be installed along the eastern boundary of the site as additional remediation works implemented by VFLI has removed any potential JK rhizome located within the adjacent land within this section of the site.	Agreed.	Agreed. No Further Comment.

	JK Solutions Comments	VFLI Response	Hydrock Comment
Inspection visit: 07th July 2017			
8	A suitable foot wash facility was located adjacent to the decontamination unit on site.	Agreed.	Agreed. No Further Comment.
9	The area of JK which had previously been missed by VFLI (situated along the south western area/boundary of the site – as identified during my previous visit) has now been excavated/removed. There was no evidence of remaining rhizome within this area. A root barrier is not required along the southern boundary of this remediated area, as the rhizome did not extend underneath the adjacent pavement.	Agreed.	Agreed. No Further Comment.
10	Material containing JK situated along the northern boundary had been excavated and stockpiled on site (adjacent to the excavation area), in preparation for removal of site. There was rhizome present along the excavation face / along the northern boundary, due to the presence of JK on neighbouring land. The majority of the excavation area along the northern boundary had been backfilled with clay-like material. There was no evidence of rhizome within the backfill material. However, there is a possibility that cross-contamination could occur between the 'clean' backfill material and neighbouring ground material infested with JK rhizome, as the root barrier (i.e. metal piling sheets which have now been agreed between VFLI, which will act as a barrier) have not yet been installed. Normally, the barrier would have been installed against the excavation face prior to the importation of 'clean' backfill material. This is also the case for a remediated area situated within the central-southern boundary of the site which has been backfilled with no initial barrier installed first.	The duration between backfill and the installation of the JK barrier has not been extensive and while it is acknowledged that the rate of JK growth is rapid, the excavation trench extended to the site boundary beyond the back of the former building an additional 500mm from the point of installation of the JK barrier. VFLI are Validating and providing warranty for the JK works undertaken on the site and therefore are satisfied with the procedure which is operationally required in order to install the sheet pile wall.	Agreed. No Further Comment.
11	There was no evidence of rhizome within the backfill material used within other excavated areas on site.	Agreed.	Agreed. No Further Comment.
12	It is recommended that any imported material (i.e. subsoil, topsoil etc.) should have certification stating that it is free of invasive plant species. This information is sometimes difficult to obtain/may not even be available for some backfill material, so would require checking prior to importing.	Noted, VFLI has inspected the material and are satisfied that there is no invasive species within the imported soils.	Agreed. No Further Comment.

	JK Solutions Comments	VFLI Response	Hydrock Comment
Inspection visit: 13th July 2017			
13	All excavation areas appeared to have been backfilled and compacted	Noted	Agreed. No Further Comment.
14	The vertical barriers (metal piling sheets) had not yet been installed along the northern and southern boundaries. Vertase's site manager (Gareth) stated that these were to be installed today (17-07-17). There was evidence of new Japanese knotweed re-growth on the southern boundary (where a piling sheet is to be installed), on the edge of the excavation face / adjacent to the existing pavement. Just to reiterate that we would recommend for the sheet piling/root barrier to have been installed against the excavation face, prior to the importation of backfill material, to reduce the risk of cross-contamination.	The regrowth described could not be identified however VFLI are comfortable that any regrowth is behind the respective JK barriers installed. Due to constraints of the wider development the barrier design had to be a vertical design, it is not possible to install the barrier prior to backfilling. The shortest possible time period was left between backfill and installation.	Agreed. No Further Comment.

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Asbestos Analyst's Job Summary Report

Job Ref No: ***186971****, Account Ref No:* ***13906****, Contract Ref No:* ***22296***

c/o University of Manchester 126AL Richmond Park-Site Maintenance Offices & Stores Fallowfield Campus Chancellors Way Fallowfield Manchester M14 6HD

Title*: Air Monitoring for Falllowfield Campus Project*



latlng: 53.444541,-2.217161



on site photo

Passed Certificates	Failed Certificates
0	0

Head Office
7 Halifax Court, Dunston,
Gateshead, NE11 9JT
E: *enquiries@lucion.co.uk*
T: *0345 5040 303*

***First Visit to Site**: Friday, 28th April, 2017, **Last Visit to Site**: Thursday, 13th July, 2017*

Intro

This document is a summary of findings relating to asbestos analytical works at **c/o University of Manchester 126AL Richmond Park-Site Maintenance Offices & Stores Fallowfield Campus Chancellors Way Fallowfield Manchester M14 6HD** from **Friday, 28th April, 2017** to **Thursday, 13th July, 2017**. It is intended to give an overview of testing and must be read only in conjunction with the certificates it references. The document should never be read in isolation as asbestos analysts reports often contain additional notes and advice that should be referred to.

A report is provided electronically via the NexGen web-portal. Rendering of the report will create a unique pdf version identified in the the footer of the document where date and time of rendering is recorded. Document history can be reviewed via the 'View File History' when viewing the report online. Prior to commencing any works or review of the report, the most current version should be obtained via the link to the NexGen web-portal; any local pdf copies should not be relied on as containing the most current information.

Furthermore, this document contains a summary of analyst notes and comments made in relation to works at this site.

Please note this document may contain findings from more than one analyst on more than one date.

Key to Air-Test Icons

To aid ease of reading the following icons have been used in this document to reference commonly undertaken activities.

- Clearance Stage 1
- Clearance Stage 2
- Clearance Stage 3
- Clearance Stage 4
- DCU Stage 2
- DCU Stage 3
- Reassurance
- Background
- Leak Testing
- Personal
- Smoke Test Witness
- Report Acknowledgement

A WARNING is used by the analyst to draw the readers attention to a particular area of the report.

Overview of Works

To view a complete air-certificate, follow the relevent link

Certificate: Phase 1 - Chancellor's Way **Building: University of Manchester, Fallow field Campus** **Level: 0**

View the Full Certificate Here: http://web.lucion.co.uk/air_cert/30480?s=e2a17794f556051471f7a27df1fec565

Type	Test-ID	Start Time	End Time	Date	Operative	# Samples	
Personal	186971-15				Joseph Chambers	1	
Background	186971-20				Joseph Chambers	4	
Background	186971-24				Christopher Sayle	7	
Personal	186971-106				Christopher Sayle	2	
Reassurance	186971-123				Ben Strutt	10	
Personal	186971-124				Ben Strutt	2	
Background	186971-1			28-04-2017	Christopher Sayle	12	
Background	186971-2			02-05-2017	Christopher Sayle	12	
Reassurance	186971-4			03-05-2017	Christopher Sayle	1	
Background	186971-3			03-05-2017	Christopher Sayle	11	
Reassurance	186971-7			04-05-2017	Christopher Sayle	1	
Personal	186971-6			04-05-2017	Christopher Sayle	2	
Background	186971-5			04-05-2017	Christopher Sayle	9	
Personal	186971-9			05-05-2017	Christopher Sayle	3	
Background	186971-8			05-05-2017	Christopher Sayle	9	
Personal	186971-11			08-05-2017	Christopher Sayle	2	
Background	186971-10			08-05-2017	Christopher Sayle	10	
Personal	186971-14			09-05-2017	Christopher Sayle	2	
Background	186971-12			09-05-2017	Christopher Sayle	5	
Reassurance	186971-13			09-05-2017	Christopher Sayle	5	
Personal	186971-13			10-05-2017	Joseph Chambers	1	
Background	186971-12			10-05-2017	Joseph Chambers	9	
Personal	186971-25			12-05-2017	Christopher Sayle	2	

Certificate: Phase 1 - Chancellor's Way				Building: University of Manchester, Fallow field Campus	Level: 0		
Type	**Test-ID**	**Start Time**	**End Time**	**Date**	**Operative**	**# Samples**	
Reassurance	186971-26			12-05-2017	Christopher Sayle	2	
Background	186971-28			15-05-2017	Christopher Sayle	4	
Personal	186971-27			15-05-2017	Christopher Sayle	3	
Background	186971-30			16-05-2017	Christopher Sayle	6	
Personal	186971-29			16-05-2017	Christopher Sayle	3	
Reassurance	186971-31			16-05-2017	Christopher Sayle	3	
Background	186971-32			17-05-2017	Christopher Sayle	7	
Personal	186971-33			17-05-2017	Christopher Sayle	2	
Reassurance	186971-34			17-05-2017	Christopher Sayle	3	
Background	186971-35			18-05-2017	Christopher Sayle	7	
Personal	186971-36			18-05-2017	Christopher Sayle	2	
Reassurance	186971-37			18-05-2017	Christopher Sayle	3	
Background	186971-38			19-05-2017	Christopher Sayle	7	
Personal	186971-39			19-05-2017	Christopher Sayle	1	
Reassurance	186971-40			19-05-2017	Christopher Sayle	3	
Background	186971-41			22-05-2017	Christopher Sayle	7	
Personal	186971-42			22-05-2017	Christopher Sayle	2	
Reassurance	186971-43			22-05-2017	Christopher Sayle	3	
Background	186971-44			23-05-2017	Christopher Sayle	7	
Personal	186971-45			23-05-2017	Christopher Sayle	2	
Reassurance	186971-46			23-05-2017	Christopher Sayle	3	
Background	186971-47			24-05-2017	Christopher Sayle	7	
Personal	186971-48			24-05-2017	Christopher Sayle	2	
Reassurance	186971-49			24-05-2017	Christopher Sayle	3	

Certificate: Phase 1 - Chancellor's Way **Building: University of Manchester, Fallow field Campus** **Level: 0**

Type	Test-ID	Start Time	End Time	Date	Operative	# Samples	
Background	186971-50			25-05-2017	Christopher Sayle	7	
Personal	186971-51			25-05-2017	Christopher Sayle	2	
Reassurance	186971-52			25-05-2017	Christopher Sayle	3	
Background	186971-53			26-05-2017	Christopher Sayle	7	
Personal	186971-54			26-05-2017	Christopher Sayle	2	
Reassurance	186971-55			26-05-2017	Christopher Sayle	3	
Background	186971-56			30-05-2017	Christopher Sayle	6	
Personal	186971-57			30-05-2017	Christopher Sayle	2	
Reassurance	186971-58			30-05-2017	Christopher Sayle	3	
Background	186971-59			31-05-2017	Christopher Sayle	7	
Personal	186971-60			31-05-2017	Christopher Sayle	1	
Reassurance	186971-61			31-05-2017	Christopher Sayle	3	
Background	186971-62			01-06-2017	Christopher Sayle	7	
Personal	186971-63			01-06-2017	Joseph Chambers	2	
Reassurance	186971-64			01-06-2017	Joseph Chambers	3	
Background	186971-65			02-06-2017	Christopher Sayle	7	
Personal	186971-66			02-06-2017	Christopher Sayle	2	
Reassurance	186971-67			02-06-2017	Christopher Sayle	3	
Personal	186971-68			06-06-2017	Christopher Sayle	5	
Background	186971-69			07-06-2017	Christopher Sayle	7	
Personal	186971-70			07-06-2017	Christopher Sayle	2	
Reassurance	186971-71			07-06-2017	Christopher Sayle	3	
Personal	186971-72			08-06-2017	Christopher Sayle	3	
Background	186971-73			08-06-2017	Christopher Sayle	6	

Certificate: Phase 1 - Chancellor's Way				Building: University of Manchester, Fallow field Campus	Level: 0		
Type	**Test-ID**	**Start Time**	**End Time**	**Date**	**Operative**	**# Samples**	
Reassurance	186971-74			08-06-2017	Christopher Sayle	3	
Background	186971-75			09-06-2017	Christopher Sayle	7	
Personal	186971-76			09-06-2017	Christopher Sayle	2	
Reassurance	186971-77			09-06-2017	Christopher Sayle	3	
Background	186971-78			12-06-2017	Christopher Sayle	7	
Personal	186971-79			12-06-2017	Christopher Sayle	2	
Reassurance	186971-80			12-06-2017	Christopher Sayle	3	
Background	186971-81			13-06-2017	Christopher Sayle	7	
Personal	186971-82			13-06-2017	Christopher Sayle	2	
Reassurance	186971-83			13-06-2017	Christopher Sayle	3	
Background	186971-84			14-06-2017	Christopher Sayle	7	
Personal	186971-85			14-06-2017	Christopher Sayle	2	
Reassurance	186971-86			14-06-2017	Christopher Sayle	3	
Background	186971-87			15-06-2017	Christopher Sayle	7	
Personal	186971-88			15-06-2017	Christopher Sayle	2	
Reassurance	186971-89			15-06-2017	Christopher Sayle	2	
Personal	186971-91			16-06-2017	Joseph Chambers	2	
Background	186971-90			16-06-2017	Joseph Chambers	7	
Reassurance	186971-92			16-06-2017	Joseph Chambers	3	
Reassurance	186971-93			19-06-2017	Ben Strutt	5	
Reassurance	186971-95			19-06-2017	Ben Strutt	3	
Personal	186971-94			19-06-2017	Ben Strutt	2	
Background	186971-96			20-06-2017	Christopher Sayle	7	
Personal	186971-97			20-06-2017	Christopher Sayle	2	

Certificate: Phase 1 - Chancellor's Way **Building: University of Manchester, Fallow field Campus** **Level: 0**

Type	Test-ID	Start Time	End Time	Date	Operative	# Samples	
Reassurance	186971-98			20-06-2017	Christopher Sayle	3	
Background	186971-99			21-06-2017	Christopher Sayle	7	
Personal	186971-100			21-06-2017	Christopher Sayle	2	
Reassurance	186971-101			21-06-2017	Christopher Sayle	3	
Background	186971-102			22-06-2017	Christopher Sayle	7	
Personal	186971-103			22-06-2017	Christopher Sayle	2	
Reassurance	186971-104			22-06-2017	Christopher Sayle	3	
Background	186971-105			23-06-2017	Christopher Sayle	7	
Reassurance	186971-107			23-06-2017	Christopher Sayle	2	
Background	186971-108			29-06-2017	Christopher Sayle	7	
Personal	186971-109			29-06-2017	Christopher Sayle	2	
Reassurance	186971-110			29-06-2017	Christopher Sayle	3	
Background	186971-111			30-06-2017	Joseph Chambers	7	
Personal	186971-112			30-06-2017	Joseph Chambers	2	
Reassurance	186971-113			30-06-2017	Joseph Chambers	3	
Report Acknowledgement	186971-114			04-07-2017	Joseph Chambers	--	
Reassurance	186971-15			04-07-2017	Joseph Chambers	2	
Background	186971-116			04-07-2017	Joseph Chambers	8	
Personal	186971-117			04-07-2017	Joseph Chambers	2	
Background	186971-118			06-07-2017	Christopher Sayle	7	
Personal	186971-119			06-07-2017	Christopher Sayle	2	
Reassurance	186971-120			06-07-2017	Christopher Sayle	3	
Background	186971-121			11-07-2017	Christopher Sayle	9	
Reassurance	186971-122			11-07-2017	Christopher Sayle	3	

Certificate: Phase 1 - Chancellor's Way			Building: University of Manchester, Fallow field Campus	Level: 0			
Type	**Test-ID**	**Start Time**	**End Time**	**Date**	**Operative**	**# Samples**	
Background	186971-125			13-07-2017	Christopher Sayle	9	
Reassurance	186971-126			13-07-2017	Christopher Sayle	3	

Job Notes

Operative		Note	Date
	**Christopher Sayle** *Analyst*	08:00 - CHS arrives on site, unpacks and fills in RA. Liaises with Gareth Roberts (GR) of Vertase. GR indicates only boundary monitoring required today. 09:30 - CHS is inducted by GR. Site walk through with GR 10:17 - Backgrounds on. Due to nature terrain and areas of J Knotweed and access not permissable to east perimeter, background air monitoring to said perimeter is not possible till access enabled. Only light easterly wind. Conditions are fair weather with low patchy cloud cover. Moist underfoot and a light easterly breeze. 1011mb and temperature of. 11:10 - CHS Phones Adam Cheers, Hydrock (AC). Leaves a voicemail touching base and detailing progress. 11:17 - Backgrounds off. 11:50 - Backgrounds on. All morning backgrounds <0.01 fibres per ccm of air; satisfactory. 12:15 - 12:45 lunch 12:50 - Backgrounds off 14:04 - Backgrounds on; off at 15:04. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. Excavators and operatives on site tuesday with a view to clearing the vegatation and picking the surface. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. 16:00 - Having finished for the day, CHS signs out and leaves site.	Friday, 28th April, 2017
	**Christopher Sayle** *Analyst*	1-6 	Friday, 28th April, 2017
	**Christopher Sayle** *Analyst*	1-7 	Friday, 28th April, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	1-8 	Friday, 28th April, 2017
 **Christopher Sayle** *Analyst*	1-9 	Friday, 28th April, 2017
 **Christopher Sayle** *Analyst*	1-10 	Friday, 28th April, 2017
 **Christopher Sayle** *Analyst*	1-11 	Friday, 28th April, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	1-12 	Friday, 28th April, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 1, samples 1 - 12. 	Friday, 28th April, 2017
	**Christopher Sayle** *Analyst*	08:00 - CHS arrives on site and signs in with Vertase. Fair weather moist underfoot with dew. V. light easterly breeze with light mist to east otherwise cloudless sky. Pressure 1015mb with a temperature of 13°c. CHS liaises with GR of Vertase. The site is currently setting up for vegetation strip to start tomorrow. CHS to run perimeter backgrounds. 09:14 - Backgrounds first run on; off at 10:14. 09:30 - First excavator arrives. 11:14 - Second run of backgrounds on perimeter; off at 12:14. Vertase clearing shrubs with excavators to make way for cabins (Not vegetation clearing). Vertase start putting dust barriers around perimeter Heras fencing. Lunch: 12:30 - 13:00 All morning air tests were below the Limit of Detection (LoD) of 0.01; satisfactory. 13:45 - Second excavator arrives on site. Spoke to GR regarding vegetation clearance; informed work at standstill till F10 has arrived. Still unable to reach east perimeter (please refer to notes on 28/04). Prevailing easterly wind. 14:24 - Final backgrounds on; off at 15:24 Inquiry by Claire Lilley (CL) Lead engineers Vertase as to general dust sampling CHS informed her about SEM sampling and would make enquiries. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. 16:45 - CHS finishes, updates AC, signs out and leaves site	Tuesday, 2nd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	2-6 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	2-7 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	2-8 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	2-9 	Tuesday, 2nd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	2-10 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	2-11 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	2-12 	Tuesday, 2nd May, 2017
 **Christopher Sayle** *Analyst*	Air test locations, activity 2, samples 1 - 12. 	Tuesday, 2nd May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site (to avoid traffic) and signs in. Liaises with GR; F10 is through and Vertase director coming through for meeting at midday for Asbestos RAMS. Weather conditions are moist underfoot with dew, fair and bright weather, cloudless sky with light North Westerly wind. mb 1021 and a temperature of 21°c. CHS attends morning review. RAMS meeting confirmed. Knotweed specialist to take excavator operatives around site to show areas if contamination. Vegetation strip will start post meeting. Prior to this CHS will provide background air monitoring to perimeters (apart from East) and reassurance air monitoring during trial pits to proposed second vehicular entrance. 08:39 - Perimeter backgrounds on; off at 09:39. 10:00 - Adam Cheers (AC) on site and liaises with CHS for rundown. Inducted on site by Vertase 10:15. 11:00 - CHS and AC go for walk around perimeter. Gate to playing fields is open and walk through of East perimeter conducted. Informed by groundsman that field should be open most of the day and liaise with E. Brainy to arrange access. 11:20 - RAMS meeting with Vertase director. Lucion to do visual inspection post cleaning of excavators on job completion. Whole site (within heras fencing = designated area/respirator zone) PPE/RPE required within (only when area is active). Whole area to be done in strips starting with the vegetation strip. Kaefer to act as watching brief. Hot spot containing lagging as notifiable non-notified?? CHS is to provide perimeter background monitoring throughout vegetation strip and personals on those involved. Reassurance, personal and backgrounds to be conducted throughout 'litter pick'. Lunch 12:45 - 13:15 (AC off site). 13:31 - Perimeter backgrounds On playing field side of East perimeter; off at 14:31. 15:00 - Excavators start vegetation strip. One number stripping vegetation to South West corner and one number stripping Knotweed to North perimeter. 15.06 - Last backgrounds and reassurance (adjacent trial pit) to proposed vehicular access; off at 16:06. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. 17:00 - CHS finishes work. Signs out from vertase and leaves site.	Wednesday, 3rd May, 2017
	**Christopher Sayle** *Analyst*	Dust barrier around all but East perimeter 	Wednesday, 3rd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	3-6 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	3-7 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	3-8 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	3-9 	Wednesday, 3rd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	3-10 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	3-11 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 3, samples 1 to 11 	Wednesday, 3rd May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 4, sample 1 	Wednesday, 3rd May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site and signs in with Vertase. 07:45 - Attends daily meeting. Work progressing as yesterday; vegetation/Knotweed strip. CHS to provide background air monitoring to perimeter fencing, and reassurances in the case of trial pits excavated. Weather conditions consist of ground moist with dew. Bright conditions with light, patchy high level cloud. Pressure - 1020mb and temperature of 12°c. Light to medium Easterly wind with occasional gusts. 08:34 - Perimeter backgrounds on; off at 09:34. 11:08 - Personal on excavator operator (C. Morgan) after break; off at 11:41. 11:30 - Second run of perimeter backgrounds on; off at 12:30. All morning air tests were below their LoD's of 0.01 and 0.05; satisfactory. Lunch 13:00 - 13:30 14:14 - Reassurance on following excavation of trial pit; off at 15:14. 14:24 - Personal on Knotweed consultant (T. Hare) conducting Knotweed strip; off at 15:04. 14:34 - Final round of backgrounds on; off at 15:34. - Both personal air samples gave results below 0.04 and 0.05 fibres per ccm of air; control measures are satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. 16:30 - Having finished, CHS updates AC on progress, signs out and leaves site	Thursday, 4th May, 2017
	**Christopher Sayle** *Analyst*	5-6 	Thursday, 4th May, 2017
	**Christopher Sayle** *Analyst*	5-7 	Thursday, 4th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	5-8 	Thursday, 4th May, 2017
 **Christopher Sayle** *Analyst*	5-9 	Thursday, 4th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, Activity 5, samples 1 - 9 	Thursday, 4th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site and signs on with Vertase. Works continuing on yesterday's theme. Vegetation/Knotweed strip, CHS to provide background perimeter and personal air monitoring. Weather conditions are: ground moist with dew. Fair weather with space low cloud, low to medium breeze from the east. 1021mb pressure and 11°c. 07:40 - CHS attends daily meeting surface pick only and dealing with dumped litter/root balls etc. No intrusive works. 08:08 - First run of backgrounds on perimeter; off at 09:08. 08:14 - Personal on excavator operator (M Morley); off at 08:56. 11:21 - Second run of backgrounds on; off at 12:21 11:40 - Personal on excavator operator (C. Morgan); off at 12:10 All morning air tests below their relevant LoD's; satisfactory. 13:00 - 13:30 lunch 14:05 - Last run of backgrounds on; off at 15:06. 14:16 - Personal on Knotweed consultant (T. Hare) on Knotweed strip; off a 14:42. - All personal air samples gave results below 0.03, 0.04 & 0.06 fibres per ccm of air; control measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. CHS updates AC via voicemail, having finished for the day; signs out and leaves site at 15:45.	Friday, 5th May, 2017
	**Christopher Sayle** *Analyst*	8-6 	Friday, 5th May, 2017
	**Christopher Sayle** *Analyst*	8-7 	Friday, 5th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	8-8 	Friday, 5th May, 2017
 **Christopher Sayle** *Analyst*	8-9 	Friday, 5th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 08 samples 1 - 9. 	Friday, 5th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site and signs in with Vertase. Attends site briefing; completion of Knotweed strip. CHS to put personals ons excavators and perimeter backgrounds (couple around changing rooms). 07:45 - Kaefer on site in role of picking mainly however to set enclosure up on changing rooms. CHS speaks to GCO and Alan (Kaefer contracts manager). Job still not clear as to whether a second analyst etc required; GCO to speak to Hydrock. ASB5 not through till 10/05. Operatives to remove mastic joints to exterior. Alan would like surveyor who conducted survey to show him the location and extent of AIB residues prior clean. Weather conditions; dry and overcast with patches of blue sky and light South Easterly breeze. 1023mb and temperature of 9°c. 08:54 - First run of backgrounds on North/West perimeter; off at 09:54. 10:36 - Second run of background perimeters on to West/ South perimeters. 10:56 - Personal on excavator operator (C. Morgan) working adjacent decontamination area. (Excavators clearing turning circle/loading bay. 11:36 - Backgrounds and personal off. All air tests before lunch <0.01 and 0.06 fibres per ccm of air; satisfactory. Lunch 12:45 - 13:15. 14:15 - Personal on VertaseFLI Operative N. Cavial) spraying down made ground moved by excavators; off at 15:03. 14:38 - Final run of backgrounds on; off at 15:38. - Both personal air samples gave results below 0.03 and 0.06 fibres per ccm of air; control measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. CHS updates AC on progress via voicemail and checks the paperwork of Kaefer ops: Steve Oldham (supervisor), Brian Lyons, Steve Mossley, M. Booth. All satisfactory. 17:00 - CHS finishes work, signs out and leaves site.	Monday, 8th May, 2017
	**Christopher Sayle** *Analyst*	10-6 	Monday, 8th May, 2017
	**Christopher Sayle** *Analyst*	10-7 	Monday, 8th May, 2017

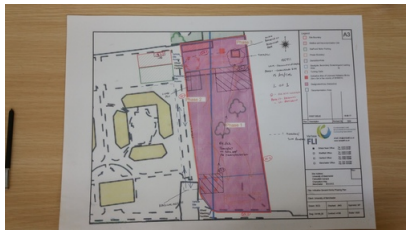
Operative	Note	Date
 **Christopher Sayle** *Analyst*	10-8 	Monday, 8th May, 2017
 **Christopher Sayle** *Analyst*	10-9 	Monday, 8th May, 2017
 **Christopher Sayle** *Analyst*	10-10 	Monday, 8th May, 2017
 **Christopher Sayle** *Analyst*	11-2 	Monday, 8th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 10, samples 1 - 10 	Monday, 8th May, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Conditions are dry, overcast with patches of sunshine, slight Easterley breeze. 1021mb and 10°c 07:30 - Daily review. Moving veg/Knotweed into certain areas. Moving soils into picking areas and picking. Kaefer picking and removing mastic to changing rooms. CHS to provide perimeter background air monitoring outside the work area. Reassurance air monitoring within work area (picking) and personals on various operatives. CHS will also run a reassurance post mastic removal. 08:29 - Backgrounds on; off at 09:29. 10:43 - Reassurances on in picking area; off at 11:43. 11:44 - Personal on Kaefer operative (M. Booth) on cement pick; off at 12:09. - All am air tests below their relevant LoD's; satisfactory Lunch 13:00 - 13:30 13:54 - Reassurance on main site; off at 14:54 14:00 - Personal on dumper operative (J. Grysakoliski); off at 14:55. 14:32 - Reassurances on around changing rooms; off at 15:33. - Both personal air samples gave results below 0.03 and 0.06 fibres per ccm of air; control measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. CHS meets Danny Hope (Hydrock) and updates him on progress. Some concerns on report format Danny will mail GCO. 17:00 - CHS finishes signs out and leaves site	Tuesday, 9th May, 2017
	**Christopher Sayle** *Analyst*	13-5 	Tuesday, 9th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	sample locations, activity 12, samples 1 - 5 	Tuesday, 9th May, 2017
 **Christopher Sayle** *Analyst*	sample locations, activity 13, samples 1 - 5. 	Tuesday, 9th May, 2017
 **Christopher Sayle** *Analyst*	The litterpick area: The original method was for the excavator to lay a 0.2m depth layer out with Kaefer/Vertase to go over surface and pick visible debris. This was undertaken till lunch on 09/05/2017. Vertase changed the method to spreading several layers on top of each other. Kaefer expressed concerns about a strong possibility of missing ACM's in individual buckets to Steve Oldham (SO) Kaefer supervisor. Steve and CHS are in agreement on issue. This change came direct from Vertase and this was confirmed by Claire Lilley of Vertase. This is agreeable on all parties,however may result in loads being returned from landfill and the process repeated.	Tuesday, 9th May, 2017
 **Christopher Sayle** *Analyst*	Non licensed works has been undertaken on the exterior of the stores (changing room, namely removal of mastic to external joints to the walls. The ASB5 is in place from 10/05/ 2017 for internal removal of AIB residues with a view for a clearance on 12/05/2017. CHS carried out reassurances in vicinity of works on 09/05/2017 (13-4 & 13-5).	Tuesday, 9th May, 2017
 **Christopher Sayle** *Analyst*	07:30 - CHS arrives on site for daily meeting. (Joe Chambers ((JC)) on site at 8.00 for induction) he will be continuing works for CHS today. Carrying on riddling roots and soil. Carrying on picking. Kaefer to start on stores today (JC). 08:00 - JC on site. CHS walks through site with him and hands over. JC inducted 08:30. 08:45 - CHS off site.	Wednesday, 10th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	10:15 - CHS on site, unpacks and signs in with Vertase. Places of action today, south turning point, dig, pick and export up to Northern loading zone (new turning point). Low key dig at Northern area. Very wet weather conditions light to medium precipitation, overcast. 10:54 - Backgrounds on; off at 11:54 13:00 - Personal on excavator operator (M. Morley) on new turning point. Off at 14:12. All am air tests below LoD's of <0.01 & 0.02; satisfactory. 13:30 - 14:00 lunch 14: 06 - reassurances on; at 15:06 14:25 - Personal on Kaefer op (S Moseley) litter picking; off at 15:04. Both personal air samples gave results below 0.02 and 0.04 fibres per ccm of air; control measures satisfactory. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. CHS updates AC on today's progress via voicemail. 16:00 - CHS finishes, packs up, signs out and leaves site.	Friday, 12th May, 2017
	**Christopher Sayle** *Analyst*	24-7 	Friday, 12th May, 2017
	**Christopher Sayle** *Analyst*	24-6 	Friday, 12th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Samples locations, activity 24, samples 1 - 7 	Friday, 12th May, 2017
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site. Attends morning meeting. Works as of Friday. The road leading into the site (treeline and hoarding is now a non pedestrian route). 40 trucks to be loaded today. Weather conditions overcast and continuous heavy rain, pressure 1013mb and temperature 11°c. Air monitoring postponed due to adverse weather. Confirmed with GCO who suggested a couple of personals on the excavators. 10:15 - Adam Cheers on site. Updated by CHS. 10:57 - Personal on excavator operator (C. Velosco) loading wagons; off at 11:57. CHS and AC walk around site. PLEASE MAIL REPORTS TO AC DAILY. 12:30 - 13:00 Lunch 13:03 - Break in the rain, perimeter backgrounds on; off at 14:03. 14:28 - Personal on excavator operator (M. Morley) on turning point excavation; off at 15:27. - All air samples gave results below 0.01 fibres per ccm of air.; satisfactory. - Personal air samples gave results below 0.03 fibres per ccm of air; control limits satisfactory. 16:15 - CHS finishes, signs out and leaves site.	Monday, 15th May, 2017
	**Christopher Sayle** *Analyst*	Area where Kaefer picking and wagons being loaded. 	Monday, 15th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	New lorry turning point excavation. 	Monday, 15th May, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 28, samples 1 -4 	Monday, 15th May, 2017
	**Christopher Sayle** *Analyst*	07:20 - CHS arrives on site attends morning meeting and signs in with Vertase. Weather conditions are dark, overcast with medium to heavy precipitation. Slight Westerly breeze. Mb of 1012 and temperature of 15°c. As such air monitoring is restricted to personals until rain abates. Works as yesterday, picking from North end, diggers moving 'clean' soil to bund/ spoil. Excavator loading 40 wagons for removal off site. New turning point excavation continuing on in South West with dumper moving soil to bund for removal. 08:44 - Personal on Kaefer op (M. Booth) on litter pick; off at 09:38. 10:49 - Break in rain, perimeter backgrounds on; off at 11:49. 12:18 - Final perimeter backgrounds on; off at 13:18. All morning air tests below their respective LoD's; Satisfactory. Lunch: 12:45 - 13:15. 14:02 - Personal on excavator operator (C. Morgan) raking for pick; off at 14:45. - All air samples gave results below 0.01 fibres per ccm of air; Satisfactory. - Personal air samples gave results below 0.03 and 0.06 fibres per ccm of air; control measure satisfactory. 16:15 - CHS updates AC on works, signs out and leaves site.	Tuesday, 16th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Bund being removed of site, North end of site. 	Tuesday, 16th May, 2017
	**Christopher Sayle** *Analyst*	Litter pick 	Tuesday, 16th May, 2017
	**Christopher Sayle** *Analyst*	Stock and load area 	Tuesday, 16th May, 2017
	**Christopher Sayle** *Analyst*	Turning point excavation 	Tuesday, 16th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	30-5 	Tuesday, 16th May, 2017
 **Christopher Sayle** *Analyst*	30-6 	Tuesday, 16th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 30, samples 1 - 6. 	Tuesday, 16th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site with Kaefer. Weather conditions are damp underfoot, very light breeze, overcast with low lying cloud with bright patches. Pressure of 1012 mb and temp of 14°c. 07:30 - Daily site meeting attended. Same day as yesterday, picking and loading at North. Excavating turning point to South West, transporting to loading point. Breach to be made in fence adjacent turning point for access. 08:15 - Backgrounds on East perimeter; off at 09:15; off at 09:33. 08:54 - Personal on Knotweed consultant (T. Hare) picking various materials. 11:04 - Final backgrounds on perimeter; off at 12:04. All morning air tests below LoD of 0.01 fibres; satisfactory. 12:45 - 13:15 lunch. 13:53 - Personal on dumper operator (J. Grysakoliski) transporting spoil from the new turning point to the load area; off at 14:45. 14:02 - Reassurances on around work area; off at 15:02. - Personal air samples gave results below 0.05 & 0.06 fibres per ccm of air; contol measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. CHS updates AC on works. 16:00 - leaves site	Wednesday, 17th May, 2017
	**Christopher Sayle** *Analyst*	Loading area and stock pile 	Wednesday, 17th May, 2017
	**Christopher Sayle** *Analyst*	Picked material being stockpiled for loading, picking area. 	Wednesday, 17th May, 2017

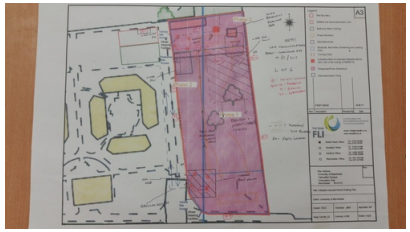
Operative		Note	Date
	**Christopher Sayle** *Analyst*	New turning point excavation. 	Wednesday, 17th May, 2017
	**Christopher Sayle** *Analyst*	32-6 	Wednesday, 17th May, 2017
	**Christopher Sayle** *Analyst*	32-7 	Wednesday, 17th May, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 32, samples 1 - 7 	Wednesday, 17th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site and signs in with Vertase. Conditions are wet underfoot, overcast with bright patches/blue sky with an Easterly breeze. Pressure 1007mb, temperature 11°c. 07:35 - Daily meeting attended. Same as yesterday, CHS to provide background, personal and reassurance air monitoring during the day. CHS mentions to Vertase about truck drivers exiting vehicles in designated ares; foreman advises site ops on situation. 08:26 - Backgrounds on East perimeter; off at 09:26. For reasons unknown, Vertase do not want a supervisor (S. Oldham) on site. Kaefers managers on site. Steve's last day is Friday and Claire Lilley to continue Kaefers paperwork; Kaefers to monitor this arrangement. 09:37 - Personal on Kaefer Supervisor (S. Oldham) on Turning point excvtn; off at 10:25. 10:30 - 11:00 - Break 10:57 - Final run of perimeter backgrounds on; off at 11:57. 12:23 - On excavator operator (C. Velosco) on picking zone; off at 13:31. All morning air tests below their respective LoD's; satisfactory. Lunch 13:00 - 13:30 Personal air samples gave results below 0.04 & 0.05 fibres per ccm of air; control measures satisfactory. 14:02 - Reassurances on work areas; off at 15:02. - All air samples gave results below 0.01 fibres per ccm of air. Nothing of any interest unearthed during works today. - CHS updates AC on progress and centres on issue regarding Kaefer supervisor. 16:00 - CHS signs out and leaves site.	Thursday, 18th May, 2017
	**Christopher Sayle** *Analyst*	Loading area/stockpile. Taken from road adjacent welfare compound. 	Thursday, 18th May, 2017
	**Christopher Sayle** *Analyst*	picking are. Taken adjacent 2 stage DCU. 	Thursday, 18th May, 2017

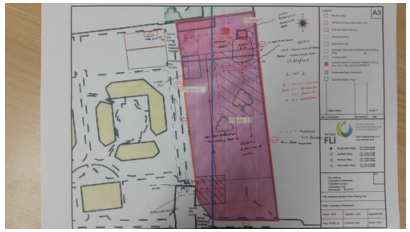
Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking area. Taken from playing fields, East perimeter. 	Thursday, 18th May, 2017
 **Christopher Sayle** *Analyst*	Turning point excavation. Taken from fence line 	Thursday, 18th May, 2017
 **Christopher Sayle** *Analyst*	35-6 	Thursday, 18th May, 2017
 **Christopher Sayle** *Analyst*	35-07 	Thursday, 18th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 35, samples 1 - 7. 	Thursday, 18th May, 2017
	**Christopher Sayle** *Analyst*	- 08:15 - CHS arrives on site after going to office for supplies, signs in with Vertase. Weather conditions are damp on site, overcast with low lying cloud and bright patches and a light breeze. Temperature of 12°cloud and 1005 mb. - Works as of yesterday. CHS to provide air monitoring. 08:39 - Backgrounds on East perimeter; off at 09:39. 10:08 - Final run of perimeter backgrounds on; off at 11:08. Break 10:30 - 11:00 11:38 - Personal on VertaseFLI banks man (N. Caviel) in loading/picking zones. Pump failed (persistent stopping). CHS put it on charge for later. Lunch 12:30 - 13:00 13:44 - Reassurances on; off at 14:46. 14:13 - Personal on VertaseFLI banks man (N. Caviel) in loading/picking zones; off at 14:39. - Personal air sample gave result below 0.09 fibres per ccm of air; control measures satisfactory. - All air samples gave result below 0.01 fibres per ccm of air; satisfactory. Nothing of any interest unearthed in today's investigations. - CHS updates AC on progress. 16:00 - CHS finishes, signs out of Certain and leaves site.	Friday, 19th May, 2017
	**Christopher Sayle** *Analyst*	Picking zone taken from East perimeter. 	Friday, 19th May, 2017

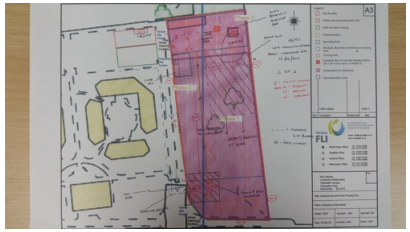
Operative	Note	Date
 **Christopher Sayle** *Analyst*	Loading area taken from welfare compound 	Friday, 19th May, 2017
 **Christopher Sayle** *Analyst*	38-6 	Friday, 19th May, 2017
 **Christopher Sayle** *Analyst*	Turning point excavation taken from fence line, West perimeter. 	Friday, 19th May, 2017
 **Christopher Sayle** *Analyst*	38-7 	Friday, 19th May, 2017

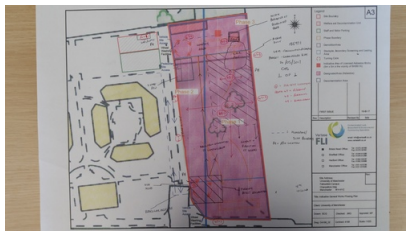
Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 38, samples 1 - 7 	Friday, 19th May, 2017
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site. Weather is bright and fair with patches of low cloud and light South Westerly breeze. Temperature of 17°c and 1010mb pressure. 07:35 - Attends daily meeting. Works as last week, excavation to turning point to South West and transporting spoil to loading area. Picking zone to North where spoil sorted before transportation off site. CHS to provide air monitoring throughout day. Works to turning point uncovered an unknown inspection cover. Works will have to be directed around this. 08:32 - Backgrounds on on East perimeter; off at 09:32. 10:25 - Final run of background perimeters on; off at 11:25. 10:30 - 11:00 tea break. 11:09 - Personal on Kaefer op (S. Moseley) during litter pick; off at 11:48. 12:39 - Personal on VertaseFLI excavator op (M. Morley) on turning point excavation; Lunch 12:45 - 13:15 13:17 - Personal off. - Personal air samples gave results below 0.06 fibres per ccm of air; control measures satisfactory. 14:10 - Reassurances on; off at 15:10. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. Nothing out of the ordinary found on today's investigation. Scarce shards of cement found at excavation, more found at picking station. CHS updates AC progress. 16:15 - CHS signs out and leaves site.	Monday, 22nd May, 2017
	**Christopher Sayle** *Analyst*	Loading area from welfare compound 	Monday, 22nd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone from East perimeter 	Monday, 22nd May, 2017
 **Christopher Sayle** *Analyst*	41-6 	Monday, 22nd May, 2017
 **Christopher Sayle** *Analyst*	41-7 	Monday, 22nd May, 2017
 **Christopher Sayle** *Analyst*	Turning point excavation from new access on road, West perimeter. 	Monday, 22nd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Sample locations, activity, 41, samples 1 - 7 	Monday, 22nd May, 2017
 **Christopher Sayle** *Analyst*	09:45 - CHS on site after technical meeting at Oldham office. Signs in with Vertase. Overcast with bright spells, 17°c and 1014mb. Works as of yesterday. 10:25 - Full run of perimeter backgrounds on; off at 11:25 10:30 - 11:00 - Tea break 12:06 - personal On Vertase dumper operative (J. Grysakoliski); off at 13:21. Lunch 13:30 - 14:00 14:10 personal on Kaefer op (B. Lyons) on excavation; off at 14:39. 14:31 - Reassurances on; off at 15:32 All personal air samples gave results below 0.03 and 0.08 fibres per ccm of air; control measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Nothing out of the ordinary found in today's investigation; Cement in higher concentration than normal. AC updated. 16:30 - CHS signs out and leaves site.	Tuesday, 23rd May, 2017
 **Christopher Sayle** *Analyst*	Loading area taken from North entrance 	Tuesday, 23rd May, 2017
 **Christopher Sayle** *Analyst*	44-6 	Tuesday, 23rd May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	44-7 	Tuesday, 23rd May, 2017
 **Christopher Sayle** *Analyst*	Picking zone taken from East perimeter fence line 	Tuesday, 23rd May, 2017
 **Christopher Sayle** *Analyst*	Turning point excavation from West perimeter fence line 	Tuesday, 23rd May, 2017
 **Christopher Sayle** *Analyst*	Spraying down in loading area 	Tuesday, 23rd May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 44, samples 1 - 7 	Tuesday, 23rd May, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Dry conditions, overcast with low lying cloud and light breeze. 16°c 1020mb. 07:30 - CHS attends daily meeting. Excavation of turning pt. to South West. Transportation of spoil to North loading area for sorting etc. Picking zone to Northern end. CHS to provide air monitoring throughout day. Toolbox talk for excavator operators regarding checks. Concerns over Kaefer picking zone regarding vehicular movement. 08:23 - Backgrounds on East perimeter; off at 09:23. 10:03 - Final run of perimeter backgrounds on; off 11:03. Tea break 10:30 - 11:00. 11:38 - Personal on Kaefer operative (M. Booth) on litter pick; off at 12:16. 12:36 - Personal on Japanese Knotweed specialist (T. Hare) sorting out Rhyzones; off at 13:13. - all morning air tests below their respective LoD's; satisfactory. Lunch 13:15 - 13:45 Both personal air samples gave results below 0.06 fibres per ccm of air; control measures satisfactory. 14:16 - Reassurances on; off at15:16 - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. Little found in excavation area, C. 2 bags of cement found in picking zone by the East fence line. Nothing out of the ordinary located as of yet CHS gives daily update to AC. 16:30 - CHS signs out and leaves site.	Wednesday, 24th May, 2017
	**Christopher Sayle** *Analyst*	loading area showing suppression method from welfare compound. 	Wednesday, 24th May, 2017

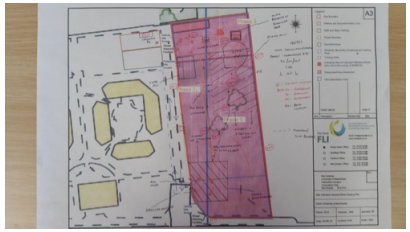
Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone from East perimeter. 	Wednesday, 24th May, 2017
 **Christopher Sayle** *Analyst*	Turning point excavation from West perimeter fence 	Wednesday, 24th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 47, samples 1 - 7 	Wednesday, 24th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 48, samples 1 - 2 	Wednesday, 24th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site to a a very bright fair day and cloudless sky with no wind. Morning dew on grass (East perimeter). Pressure 1019 and current temperature of 18°c but forecast to increase to 26°c 07:30 - Attends daily meeting. Works as usual but no excavation (Excavator operator absent) picking/loading in North, CHS to provide background, personal and reassurance air monitoring throughout. Signs in with Vertase. 08:19 - Backgrounds on East perimeter; off at 09:19. 10:00 - Final perimeter backgrounds on; off at 11:00 Tea break 10:30 - 11:00 11:00 - Backgrounds off. 1 minute silence in acknowledgement of Manchester bombing?. 11:45 - Adam Cheers and Aaron on site for visit/meeting. CHS attends walk-through. 11:59 - Personal on excavator op (C. Morgan) loading wagons; 12:34 off. 12:49 - Personal on Kaefer op. (B. Lyons) on excavation (now back operational); off at 13:23 All morning air tests below their relative LoD's; Satisfactory. Lunch 13:15 - 13-45 Personal air samples gave results below 0.07 fibres per ccm of air; control measures satisfactory. 14:15 Reassurances on; off at 15:15. - All air samples gave results below 0.01 fibres per ccm of air.; satisfactory. 16:30 - CHS finishes, signs out and level site.	Thursday, 25th May, 2017
	**Christopher Sayle** *Analyst*	Loading area and stockpile from welfare compound. 	Thursday, 25th May, 2017
	**Christopher Sayle** *Analyst*	Picking zone from East perimeter. 	Thursday, 25th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	50-6 	Thursday, 25th May, 2017
 **Christopher Sayle** *Analyst*	50-7 	Thursday, 25th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 50, samples 1 - 7 	Thursday, 25th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site to a very bright, fair day, cloudless sky and leisurely Easterly breeze. Current temperature of 18° but expected to soar to high 20's. 1014 mb. 07:40 - Attends daily meeting. Same as all week. CHS to provide air monitoring throughout. Signs in with Vertase. 08:05 - Backgrounds on East perimeter; off at 09:05. - CHS inspected the walls and floor of the excavation (25/05/2017) for ACM's; none noted. - CHS asks Vertase to spray haul road. (Only concern regarding AC's site visit 25/05). 09:27 - Final run of backgrounds on; off at 10:29. 10:30 - 11:00 - Tea break 11:44 - Personal on Kaefer op (S. Moseley) on picking duties; off at 12:21. 12:22 - Personal on excavator op (M. Morley) on turning point; off at 12:59. All am air tests below their respective LoD's; Satisfactory. Lunch 13:15 - 13:45 13:57 - Reassurances on; off at 14:57. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Both perdonal air samples gave results below 0.06 fibres per ccm of air; control measures satisfactory. - Couple of shards of cement found in excavation, 3 bags to Nothing end. Nothing of interest uncovered. AC updated via voicemail. 16:00 CHS finishes, packs up, Signs out and leaves site. - CHS gives daily update to AC.	Friday, 26th May, 2017
	**Christopher Sayle** *Analyst*	Loading area and stock pile taken from office. 	Friday, 26th May, 2017
	**Christopher Sayle** *Analyst*	New turning point excavation with new access. 	Friday, 26th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking Zone from East perimeter 	Friday, 26th May, 2017
 **Christopher Sayle** *Analyst*	Suppression methods in practice. 	Friday, 26th May, 2017
 **Christopher Sayle** *Analyst*	53-6 	Friday, 26th May, 2017
 **Christopher Sayle** *Analyst*	53-7 	Friday, 26th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 53, samples 1 - 7 	Friday, 26th May, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site and unpacks. Weather is damp underfoot, overcast with low level cloud and little to no breeze. Temperature 14°c and pressure 1006mb. 07:35 - Attends daily meeting. Works same as last week. Stone to be delivered to turning point excavation. Where stone is placed to remain within the designated area. CHS signs in. 08:45 - Onset of heavy rain; air monitoring postponed. Personals only till rain abates. 09:58 - Break in rain. Perimeter backgrounds on; off at 10:58. 11:26 - Personal on VertaseFLI banksman (N. Caviel) working in loading area; off at 12:00. 12:07 - Background perimeters on; off at 13:07 All Am air tests below their relevant LoD's; satisfactory. Lunch 12:30 - 13:00 14:14 - Reassurances on; off at 15:14. 14:30 - Personal on excavator op (C.velasco aguirre); off at 15:06. 14:15 - AC on site for visit/meeting. - Both personal air samples gave results below 0.07 fibres per ccm of air; control measures are satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. AC and CL suggests taking soil sample for validation from turning point excavation. 16:45 it is decided to do it on 31/05 instead. Nothing out the ordinary unearthed today. 17:00 - CHS signs and leaves site.	Tuesday, 30th May, 2017
	**Christopher Sayle** *Analyst*	Loading area captured from haul road. 	Tuesday, 30th May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone, captured from East perimeter. 	Tuesday, 30th May, 2017
 **Christopher Sayle** *Analyst*	56-6 	Tuesday, 30th May, 2017
 **Christopher Sayle** *Analyst*	New turning point with new access from West perimeter. 	Tuesday, 30th May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 56, samples 1 - 6 	Tuesday, 30th May, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Weather is very fair and bright with very light, dispersed clouds and little wind. Morning dew on the ground. Current temperature is 10°c and pressure of 1017mb. 07:40 - Attends daily meeting. Groundwork to turning point excavation and picking zone as usual. Additional Knotweed works to Eastern perimeter so a new fence line will be extended by 10m. 08:20 - East perimeter backgrounds on; off at 09:20. 09:54 - Final run of perimeter backgrounds on; off at 10:54 10:30 - 11:00 tea break 12:06 - Personal on Kaefer operative (B. Lyons) on turning point excavation; off at 12:42. All am air tests below their relative LoD's; satisfactory. Lunch 12:15 - 12:45 13:49 - Reassurances on; off at 14:49. - Personal air sample gave result below 0.07 fibres per ccm of air; control measures are satisfactory. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Kaefer found a bags worth of cement in picking zone, none on turning point excavation. Nothing out of the ordinary unearthed today. AC updated via voicemail. - CL still not conducted trial pit investigation. CHS will stay a little later to see if she wants to get it done. 17:00 - CHS signs out and leaves site.	Wednesday, 31st May, 2017
	**Christopher Sayle** *Analyst*	Turning point excavation captured from Haul Road. 	Wednesday, 31st May, 2017
	**Christopher Sayle** *Analyst*	Loading area/stock pile captured from welfare compound 	Wednesday, 31st May, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone captured from East perimeter. 	Wednesday, 31st May, 2017
 **Christopher Sayle** *Analyst*	59-6 	Wednesday, 31st May, 2017
 **Christopher Sayle** *Analyst*	59-7 	Wednesday, 31st May, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 59, samples 1 - 7. 	Wednesday, 31st May, 2017

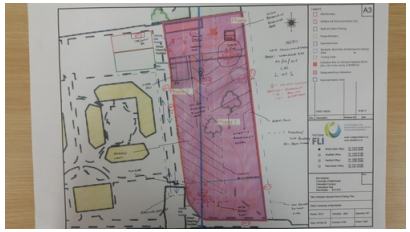
Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. It is dry under foot, overcast with bright patches no wind and no precipitation. Temperature of 17°c and pressure of 1014mb. Kaefer have 2 new operatives to replace those on AL. 07:35 - Attends daily site meeting. Works on picking/loading area ongoing as is works to new turning point. CHS to provide air monitoring throughout day. Tarmac wagons to turning point. CHS to oversee trial pit excavation/s in turning point area. CL to take soil samples. 07:58 - First run of perimeter backgrounds on; 0ff at 08:58. 10:08 - Final run of perimeter air tests on 08:35 - Receive phone call from NSE that Joe Chambers is in office doing QC' slides. When done he will come to site and replace CHS who will go and do his. 10:16 - CHS and CL in area for trial pits. Personal on dumper operator (J. Grysakoliski); off at 10:37. 10:40 - CHS out of area after a visual inspection of the bottom and bluffs of the turning point excavation. No trial pits due to break. 12:00 - 12:30 - CHS witnesses CL sample 2 no. trial pits to turning point. All am air tests below their relevant LoD's; satisfactory. Lunch 12:30 - 13:00 14:30 - JC on site. CHS hands site over. 14:45 - CHS signs out and leaves site.	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	Picking zone from existing East perimeter. 	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	Loading area/stockpile showing suppression methods in practice. Captured from welfare area. 	Thursday, 1st June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Turning point with Knotweed clearance in operation in near distance. Captured from West perimeter tree line. 	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	62-7 	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	62-6 	Thursday, 1st June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Soil sample from trial pit, central turning point (CL) 	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	Soil sample from trial pit, outer turning point. (CL). 	Thursday, 1st June, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site to an overcast day, slight Easterly breeze. Dry underfoot chance of precipitation. Pressure 1010mb and temperature of 14°c. 07:35 - Daily site meeting attended. Excavations to North and South as per normal. Picking and loading to North. CHS to provide, background, personal and reassurance air monitoring throughout day. 08:16 - Backgrounds on covering East/South perimeters. Onset of very light rain. Situation to be monitored. Off at 09:16. 09:43 - Backgrounds on North/West perimeters; off at 10:43. 10:30 - 11:00 Tea break for operatives - Most of West side of area now level (Approx.). Picking zone now established South of turning point 11:13 - Personal on Kaefer op (V. Ward) on picking duties to South of turning point.(New picking zone) Off at 11:49 12:11 - Personal on excavator operator (D. Digby) on stockpile loading wagons; off at 12:55. All am air tests gave results below their relevant LoD's; satisfactory. Lunch 13:15 - 13:45. At lunch Vincent the Kaefer on the Southern picking zone indicated he had found a flue but was unsure of what it was . CHS said he'd investigate 13:48 - Reassurances on within area; off at 14:48. CHS confirms flue is cement. Due to time, ground conditions, damp etc the cement had started to delaminate resulting in the suspicious appearance of it. It also softens in texture. - All air samples gave results below 0.01 fibres per ccm of air; Satisfactory. - Both personal air samples gave results below 0.05 and 0.07 fibres per ccm of air; control measures are satisfactory. - Quarter of a bag of AC found on picking zone adjacent loading area. Couple of shards and a couple of sections of pipe located on southern picking zone. Nothing untoward found as of yet. - AC updated via voicemail. 16:00 - CHS finishes, signs out and leaves site.	Friday, 2nd June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone, captured from East perimeter 	Friday, 2nd June, 2017
 **Christopher Sayle** *Analyst*	Loading area and stockpile captured from welfare compound 	Friday, 2nd June, 2017
 **Christopher Sayle** *Analyst*	65-6 	Friday, 2nd June, 2017
 **Christopher Sayle** *Analyst*	65-7 	Friday, 2nd June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	New picking zone with turning point in foreground. Captured from West perimeter. 	Friday, 2nd June, 2017
 **Christopher Sayle** *Analyst*	Suspect cement flue pipe found by Kaefer. 	Friday, 2nd June, 2017
 **Christopher Sayle** *Analyst*	Extent of earth moved, captured from DCU. The tarmac of the new turning circle can be seen in the distance as can the picking zone. 	Friday, 2nd June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 65, samples 1 - 7 	Friday, 2nd June, 2017
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site. Murky, overcast and raining. Agreed with Vertase that personal air monitoring is only required today due to rain and the ground is saturated. 11°c temperature and pressure of 983mb. 07:40 - Daily meeting. All picking activities to south of site adjacent turning point. 08:15 - Jack on site. CHS arranges an induction for him. No CSCS card not allowed on site. Shown air monitoring basics about types of air monitoring, microscope set up and rules of counting. 09:46 - Personal on Kaefer op (S. Moseley) on litter pick; off at 10:43. Kaefer operatives are on the southern picking station looking out for any ACM's in the soil. They are wearing Sundstrom P3 half masks and type 5/6 overalls. 11:41 - Personal on excavator operator (D. Digby) working on stock pile; off at 12:17. Morning personals below their relevant LoD's; satisfactory. J. Taylor off site at 13:00 13:00 - 13:30 Lunch 14:15 - Adam Cheers on site; liaises with CHS for update 14:18 - Personal on Kaefer op (M. Booth) on litter pick; off at 15:00. 15:01 - Personal on excavator operator (C. Velasco Aguirre) sorting soils for litter pick; off at 15:42. - All personal air samples gave results below 0.04, 0.06, 0.07, 0.08 fibres per ccm of air; control measures satisfactory. - Soil sorting did not reveal much of interest today. More sections of the cement flue, nothing out of the ordinary. 16:20 - Adam Cheers off site following progress meeting. 16:30 - CHS signs out and leaves site.	Tuesday, 6th June, 2017
	**Christopher Sayle** *Analyst*	Loading area and stock pile captured from welfare compound. 	Tuesday, 6th June, 2017

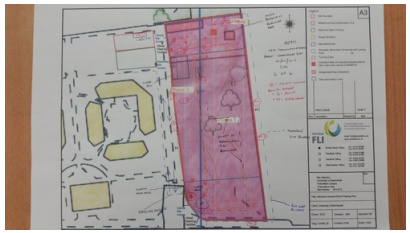
Operative		Note	Date
	**Christopher Sayle** *Analyst*	Picking station, captured from perimeter fence. 	Tuesday, 6th June, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 68, samples 1 to 5 	Tuesday, 6th June, 2017
	**Christopher Sayle** *Analyst*	07:30 - CHS arrives on site. Ground conditions are saturated underfoot, mostly overcast with bright patches and Westerly gusts. A temperature of 13°c and pressure 1001mb. 07:35 - Daily meeting. Same works as yesterday. Picking on South perimeter CHS to provide background, personal and reassurance air monitoring throughout day. CHS signs in. 08:28 - First perimeter backgrounds on South/East perimeter; off at 09:32. Kaefer lads back on original picking station adjacent loading area as area needs clearing of stock piles 10:05 - Second run of background perimeters on; off at 11:05. 10:30 - 11:00 Break 10:57 - Personal On Vertase dumper operator (J. Grysakoliski) moving cleared Knotweed spoil to stock pile South East to South West and moving picked spoil to stock pile to North of site; off at 12:23. 12:41 - Personal on Kaefer operative (D. Cook) going over South East corner surface for any ACM's. He has a Sundstrom P3 filter orinasal mask, type 5/6 overalls and wellies for the work; off at 13:13. Lunch - 13:30 - 14:00 14:31 - Reassurances on; off at 15:37. - All air samples gave results below 0.01 fibres per ccm of air; Satisfactory. - Both personal air samples gave results below 0.03 and 0.07 fibres per ccm of air; control measures are satisfactory. - Little found in finds today; nothing to the South East corner and a couple of shards of cement located to the North picking area. Nothing to write home about. AC updated via voice mail. 16:45 - CHS signs out and leaves site	Wednesday, 7th June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	69-6 	Wednesday, 7th June, 2017
 **Christopher Sayle** *Analyst*	69-7 	Wednesday, 7th June, 2017
 **Christopher Sayle** *Analyst*	Picking station captured from West perimeter. 	Wednesday, 7th June, 2017
 **Christopher Sayle** *Analyst*	Loading area and stock pile captured from North vehicular entrance 	Wednesday, 7th June, 2017

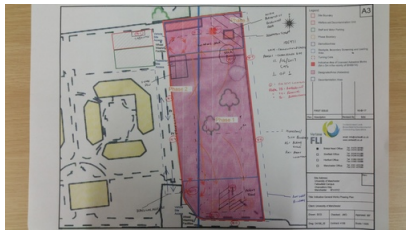
Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample location, activity 69, samples 1 to 7. 	Wednesday, 7th June, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS on site. Saturated underfoot, overcast with lighter patches and intermittent showers and light Easterly breeze. Temperature 14°c with 999mb pressure. 07:35 - Daily meeting. Same as yesterday. Picking on original North station. Knotweed works to South site. No soil transportation as it is too wet for the dumper. CHS signs in. 08:00 - Rain more persistent; static air monitoring postponed, restricted to personals. 08:27 - Personal On VertaseFLI banks man (N. Caviel) directing traffic in and out of loading area and cleaning off trailers prior to leaving site; off at 09:19. 09:33 - Break in rain; dumper resumes work. Background perimeters South and East on; off at 10:33. 10:30 - 11:00 Break for operatives 11:12 - Personal on On Kaefer operative (S. Moseley) conducting litter pick. Operatives tested are wearing Sundstrom P3 filter half masks with type 5/6 overalls and wellies. They are wearing disposable Hi viz waterproof overalls on top which do not go past the dirty end of the DCU and will be disposed of upon job completion. 11:35 - Final round of backgrounds North/West perimeters on; off at 12:35. 12:11 - Personal off. All morning air tests below their relative LoD's Satisfactory. - Sample location, activity 74, samples 1 to 3 Lunch 13:15 - 13:45 14:30 - Reassurances on; off at 15:30. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. -Both personal air samples gave results below 0.04 and 0.05 fibres per ccm of air; control measures satisfactory. Half a waste back of cement found today, nothing of interest. Updated AC on voice mail. 16:30 - CHS signs out and leaves site	Thursday, 8th June, 2017
	**Christopher Sayle** *Analyst*	Picking zone captured from East perimeter 	Thursday, 8th June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	73-5 	Thursday, 8th June, 2017
 **Christopher Sayle** *Analyst*	73-6 	Thursday, 8th June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 72, samples 1 to 6 	Thursday, 8th June, 2017
 **Christopher Sayle** *Analyst*	oading area captured from welfare compound 	Thursday, 8th June, 2017

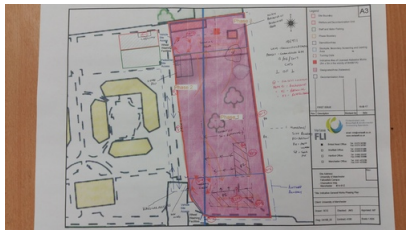
Operative	Note	Date
 **Christopher Sayle** *Analyst*	07:15 - CHS arrives on site to an overcast day with sparce bright patches and light southerly breeze with gusts and wet underfoot. Temperature of 12°c and pressure of 1000mb. All morning air tests below their relative LoD's; satisfactory. - Lunch 12:30 - 13:00 07:35 - Daily site meeting and TBT. Wagons to start on new turning circle not from former loading area. 08:13 - First perimeter background on; off at 09:13. 08:48 - Second run of perimeter backgrounds on; off at 09:48. 09:24 - Personal on excavator operator (B.Taylor) on general duties North designated area; off at 09:56 10:09 - Final run of perimeter backgrounds on. 10:30 - 11:00 Break for operatives 11:09 - Backgrounds off. 11:29 - Personal on Kaefer operative (B. Lyons) supervising excavator clearing vegetation to North East corner. The operative is wearing a Sundstrom P3 filter orinasal mask with type 5/6 overalls and wellingtons. Lunch 12:30 - 13:00 13:11 - Reassurance on on Southern turning point; off at 14:11. 14:18 - Remaining reassurances on; off at 15:18. - Both personal air samples gave results below 0.06 and 0.07 fibres per ccm of air; control measures satisfactory. - All air samples gave results below 0.01 fibres per ccm of air: Satisfactory - Inside the area today nothing out of the ordinary found during the soil sorting; half a waste bag of cement. To the rear of the stores (post demolition), there is to be a Knotweed barrier put into the ground and trees felled to facilitate the barrier. As such, Kaefer were asked by Claire Lilley (CL) of vertase to do a litter pick the length of the stores. The pick resulted in a 14Kg bag of cement debris. CL was satisfied and understands the pick covers the surface only. AC updated. 16:15 - CHS signs out and leaves site.	Friday, 9th June, 2017
 **Christopher Sayle** *Analyst*	Picking zone captured from East perimeter 	Friday, 9th June, 2017
 **Christopher Sayle** *Analyst*	75-6 	Friday, 9th June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	75-7 	Friday, 9th June, 2017
 **Christopher Sayle** *Analyst*	loading area captured from West perimeter 	Friday, 9th June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 75, samples 1 to 7 	Friday, 9th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Cold, overcast and light SW wind and gusts. Temperature 14°c and pressure 1007mb. 07:35 - Daily site meeting. loading from North area today due to reparation to new turning point. CHS signs in. 08:43 - Backgrounds on North/West perimeter; off at 09:43 Picking area has now moved to South Central of site. 09:50 - Personal on excavator op (D. Digby) on stock pile North loading area; off at 11:17. 10:30 - 11:00 Break 12:03 - Personal on excavator op (10:10 - Air monitoring (apart from personals) postponed due to a deterioration in weather conditions. 10:30 - Rain off. Backgrounds on South/East perimeters; off at 11:30. 12:03 - Personal on excavator op (M Lister); off at 12:51. Lunch 13:00 - 13:30 14:21 Reassurances on, off at 15:21. All air samples gave results below 0.01 fibres per ccm of air; satisfactory. Both personal air samples gave results below 0.03 and 0.05 fibres per ccm of air; control limits satisfactory. Only a few shards of cement during today's investigations , nothing out of the ordinary . AC updated. 16:30 - CHS signs out and leaves site.	Monday, 12th June, 2017
	**Christopher Sayle** *Analyst*	Picking zone/loading area and stockpile captured from West perimeter 	Monday, 12th June, 2017
	**Christopher Sayle** *Analyst*	New turning circle with 'picked' stockpile to right hand side. captured from West elevation 	Monday, 12th June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	78-6 	Monday, 12th June, 2017
 **Christopher Sayle** *Analyst*	78-7 	Monday, 12th June, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 78, samples 1 - 7 	Monday, 12th June, 2017

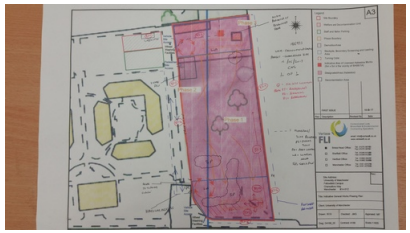
Operative		Note	Date
	**Christopher Sayle** *Analyst*	08:15 - CHS ons site after going to office for supplies and signs in with vertase. Weather conditions consist of wet underfoot, overcast with bright/blue patches and light breeze. Pressure 1013 and temperature of 16°c. Picking zone to South adjacent turning point. Picked soils loaded from there. Loading also from North area. CHS to provide air monitoring throughout day. 09:11 - Background perimeters on North, West and South perimeters; off at 10:11. Break 10:30 - 11:00 11:17 - Personal on Kaefer op (M. Booth) hand picking asbestos cement pieces from excavated soil. He is wearing a Sundstrom P3 filter orinasal mask, 5/6 overalls and wellies as specified in his Rams. 11:56 - Backgrounds on East perimeter; off at 13:01. 12:02 - Personal off. 12:45 - Personal on excavator operative (M. Lister) preparing excavated soil for handpicking work; off at 13:11. 13:05 - CHS witness CL of Vertase taking a soil sample for validation. All am air monitoring below it's relevant LoD; satisfactory. Lunch 13:45 - 14:15 AC on site for catch up and progress meeting. Liaises with CHS for update. 15:15 - AC In meeting 14:34 - Reassurances on; off at 15:24. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - All Personnal air samples gave results below 0.05 and 0.09 fibres per ccm of air; control measures satisfactory. - Nothing to note found in today's investigations; AC updated on site.	Tuesday, 13th June, 2017
	**Christopher Sayle** *Analyst*	81-6 	Tuesday, 13th June, 2017
	**Christopher Sayle** *Analyst*	81-7 	Tuesday, 13th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	North loading area and stockpile captured from East perimeter 	Tuesday, 13th June, 2017
	**Christopher Sayle** *Analyst*	Picking zone as captured from East perimeter 	Tuesday, 13th June, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 81, samples 1 to 7. 	Tuesday, 13th June, 2017
	**Christopher Sayle** *Analyst*	16:45 - CHS signs out and leaves site.	Tuesday, 13th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS on site. Bright, sunny day, dry with scarce clouds in the sky and no breeze. Temperature of 16°c and pressure 1012mb. 07:35 - Daily site briefing, loading from North (stockpile) and South. when North has finished revert to South. Picking in South. TBT on excavators working in close proximity. CL congratulates team on top class Audit by MD yesterday. CHS to provide air monitoring throughout day. 08:17 - First run of perimeter backgrounds on; off at 09:19. 09:14 - Personal on excavator operator (V. Casale) working on North stock pile and loading; off at 10:05. 09:59 - Backgrounds on East perimeter; off at 10:59. Break 10:30 - 11:00. 11:42 - Personal on excavator op (B. Taylor) preparing excavated soil for handpicking work; off at 12:16. - All morning air tests were below their relevant LoD's; satisfactory. Lunch 12:45 - 13.15 14:12 - Reassurances on; off at 15:12. -All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Both personal air samples gave results below 0.05 and 0.07 fibres per ccm of air; control measures satisfactory. - Usual fragments of cement being found and not plentiful; AC Updated. 16:15 - CHS signs out and leaves site.	Wednesday, 14th June, 2017
	**Christopher Sayle** *Analyst*	Turning circle (loading area South) and stockpile captured from West perimeter 	Wednesday, 14th June, 2017
	**Christopher Sayle** *Analyst*	loading area North and stockpile captured from West perimeter 	Wednesday, 14th June, 2017

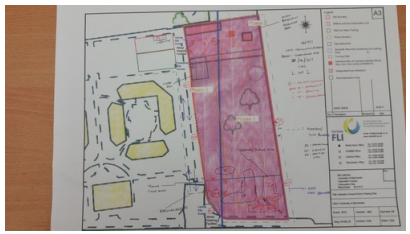
Operative	Note	Date
 **Christopher Sayle** *Analyst*	Picking zone captured from East perimeter 	Wednesday, 14th June, 2017
 **Christopher Sayle** *Analyst*	84-7 	Wednesday, 14th June, 2017
 **Christopher Sayle** *Analyst*	84-6 	Wednesday, 14th June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 84, samples 1 to 7 	Wednesday, 14th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS on site. Dry underfoot, overcast with high cloud cover and little to no breeze. Temperature of 15°c and pressure of 1005. 07:45 - Daily site review, same as yesterday loading from both ends. Spreading and picking from South adjacent turning circle. CHS to provide air monitoring throughout day. 08:11 - Backgrounds to N, W and S perimeters on; off at 09:11 09:10 - Personal on Japanese Knotweed consultant on remediation works to East perimeter; off at 09:54. - All operatives working with soil within the designated area are wearing a Sundstrom P3 filter orinasal mask, 5/6 overalls and wellies as specified in their Rams. 09:57 - Backgrounds on East perimeter; Break 10:30 - 11:00 10:58 - Backgrounds off. 11:13 - Personal on Kaefer op (B. Lyons) hand picking asbestos cement pieces from excavated soil; off at 11:53. 14:21 - Reassurances on in picking zone; off at 15:21. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Both personal air samples gave results below 0.05 and 0.06 fibres per ccm of air; control measures are satisfactory. Today's investigations amounted to very little cement unearthed and nothing. AC updated. 16:15 - CHS signs out and leaves site.	Thursday, 15th June, 2017
	**Christopher Sayle** *Analyst*	87-7 	Thursday, 15th June, 2017
	**Christopher Sayle** *Analyst*	Picking zone captured from East perimeter 	Thursday, 15th June, 2017

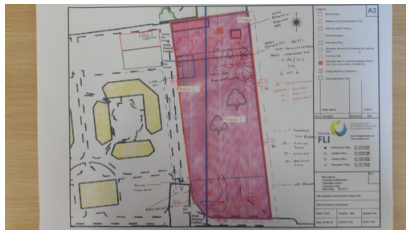
Operative	Note	Date
 **Christopher Sayle** *Analyst*	87-6 	Thursday, 15th June, 2017
 **Christopher Sayle** *Analyst*	Turning circle captured from West perimeter 	Thursday, 15th June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 87, samples 1 to 7 	Thursday, 15th June, 2017
 **Joseph Chambers** *Senior Analyst*	07:35 on site liase site agents and kaefer etc. 17 degrees 1017 bpa slight easterly breeze. First set of perimeter and personal monitoring 08:20 -10:30. second set of perimeter and personal monitoring 11:45 -13:30. reassurance monitoring inside work area 14:30 -16:00 all air testing satisfactory	Friday, 16th June, 2017
 **Ben Strutt** *Senior Analyst*	Ben strutt on site to carry out perimeter air monitoring and personal air monitoring on plant driver ,	Monday, 19th June, 2017

Operative		Note	Date
	**Ben Strutt** *Senior Analyst*	weather conditions bright and dry	Monday, 19th June, 2017
	**Ben Strutt** *Senior Analyst*	perimeter air test results all ok	Monday, 19th June, 2017
	**Ben Strutt** *Senior Analyst*	personal test results ok	Monday, 19th June, 2017
	**Ben Strutt** *Senior Analyst*	reassurance test around active work area results all ok	Monday, 19th June, 2017
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Very bright day with some cloud cover. Dry underfoot and light breeze. temp 22°c and pressure of 1014mb 07:50 - Daily site briefing; all loading from south turning point, 2 excavators on stockpiles, 2 on SE picking zone, one excavating to 0.2m other laying out excavated soil for picking. 1 Kaefer operative. 08:00 - CHS phones GCO. Due to a failure in IT or the fact that the Analyst's covering 16th/19th June not syncing their data. Air certs 85-90 have been duplicated. GCO has contacted IT. CHS holding fire till problem resolved not wanting to add to problem.	Tuesday, 20th June, 2017
	**Christopher Sayle** *Analyst*	96-6 	Tuesday, 20th June, 2017

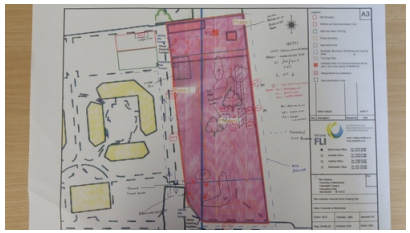
Operative	Note	Date
 **Christopher Sayle** *Analyst*	96-7 	Tuesday, 20th June, 2017
 **Christopher Sayle** *Analyst*	Stockpiles around turning circle captured from East perimeter 	Tuesday, 20th June, 2017
 **Christopher Sayle** *Analyst*	Picking zone captured from East perimeter 	Tuesday, 20th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	10:05 - Phoned GCO and informed air tests can be edited manually. All duplicates corrected. 10:42 - All boundary perimeters on; off at 11:42. 11:27 - Personal on excavator operator (V. Casale) preparing excavated soil for handpicking work; off at 11:59 - All operatives on foot in area are wearing a Sundstrom P3 filter orinasal mask, 5/6 overalls and wellies as specified in their Rams. 12:30 - Personal On Kaefer operative (D. Cook) hand picking asbestos cement pieces from excavated soil. - All am air tests below their relevant LoD's; satisfactory. - lunch 13:30 - 14:00 14:30 - Reassurances on; - Both personal air samples gave results below 0.07 fibres per ccm of air; control measures satisfactory. Air test 98-1 too occluded to read accurately. This is due to the close proximity to the wagons being loaded and all dust produced. CHS will advise to spray down. Field blank read - 1/100; satisfactory. At least 80% of air samples gave results below 0.01 fibres per cc of air; satisfactory. No unusual find in today's shift. Very little found throughout day. AC updated. 16:45 - CHS signs out and leaves site	Tuesday, 20th June, 2017
	**Christopher Sayle** *Analyst*	Sample locations, activity 96, samples 1 to 7 	Tuesday, 20th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Dry underfoot, bright patches with high cloud cover and Easterly gusts. Temperature of 18°c and 1011mb pressure. 07:45 - Daily site briefing - Excavators on stockpile loading, excavating and sifting. New fence to be erected to North perimeter. CHS mentions the occluded air test of 20/06 and the need to keep the dust down in the loading areas. Vertase to put Measures in place. Air monitoring to be conducted throughout the day. Signs in with Vertase. 08:00 - Backgrounds on N, W and S perimeters; off at 09:00. 08:40 - Backgrounds on E. Perimeter; off at 09:40. All bacground air samples gave results below 0.01 fibres per ccm of air; satisfactory. 10:30 - 11:00 - Ops break 11:06 - Personal on Vertase Knotweed consultant (T. Hare) hand digging in soil on E perimeter to ascertain the extent of rhyzones and eradicate them; off at 11:42. - All personal on foot in area are wearing a P3 filter orinasal mask with 5/6 overalls and Wellingtons as specified by their RAMS. 12:03 - Personal on vertase excavator operator (D. Digby) loading handpicked spoil onto wagons on turning point; off at 12:43. - Both personal air samples gave results below 0.06 and 0.07 fibres per ccm of air; control measures satisfactory. Lunch 13:00 - 13:30 13:59 - Reassurances on; off at 14:59. - All reassurance air samples gave results below 0.01 fibres per ccm of air; satisfactory. 2 no. waste bags of cement uncovered by today's Knotweed works on NE perimeter. Nothing of interest found. AC updated. 16:00 - CHS signs out and leaves site.	Wednesday, 21st June, 2017
	**Christopher Sayle** *Analyst*	99-6 	Wednesday, 21st June, 2017
	**Christopher Sayle** *Analyst*	99-7 	Wednesday, 21st June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Knotweed excavations captured from East perimeter. 	Wednesday, 21st June, 2017
 **Christopher Sayle** *Analyst*	Picking/scraping zone captured from East perimeter. 	Wednesday, 21st June, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 99, samples 1 -7. 	Wednesday, 21st June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Overcast with high cloud light breeze and dry underfoot. Temperature 17°c and 1003 pressure. 07:40 - Daily site briefing, Knotweed works on east perimeter, Kaefer on watching brief. Loading of stockpiles on turning point. CHS to provide air monitoring throughout. Signs in with Vertase. 07:59 - Background on N, W and S perimeters; off at 08:59. 08:41 - Backgrounds on East perimeter; off at 09:41. 09:45 - Personal on Kaefer op (S. Moseley) hand picking asbestos cement pieces from excavated soil; off at 10:23. He is wearing a Sundstrom P3 filter mask with 5/6 overalls and Wellingtons as per his RAMS. - 09:45 - AC (Hydrock) on site. - All background air samples gave results below 0.01 fibres per ccm of air; satisfactory. Break 10:30 - 11:00 11:33 - Personal on Vertase excavator operator excavating trial pits for Knotweed works on East perimeter; off at 12:19. - Both personal air samples gave results below 0.05 and 0.06 fibres per ccm of air; control limits are satisfactory. Lunch 12:44 - 13:15 13:43 - Reassurances on; off at 14:43. All reassurance air samples gave results below 0.01 fibres per ccm of air; satisfactory. Only small amount of cement (half a waste bag) located in today's work, Nothing of note. AC updated on site. 16:15 - CHS signs out and leaves site.	Thursday, 22nd June, 2017
	**Christopher Sayle** *Analyst*	102-6 	Thursday, 22nd June, 2017
	**Christopher Sayle** *Analyst*	Turning circle and stockpiles captured from East perimeter 	Thursday, 22nd June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	102-7 	Thursday, 22nd June, 2017
 **Christopher Sayle** *Analyst*	Knotweed works captured from East perimeter 	Thursday, 22nd June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 102, samples 1 to 7 	Thursday, 22nd June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	08:15 - CHS arrives on site after going to office and signs in with Vertase. Wet underfoot, light drizzle and overcast with little wind. Temperature of 15°c and 1006mb pressure. No Knotweed works today as Tim Hare (Knotweed consultant. TH) not on site. Loading stockpiles from N and S. Excavation works to SW corner under watching brief by Kaefer. CHS to conduct air monitoring throughout works. 08:59 - Backgrounds on N, W and S perimeters; off at 09:59. 09:42 - Backgrounds on E perimeter; off at 10:42. 10-30 - 11:00 - Ops break 11:02 - On Vertase excavator operator (M. Lister) loading stockpile from Knotweed works. - All background air samples gave results below 0.01 fibres per ccm of air; satisfactory. 11:36 - Personal off. 12:02 - Personal on Vertase operative (Claudius) guiding levels for excavator using GPS. He is wearing a P3 filter disposable half mask, 5/6 overalls and Wellingtons as per his RAMS. 12:34 - Personal off. - All personal air samples gave results below 0.07 fibres per ccm of air; control measures satisfactory. 13:15 - 13:45 Lunch 13:47 - Reassurances on; off at 14:47. - All reassurance air samples gave results below 0.01 fibres per ccm of air; satisfactory. - Only a small amount of cement (half a waste back found in Knotweed stockpile today, nothing of further interest. AC updated. 16:00 - CHS signs out and leaves site.	Friday, 23rd June, 2017
	**Christopher Sayle** *Analyst*	105-6 	Friday, 23rd June, 2017
	**Christopher Sayle** *Analyst*	Excavation works to SE corner and stockpiles captured from East perimeter. 	Friday, 23rd June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	105-7 	Friday, 23rd June, 2017
	**Christopher Sayle** *Analyst*	Knotweed excavations and resulting stockpile captured from East perimeter. 	Friday, 23rd June, 2017
	**Christopher Sayle** *Analyst*	Sample location, activity 105, samples 1 to 7 	Friday, 23rd June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Sodden underfoot due to previous days rain. Raining today and heavily overcast and slight breeze. Temperature of 11°c and pressure 988mb. 07:40 - Morning briefing - loading ACM soils/Knotweed soils from North and South loading areas. TBT on signing in. CHS signs in. 08:53 - Backgrounds on E/S perimeters; off at 09:53. 10:24 - Backgrounds on N/W perimeters; Break: 10:30 - 11:00 11:15 - Personal on Kaefer op (D. Cook) hand picking asbestos cement pieces from excavated soil. He is wearing a P3 Sundstrom Orinasal mask with type 5/6 overalls and disposable hi viz waterproofs as per RAMS 11:24 - Perimeter Backgrounds off. - All background air samples gave results below 0.01 fibres per ccm of air; satisfactory. 12:07 - Personal off. 12:24 - Personal in cab of Vertase site manager/excavator operator (G. Roberts) loading picked soils onto wagons for transit off site; off at 13:00. - Both personal air samples gave results below 0.03 and 0.07 fibres per ccm of air; control measures are satisfactory. Lunch 13:15 - 13:45 14:06 - Reassurances on in work area; off at 15:06. - All reassurance air samples gave results below 0.01 fibres per ccm of air; satisfactory. Small bit of cement found in today's investigations. Nothing of note. AC updated on progress. 16:30 - CHS signs out and leaves site.	Thursday, 29th June, 2017
	**Christopher Sayle** *Analyst*	North loading area and stockpiles captured from East perimeter 	Thursday, 29th June, 2017
	**Christopher Sayle** *Analyst*	South loading area and stockpiles captured from East perimeter 	Thursday, 29th June, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	108-6 	Thursday, 29th June, 2017
 **Christopher Sayle** *Analyst*	108-7 	Thursday, 29th June, 2017
 **Christopher Sayle** *Analyst*	Sample location, activity 108, samples 1 - 7 	Thursday, 29th June, 2017
 **Joseph Chambers** *Senior Analyst*	on site 07:35 liase vertices etc advised works continued also concrete being broken down today. weather over cast slight easterly breeze. pooled water on ground 12 degrees 1002mba. first round of backgrounds and personal 08:20-10:00. second round of back perimeter backgrounds 10:00-11:45. reassurance testing within work area 13:15 -14:30.	Friday, 30th June, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Dry ground conditions, bright day with scattered low lying cloud cover and no breeze. Temperature 20°c and pressure 1010. Unpacks and liaises with GR and CL of vertase. They are going to pick the concentrated area of cement and the hotspot. (North site). 07:50 - Daily site briefing. Above confirmed plus filling some excavations (Knotweed). VHS to provide air monitoring throughout. 08:17 - Perimeter backgrounds on E/S perimeters; off at 09:17. 09:50 - Perimeter backgrounds on N/W perimeters. Hotspot excavation on Hold as correct size of pallet required for bags are not on site. Vertase arranging this. 10:30 - 11.00 Break 11:01 - Bacgrounds off. -All background air samples gave results below 0.01 fibres per ccm of air; satisfactory 11:51 - Works on hotspot 2 begins; personal on Kaefer operative (M. Booth) watching and picking Hotspot 2; off at 12:29. All groundwork in operatives are wearing P3 filter half masks and type 5/6 overalls as per RAMS. - Kaefer found solution to pallets and correct ones on their way to site. 13:30 - 14:00 (ops out of area) 13:58 - Reassurances on in working area; off at 14:58. 14:31 - Personal in cab of VertaseFLI site manager (G. Roberts) on excavator clearing hotspot ; off at 14:56. - Both personal air samples gave results below 0.03 and 0.06 fibres per ccm of air; control measures are satisfactory. All reassurance air samples gave results below 0.01 fibres per ccm of air; satisfactory. 5 bags of cement minimum have been extracted from Hot spot 2. MMMF was witnessed in the soil at hotspot 1. AC updated. 16:30 - CHS signs out and leaves site.	Thursday, 6th July, 2017
	**Christopher Sayle** *Analyst*	118-6 	Thursday, 6th July, 2017
	**Christopher Sayle** *Analyst*	118-7 	Thursday, 6th July, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Hotspot 2 (asbestos cement)with Kaefer ops picking. Captured from West perimeter 	Thursday, 6th July, 2017
 **Christopher Sayle** *Analyst*	Bag ready for transportation and hopper for loading picked soil into bag. Captured from work area. 	Thursday, 6th July, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 118, samples 1 - 7. 	Thursday, 6th July, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	Hotspot 1 (Thermal). Captured from work area 	Thursday, 6th July, 2017
 **Christopher Sayle** *Analyst*	MMMF found in soils, hotspot 1. 	Thursday, 6th July, 2017
 **Christopher Sayle** *Analyst*	Filling bags via hopper, hotspot 1. Captured adjacent hotspot 1. 	Thursday, 6th July, 2017
 **Christopher Sayle** *Analyst*	Hotspot 1 complete nothing untoward found	Thursday, 6th July, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	07:15 - CHS on site. Damp underfoot, grey, overcast and raining. Little breeze. Temperature 13°c and pressure 1002mb - Checks in with GR and CL (VertaseFLI). Not much activity today due to rain. Possibility of running backgrounds throughout site. 07:45 - Daily briefing; very little excavation works. 2 wagons to be loaded and East perimeter fence line to be receded. Backgrounds to perimeters and a some reassurance monitoring. CHS signs in. 08:45 - First run perimeter backgrounds on; off at 09:45. 10:30 - Break. 10:50 - Remaining perimeter backgrounds on; off at 11:50. - All background air samples gave results below 0.01 fibres per ccm of air; satisfactory. Lunch 12:30 - 13:00 13:51 - Reassurances on in work area; off at 14:51. - Sample number 122-2 occluded due rain ingress to filter. 121-1 (FB) counted. 0.5/100; satisfactory. - At least 80% of air samples gave results below 0.01 fibres per cc of air and all results are below 0.015 fibres per cc of air; satisfactory. - Nothing to report today as no excavations took place and any scrapings revealed nothing. - 16:30 - CHS signs out and leaves site.	Tuesday, 11th July, 2017
	**Christopher Sayle** *Analyst*	121-6 	Tuesday, 11th July, 2017
	**Christopher Sayle** *Analyst*	121-7 	Tuesday, 11th July, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	121-8 	Tuesday, 11th July, 2017
 **Christopher Sayle** *Analyst*	121-9 	Tuesday, 11th July, 2017
 **Christopher Sayle** *Analyst*	Sample locations, activity 121, samples 1-9 	Tuesday, 11th July, 2017
 **Christopher Sayle** *Analyst*		Thursday, 13th July, 2017
 **Christopher Sayle** *Analyst*	07:15 - CHS arrives on site. Dry conditions, overcast with bright patches and no visible breeze. Temperature of 18°c and pressure of 1015mb. 07:45 - Daily site briefing. General duties and minimal asbestos works (scraping below DCU after off hire today). CHS will conduct boundary air monitoring and reassurances for good measure. 09:01 - Backgrounds on E/S perimeters; off at 10:01.	Thursday, 13th July, 2017

Operative	Note	Date
 **Christopher Sayle** *Analyst*	125-6 	Thursday, 13th July, 2017
 **Christopher Sayle** *Analyst*	125-7 	Thursday, 13th July, 2017
 **Christopher Sayle** *Analyst*	125-8	Thursday, 13th July, 2017
 **Christopher Sayle** *Analyst*	125-9 	Thursday, 13th July, 2017
 **Christopher Sayle** *Analyst*	10:30 - 11:00 Break 11:01 - Backgrounds on N/W perimeters; off at 12:05. - All background air sample gave result below 0.01 fibres per ccm of air; satisfactory. 13:00 - 13:30 Lunch 13:46 - Reassurances on work area; off at 14:46. - All air samples gave results below 0.01 fibres per ccm of air; satisfactory. 16:00 - CHS finishes, packs up and leaves site.	Thursday, 13th July, 2017

Operative		Note	Date
	**Christopher Sayle** *Analyst*	Sample locations, activity 5, samples 1 - 9. 	Thursday, 13th July, 2017
	**Christopher Sayle** *Analyst*	Site following completion of Asbestos works 	Thursday, 13th July, 2017
	**Adrian Pycroft** *Senior Analyst*	Adrian Pycroft on site. Inducted by Site manager Gareth Roberts. Discuss works for day, reassurance air monitoring around perimeter of site. Reassurance x4 on. Reassurance x4 on. Adam Cheers from Hydrock on site. Reassurance x2 on. all perimeter covered. all air test results satisfactory.	Wednesday, 19th July, 2017

Attachments

The following documents accompany this report and should be regarded as an integral part of this report.

They can be downloaded from http://web.lucion.co.uk/reports/186971/attachments.

- Method Statement [http://web.lucion.co.uk/method_statements/186971?s=f8f3412b23646cad7f3b2186bdaa2b90]
- Risk Assessment [http://web.lucion.co.uk/risk_assessment/186971?s=58755fe2ed9f30cc3d2bd12f551f720d]
- Asbestos-Risk-Assessment-and-Plan-of-Work-Rev-B-for-approval.pdf
- UOM-HYD-XX-RMS-M2-G-0004-S2-P2.pdf

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Asbestos Analyst's Certificate Report

Job Ref No: ***186971****, Cert Ref No:* ***30480****, Account Ref No:* ***13906****, Contract Ref No:* ***22296***

c/o University of Manchester 126AL Richmond Park-Site Maintenance Offices & Stores Fallowfield Campus Chancellors Way Fallowfield Manchester M14 6HD



latlng: 53.444541,-2.217161



on site photo



general works area photo

Building	Level	Works-Area	Enclosure Used?
University of Manchester, Fallow field Campus	0	Phase 1 - Chancellor's Way	No

Passed Tests	Failed Tests	WARNINGS
0	0	0

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UKAS TESTING
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Intro

This certificate is for the attention of	**Danny Hope** **Hydrock Group Ltd** Over Court Barns Over Lane Almondsbury Bristol BS32 4DF

Sampling & Evaluation Methods

In-house methods TOP02.08 & TOP02.09 in accordance with HSG 248 Asbestos - The Analyst's Guide to Sampling, Analysis and Clearance Procedures.

Notes: The samples referred to in this report will be retained for 6 months unless requested otherwise. Unless otherwise stated, there are no departures from the sampling and evaluation methods specified. Results detailed in this report relate only to the time, and corresponding conditions prevailing, when the sampling and examination were undertaken.

Notes to Test Accuracy

Airflow measured on site is recorded against a correction chart. Flow meters are calibrated against a UKAS certified master flow meter accurate to ±0.5%. In accordance with HSG248, if the combined effect of ambient temperature and pressure between calibration and sampling location exceeds 5% a correction is applied to the air sample volume. The calculated fibre concentration is given for each air sample taken. Where the corresponding reported fibre concentration is preceded by "<", the lower limit of quantification (LOQ) of the method has not been reached. For a 480 litre air sample with 200 graticule areas counted, the (LOQ) of this method is 0.010 fibres per cubic centimetre of air; samples of less volume/graticules will be reported to a lower LOQ (refer count sheet). While counting randomly distributed fibres, an expected degree of variation of 1.5 standard deviations from the mean count may occur. At clearance indicator level (0.01 fibres per cubic centimetre of air) a 480-litre air sample yielding a count of 20 fibres over 200 fields would have an expected standard deviation of ±8 fibres.

Sampling

When testing within an Enclosure and conducting a 4-Stage Clearance - the number of samples (Ns) is calculated by A1/3-1. Where enclosure is less than 3m in height: A is denoted by area. Where enclosure is greater than 3m in height: A is denoted by volume/3. Refer air sampling and fibre counting sheet.

When testing within a decontamination unit (DCU) - where the combined floor area of shower and dirty areas is less than 10m2; 1 air test has been carried out. During this test the door between these areas has been propped open. For combined floor areas exceeding 10m2 a sample in each area (i.e. shower and dirty end) will be taken.

For tests other than those associated with 4-Stage Clearance testing the analyst will apply the principles of current HSE guidance and experience combined with situational circumstances.

Where a photograph of the completed decontamination unit certificate appears in this report the analyst has completed an abridged report to be left inside the DCU; this abridged report should not be used in lieu of this comprehensive report.

Where sampling plans have been supplied; please note these are not to scale.

Where a sample filter has been deemed uncountable or biased the analyst will record this as "uncountable" in the count-sheet.

Field Blanks - Where site sampling and counting is carried out in a field laboratory a field blank is carried out by the analyst prior to the start of sampling and counting. The field blank constitutes a filter taken from a loaded but unused filter head that is mounted in the usual way and assigned a sample number which is recorded on the slide and the count sheet. Following sampling and analysis of the air tests, the results shall be assessed; where low counts (<0.01 fcm-^{3}) are obtained from some of the field samples, analysis of the field blank will not be necessary. Where elevated counts (>0.01 fcm-^{3}) are obtained on all field samples, then the field blank must be counted to exclude the possibility of contamination.

Disclaimers

Any opinions and interpretations expressed herein are outside the scope of UKAS accreditation. This certificate is valid only when it bears the signature of an authorised member of Lucion personnel. Please note the witnessing of smoke tests is outwith the scope of UKAS accreditation.

Representatives Signature - The signatory on report acknowledgement agrees to findings of this report being accurate and correct and Lucion Environmental Ltd issuing this report to the email address held on record for the job and does not require a copy of this report to be left on site. Furthermore Lucion Environmental Ltd cannot be held responsible for any actions undertaken following the issue of this report.

This certificate *may* be part of a series of works and should be read in conjunction with the Asbestos Analyst's Job Summary Report.

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Test: Background (186971-1)

Number of samples being taken	12
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 28th April, 2017 @ 15:49:35
Additional Photo 1	 1-2
Additional Photo 2	 1-3

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Additional Photo 3	
Additional Photo 4	 1-5

Test: Background (186971-1) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-1	Friday, 28th April, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1011	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-1-1	Field Blank	782													
186971-1-2	On perimeter in vicinity of hotspot	716	1737	10:16:00	11:17:00	61	8.0		8.0	488	488	2.0	197	0.001	<0.01
186971-1-3	On north perimeter adjacent ground store	720	1844	10:20:00	11:20:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-1-4	Treeline, West perimeter	721	1846	10:25:00	11:25:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-1-5	Treeline, West perimeter	778	1848	10:27:00	11:27:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-1-6	Treeline, West perimeter	716	1737	11:50:00	12:50:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-1-7	Treeline, West perimeter	720	1844	11:52:00	12:53:00	61	8.0		8.0	488	488	0.5	197	0.000	<0.01
186971-1-8	Treeline, West perimeter	721	1846	11:54:00	12:54:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-1-9	Treeline, West perimeter	778	1848	11:55:00	12:55:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-1-10	South west corner	720	1844	14:04:00	15:04:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-1-11	South perimeter	721	1846	14:07:00	15:07:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-1-12	South east corner	778	1848	14:09:00	15:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-2)

Number of samples being taken	12
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 2nd May, 2017 @ 16:27:05
Additional Photo 1	 2-2
Additional Photo 2	 2-3

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Additional Photo 3	 2-4
Additional Photo 4	 2-4

Test: Background (186971-2) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-2	Tuesday, 2nd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1015	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-2-1	Field Blank	782													
186971-2-2	On North perimeter adjacent hot spot	716	1737	09:14:00	10:14:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-2-3	On North perimeter adjacent former changing rooms	720	1844	09:17:00	10:17:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-2-4	On treeline, West perimeter	721	1846	09:20:00	10:20:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-2-5	On treeline, West perimeter	778	1848	09:25:00	10:25:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-2-6	On South West corner	716	1737	11:14:00	12:14:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-2-7	On South perimeter	720	1844	11:16:00	12:16:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-2-8	On South East corner	721	1846	11:18:00	12:18:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-2-9	Adjacent bowsers/ excavators	778	1848	14:24:00	15:24:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-2-10	On treeline, West perimeter	716	1737	14:27:00	15:27:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-2-11	On treeline, West perimeter	721	1846	14:30:00	15:30:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-2-12	On treeline, West perimeter	720	1844	14:33:00	15:33:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-3)

Number of samples being taken	11
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 3rd May, 2017 @ 16:46:59
Additional Photo 1	 3-2
Additional Photo 2	 3-3

table continued from previous page...

Additional Photo 3	 3-4
Additional Photo 4	 3-5

Test: Background (186971-3) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-3	Wednesday, 3rd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	9	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-3-1	Field Blank	782													
186971-3-2	On North perimeter adjacent former changing rooms	716	1737	08:39:00	09:39:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-3-3	On treeline, West perimeter	720	1844	08:42:00	09:42:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-3-4	On treeline, West perimeter	721	1846	08:44:00	09:44:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-3-5	On South perimeter	778	1848	08:46:00	09:46:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-3-6	On playing field side of East perimeter	716	1737	13:31:00	14:31:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-3-7	On playing field side of East perimeter	721	1844	13:35:00	14:35:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-3-8	On playing field side of East perimeter	720	1846	13:38:00	14:38:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-3-9	On playing field side of East perimeter	778	1848	13:48:00	14:48:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-3-10	In West perimeter adjacent former changing rooms	720	1844	15:06:00	16:06:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

table continued from previous page...

Sample Details															
186971-3-11	On South perimeter in vicinity of excavator	778	1848	15:14:00	16:14:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01

Test: Reassurance (186971-4)

Number of samples being taken	1
Air sample results	Air sample gave result below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 3rd May, 2017 @ 16:41:51
Additional Photo 1	 4-1

Test: Reassurance (186971-4) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-4	Wednesday, 3rd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	9	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	MS	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-4-1	On West perimeter adjacent trial pit	721	1846	15:09:00	16:09:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Background (186971-5)

Number of samples being taken	9
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Additional Photo 1	 5-1
Additional Photo 2	 5-3
Additional Photo 3	 5-4

table continued from previous page...

Additional Photo 4	 5-5

Test: Background (186971-5) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-5	Thursday, 4th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-5-1	Field Blank	782													
186971-5-2	On North perimeter of designated area adjacent Knotweed strip	716	1737	08:34:00	09:34:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-5-3	On North perimeter of designated area adjacent Knotweed strip	720	1844	08:36:00	09:36:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-5-4	On treeline, West perimeter adjacent excavator	721	1844	08:40:00	09:40:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-5-5	On treeline, West perimeter adjacent excavator	778	1848	08:42:00	09:42:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-5-6	On South perimeter	716	1737	11:30:00	12:30:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-5-7	On East perimeter adjacent Knotweed strip	720	1844	11:34:00	12:34:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-5-8	On treeline, West perimeter in vicinity of excavator	778	1846	14:34:00	15:34:00	60	8.0		8.0	480	480	8.0	200	0.004	<0.01
186971-5-9	On East perimeter in vicinity of excavator	716	1737	14:42:00	15:42:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-6)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Vegetation and Knotweed strip to brownfield site
Asbestos Contractor	Vertase FLI
Client Representative or Contractor	T. Hare/C. Morgan
Air sample results	Both personal air samples gave results below 0.04 and 0.05 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 4th May, 2017 @ 16:06:30
Additional Photo 1	 6-1
Additional Photo 2	 6-2

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Additional Photo 3	 Sample locations, Activity 6, samples 1 - 2

Test: Personal (186971-6) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-6	Thursday, 4th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	5	22.5

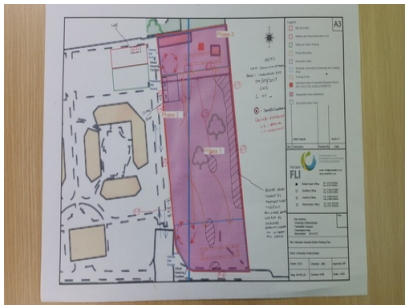
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-6-1	In cab of excavator operator (C. Morgan)	303	20	11:08:00	11:41:00	33	3.0		3.0	99	99	5.5	200	0.014	<0.05
186971-6-2	On Knotweed consultant (T. Hare)	303	20	14:24:00	15:04:00	40	3.0		3.0	120	120	3.5	200	0.007	<0.04

Test: Reassurance (186971-7)

Number of samples being taken	1
Air sample results	Air sample gave result below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 4th May, 2017 @ 16:01:09
Additional Photo 1	 7-1
Additional Photo 2	 Sample location, Activity 7, sample 1

Test: Reassurance (186971-7) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-7	Thursday, 4th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-7-1	Adjacent trial pit, West perimeter	721	1846	14:14:00	15:14:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-8)

Number of samples being taken	9
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 5th May, 2017 @ 15:30:32
Additional Photo 1	 8-2
Additional Photo 2	 8-3

table continued from previous page...

Additional Photo 3	 8-4
Additional Photo 4	 8-5

Test: Background (186971-8) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-8	Friday, 5th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-8-1	Field Blank	782													
186971-8-2	On Heras fencing, North perimeter	716	1737	08:08:00	09:08:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-8-3	On Heras fencing, North perimeter	72	1844	08:11:00	09:11:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-8-4	On playing fields, East perimeter,	716	1737	11:21:00	12:21:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-8-5	On playing fields, East perimeter,	720	1844	11:24:00	12:24:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-8-6	On South perimeter	721	1846	11:27:00	12:27:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-8-7	On South perimeter	778	1848	11:29:00	12:29:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-8-8	On treeline, West perimeter	721	1846	14:06:00	15:06:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-8-9	On treeline, West perimeter	778	1848	14:08:00	15:08:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Personal (186971-9)

Number of samples being taken	3
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Vegetation and Knotweed strip to brownfield site
Asbestos Contractor	VertaseFLI
Client Representative or Contractor	Various Operatives
Air sample results	All personal air samples gave results below 0.03, 0.04 & 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 5th May, 2017 @ 14:58:05
Additional Photo 1	 9-1
Additional Photo 2	 9-2

table continued from previous page...

Additional Photo 3	 9-3
Additional Photo 4	 Sample locations, activity 9 samples 1 - 3.

Test: Personal (186971-9) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-9	Friday, 5th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-9-1	On excavator operator (M. Morley)	303	20	08:14:00	08:56:00	42	3.0		3.0	126	126	4.5	200	0.009	<0.04
186971-9-2	On excavator operator (C. Morgan)	303	20	11:40:00	12:35:00	55	3.0		3.0	165	165	1.5	200	0.002	<0.03
186971-9-3	On Knotweed consultant (T. Hare)	303	20	14:16:00	14:42:00	26	3.0		3.0	78	78	4.5	200	0.015	<0.06

Test: Background (186971-10)

Number of samples being taken	10
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 8th May, 2017 @ 16:15:19
Additional Photo 1	 10-2
Additional Photo 2	 10-3

table continued from previous page...

Additional Photo 3	 10:4
Additional Photo 4	 10-5

Test: Background (186971-10) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-10	Monday, 8th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	9	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1023	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-10-1	Field Blank	782													
186971-10-2	Adjacent former changing rooms, North perimeter	716	1737	08:54:00	09:54:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-10-3	Adjacent access to former changing rooms, North perimeter	720	1844	08:56:00	09:56:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-10-4	Adjacent access to designated area, West perimeter	721	1846	08:58:00	09:58:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-10-5	On treeline, West perimeter	778	1848	09:00:00	10:00:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-10-6	On treeline, West perimeter	720	1844	10:36:00	11:36:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-10-7	In South perimeter	721	1846	10:40:00	11:40:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-10-8	On South perimeter	778	1848	10:43:00	11:43:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-10-9	On east perimeter playing fields, in vicinity of excavators	716	1737	14:38:00	15:38:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-10-10	On East perimeter playing fields, adjacent excavators	720	1844	14:40:00	15:40:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-11)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site in preparation of litter pick
Asbestos Contractor	VertaseFLI
Client Representative or Contractor	Various Operatives
Air sample results	Both personal air samples gave results below 0.03 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 8th May, 2017 @ 15:49:56
Additional Photo 1	 11-1
Additional Photo 2	 Sample locations, activity 11, samples 1 - 2

Test: Personal (186971-11) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-11	Monday, 8th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	9	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1023	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-11-1	On excavator operator (C. Morgan)	303	20	10:56:00	11:47:00	51	3.0		3.0	153	153	9.5	100	0.031	<0.06
186971-11-2	On VertaseFLI operative (N. Caviel)	303	20	14:15:00	15:03:00	48	3.0		3.0	144	144	2.5	200	0.004	<0.03

Test: Background (186971-12)

Number of samples being taken	4
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 9th May, 2017 @ 15:38:13
Additional Photo 1	 12-2
Additional Photo 2	 12-3

table continued from previous page...

Additional Photo 3	 12-4
Additional Photo 4	 12-5

Test: Background (186971-12) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-12	Tuesday, 9th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

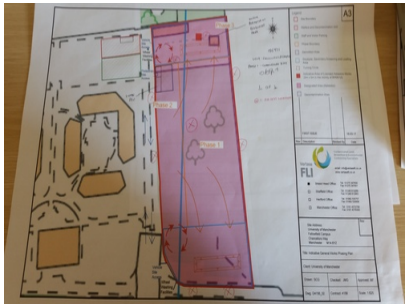
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-12-1	Field Blank	782													
186971-12-2	On North perimeter, adjacent picking zone	716	1737	08:29:00	09:29:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-12-3	On treeline, West perimeter	720	1844	08:36:00	09:36:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-12-4	On south perimeter	721	1844	08:40:00	09:40:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-12-5	On Eastern perimeter	778	1848	08:49:00	09:49:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-12)

Number of samples being taken	8
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 10th May, 2017 @ 15:54:49
Additional Photo 1	

Test: Background (186971-12) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-12	Wednesday, 10th May, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	MS018	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	FM087	FM319	313	SM405

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-12-1	North perimeter Entrance to work area	278	1848	09:13:00	10:13:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-12-2	West Perimeter side of road	721	1846	09:15:00	10:15:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-12-3	South perimeter footpath	720	1844	09:17:00	10:17:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-12-4	East perimeter. Playing fields	716	1737	09:20:00	10:20:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-12-5	Field Blank	782													
186971-12-6	North perimeter in front of low buildings	720	1848	14:26:00	15:26:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-12-7	West perimeter side of road	303	1737	14:30:00	15:30:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-12-8	South perimeter footpath	778	1844	14:33:00	15:33:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-12-9	East perimeter playing fields	721	1846	14:37:00	15:37:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Reassurance (186971-13)

Number of samples being taken	5
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 9th May, 2017 @ 16:12:15
Additional Photo 1	 13-1
Additional Photo 2	 13-2

table continued from previous page...

Additional Photo 3	 13-3
Additional Photo 4	 13-4

Test: Reassurance (186971-13) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-13	Tuesday, 9th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

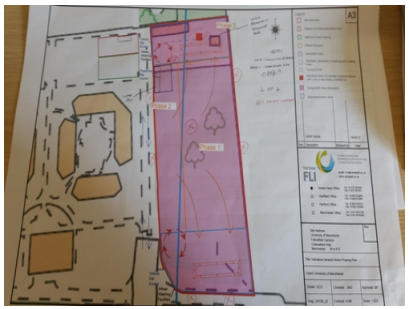
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-13-1	In picking area	721	1846	10:43:00	11:43:00	60	8.0		8.0	480	480	9.5	200	0.005	<0.01
186971-13-2	In picking area	778	1848	10:45:00	11:45:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-13-3	East of site	716	1737	13:54:00	14:54:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-13-4	Adjacent changing rooms	720	1844	14:32:00	15:33:00	61	8.0		8.0	488	488	3.5	197	0.002	<0.01
186971-13-5	Adjacent changing rooms	721	1846	14:34:00	15:34:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-13)

Number of samples being taken	1
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement
Asbestos Contractor	Kaefer C+D
Client Representative or Contractor	Brian Lyons
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	Wednesday, 10th May, 2017 @ 15:18:47
Additional Photo 1	

Test: Personal (186971-13) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-13	Wednesday, 10th May, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1022	1	MS018	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	FM	FM319	313	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-13-1	Brian Lyans kaefer C+D Hand picking cement from soil	303	20	09:12:00	10:12:00	60	2.0		2.0	120	120	6.0	200	0.013	<0.04

Test: Personal (186971-14)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both air samples gave results below 0.03 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 9th May, 2017 @ 15:32:03
Additional Photo 1	 14-1
Additional Photo 2	 14-2

table continued from previous page...

Additional Photo 3	 sample locations, activity 14, samples 1 - 2

Test: Personal (186971-14) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-14	Tuesday, 9th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1021	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-14-1	On Kaefer operative (M. Booth)	303	20	11:44:00	12:09:00	25	3.0		3.0	75	75	3.0	200	0.010	<0.06
186971-14-2	On Vertase dumper operative (J. Grysakoliski)	303	20	14:00:00	14:55:00	55	3.0		3.0	165	165	1.5	200	0.002	<0.03

Test: Personal (186971-15)

Number of samples being taken	1
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement
Client Representative or Contractor	Tim Harw

Test: Personal (186971-15) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-15		Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293		1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
		MS	100	5	22.5

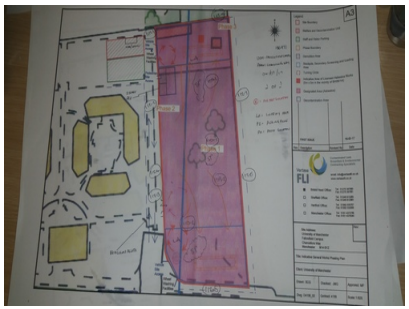
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS	FM	FM		SM

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-15-1	Tim Hare Paper mask removal of knotweed Rhyzolmes	601	306	08:27:00	09:27:00	60	1.0		1.0	60	0				

Test: Reassurance (186971-15)

Number of samples being taken	8
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 4th July, 2017 @ 14:19:21
Additional notes	reassurance monitoring in work area
Additional Photo 1	

Test: Reassurance (186971-15) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-15	Tuesday, 4th July, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	MS081	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-115-1	in work area adjacent stockpile	602	03	08:38:00	09:38:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-115-2	Turning circle in work area	601	1308	08:40:00	09:40:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Background (186971-20)

Test: Background (186971-20) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-20		Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293		1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
		MS	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS	FM	FM		SM

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-20-1	North side adjacent stores	602	03	08:38:00	09:38:00	60	8.0		8.0	480	0				
186971-20-2	West side near car park	19	1269	08:41:00	09:41:00	60	8.0		8.0	480	0				
186971-20-3	South side corner	770	1308	08:44:00	09:44:00	60	8.0		8.0	480	0				
186971-20-4	East side middle	650	378	08:48:00	09:48:00	60	8.0		8.0	480	0				

Test: Background (186971-24)

Number of samples being taken	6
Additional Photo 1	 24-2
Additional Photo 2	 24-3
Additional Photo 3	 23- 4

table continued from previous page...

Additional Photo 4	 24-5

Test: Background (186971-24) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-24		Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
990	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

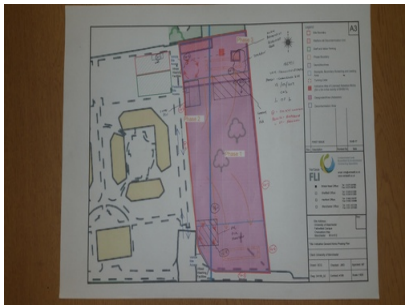
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-24-1	Field Blank	782													
186971-24-2	On North perimeter adjacent changing rooms	815	03	10:54:00	11:54:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-24-3	On treeline, West perimeter	814	1269	10:59:00	11:59:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-24-4	On treeline, West perimeter	716	1737	11:04:00	12:04:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-24-5	On South perimeter	720	1844	11:09:00	12:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-24-6	On playing fields, East perimeter	721	1846	11:14:00	12:14:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-24-7	On playing fields, East perimeter	782	1846	11:16:00	12:16:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-25)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/Vertase
Client Representative or Contractor	Varios
Air sample results	All air samples gave results below 0.02 and 0.04 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 15:29:19
Additional Photo 1	 25-1
Additional Photo 2	 25-2

table continued from previous page...

Additional Photo 3	 Samples locations, activity 25, samples 1 - 2

Test: Personal (186971-25) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-25	Friday, 12th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
990	1	MS108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-25-1	On excavator operator (M. Morley)	303	20	13:00:00	14:12:00	72	3.0		3.0	216	216	2.5	200	0.003	<0.02
186971-25-2	On Kaefer operative (S. Moseley)	814	20	14:25:00	15:04:00	39	3.0		3.0	117	117	1.0	200	0.002	<0.04

Test: Reassurance (186971-26)

Number of samples being taken	2
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 15:39:25
Additional Photo 1	 26-1
Additional Photo 2	 26-2

table continued from previous page...

Additional Photo 3	 Samples locations, activity 26, samples 1 - 2

Test: Reassurance (186971-26) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-26	Friday, 12th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
990	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

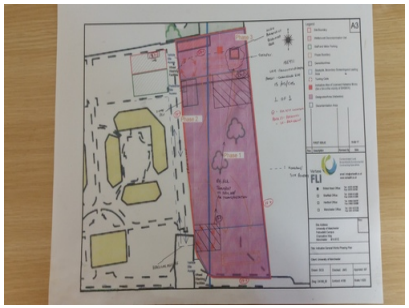
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-26-1	Adjacent stockpile	716	1737	14:06:00	15:06:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-26-2	Within shelter adjacent turning point excavation	720	1844	14:09:00	15:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-27)

Number of samples being taken	3
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.03 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 15th May, 2017 @ 15:52:19
Additional Photo 1	 27-2
Additional Photo 2	 27-3

table continued from previous page...

Additional Photo 3	 Sample locations, activity 27, samples 1-3

Test: Personal (186971-27) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-27	Monday, 15th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	MS	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-27-1	Field Blank	782													
186971-27-2	On excavator operator (C. Velosco)	303	20	10:57:00	11:57:00	60	3.0		3.0	180	180	2.5	200	0.004	<0.03
186971-27-3	On excavator Operator (M. Morley)	303	20	14:28:00	15:27:00	59	3.0		3.0	177	177	1.0	200	0.001	<0.03

Test: Background (186971-28)

Number of samples being taken	4
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 15th May, 2017 @ 15:30:39
Additional Photo 1	 28-1
Additional Photo 2	 28-2

table continued from previous page...

Additional Photo 3	 28-3
Additional Photo 4	 28-4

Test: Background (186971-28) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-28	Monday, 15th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-28-1	On North perimeter	716	1737	13:03:00	14:03:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-28-2	On treeline, West perimeter	720	1844	13:15:00	14:15:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-28-3	On South perimeter	721	1846	13:20:00	14:21:00	61	8.0		8.0	488	488	0.5	200	0.000	<0.01
186971-28-4	On East perimeter	778	1848	13:25:00	14:25:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-29)

Number of samples being taken	3
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.03 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 16th May, 2017 @ 15:10:23
Additional Photo 1	 29-2
Additional Photo 2	 29-3

table continued from previous page...

Additional Photo 3	 Sample locations, activity 29, samples 1 - 3.

Test: Personal (186971-29) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-29	Tuesday, 16th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-29-1	Field Blank	782													
186971-29-2	On Kaefer operative (M. Booth)	303	20	08:44:00	09:38:00	54	2.0		2.0	108	108	1.0	200	0.002	<0.04
186971-29-3	On excavator operator (C. Morgan)	303	20	14:02:00	14:45:00	43	2.0		2.0	86	86	2.0	200	0.006	<0.06

Test: Background (186971-30)

Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 16th May, 2017 @ 13:44:58
Additional Photo 1	 30-1
Additional Photo 2	 30-2

table continued from previous page...

Additional Photo 3	 30-3
Additional Photo 4	 30-4

Test: Background (186971-30) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-30	Tuesday, 16th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

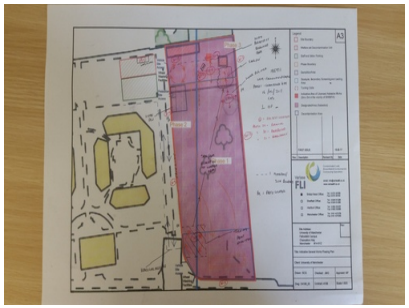
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-30-1	On playing fields, East perimeter	720	1844	10:49:00	11:49:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-30-2	On playing fields, East perimeter	716	1737	10:52:00	11:52:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-30-3	On South perimeter	721	1846	10:58:00	11:59:00	61	8.0		8.0	488	488	0.5	197	0.000	<0.01
186971-30-4	On treeline, West perimeter	778	1848	11:01:00	12:01:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-30-5	Adjacent stores, North perimeter	716	1844	12:18:00	13:18:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-30-6	On treeline, West perimeter	720	1844	12:19:00	13:19:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Reassurance (186971-31)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 16th May, 2017 @ 16:09:37
Additional Photo 1	 31-1
Additional Photo 2	 31-2

table continued from previous page...

Additional Photo 3	 31-3
Additional Photo 4	 Sample locations, activity 31, samples 1 - 3.

Test: Reassurance (186971-31) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-31	Tuesday, 16th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	0814

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-31-1	Picking area, adjacent stockpile	720	1844	14:15:00	15:15:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-31-2	Adjacent picking area	721	1846	14:20:00	15:20:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-31-3	On turning point excavation	778	1848	14:27:00	15:27:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Background (186971-32)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 17th May, 2017 @ 12:47:53
Additional Photo 1	 32-2
Additional Photo 2	 32-3

table continued from previous page...

Additional Photo 3	 32-4
Additional Photo 4	 32-5

Test: Background (186971-32) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-32	Wednesday, 17th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-32-1	Field Blank	782													
186971-32-2	On playing fields, East perimeter	716	1737	08:15:00	09:15:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-32-3	On playing fields adjacent picking area, East perimeter	720	1844	08:18:00	09:18:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-32-4	On North perimeter adjacent stores	716	1737	11:04:00	12:04:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-32-5	On treeline, West perimeter	720	1844	11:07:00	12:07:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-32-6	On treeline, West perimeter	721	1846	11:11:00	12:11:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-32-7	On south perimeter	778	1848	11:15:00	12:15:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-33)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.05 & 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 17th May, 2017 @ 14:59:29
Additional Photo 1	 33-1
Additional Photo 2	 33-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 33, samples 1 - 2

Test: Personal (186971-33) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-33	Wednesday, 17th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

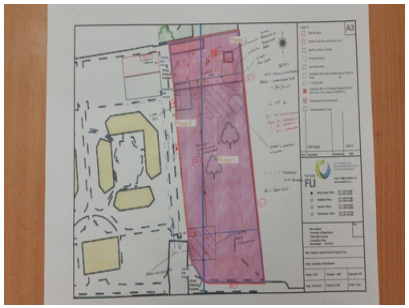
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-33-1	On Knotweed consultant (T. Hare)	303	20	08:54:00	09:33:00	39	2.0		2.0	78	78	0.5	200	0.002	<0.06
186971-33-2	On dumper operator (J. Grysakoliski)	303	20	13:53:00	14:45:00	52	2.0		2.0	104	104	2.5	200	0.006	<0.05

Test: Reassurance (186971-34)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 17th May, 2017 @ 15:45:12
Additional Photo 1	 24-2
Additional Photo 2	 34-2

table continued from previous page...

Additional Photo 3	 34-3
Additional Photo 4	 Sample locations, activity 34, samples 1 - 3

Test: Reassurance (186971-34) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-34	Wednesday, 17th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-34-1	On fence line adjacent turning point exvavation	720	1844	14:02:00	15:02:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-34-2	Loading area, adjacent stockpile	721	1846	14:07:00	15:07:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-34-3	In picking area	778	1848	14:15:00	15:15:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-35)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 18th May, 2017 @ 13:08:14
Additional Photo 1	 35-2
Additional Photo 2	 35-3

table continued from previous page...

Additional Photo 3	 35-4
Additional Photo 4	 34-5

Test: Background (186971-35) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-35	Thursday, 18th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

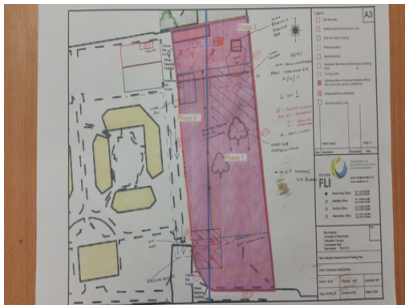
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-35-1	Field Blank	782													
186971-35-2	On playing fields, East perimeter	716	1737	08:26:00	09:26:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-35-3	On playing fields, East perimeter adjacent stock pile	720	1844	08:28:00	09:28:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-35-4	On North perimeter adjacent stores	716	1737	10:57:00	11:57:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-35-5	On treeline, West perimeter	720	1844	11:00:00	12:00:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-35-6	On treeline, West perimeter	721	1846	11:05:00	12:05:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-35-7	On South perimeter	778	1848	11:07:00	12:07:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Personal (186971-36)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.04 & 0.05 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 18th May, 2017 @ 13:47:25
Additional Photo 1	 36-1
Additional Photo 2	 37-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 36, samples 1 - 2

Test: Personal (186971-36) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-36	Thursday, 18th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

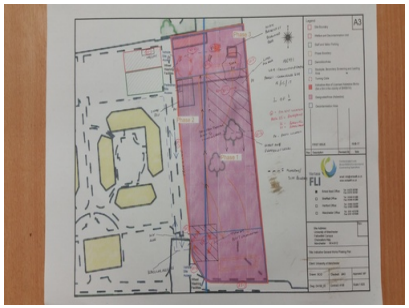
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-36-1	On Kaefer supervisor (S. Oldham)	303	20	09:37:00	10:25:00	48	2.0		2.0	96	96	3.0	200	0.008	<0.05
186971-36-2	On excavator operator (C. Velosco)	303	20	12:23:00	13:31:00	68	2.0		2.0	136	136	4.0	200	0.007	<0.04

Test: Reassurance (186971-37)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 18th May, 2017 @ 15:34:12
Additional Photo 1	 37-1
Additional Photo 2	 37-2

table continued from previous page...

Additional Photo 3	 37-3
Additional Photo 4	 Sample locations, activity 37, samples 1 - 3

Test: Reassurance (186971-37) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-37	Thursday, 18th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-37-1	Adjacent stock pile	720	1844	14:02:00	15:02:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-37-2	In vicinity of picking zone	721	1846	14:05:00	15:05:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-37-3	In Fence line in vicinity of excavation	778	1848	14:10:00	15:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-38)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 19th May, 2017 @ 12:07:12
Additional Photo 1	 38-2
Additional Photo 2	 38-3

table continued from previous page...

Additional Photo 3	 38-4
Additional Photo 4	 38-5

Test: Background (186971-38) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-38	Friday, 19th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1005	1	108	100	6	22.5

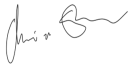
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-38-1	Field Blank	782													
186971-38-2	On playing fields, East perimeter	716	1737	08:39:00	09:39:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-38-3	Adjacent picking picking zone, playing fields	720	1844	08:41:00	09:41:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-38-4	On North perimeter adjacent stores	716	1737	10:08:00	11:08:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-38-5	On treeline, West perimeter	720	1844	10:13:00	11:13:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-38-6	On treeline, West perimeter	721	1846	10:14:00	11:14:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-38-7	On South perimeter	778	1848	10:19:00	11:19:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-39)

Number of samples being taken	1
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI
Client Representative or Contractor	N. Caviel
Air sample results	Personal air sample gave result below 0.09 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 19th May, 2017 @ 15:20:41
Additional Photo 1	 39-1
Additional Photo 2	 Sample location, activity 39, sample 1

Test: Personal (186971-39) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-39	Friday, 19th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1082	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-39-1	On Banks man (N. Caviel)	303	20	14:13:00	14:39:00	26	2.0		2.0	52	52	2.0	200	0.010	<0.09

Test: Reassurance (186971-40)

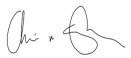
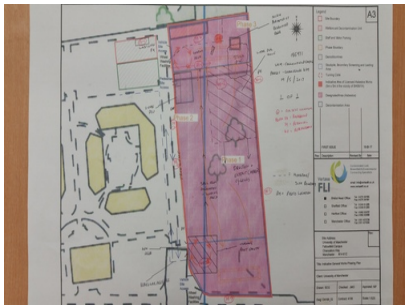
Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 19th May, 2017 @ 15:39:37
Additional Photo 1	 40-1
Additional Photo 2	 40-2

table continued from previous page...

Additional Photo 3	 40-3
Additional Photo 4	 Sample locations, activity 40, samples 1 - 3

Test: Reassurance (186971-40) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-40	Friday, 19th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1005	1	MS108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-40-1	In loading area adjacent stock pile	716	1737	13:44:00	14:46:00	62	8.0		8.0	496	496	2.0	194	0.001	<0.01
186971-40-2	In picking zone adjacent stock pile	721	1846	13:50:00	14:50:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-40-3	On new turning point excavation	720	1844	13:53:00	14:53:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Background (186971-41)

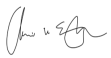
Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 22nd May, 2017 @ 12:29:50
Additional Photo 1	 41-2
Additional Photo 2	 41-3

table continued from previous page...

Additional Photo 3	 41-4
Additional Photo 4	 41-5

Test: Background (186971-41) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-41	Monday, 22nd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

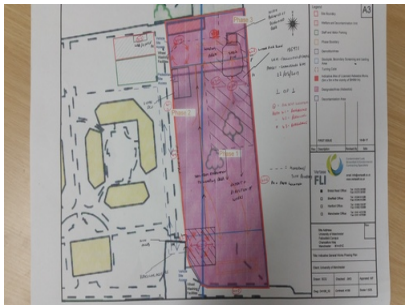
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-41-1	Field Blank	782													
186971-41-2	On playing fields, East perimeter	716	1737	08:32:00	09:32:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-41-3	On playing fields, East perimeter adjacent stock pile	720	1844	08:35:00	09:35:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-41-4	On North perimeter	716	1737	10:25:00	11:25:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-41-5	On treeline, West perimeter	720	1844	10:27:00	11:27:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-41-6	On treeline, West perimeter	721	1846	10:29:00	11:29:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-41-7	On South perimeter	778	1848	10:33:00	11:33:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01

Test: Personal (186971-42)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 22nd May, 2017 @ 13:53:14
Additional Photo 1	 Area of 42-1 (litter pick)
Additional Photo 2	 42-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity, 42, samples 1 - 2.

Test: Personal (186971-42) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-42	Monday, 22nd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

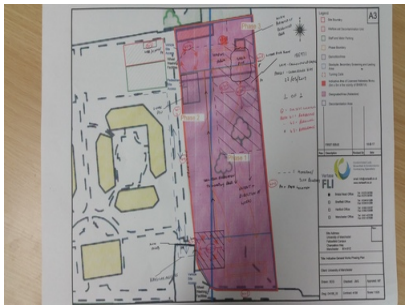
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-42-1	On Kaefer operative (S. Moseley)	303	20	11:09:00	11:48:00	39	2.0		2.0	78	78	1.0	200	0.003	<0.06
186971-42-2	On VertaseFLI excavator operator (M. Morley)	303	20	12:39:00	13:17:00	38	2.0		2.0	76	76	2.0	200	0.007	<0.06

Test: Reassurance (186971-43)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 22nd May, 2017 @ 15:52:58
Additional Photo 1	 43-1
Additional Photo 2	 43-2

table continued from previous page...

Additional Photo 3	 43-3
Additional Photo 4	 Sample locations, activity, 43, samples 1 - 3

Test: Reassurance (186971-43) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-43	Monday, 22nd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-43-1	Loading area, in vicinity of stock pile	720	1844	14:10:00	15:10:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-43-2	Adjacent picking zone	721	1846	14:15:00	15:15:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-43-3	On new access, turning point excavation	778	1848	14:23:00	15:23:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01

Test: Background (186971-44)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 23rd May, 2017 @ 12:51:57
Additional Photo 1	 44-2
Additional Photo 2	 44-3

table continued from previous page...

Additional Photo 3	 44-4
Additional Photo 4	 44-5

Test: Background (186971-44) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-44	Tuesday, 23rd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

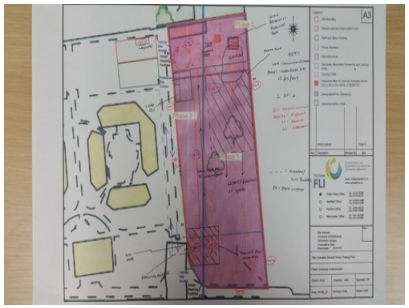
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-44-1	Field Blank	782													
186971-44-2	On North perimeter adjacent vehicular access	716	1737	10:25:00	11:25:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-44-3	On West perimeter adjacent dirty end, DCU	720	1844	10:27:00	11:27:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-44-4	On tree line, West perimeter	721	1846	10:29:00	11:29:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-44-5	On South perimeter	814	1847	10:32:00	11:32:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-44-6	On playing fields, East perimeter	778	1848	10:35:00	11:35:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-44-7	On playing fields, East perimeter adjacent picking zone			10:39:00	11:39:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Personal (186971-45)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	All personal air samples gave results below 0.03 and 0.08 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 23rd May, 2017 @ 15:06:15
Additional Photo 1	 45-1
Additional Photo 2	 45-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 45, samples 1 - 2

Test: Personal (186971-45) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-45	Tuesday, 23rd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-45-1	On Vertase dumper operative (J. Grysakoliski)	303	20	12:06:00	13:21:00	75	2.0		2.0	150	150	4.0	200	0.007	<0.03
186971-45-2	On Kaefer operative (B. Lyons)	303	20	14:10:00	14:39:00	29	2.0		2.0	58	58	4.0	200	0.017	<0.08

Test: Reassurance (186971-46)

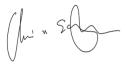
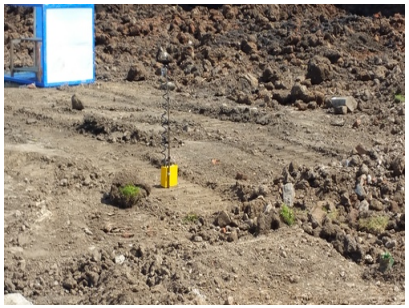
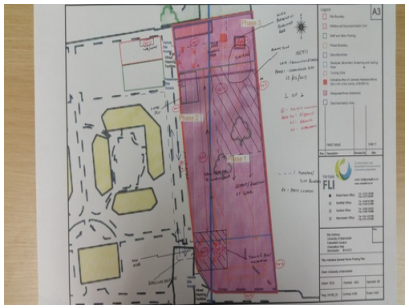
Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 23rd May, 2017 @ 16:06:26
Additional Photo 1	 46-1
Additional Photo 2	 46-2

table continued from previous page...

Additional Photo 3	 46-3
Additional Photo 4	 Sample locations, activity 46, samples 1 - 3

Test: Reassurance (186971-46) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-46	Tuesday, 23rd May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-46-1	Adjacent stock pile	720	1844	14:31:00	15:32:00	61	8.0		8.0	488	488	1.5	197	0.001	<0.01
186971-46-2	In picking zone	721	1846	14:33:00	15:34:00	61	8.0		8.0	488	488	3.0	197	0.002	<0.01
186971-46-3	On turning point excavation	778	1848	14:38:00	15:38:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-47)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 24th May, 2017 @ 12:07:23
Additional Photo 1	 47-4
Additional Photo 2	 47-5

table continued from previous page...

Additional Photo 3	 47-6
Additional Photo 4	 47-7

Test: Background (186971-47) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-47	Wednesday, 24th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-47-1	Field Blank	782													
186971-47-2	On playing fields, East perimeter	716	1737	08:23:00	09:23:00	60	8.0		8.0	480	480	5.5	200	0.003	<0.01
186971-47-3	On playing fields, East perimeter adjacent stock pile	720	1844	08:25:00	09:25:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-47-4	On North perimeter adjacent loading area	716	1737	10:03:00	11:03:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-47-5	On West perimeter	720	1844	10:05:00	11:05:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-47-6	On tree line, West perimeter	721	1846	10:07:00	11:07:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-47-7	On South perimeter	778	1848	10:09:00	11:09:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Personal (186971-48)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 24th May, 2017 @ 14:06:59
Additional Photo 1	 48-2
Additional Photo 2	 48-3

table continued from previous page...

Additional Photo 3	 48-1
Additional Photo 4	 48-2

Test: Personal (186971-48) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-48	Wednesday, 24th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

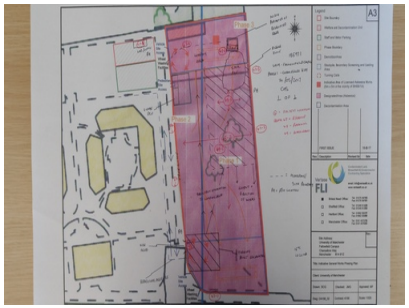
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-48-1	On Kaefer operative (M. Booth)	303	20	11:38:00	12:16:00	38	2.0		2.0	76	76	3.0	200	0.010	<0.06
186971-48-2	On Knotweed specialist (T. Hare)	303	20	12:36:00	13:13:00	37	2.0		2.0	74	74	0.5	200	0.002	<0.06

Test: Reassurance (186971-49)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 24th May, 2017 @ 16:04:11
Additional Photo 1	 49-1
Additional Photo 2	 49-2

table continued from previous page...

Additional Photo 3	 49-3
Additional Photo 4	 Sample locations, activity 49, samples 1 - 3

Test: Reassurance (186971-49) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-49	Wednesday, 24th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1020	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-49-1	Adjacent stock pile, loading area	716	1737	14:16:00	15:16:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-49-2	In picking zone	720	1844	14:22:00	15:22:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-49-3	On turning point excavation	721	1846	14:26:00	15:26:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-50)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 25th May, 2017 @ 11:50:29
Additional Photo 1	 50-2
Additional Photo 2	 50-3

table continued from previous page...

Additional Photo 3	 50-4
Additional Photo 4	 50-5

Test: Background (186971-50) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-50	Thursday, 25th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1019	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

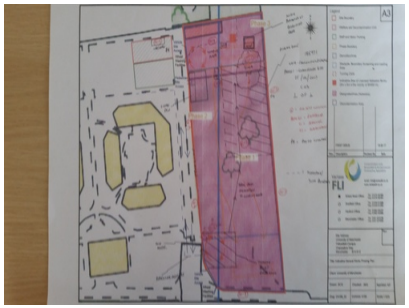
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-50-1	Field Blank	782													
186971-50-2	On playing fields, East perimeter	716	1737	08:19:00	09:19:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-50-3	On playing fields, East perimeter adjacent picking zone	720	1844	08:22:00	09:22:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-50-4	On North perimeter adjacent loading area	716	1737	10:00:00	11:00:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-50-5	On tree line, West perimeter	720	1844	10:04:00	11:04:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-50-6	On tree line, West perimeter	721	1846	10:06:00	11:06:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-50-7	On South perimeter	778	1848	10:09:00	11:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-51)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	All air samples gave results below 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 25th May, 2017 @ 13:55:40
Additional Photo 1	 51-1
Additional Photo 2	 51-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 51, samples 1 - 2

Test: Personal (186971-51) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-51	Thursday, 25th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1019	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

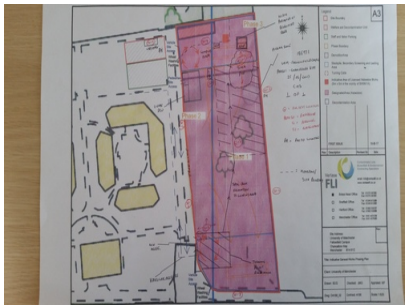
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-51-1	On excavator operator (C. Morgan)	303	20	11:59:00	12:34:00	35	2.0		2.0	70	70	2.0	200	0.007	<0.07
186971-51-2	On Kaefer operative (B. Lyons)	815	303	12:49:00	13:23:00	34	2.0		2.0	68	68	2.5	200	0.009	<0.07

Test: Reassurance (186971-52)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 25th May, 2017 @ 16:10:12
Additional Photo 1	 52-1
Additional Photo 2	 52-2

table continued from previous page...

Additional Photo 3	 52-3
Additional Photo 4	 Sample locations, activity 52, samples 1 - 3

Test: Reassurance (186971-52) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-52	Thursday, 25th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1019	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-52-1	Adjacent Knotweed skip, loading zone	720	1844	14:15:00	15:15:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-52-2	In picking zone	721	1846	14:19:00	15:19:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-52-3	On excavation	778	1848	14:23:00	15:23:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-53)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 26th May, 2017 @ 11:21:27
Additional Photo 1	 53-2
Additional Photo 2	 53-3

table continued from previous page...

Additional Photo 3	 53-4
Additional Photo 4	 53-5

Test: Background (186971-53) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-53	Friday, 26th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-53-1	Field Blank	782													
186971-53-2	On playing fields, East perimeter	716	1737	08:05:00	09:05:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-53-3	On playing fields, East perimeter adjacent stockpile	720	1844	08:10:00	09:10:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-53-4	On North perimeter, adjacent loading area	716	1737	09:27:00	10:29:00	62	8.0		8.0	496	496	0.5	194	0.000	<0.01
186971-53-5	On tree line, West perimeter adjacent picking zone	720	1844	09:30:00	10:30:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-53-6	On tree line, West perimeter in vicinity of excavation	721	1846	09:31:00	10:31:00	60	8.0		8.0	480	480	6.5	200	0.003	<0.01
186971-53-7	On perimeter, South West corner	778	1848	09:36:00	10:36:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-54)

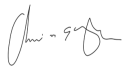
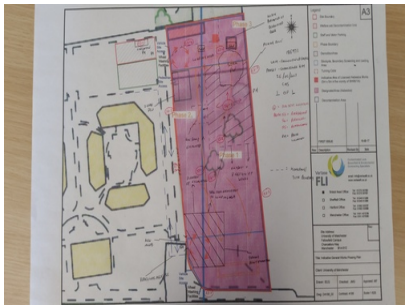
Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 26th May, 2017 @ 13:12:20
Additional Photo 1	 54-1
Additional Photo 2	 54-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 54, samples 1 - 2

Test: Personal (186971-54) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-54	Friday, 26th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

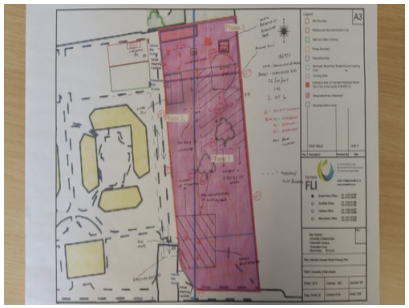
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-54-1	On Kaefer operative (S. Moseley)	303	20	11:44:00	12:21:00	37	2.0		2.0	74	74	3.0	200	0.010	<0.06
186971-54-2	On Vertase excavator operator (M. Morley)	815	20	12:22:00	12:59:00	37	2.0		2.0	74	74	1.0	200	0.003	<0.06

Test: Reassurance (186971-55)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 26th May, 2017 @ 15:52:04
Additional Photo 1	 55-1
Additional Photo 2	 55-2

table continued from previous page...

Additional Photo 3	 55-3
Additional Photo 4	 Sample locations, activity 55, samples 1 - 3

Test: Reassurance (186971-55) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-55	Friday, 26th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-55-1	Adjacent skip, loading area	720	1844	13:57:00	14:57:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-55-2	In picking zone	721	1846	14:01:00	15:01:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-55-3	Adjacent excavation	778	1848	14:04:00	15:04:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Background (186971-56)

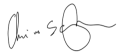
Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 30th May, 2017 @ 14:06:58
Additional Photo 1	 56-2
Additional Photo 2	 56-3

table continued from previous page...

Additional Photo 3	 56-4
Additional Photo 4	 56-5

Test: Background (186971-56) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-56	Tuesday, 30th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

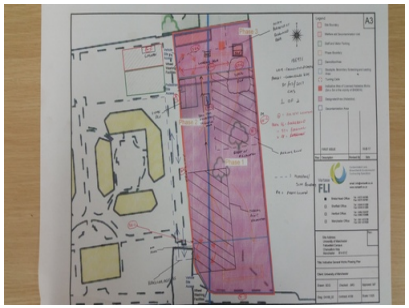
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-56-1	Field Blank	782													
186971-56-2	On plying fields, East perimeter adjacent picking zone	720	1844	09:58:00	10:58:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-56-3	On South perimeter	721	1846	10:05:00	11:05:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-56-4	On Treeline, West perimeter adjacent excavation	778	1848	10:08:00	11:08:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-56-5	Adjacent DCU, West perimeter	721	1846	12:07:00	13:07:00	60	8.0		8.0	480	480	5.5	200	0.003	<0.01
186971-56-6	On North perimeter adjacent loading area	778	1848	12:10:00	13:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-57)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 30th May, 2017 @ 15:57:55
Additional Photo 1	 57-1
Additional Photo 2	 57-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 57, samples 1 - 2

Test: Personal (186971-57) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-57	Tuesday, 30th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

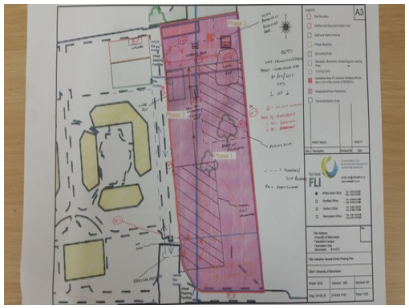
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-57-1	On VertaseFLI banksman (N. Caviel)	303	20	11:26:00	12:00:00	34	2.0		2.0	68	68	3.0	200	0.011	<0.07
186971-57-2	On excavator operator (C.velasco aguirre)	303	20	14:30:00	15:06:00	36	2.0		2.0	72	72	0.5	200	0.002	<0.07

Test: Reassurance (186971-58)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 30th May, 2017 @ 16:25:18
Additional Photo 1	 58-1
Additional Photo 2	 58-2

table continued from previous page...

Additional Photo 3	 58-3 near far fence
Additional Photo 4	 Sample locations, activity 58, samples 1 - 3

Test: Reassurance (186971-58) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-58	Tuesday, 30th May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	007	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-58-1	On access adjacent excavation	716	1737	14:14:00	15:14:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-58-2	Adjacent Knotweed skip, loading area	720	1844	14:22:00	15:22:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-58-3	On picking zone	721	1846	14:25:00	15:25:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Background (186971-59)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 31st May, 2017 @ 11:53:46
Additional Photo 1	 59-2
Additional Photo 2	 59-3

table continued from previous page...

Additional Photo 3	 59-4
Additional Photo 4	 59-5

Test: Background (186971-59) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-59	Wednesday, 31st May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1017	1	108	100	6	22.5

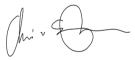
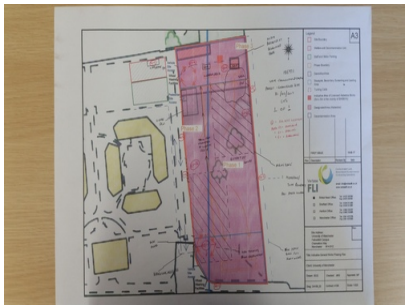
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-59-1	Field Blank	782													
186971-59-2	On playing fields, East perimeter	716	1737	08:20:00	09:20:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-59-3	On playing fields, East perimeter adjacent stock pile	720	1844	08:23:00	09:24:00	61	8.0		8.0	488	488	2.0	197	0.001	<0.01
186971-59-4	On North perimeter bordering loading area	716	1737	09:54:00	10:54:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-59-5	On tree line, West perimeter	720	1844	09:58:00	10:58:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-59-6	On West perimeter adjacent excavation	721	1846	10:01:00	11:01:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-59-7	In South perimeter	778	1848	10:04:00	11:04:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01

Test: Personal (186971-60)

Number of samples being taken	1
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer
Client Representative or Contractor	Bryan Lyons
Air sample results	Personal air sample gave result below 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 31st May, 2017 @ 12:57:48
Additional Photo 1	 60-1
Additional Photo 2	 Sample location, activity 60, samples 1.

Test: Personal (186971-60) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-60	Wednesday, 31st May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1017	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

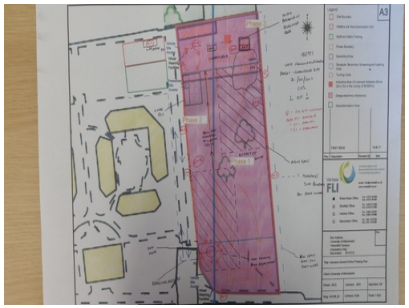
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-60-1	On Kaefer operative (B. Lyons)	303	20	12:06:00	12:42:00	36	2.0		2.0	72	72	3.0	200	0.011	<0.07

Test: Reassurance (186971-61)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 31st May, 2017 @ 15:56:13
Additional Photo 1	 61-1
Additional Photo 2	 61-2

table continued from previous page...

Additional Photo 3	 61-3
Additional Photo 4	 Sample locations, activity 61, samples 1 - 3.

Test: Reassurance (186971-61) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-61	Wednesday, 31st May, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1017	1	100	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-61-1	Adjacent stockpile	721	1846	13:49:00	14:49:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-61-2	On picking zone	720	1844	13:53:00	14:53:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-61-3	Adjacent turning point excavation	778	1848	13:58:00	14:58:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Background (186971-62)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 1st June, 2017 @ 11:42:13
Additional Photo 1	 62-2
Additional Photo 2	 62-3

table continued from previous page...

Additional Photo 3	 62-4
Additional Photo 4	 62-5

Test: Background (186971-62) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-62	Thursday, 1st June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

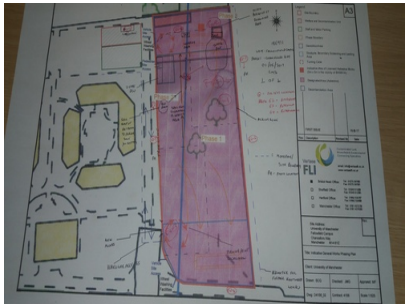
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-62-1	Field Blank	782													
186971-62-2	On playing fields, new East perimeter fence line	716	1737	07:58:00	08:58:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-62-3	On playing fields, new East perimeter fence line	720	1844	08:02:00	09:02:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-62-4	On South perimeter	721	1846	08:06:00	09:06:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-62-5	On North perimeter adjacent loading area	720	1844	10:00:00	11:00:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-62-6	On tree line, West perimeter adjacent root ball stock pile	721	1846	10:03:00	11:03:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-62-7	On tree line, West perimeter adjacent turning point excavation	778	1848	10:05:00	11:05:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-63)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 1st June, 2017 @ 16:12:52
Additional Photo 1	 63-1

Test: Personal (186971-63) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-63	Thursday, 1st June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

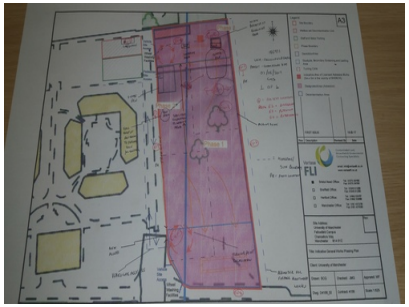
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-63-1	M. Booth. Keafer C+D. Half face in work area	303	20	14:49:00	15:49:00	60	2.0		2.0	120	120	3.5	200	0.007	<0.04
186971-63-1	On Vertase dumper operator (J. Grysakoliski)	303	20	10:16:00	11:14:00	58	2.0		2.0	116	116	2.5	200	0.005	<0.04

Test: Reassurance (186971-64)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 1st June, 2017 @ 16:14:17
Additional Photo 1	

Test: Reassurance (186971-64) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-64	Thursday, 1st June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS183	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-64-1	inside of boundary fence	721	1846	14:56:00	15:56:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-64-2	far side of boundary	720	1844	14:57:00	15:57:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-64-3	turning circle	778	1848	15:01:00	16:01:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-65)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 2nd June, 2017 @ 12:43:44
Additional Photo 1	 65-2
Additional Photo 2	 65-3

table continued from previous page...

Additional Photo 3	 65-4
Additional Photo 4	 65-5

Test: Background (186971-65) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-65	Friday, 2nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

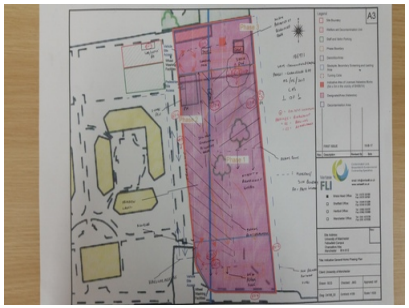
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-65-1	Field Blank	782													
186971-65-2	On playing fields, East perimeter	716	1737	08:16:00	09:16:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-65-3	On playing fields, East perimeter adjacent picking zone	720	1844	08:19:00	09:19:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-65-4	On South perimeter	721	1846	08:25:00	09:25:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-65-5	On North perimeter, adjacent loading area	720	1844	09:43:00	10:43:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-65-6	On West perimeter	721	1846	09:45:00	10:45:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-65-7	On tree line, West perimeter adjacent excavation	778	1848	09:48:00	10:48:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01

Test: Personal (186971-66)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.05 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 2nd June, 2017 @ 13:10:57
Additional Photo 1	 66-1
Additional Photo 2	 66-1

table continued from previous page...

Additional Photo 3	 Sample locations, activity 66, samples 1 - 2

Test: Personal (186971-66) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-66	Friday, 2nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

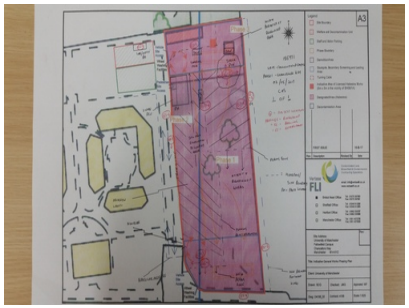
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-66-1	On Kaefer operative (V. Ward)	303	20	11:13:00	11:49:00	36	2.0		2.0	72	72	0.5	200	0.002	<0.07
186971-66-2	On excavator operator (D. Digby)	303	20	12:11:00	12:55:00	44	2.0		2.0	88	88	3.0	200	0.009	<0.05

Test: Reassurance (186971-67)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 2nd June, 2017 @ 15:51:39
Additional Photo 1	 67-1
Additional Photo 2	 67-2

table continued from previous page...

Additional Photo 3	 67-3
Additional Photo 4	 Sample locations, activity 67, samples 1 - 3

Test: Reassurance (186971-67) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-67	Friday, 2nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-67-1	Adjacent Knotweed skip, loading area	716	1737	13:48:00	14:48:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-67-2	On North picking zone	721	1846	13:52:00	14:52:00	60	8.0		8.0	480	480	5.0	200	0.003	<0.01
186971-67-3	Adjacent South picking zone	720	1844	13:57:00	14:57:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-68)

Number of samples being taken	4
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	All personal air samples gave results below 0.04, 0.06, 0.07, 0.08 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 6th June, 2017 @ 16:07:53
Additional Photo 1	 68-2
Additional Photo 2	 68-3

table continued from previous page...

Additional Photo 3	 68-4
Additional Photo 4	 68-5

Test: Personal (186971-68) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-68	Tuesday, 6th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
893	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-68-1	Field Blank														
186971-68-2	On Kaefer operative (S. Moseley)	303	20	09:46:00	10:43:00	57	2.0		2.0	114	114	2.0	200	0.004	<0.04
186971-68-3	On excavator operator (D. Digby)	303	20	11:41:00	12:17:00	36	2.0		2.0	72	72	1.5	200	0.005	<0.07
186971-68-4	On Kaefer operative (M. Booth)	303	20	14:18:00	14:49:00	31	2.0		2.0	62	62	1.0	200	0.004	<0.08
186971-68-5	On excavator operator (C. Velasco Aguirre)	815	20	15:01:00	15:42:00	41	2.0		2.0	82	82	2.5	200	0.008	<0.06

Test: Background (186971-69)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 7th June, 2017 @ 11:46:49
Additional Photo 1	 69-2
Additional Photo 2	 69-3

table continued from previous page...

Additional Photo 3	 69-4
Additional Photo 4	 6-5

Test: Background (186971-69) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-69	Wednesday, 7th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

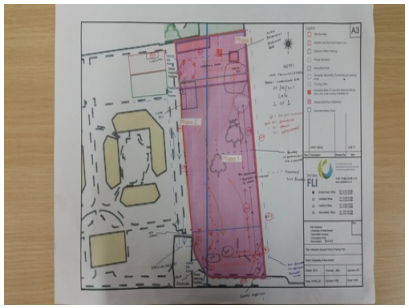
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-69-1	Field Blank	782													
186971-69-2	On South perimeter	716	1737	08:28:00	09:32:00	64	8.0		8.0	512	512	0.5	188	0.000	<0.01
186971-69-3	On playing fields, East perimeter	720	1844	08:39:00	09:39:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-69-4	On playing fields, East perimeter	721	1846	08:43:00	09:43:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-69-5	On Northern perimeter	720	1844	10:05:00	11:05:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-69-6	On tree line, West perimeter	721	1846	10:10:00	11:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-69-7	On treeline, West perimeter	778	1848	10:13:00	11:13:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01

Test: Personal (186971-70)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/kaefer
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.03 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 7th June, 2017 @ 14:17:45
Additional Photo 1	 70-1
Additional Photo 2	 7-1

table continued from previous page...

Additional Photo 3	 Sample location, activity 70, samples 1 to 2

Test: Personal (186971-70) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-70	Wednesday, 7th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

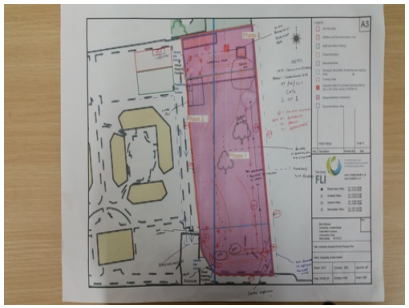
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-70-1	On Vertase dumper operator (J. Grysakoliski)	303	20	10:57:00	12:23:00	86	2.0		2.0	172	172	4.5	200	0.007	<0.03
186971-70-2	On Kaefer operative (D. Cook)	303	20	12:41:00	13:13:00	32	2.0		2.0	64	64	1.0	200	0.004	<0.07

Test: Reassurance (186971-71)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 7th June, 2017 @ 16:21:24
Additional Photo 1	 71-1
Additional Photo 2	 71-2

table continued from previous page...

Additional Photo 3	 71-3
Additional Photo 4	 Sample location, activity 71, samples 1 to 3

Test: Reassurance (186971-71) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-71	Wednesday, 7th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

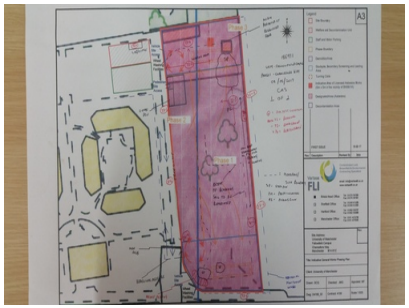
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-71-1	Adjacent stock piles, New turning point	716	1737	14:31:00	15:37:00	66	8.0		8.0	528	528	2.0	182	0.001	<0.01
186971-71-2	In vicinity of Knotweed works	720	1844	14:39:00	15:42:00	63	8.0		8.0	504	504	2.0	190	0.001	<0.01
186971-71-3	On picking zone	721	1846	14:45:00	15:46:00	61	8.0		8.0	488	488	1.0	197	0.001	<0.01

Test: Personal (186971-72)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	All air samples gave results below 0.04 and 0.05 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 8th June, 2017 @ 12:31:16
Additional Photo 1	 Area of 72-2
Additional Photo 2	 72-3

table continued from previous page...

Additional Photo 3	 Sample location, activity 72, samples 1 to 3

Test: Personal (186971-72) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-72	Thursday, 8th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-72-1	Field Blank	782													
186971-72-2	On VertaseFLI banks man (N. Caviel)	303	20	08:27:00	09:19:00	52	2.0		2.0	104	104	2.0	200	0.005	<0.05
186971-72-3	On Kaefer operative (S. Moseley)	303	20	11:12:00	12:11:00	59	2.0		2.0	118	118	3.5	200	0.008	<0.04

Test: Background (186971-73)

Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 8th June, 2017 @ 13:14:42
Additional Photo 1	 73-1
Additional Photo 2	 73-2

table continued from previous page...

Additional Photo 3	 73-3
Additional Photo 4	 73-4

Test: Background (186971-73) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-73	Thursday, 8th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

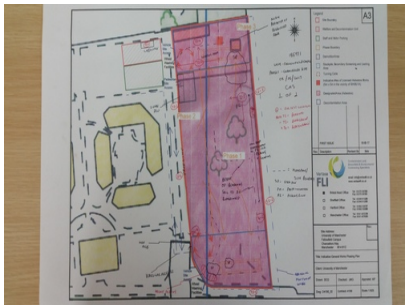
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-73-1	On South perimeter	716	1737	09:33:00	10:33:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-73-2	On playing fields, East perimeter	720	1844	09:38:00	10:38:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-73-3	On playing fields, East perimeter adjacent stock pile	721	1846	09:50:00	10:51:00	61	8.0		8.0	488	488	1.0	197	0.001	<0.01
186971-73-4	On North perimeter adjacent loading area	720	1844	11:35:00	12:35:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-73-5	On West perimeter adjacent dirty end, DCU	721	1846	11:38:00	12:38:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-73-6	On West perimeter	778	1848	11:43:00	12:43:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Reassurance (186971-74)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 8th June, 2017 @ 16:18:14
Additional Photo 1	 74-1
Additional Photo 2	 74-2

table continued from previous page...

Additional Photo 3	 74-3
Additional Photo 4	 Sample location, activity 74, samples 1 to 3

Test: Reassurance (186971-74) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-74	Thursday, 8th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-74-1	On vehicular access in vicinity of stock piles	716	1737	14:30:00	15:30:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-74-2	Adjacent excavation	720	1844	14:45:00	15:45:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-74-3	On picking zone	721	1846	14:49:00	15:49:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-75)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 9th June, 2017 @ 12:00:01
Additional Photo 1	 75-2
Additional Photo 2	 75-3

table continued from previous page...

Additional Photo 3	 75-4
Additional Photo 4	 75-5

Test: Background (186971-75) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-75	Friday, 9th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

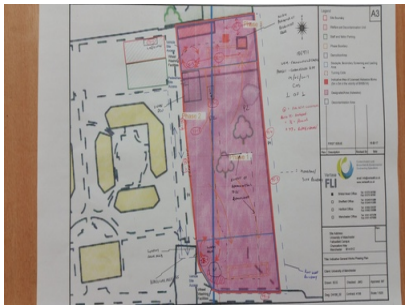
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-75-1	Field Blank	782													
186971-75-2	On South perimeter	716	1737	08:13:00	09:13:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-75-3	On playing fields, East perimeter	720	1844	08:48:00	09:48:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-75-4	On playing fields, East perimeter adjacent picking zone	721	1846	08:49:00	09:49:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-75-5	On North perimeter adjacent clean end DCU	716	1737	10:09:00	11:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-75-6	On West perimeter adjacent picking zone	721	1846	10:11:00	11:11:00	60	8.0								
186971-75-7	On West perimeter adjacent excavator	778	1848	10:15:00	11:15:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Personal (186971-76)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.06 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 9th June, 2017 @ 12:26:44
Additional Photo 1	 76-1
Additional Photo 2	 76-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 76, samples 1 to 2

Test: Personal (186971-76) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-76	Friday, 9th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-76-1	On excavator operator (B.Taylor)	303	20	09:24:00	09:56:00	32	2.0		2.0	64	64	6.0	200	0.024	<0.07
186971-76-2	On Kaefer operative (B. Lyons)	303	20	11:29:00	12:09:00	40	2.0		2.0	80	80	4.0	200	0.013	<0.06

Test: Reassurance (186971-77)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 9th June, 2017 @ 15:51:25
Additional Photo 1	 77-1
Additional Photo 2	 77-2

table continued from previous page...

Additional Photo 3	 77-3
Additional Photo 4	 Sample location, activity 77, samples 1 to 3

Test: Reassurance (186971-77) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-77	Friday, 9th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
999	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-77-1	On turning point adjacent stock pile	778	1848	13:11:00	14:11:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-77-2	Adjacent Knotweed skip, picking zone	716	1737	14:18:00	15:18:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-77-3	On picking zone	720	1844	14:19:00	15:19:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-78)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 12th June, 2017 @ 12:40:15
Additional Photo 1	 78-2
Additional Photo 2	 78-3

table continued from previous page...

Additional Photo 3	 78-4
Additional Photo 4	 78-5

Test: Background (186971-78) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-78	Monday, 12th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	08	313

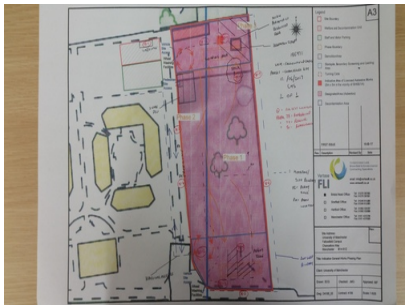
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-78-1	Field Blank	782													
186971-78-2	On North perimeter/ loading area	720	1844	08:43:00	09:43:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-78-3	On tree line, West perimeter	716	1737	08:46:00	09:46:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-78-4	On tree line, West perimeter	721	1846	08:48:00	09:48:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-78-5	On South perimeter	720	1844	10:30:00	11:30:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-78-6	On playing fields, East perimeter	721	1846	10:35:00	11:35:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-78-7	On playing fields, East perimeter	778	1848	10:38:00	11:38:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01

Test: Personal (186971-79)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Personal air samples gave results below 0.03 and 0.05 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 12th June, 2017 @ 13:45:12
Additional Photo 1	 79-1
Additional Photo 2	 79-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 79, samples 1 - 2

Test: Personal (186971-79) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-79	Monday, 12th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

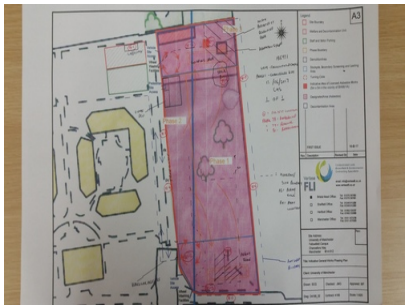
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-79-1	On excavator operator (D. Digby)	303	20	09:50:00	11:17:00	87	2.0		2.0	174	174	5.0	200	0.007	<0.03
186971-79-2	On excavator operative (M. Lister)	303	20	12:03:00	12:51:00	48	2.0		2.0	96	96	2.0	200	0.005	<0.05

Test: Reassurance (186971-80)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 12th June, 2017 @ 16:04:42
Additional Photo 1	 80-1
Additional Photo 2	 80-2

table continued from previous page...

Additional Photo 3	 80-3
Additional Photo 4	 Sample locations, activity 80, samples 1 - 3

Test: Reassurance (186971-80) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-80	Monday, 12th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1007	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-80-1	Loading area adjacent vegetation strip	720	1844	14:21:00	15:21:00	60	8.0		8.0	480	480	6.0	200	0.003	<0.01
186971-80-2	Adjacent stock piles, new turning point	721	1846	14:27:00	15:27:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-80-3	In vicinity of picking zone	778	1848	14:30:00	15:30:00	60	8.0					1.0	200		

Test: Background (186971-81)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 13th June, 2017 @ 15:06:33
Additional Photo 1	 81-2
Additional Photo 2	 81-3

table continued from previous page...

Additional Photo 3	 81-4
Additional Photo 4	 81-5

Test: Background (186971-81) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-81	Tuesday, 13th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	MS	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-81-1	Field Blank	782													
186971-81-2	On North perimeter/loading area	716	1737	09:11:00	10:11:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-81-3	On tree line, West perimeter	720	1844	09:14:00	10:14:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-81-4	On tree line, West perimeter	721	1846	09:16:00	10:17:00	61	8.0		8.0	488	488	4.5	197	0.002	<0.01
186971-81-5	On South perimeter	778	1848	09:19:00	10:19:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01
186971-81-6	On playing fields, East perimeter adjacent picking zone	721	1846	11:56:00	13:01:00	65	8.0		8.0	520	520	1.5	185	0.001	<0.01
186971-81-7	On playing fields, East perimeter adjacent picking zone	778	1848	11:58:00	13:01:00	63	8.0		8.0	504	504	5.0	190	0.003	<0.01

Test: Personal (186971-82)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	All Personnal air samples gave results below 0.05 and 0.09 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 13th June, 2017 @ 15:12:23
Additional Photo 1	 82-1
Additional Photo 2	 82-2

table continued from previous page...

	Sample location, activity 82, samples 1 to 2

Test: Personal (186971-82) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-82	Tuesday, 13th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-82-1	On Kaefer operative (M. Booth)	303	20	11:14:00	12:02:00	48	2.0		2.0	96	96	2.0	200	0.005	<0.05
186971-82-2	On excavator operator (M. Lister)	303	20	12:45:00	13:11:00	26	2.0		2.0	52	52	1.5	200	0.007	<0.09

Test: Reassurance (186971-83)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 13th June, 2017 @ 16:17:35
Additional Photo 1	 82-1
Additional Photo 2	 83-2

table continued from previous page...

Additional Photo 3	 83-3
Additional Photo 4	 Sample location, activity 83, samples 1 to 3

Test: Reassurance (186971-83) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-83	Tuesday, 13th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-83-1	On new turning circle adjacent excavators	716	17	14:34:00	15:34:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-83-2	On edge of picking zone	720	1844	14:41:00	15:41:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-83-3	On picking zone	778	1848	14:44:00	15:44:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Background (186971-84)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 14th June, 2017 @ 11:59:44
Additional Photo 1	 84-2
Additional Photo 2	 84-3

table continued from previous page...

Additional Photo 3	 84-4
Additional Photo 4	 84-5

Test: Background (186971-84) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-84	Wednesday, 14th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

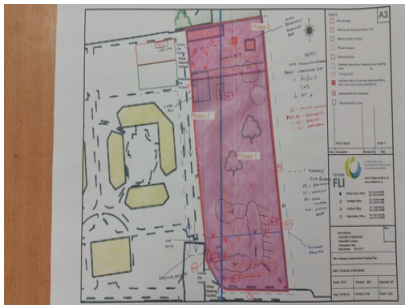
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-84-1	Field Blank	782													
186971-84-2	On North perimeter /loading area	716	737	08:17:00	09:19:00	62	8.0		8.0	496	496	4.5	194	0.002	<0.01
186971-84-3	On treeline, West perimeter adjacent DCU	720	1846	08:20:00	09:20:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-84-4	On treeline, West perimeter adjacent turning point	721	1846	08:23:00	09:23:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-84-5	On South perimeter	778	1848	08:26:00	09:26:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-84-6	On playing fields, East perimeter adjacent picking zone	716	1737	09:59:00	10:59:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-84-7	On playing fields, East perimeter adjacent picking zone	778	1848	10:02:00	11:02:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Personal (186971-85)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VeryaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.05 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 14th June, 2017 @ 12:43:50
Additional Photo 1	 85-1
Additional Photo 2	 85-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 85, samples 1 to 2

Test: Personal (186971-85) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-85	Wednesday, 14th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

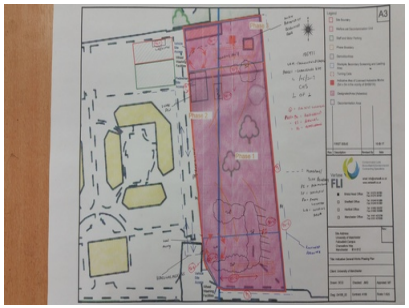
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-85-1	On excavator operator (V. Casale)	303	20	09:14:00	10:05:00	51	2.0		2.0	102	102	5.0	200	0.012	<0.05
186971-85-2	On excavator operator (B. Taylor)	303	20	11:42:00	12:16:00	34	2.0		2.0	68	68	2.5	200	0.009	<0.07

Test: Reassurance (186971-86)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 14th June, 2017 @ 15:55:41
Additional Photo 1	 86-1
Additional Photo 2	 86-2

table continued from previous page...

Additional Photo 3	 86-3
Additional Photo 4	 Sample location, activity 8, samples 1 to 3

Test: Reassurance (186971-86) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-86	Wednesday, 14th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1012	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS106	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-86-1	On loading area adjacent Knotweed skip	716	1737	14:12:00	15:12:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-86-2	On turning pint adjacent loading excavators	720	1844	14:16:00	15:16:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-86-3	On picking zone	721	1846	14:24:00	15:24:00	60	8.0						200		

Test: Background (186971-87)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 15th June, 2017 @ 11:45:40
Additional Photo 1	 87-2
Additional Photo 2	 87-3

table continued from previous page...

Additional Photo 3	 87-4
Additional Photo 4	 87-5

Test: Background (186971-87) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-87	Thursday, 15th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1005	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

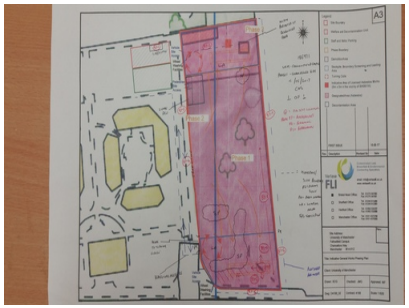
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-87-1	Field Blank	782													
186971-87-2	On North perimeter/loading area	716	1737	08:11:00	09:11:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-87-3	On treeline, West perimeter	720	1844	08:14:00	09:14:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-87-4	On treeline, West perimeter adjacent stockpile	721	1846	08:17:00	09:17:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-87-5	On South perimeter	778	1848	08:20:00	09:20:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-87-6	On playing fields, East perimeter adjacent picking zone	716	1737	09:57:00	10:58:00	61	8.0		8.0	488	488	3.0	197	0.002	<0.01
186971-87-7	On playing fields, East perimeter	720	1844	09:59:00	10:59:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-88)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.05 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 15th June, 2017 @ 12:25:24
Additional Photo 1	 Work area 88-1 (East perimeter)
Additional Photo 2	 88-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 88, samples 1 to 2

Test: Personal (186971-88) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-88	Thursday, 15th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1005	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-88-1	On Japanese Knotweed consultant (T. Hare)	303	20	09:10:00	09:54:00	44	2.0		2.0	88	88	3.0	200	0.009	<0.05
186971-88-2	On Kaefer operative (B. Lyons)	303	20	11:13:00	11:53:00	40	2.0		2.0	80	80	0.5	200	0.002	<0.06

Test: Reassurance (186971-89)

Number of samples being taken	2
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 15th June, 2017 @ 15:52:11
Additional Photo 1	 89-1
Additional Photo 2	 89-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 89, samples 1 to 2

Test: Reassurance (186971-89) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-89	Thursday, 15th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1005	1	108	100	6	22.5

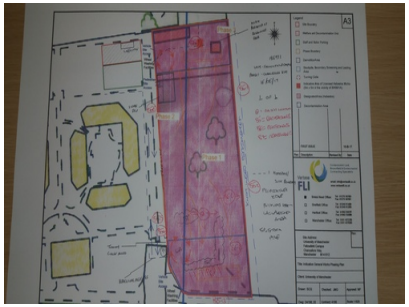
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-89-1	On picking zone	721	1846	14:21:00	15:21:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-89-2	On picking zone	778	1848	14:23:00	15:23:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01

Test: Background (186971-90)

Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 16th June, 2017 @ 13:30:45
Additional Photo 1	

Test: Background (186971-90) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-90	Friday, 16th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	MS108	100	5	22.5

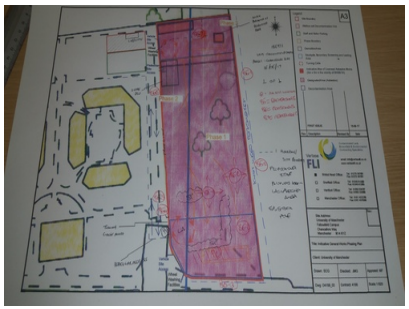
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	FM087	FM	313	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971--5	Field Blank	782													
186971-90-1	East perimeter playing field	716	1737	08:18:00	09:18:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-90-2	East perimeter playing fields	720	1844	08:20:00	09:20:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-90-3	South perimeter walk way	778	1848	08:23:00	09:23:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-90-4	West perimeter Adjacent turning circle	721	1846	08:26:00	09:26:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-90-6	West perimeter middle	720	1848	11:45:00	12:45:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-90-7	south perimeter middle	721	1846	11:47:00	12:47:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-91)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement
Asbestos Contractor	Vertase and Kaefer C+D
Client Representative or Contractor	various
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 16th June, 2017 @ 13:07:14
Additional Photo 1	

Test: Personal (186971-91) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-91	Friday, 16th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1015	1	MS108	100	5	22.5

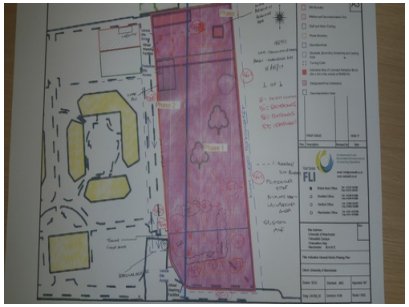
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	FM	FM319	313	SM405

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-91-1	In cab of excavator operator. (Martin lister)	303	20	07:58:00	08:58:00	60	2.0		2.0	120	120	4.0	200	0.008	<0.04
186971-91-2	B. Lyons kaefer C+D half mask hand picking cement debris	778	20	11:50:00	12:50:00	60	2.0		2.0	120	120	1.0	200	0.002	<0.04

Test: Reassurance (186971-92)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 16th June, 2017 @ 15:50:51
Additional Photo 1	

Test: Reassurance (186971-92) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-92	Friday, 16th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	16	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1015	1	MS108	100	5	22.5

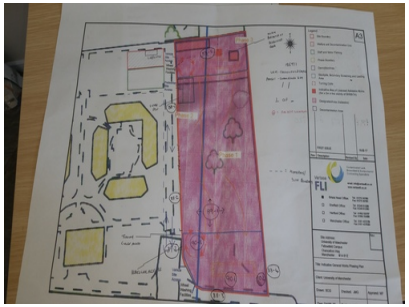
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	FM087	FM	313	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-92-1	on turning point	778	1848	13:29:00	14:29:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-92-2	picking area	721	1846	14:32:00	15:32:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-92-3	side of stock pile	720	1844	14:35:00	15:35:00	60	8.0		8.0	480	480	3.5	200	0.002	<0.01

Test: Reassurance (186971-93)

Number of samples being taken	4
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 19th June, 2017 @ 14:45:09
Additional Photo 1	

Test: Reassurance (186971-93) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-93	Monday, 19th June, 2017	Ben Strutt	Ben Strutt

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	MS341	100	5	22.5

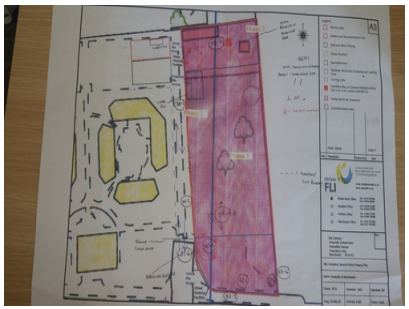
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS106	FM204	FM115	218	SM00213

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-93-1	perimeter (roadside)	303	1848	11:13:00	12:13:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-93-2	perimeter (roadside)	778	1737	11:15:00	12:15:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-93-3	perimeter (back of site)	716	1844	11:17:00	12:17:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-93-4	perimeter (back of site)	782	1846	11:19:00	12:19:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-93-5	perimeter closest to office	815	1924	12:59:00	13:59:00	60	8.0								

Test: Personal (186971-94)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	excavator driver
Asbestos Contractor	vertase
Client Representative or Contractor	various
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 19th June, 2017 @ 14:45:40
Additional Photo 1	

Test: Personal (186971-94) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-94	Monday, 19th June, 2017	Ben Strutt	Ben Strutt

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	MS341	100	5	22.5

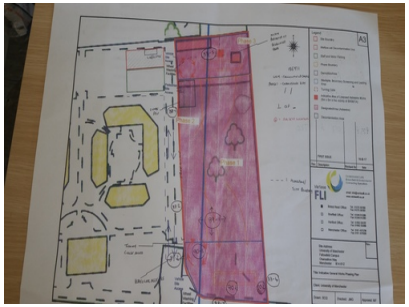
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS106	FM204	FM115	218	SM00213

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-94-1	Martin lister jcb driver inside cab	720	207	11:38:00	12:38:00	60	2.0		2.0	120	120	0.5	200	0.001	<0.04
186971-94-2	banksman Neill	808	207	13:15:00	14:00:00	45	1.0		4.0	113	113	0.5	200	0.001	<0.04

Test: Reassurance (186971-95)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Monday, 19th June, 2017 @ 14:45:28
Additional Photo 1	

Test: Reassurance (186971-95) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-95	Monday, 19th June, 2017	Ben Strutt	Ben Strutt

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	MS341	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
106	FM204	FM115	218	SM006

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-95-1	work area	782	1844	13:03:00	14:03:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-95-2	work area	716	1848	13:04:00	14:04:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-95-3	work area	303	1737	13:05:00	14:05:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-96)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 20th June, 2017 @ 13:17:59
Additional Photo 1	 96-2
Additional Photo 2	 96-3

table continued from previous page...

Additional Photo 3	 96-5
Additional Photo 4	 96-4

Test: Background (186971-96) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-96	Tuesday, 20th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	MS	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-96-1	Field Blank	782										1.0	100		
186971-96-2	On North perimeter	716	1737	10:42:00	11:42:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-96-3	On treeline, West perimeter	720	1844	10:44:00	11:44:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-96-4	On treeline, West perimeter	721	1846	10:46:00	11:46:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-96-5	On South perimeter	778	1847	10:48:00	11:48:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-96-6	On playing fields, East perimeter	814	1848	10:55:00	11:55:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-96-7	On playing fields , East perimeter	815	1849	10:57:00	11:57:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01

Test: Personal (186971-97)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 20th June, 2017 @ 14:07:55
Additional Photo 1	 97-1
Additional Photo 2	 97-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 97, samples 1 to 2

Test: Personal (186971-97) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-97	Tuesday, 20th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

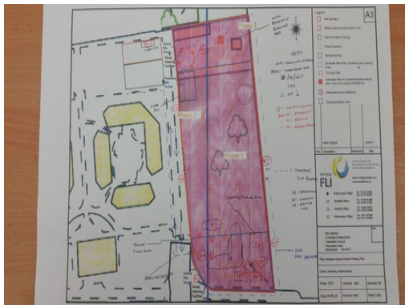
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-97-1	On excavator operator (V. Casale)	303	20	11:27:00	11:59:00	32	2.0		2.0	64	64	4.0	200	0.016	<0.07
186971-97-2	On Kaefer operative (D. Cook)	303	20	12:30:00	13:05:00	35	2.0		2.0	70	70	2.0	200	0.007	<0.07

Test: Reassurance (186971-98)

Number of samples being taken	3
Air sample results	At least 80% of air samples gave results below 0.01 fibres per cc of air
Stage Warning?	No
Additional Photo 1	 98-1
Additional Photo 2	 98-2
Additional Photo 3	 98-3

table continued from previous page...

Additional Photo 4	 Sample locations, activity 98, samples 1 to 3

Test: Reassurance (186971-98) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-98	Tuesday, 20th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1014	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-98-1	Work area, on turning point	778	1847	14:30:00	15:30:00	60	8.0		8.0	480	480	*Uncountable*			
186971-98-2	Work area, on adjacent zone	814	1848	14:36:00	15:36:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-98-3	Work area, adjacent stockpile	815	1849	14:39:00	15:39:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01

Test: Background (186971-99)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 21st June, 2017 @ 10:07:15
Additional Photo 1	 99-2
Additional Photo 2	 99-3

table continued from previous page...

Additional Photo 3	 99-4
Additional Photo 4	 99-5

Test: Background (186971-99) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-99	Wednesday, 21st June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1011	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

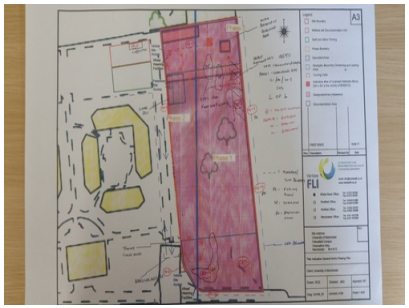
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-99-1	Field Blank	782													
186971-99-2	On North perimeter	716	1737	08:00:00	09:00:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-99-3	On treeline, West perimeter	720	1844	08:03:00	09:03:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-99-4	On treeline, West perimeter	721	1846	08:07:00	09:07:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-99-5	On South perimeter	778	1847	08:09:00	09:09:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-99-6	On playing fields, East perimeter adjacent picking zone	814	1848	08:40:00	09:40:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-99-7	On playing fields, East perimeter adjacent Knotweed excavations	815	1849	08:43:00	09:43:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-100)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.06 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 21st June, 2017 @ 12:57:28
Additional Photo 1	 100-1
Additional Photo 2	 100-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 100, samples 1 - 2

Test: Personal (186971-100) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-100	Wednesday, 21st June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1011	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

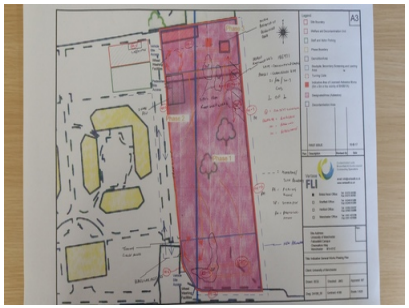
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-100-1	On Vertase Knotweed consultant (T. Hare)	303	20	11:06:00	11:42:00	36	2.0		2.0	72	72	1.5	200	0.005	<0.07
186971-100-2	On vertase excavator operator (D. Digby)	303	20	12:03:00	12:43:00	40	2.0		2.0	80	80	3.0	200	0.009	<0.06

Test: Reassurance (186971-101)

Number of samples being taken	3
Air sample results	All reassurance air samples gave results below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Wednesday, 21st June, 2017 @ 15:41:46
Additional Photo 1	 101-1
Additional Photo 2	 101-2

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Additional Photo 3	 101-3
Additional Photo 4	 Sample locations, activity 101, samples 1 to 3

Test: Reassurance (186971-101) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-101	Wednesday, 21st June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1011	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-101-1	On working area in vicinity of stock pile	778	1847	13:59:00	14:59:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-101-2	On working area, adjacent Knotweed excavation	814	1878	14:02:00	15:02:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-101-3	On working area, adjacent Knotweed excavation	815	1849	14:05:00	15:05:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01

Test: Background (186971-102)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 22nd June, 2017 @ 10:33:58
Additional Photo 1	 102-2
Additional Photo 2	 102-3

table continued from previous page...

Additional Photo 3	 102-4
Additional Photo 4	 102-5

Test: Background (186971-102) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-102	Thursday, 22nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

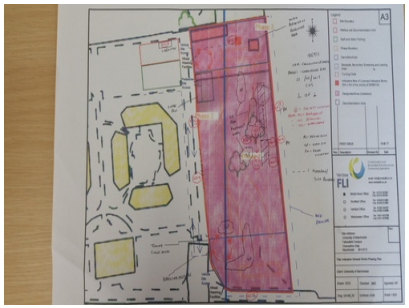
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-102-1	Field Blank	782													
186971-102-2	On North perimeter	716	1737	07:59:00	08:59:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-102-3	On treeline, West perimeter	720	1844	08:03:00	09:03:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-102-4	On Treeline, West perimeter	721	1846	08:05:00	09:05:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-102-5	On South perimeter	778	1848	08:08:00	09:08:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-102-6	On playing fields, East perimeter adjacent Knotweed works	814	1847	08:41:00	09:41:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-102-7	On playing fields, East perimeter adjacent Knotweed works	815	1849	08:45:00	09:45:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01

Test: Personal (186971-103)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	Both air samples gave results below 0.05 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 22nd June, 2017 @ 12:41:31
Additional Photo 1	 103-1
Additional Photo 2	 103-2

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Additional Photo 3	 Sample location, activity 103, samples 1 to 2

Test: Personal (186971-103) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-103	Thursday, 22nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-103-1	On Kaefer operative (S. Moseley)	303	20	09:45:00	10:23:00	38	2.0		2.0	76	76	4.0	200	0.013	<0.06
186971-103-2	On Vertase excavator operator (B. Taylor)	303	20	11:33:00	12:19:00	46	2.0		2.0	92	92	4.5	200	0.012	<0.05

Test: Reassurance (186971-104)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 22nd June, 2017 @ 15:38:20
Additional Photo 1	 104-1
Additional Photo 2	 104-2

table continued from previous page...

Additional Photo 3	 104-3
Additional Photo 4	 Sample location, activity 104, samples 1 to 3

Test: Reassurance (186971-104) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-104	Thursday, 22nd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	17	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-104-1	On work area, central stockpile area	716	1737	13:43:00	14:43:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-104-2	On work area, adjacent Knotweed excavation	720	1844	13:54:00	14:54:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-104-3	On work area adjacent Knotweed excavation	721	1846	13:56:00	14:56:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Background (186971-105)

Number of samples being taken	7
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 23rd June, 2017 @ 11:26:07
Additional Photo 1	 105-2
Additional Photo 2	 105-3

table continued from previous page...

Additional Photo 3	 105-4
Additional Photo 4	 105-5

Test: Background (186971-105) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-105	Friday, 23rd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-105-1	Field Blank	782													
186971-105-2	On North perimeter/loading area	716	1737	08:59:00	09:59:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-105-3	On Treeline, West perimeter adjacent dirty end DCU	720	1844	09:03:00	10:03:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-105-4	On treeline, West perimeter	721	1846	09:08:00	10:08:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-105-5	On South perimeter adjacent excavation	778	1848	09:10:00	10:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-105-6	On playing fields, East perimeter adjacent Knotweed excavation	814	1847	09:42:00	10:42:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-105-7	On playing fields, East perimeter adjacent Knotweed excavation	815	1849	09:46:00	10:46:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Personal (186971-106)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	VertaseFLI/Kaefer
Client Representative or Contractor	Various
Air sample results	All air samples gave results below 0.07 fibres per ccm of air.
Additional Photo 1	 106-1
Additional Photo 2	 106-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 106, samples 1 to 2

Test: Personal (186971-106) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-106		Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-106-1	On Vertase excavator operator (M. Lister)	303	20	11:02:00	11:36:00	34	2.0		2.0	68	68	1.0	200	0.004	<0.07
186971-106-2	On Vertase operative (Claudius)	303	20	12:02:00	12:34:00	32	2.0		2.0	64	64	0.5	200	0.002	<0.07

Test: Reassurance (186971-107)

Number of samples being taken	2
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 23rd June, 2017 @ 15:19:44
Additional Photo 1	 107-1
Additional Photo 2	 107-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 107, samples 1 to 2

Test: Reassurance (186971-107) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-107	Friday, 23rd June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1006	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-107-1	On work area adjacent Knotweed stockpile	720	1844	13:47:00	14:47:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-107-2	On work area in vicinity of excavators	716	1734	13:55:00	14:55:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01

Test: Background (186971-108)

Number of samples being taken	7
Air sample results	All background air samples gave results below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 29th June, 2017 @ 12:00:00
Additional Photo 1	 108-2
Additional Photo 2	 108-3

table continued from previous page...

Additional Photo 3	 108-4
Additional Photo 4	 108-5

Test: Background (186971-108) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-108	Thursday, 29th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
988	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-108-1	Field Blank	782													
186971-108-2	On playing fields, East perimeter	716	1737	08:53:00	09:53:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-108-3	On playing fields, East perimeter adjacent Knotweed works	720	1844	09:01:00	10:01:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-108-4	On South perimeter	721	1846	09:07:00	10:07:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-108-5	On North perimeter/ loading area	716	1737	10:24:00	11:24:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-108-6	On treeline, West perimeter	720	1844	10:28:00	11:28:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-108-7	On treeline, West perimeter	721	1846	10:31:00	11:31:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-109)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Stripping brownfield site and litter pick
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personalair samples gave results below 0.03 and 0.07 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 29th June, 2017 @ 13:17:11
Additional Photo 1	 109-1
Additional Photo 2	 109-2

table continued from previous page...

Additional Photo 3	 Sample location, activity 109, samples 1 - 2

Test: Personal (186971-109) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-109	Thursday, 29th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
988	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-109-1	On Kaefer operative (D. Cook)	303	20	11:15:00	12:07:00	52	3.0		3.0	156	156	3.0	200	0.005	<0.03
186971-109-2	In cab of Vertase site manager/ excavator operator (G. Roberts)	303	20	12:24:00	13:00:00	36	2.0		2.0	72	72	2.0	200	0.007	<0.07

Test: Reassurance (186971-110)

Number of samples being taken	3
Air sample results	All reassurance air samples gave results below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 29th June, 2017 @ 16:04:28
Additional Photo 1	 110-1
Additional Photo 2	 110-2

table continued from previous page...

Additional Photo 3	 110-3
Additional Photo 4	 Sample location, activity 110, samples 1 - 3

Test: Reassurance (186971-110) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-110	Thursday, 29th June, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	11	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
988	1	103	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	0087	316	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-110-1	Work area, adjacent stock pile	716	1737	14:06:00	15:06:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-110-2	Work area, adjacent stock pile	720	1844	14:10:00	15:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-110-3	Work area, on south loading area	721	1844	14:14:00	15:14:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01

Test: Background (186971-111)

Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 30th June, 2017 @ 11:46:38
Additional Photo 2	
Additional Photo 3	

table continued from previous page...

Additional Photo 4	

Test: Background (186971-111) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-111	Friday, 30th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	10	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1002	1	MS801	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971--7	Field Blank	14													
186971-111-1	North perimeter	733	03	08:23:00	09:23:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-111-2	West perimeter side of car park	602	1259	08:25:00	09:25:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-111-3	West perimeter turning circle entrance	666	1308	08:29:00	09:29:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-111-4	south perimeter middle	770	325	08:31:00	09:31:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-111-5	East perimeter	666	03	10:14:00	11:14:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-111-6	East perimeter	723	1269	10:15:00	11:15:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01

Test: Personal (186971-112)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement
Asbestos Contractor	various
Client Representative or Contractor	Various
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 30th June, 2017 @ 11:47:25
Additional Photo 1	

Test: Personal (186971-112) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-112	Friday, 30th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1002	1	MS081	100	5	22.5

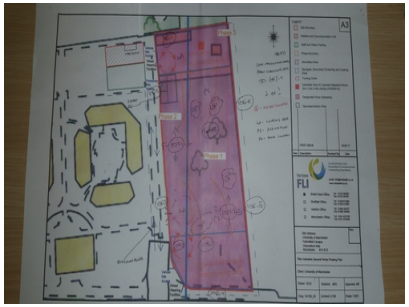
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM230	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-112-1	Claudious Kane vertace laboring in work area half mask	14	230	08:20:00	09:20:00	60	2.0		2.0	120	120	2.0	200	0.004	<0.04
186971-112-2	D. Cook Kaefer half mask picking cement	601	230	10:09:00	11:09:00	60	2.0		2.0	120	120	1.0	200	0.002	<0.04

Test: Reassurance (186971-113)

Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 30th June, 2017 @ 14:48:12
Additional Photo 1	

Test: Reassurance (186971-113) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-113	Friday, 30th June, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1002	1	MS081	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-113-1	picking area	602	03	13:12:00	14:12:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-113-2	Picking area	750	325	13:13:00	14:13:00	60	8.0		8.0	480	480	4.5	200	0.002	<0.01
186971-113-3	turning circle	666	1308	13:15:00	14:15:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Report Acknowledgement (186971-114)

Issue Certificate of Reoccupation?	No
Client Representative or Contractor	Vertase
Analyst Signature Signature Date	 Tuesday, 4th July, 2017 @ 11:11:21
Additional notes	validation sampling by Claire Lilley vertase. witnessed by Joe Chambers Lucion
Additional Photo 1	
Additional Photo 2	

table continued from previous page...

Additional Photo 3	
Additional Photo 4	

Test: Background (186971-116)

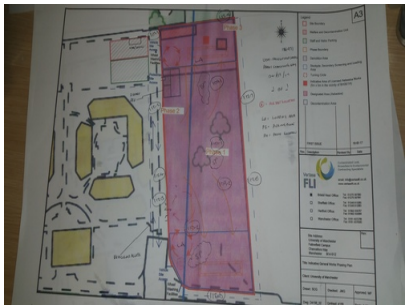
Number of samples being taken	6
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 4th July, 2017 @ 15:23:58
Additional notes	perimeter background monitoring
Additional Photo 1	
Additional Photo 2	

table continued from previous page...

Additional Photo 3	
Additional Photo 4	

Test: Background (186971-116) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-116	Tuesday, 4th July, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	3	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	MS	100	5	22.5

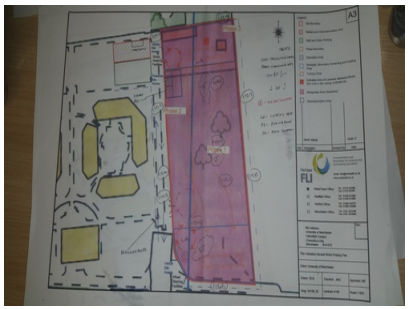
Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971--4	Field Blank	733													
186971-116-1	North corner	14	325	10:43:00	11:43:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-116-2	western perimeter	602	1269	10:45:00	11:45:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-116-3	Western perimeter	770	03	10:46:00	11:46:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-116-5	South Perimeter	14	325	13:54:00	14:54:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-116-6	East perimeter	602	03	13:58:00	14:58:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-116-7	East perimeter	770	1269	14:00:00	15:00:00	60	8.0		8.0	480	480	1.5			
186971-116-8	North perimeter	601	1308	14:03:00	15:03:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-117)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement
Asbestos Contractor	various
Client Representative or Contractor	varios
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 4th July, 2017 @ 15:27:53
Additional Photo 1	

Test: Personal (186971-117) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-117	Tuesday, 4th July, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	14	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1003	1	MS081	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM250	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-117-1	M. Lister digger driver	650	230	08:36:00	09:36:00	60	2.0		2.0	120	120	2.0	200	0.004	<0.04
186971-117-2	D. Cook kaefer C+D half face picking cement	733	230	14:09:00	15:09:00	60	2.0		2.0	120	120	1.0	200	0.002	<0.04

Test: Background (186971-118)

Number of samples being taken	7
Air sample results	All background air samples gave results below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 6th July, 2017 @ 12:06:32
Additional Photo 1	 118-2
Additional Photo 2	 118-3

table continued from previous page...

Additional Photo 3	 118-4
Additional Photo 4	 118-5

Test: Background (186971-118) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-118	Thursday, 6th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	20	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-118-1	Field Blank	782													
186971-118-2	On playing fields, East perimeter	716	1737	08:17:00	09:17:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-118-3	On playing fields, East perimeter	720	1844	08:21:00	09:21:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-118-4	On South perimeter	778	1848	08:24:00	09:24:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-118-5	On North perimeter adjacent stockpile	716	1737	09:50:00	11:01:00	71	8.0		8.0	568	568	3.0	169	0.002	<0.01
186971-118-6	On treeline, West perimeter	720	1844	09:53:00	11:03:00	70	8.0		8.0	560	560	2.0	171	0.001	<0.01
186971-118-7	On treeline, West perimeter	778	1848	09:55:00	11:04:00	69	8.0		8.0	552	552	1.0	174	0.001	<0.01

Test: Personal (186971-119)

Number of samples being taken	2
RPE used for works	Sundstrom SR100 P3 filter
Description of works / product removed	Non-licensed removal of asbestos cement/ licensed removal of contaminated soil
Asbestos Contractor	Kaefer/VertaseFLI
Client Representative or Contractor	Various
Air sample results	Both personal air samples gave results below 0.04 and 0.06 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 6th July, 2017 @ 15:44:10
Additional Photo 1	 119-1
Additional Photo 2	 119-2

table continued from previous page...

Additional Photo 3	 Sample locations, activity 119 samples 1 & 2

Test: Personal (186971-119) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-119	Thursday, 6th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	20	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

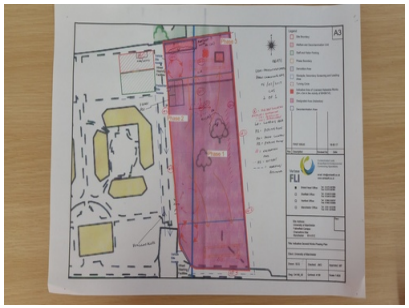
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-119-1	On Kaefer Operative (M. Booth)	303	20	11:51:00	12:29:00	38	3.0		3.0	114	114	5.0	200	0.011	<0.04
186971-119-2	On VertaseFLI site manager (G. Roberts) on excavator	303	20	14:31:00	14:56:00	25	3.0		3.0	75	75	1.0	200	0.003	<0.06

Test: Reassurance (186971-120)

Number of samples being taken	3
Air sample results	All reassurance air samples gave results below 0.01 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 6th July, 2017 @ 16:05:43
Additional Photo 1	 120-1
Additional Photo 2	 120-2

table continued from previous page...

Additional Photo 3	 120-3
Additional Photo 4	 Sample locations, activity 120, samples 1 to 3.

Test: Reassurance (186971-120) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-120	Thursday, 6th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	20	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1010	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

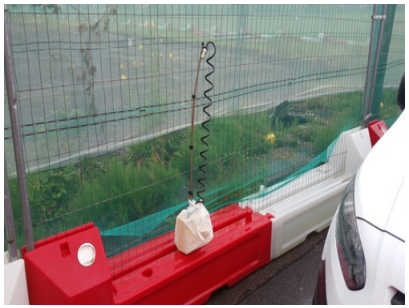
Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-120-1	On work area in vicinity of hotspot 2	716	1737	13:58:00	14:58:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-120-2	On Work area, in vicinity of hotspot 1	720	1844	14:02:00	15:02:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-120-3	On work area adjacent backfilled Knotweed excavations	778	1848	14:06:00	15:06:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Background (186971-121)

Number of samples being taken	9
Air sample results	At least 80% of air samples gave results below 0.01 fibres per cc of air and all results are below 0.015 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 11th July, 2017 @ 12:31:48
Additional Photo 1	 121-2
Additional Photo 2	 121-3

table continued from previous page...

Additional Photo 3	 121-4
Additional Photo 4	 121-5

Test: Background (186971-121) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-121	Tuesday, 11th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1002	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-121-1	Field Blank	782										0.5	100		
186971-121-2	On playing fields, East perimeter	716	1737	08:45:00	09:45:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-121-3	On playing fields, East perimeter	720	1844	08:50:00	09:50:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-121-4	On South perimeter	778	1848	08:55:00	09:55:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-121-5	On South perimeter	815	1849	08:59:00	09:59:00	60	8.0		8.0	480	480	3.0	200	0.002	<0.01
186971-121-6	On North perimeter	716	1737	10:50:00	11:50:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-121-7	On North perimeter	720	1844	10:52:00	11:52:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-121-8	On treeline, West perimeter	778	1848	10:55:00	11:55:00	60	8.0		8.0	480	480	1.5	200	0.001	<0.01
186971-121-9	On treeline, West perimeter	815	1849	10:58:00	11:58:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Reassurance (186971-122)

Number of samples being taken	3
Air sample results	At least 80% of air samples gave results below 0.01 fibres per cc of air and all results are below 0.015 fibres per ccm of air.
Stage Warning?	No
Analyst Signature Signature Date	 Tuesday, 11th July, 2017 @ 16:04:59
Additional Photo 1	 122-1
Additional Photo 2	 122-2

table continued from previous page...

Additional Photo 3	 122-3
Additional Photo 4	 Sample locations, activity 122, samples 1-3

Test: Reassurance (186971-122) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-122	Tuesday, 11th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	13	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1002	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-122-1	Work area adjacent DCU	716	1737	13:51:00	14:51:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-122-2	Work area, on stockpile	720	1844	13:56:00	14:56:00	60	8.0		8.0	480	480	*Uncountable*			
186971-122-3	On Work area	778	1848	13:59:00	14:59:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Reassurance (186971-123)

Number of samples being taken	10

Test: Reassurance (186971-123) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-123		Ben Strutt	Ben Strutt

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	18	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	MS341	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS106	FM204	FM115	218	SM00213

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-123-1	perimeter	462	1924	08:45:00	09:45:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-2	perimeter	819	1735	08:47:00	09:47:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-123-3	perimeter	304	1799	08:48:00	09:48:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-123-4	perimeter	797	1733	08:51:00	09:51:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-5	perimeter	304	1735	10:12:00	11:12:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-6	perimeter	819	1924	10:13:00	11:13:00	60	8.0		8.0	480	480	0.5	200	0.000	<0.01
186971-123-7	perimeter	462	1733	10:15:00	11:15:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-8	perimeter	797	1799	10:17:00	11:17:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-9	site entrance	819	1799	12:00:00	13:00:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-123-10	site exit	304	1924	12:04:00	13:04:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01

Test: Personal (186971-124)

Number of samples being taken	2
Client Representative or Contractor	various

Test: Personal (186971-124) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-124		Ben Strutt	Ben Strutt

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	19	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1001	1	MS341	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS106	FM204	FM115	218	SM00213

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-124-1	brandon Taylor jcb driver	462	01180	12:20:00	12:50:00	30	4.0		4.0	120	120	1.0	200	0.002	<0.04
186971-124-2	nick booth fence erecting	797	01180	13:00:00	13:20:00	20	4.0		4.0	80	80	0.5	200	0.002	<0.06

Test: Background (186971-125)

Number of samples being taken	9
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 13th July, 2017 @ 12:57:22
Additional Photo 1	 125-2
Additional Photo 2	 125-3

table continued from previous page...

Additional Photo 3	 125-4
Additional Photo 4	 125-5

Test: Background (186971-125) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-125	Thursday, 13th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	15	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1015	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971--1	Field Blank	782													
186971-125-2	On playing fields, East perimeter	716	1737	09:01:00	10:01:00	60	8.0		8.0	480	480	2.5	200	0.001	<0.01
186971-125-3	On playing fields, East perimeter	720	1844	09:04:00	10:04:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-125-4	On South perimeter	778	1848	09:08:00	10:08:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
186971-125-5	On South perimeter	815	1849	09:10:00	10:10:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-125-6	On North perimeter	716	1737	11:01:00	12:05:00	64	8.0		8.0	512	512	1.0	188	0.001	<0.01
186971-125-7	On North perimeter	720	1844	11:03:00	12:06:00	63	8.0		8.0	504	504	1.0	190	0.001	<0.01
186971-125-8	On treeline, West perimeter	778	1848	11:08:00	12:08:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
186971-125-9	On treeline, West perimeter	815	1849	11:10:00	12:10:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

Test: Reassurance (186971-126)

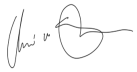
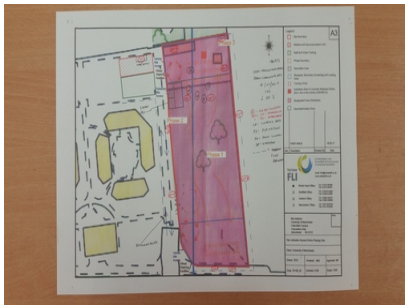
Number of samples being taken	3
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Thursday, 13th July, 2017 @ 15:28:39
Additional Photo 1	 126-1
Additional Photo 2	 126-2

table continued from previous page...

Additional Photo 3	 126-3
Additional Photo 4	 Sample locations, activity 126, samples 1 - 3

Test: Reassurance (186971-126) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
186971-126	Thursday, 13th July, 2017	Christopher Sayle	Christopher Sayle

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	22	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
1013	1	108	100	6	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS103	087	319	313	08

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
186971-126-1	Rear of stockpiles, West work area	716	1737	13:46:00	14:46:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-126-2	Adjacent stockpiles, central work area	720	1844	13:49:00	14:49:00	60	8.0		8.0	480	480	1.0	200	0.001	<0.01
186971-126-3	East work area	778	1848	13:52:00	14:52:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01

University of Manchester

Fallowfield Campus Remediation Project

Contract Completion Report

Rev A

July 2017

Vertase FLI

Contaminated Land, Brownfield & Environmental Contracting

REPORT TITLE: **Contract Completion Report**

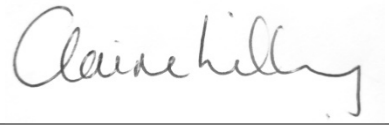
REPORT NUMBER: **1706UOM**

CLIENT NAME: **University of Manchester**

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Author	Signed	Date
Claire Lilley		24/07/17
QA Approved	**Signed**	**Date**
Mike Allsobrook		24/07/17

Revision: A		31/07/17

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Appendix G	Geotechnical Test Certificates

1.0 Introduction

1.1 Scope of Works

1.1.1 Vertase F.L.I. Limited (VertaseFLI) were employed by University of Manchester (the Client), to undertake Remedial Works including the excavation, segregation, processing and disposal of a mound (17,800m^3) of asbestos contaminated soils, and Japanese knotweed contaminated soils at the University of Manchester Fallowfield Campus. The remediation works are enabling works for a wider phase 1 development of student accommodation. The site is located off Chancellors Way, Fallowfield, Manchester, M14 6YZ.

1.1.2 A Remediation Strategy was written and issued by Hydrock in February 2017 (ref: UOM-HYD-XX-XX-RP-G-001), which explored the hazards associated with the enabling works and proposed solutions to remove the risks prior to development.

1.1.3 The three contamination risks identified by Hydrock was the presence of asbestos contaminated soils, both with loose fibres and asbestos containing materials (ACM); A large Japanese knotweed infestation both on and off site; A maintenance outbuilding containing asbestos materials.

1.1.4 The site was formerly part of an athletics ground including a stadium, velodrome and other associated structures. The complex was demolished in 1994. The site is assumed to have been used to deposit demolition wastes not removed from the site in 1994.

1.1.5 This Contract Completion Report contains details of the remediation works undertaken to remove the risks mentioned in 1.1.3 and provides information for including in the Health and Safety File for the site.

1.2 Site Setting

1.2.1 The site is located within the University of Manchester's (UoM) Fallowfield Campus, along the northern part of Chancellors Way. The site is bound by sports fields to the east, Chancellors Way and Student accommodation to the West, woodland to the north and to the south by the Armitage Centre sports complex.

1.2.2 The site comprised a rectangular mound of soil measuring approximately 110m on north south axis, 60m east to west and approximately 3.5m higher than the surrounding ground level.

1.2.3 The northern end of the site comprised a single storey maintenance outbuilding constructed of precast concrete walls and metal roofing, and an area of hardstanding concrete and compacted stone.

1.3 Aims and Objectives

1.3.1 The Remediation Strategy detailed the works to be undertaken and comprised the following aims and objectives:

i) Controlled excavation and removal of Japanese knotweed vegetation and Japanese knotweed contaminated soils.

ii) General vegetation clearance

iii) Licenced asbestos removal of asbestos containing materials from the former maintenance building and subsequent demolition of the building.

iv) Controlled excavation and processing of asbestos contaminated soils including handpicking of bulk ACM's.

v) Excavation of soils to agreed formation levels.

vi) Loading asbestos containing soils (ACS) to road waggons and offsite disposal to suitable licenced facilities.

vii) Excavation of hotspot of hazardous asbestos contamination identified within site investigation location BH6/1A.

viii) Reinstatement and compaction any excavations required to go deeper than the finished formation level to chase out Japanese Knotweed rhizomes.

ix) Import clean fill material as required to achieve final finished level.

x) Validate soils at formation level for asbestos.

xi) Validation of Japanese knotweed excavations and final formation to ensure that no plant matter remains within the site.

xii) Where deemed appropriate install Japanese knotweed barriers along the boundary of the site to prevent the re infestation of soils within the site from off-site sources.

2.0 Site Establishment and Organisation

2.1 Duration of the works

2.1.1 VertaseFLI mobilised to site on the 24th April 2017 and completed the works on 28th July 2017.

2.2 Welfare and equipment

2.2.1 Upon commencement, VertaesFLI mobilised all necessary plant and equipment for the completion of the site works.

2.2.2 Main items comprised:

- Welfare facilities including two site offices, canteen, drying room, decontamination unit and toilet facilities.
- 2 number Storage containers.
- 3 number 20 tonne tracked excavator.
- 1 number 35 tonne tracked excavator.
- 1 number 25 tonne automatic dumpers.
- 1 number 9 tonne forward tipping dumper
- Two Jet Washes
- Two Dust suppression units
- 1 tonne sack loading hopper.

2.3 Site access

2.3.1 The site compound was located on the Richmond Park carpark adjacent to the works area. The compound was securely fence as part of the wider site which also included the top part of Chancellor's way adjacent to the works area. Hoarding was positioned between the roadway and residential accommodation on Chancellors way to create a solid barrier, visual and noise screen from the site works and traffic.

2.3.2 The works area comprised an established access in the north west of the site. A secondary access was constructed in the south west of the site.

3.0 Vegetation Clearance

3.1 General

3.1.1 The site was heavily vegetated with general scrub, self-seeded trees and a well-established large Japanese knotweed infestation. A survey of the Japanese knotweed had been undertaken by Japanese Knotweed Solutions Ltd (JKSL) in 2015 see drawing JK15008680001Rev A Appendix A.

3.1.2 Tree felling had been undertaken prior to the occupation of site by VFLI, however numerous tree stumps were present over the mound.

3.1.3 VertaseFLI's Japanese knotweed specialist carried out a survey of the vegetation to identify the areas impacted by JK prior to the commencement of works. All impacted areas were demarked to maintain careful control of the plant material and prevent spreading.

3.1.4 The crowns and near surface material was carefully stripped using a dedicated excavator. The plant material was gathered and placed within a dedicated skip for disposal at a facility licenced to receive Japanese knotweed waste.

3.1.5 Following removal of the plant crowns and above ground vegetation the areas remained marked to prevent earthmoving plant and personnel entering the areas and spreading JK impacted soils beneath the above ground vegetative growth.

3.1.6 The remainder of the site was cleared of above ground vegetative material and remnant tree stumps and placed into skips for offsite disposal.

4.0 Asbestos Contaminated Soils

4.1 General Methodology

4.1.1 A number of site investigations undertaken by Coffey and Environmental Essentials on the site had found asbestos containing material within the soils confirmed by laboratory testing.

4.1.2 Given the wide spread of ACM and fibres identified during the various site investigations all soils above the formation level were considered to have the potential to contain asbestos and all soils above the natural formation were considered to potentially contain asbestos fibres as they principally appeared to comprise the same madeground material.

4.1.3 All works were undertaken in accordance with VertaseFLI Asbestos Plan of Works (POW) and Asbestos Risk Assessments (ARA) Revision B. This live document was reviewed regularly during the works, all personnel working within the site was inducted into the POW and ARA.

4.1.4 Soils were excavated using a 20T excavator and placed in 200mm layers, each layer was inspected for asbestos containing materials by asbestos specialist contactors Keafer. Keafer operatives hand-picked any ACM from the soils which was generally cement bound fragments and them into red asbestos bags. Each bag weighed less than 20Kg, was secured at the neck and double bagged using a clear plastic asbestos bag prior to placement within a designated asbestos skip.

4.1.5 This process was undertaken for the original 17,800m^3 of soils to achieve an excavation formation level of 44.8mAOD. A further 1,584m^3 of soils were excavated and processed where the formation level was reduced in the central and northern parts of the site to achieve a level formation at 44.6mAOD and a sloping formation at 44.6mAOD-43.7mAOD in the north of the site as shown on BDP dwg P1A 00(9-)Z0 L214 (Appendix A)

4.1.6 The formation level was validated in accordance with Hydrock remediation strategy. Validation results are reported in section 9.0 of this report.

4.1.7 All processed soils were loaded into 8 wheeled road tippers and sent of site for disposal at non hazardous landfills. The duty of care notices associated with this disposal are presented in Appendix C.

4.2 Hotspot BH6/1A

4.2.1 The exception to the process described above was the excavation of the area around site investigation location BH6/1A where asbestos concentrations of 1.888%w/w had been quantified and identified as asbestos lagging material.

4.2.2 This area of the site was isolated and the soils excavated in bulk under controlled conditions as per the POW directly to large tonne sacks for off-site disposal to a hazardous landfill.

4.2.3 During the works the surface of the soils were slowly scraped and loaded to bags. As the surface was scraped it became clear where the borehole had been drilled as it had been backfilled with natural reddish brown clay which stood out within the black made ground Appendix B Photo log.

4.2.4 The area around the borehole was excavated until the natural clay formation was encountered. A full watching brief was undertaken during the works by Keafer representative. No evidence of bulk lagging products were observed during the controlled excavation, however all impacted soils were removed from the location.

4.3 Unexpected Asbestos

4.3.1 During the main asbestos removal works small localised pockets of asbestos were encountered throughout the mound and were dealt with in accordance with the POW, however a variation to this was a particularly dense 'nest' of asbestos cement fragments was encountered in the north western part of the site at formation level of 44.5mAOD.

4.3.2 Prior to dealing with this variation the Plan of Works and other H&S method statements were reviewed in light of the change of material.

4.3.3 This area was over excavated to natural clay formation and the soils processed to remove asbestos cement sheeting. Due to the density of the cement fragments the Asbestos contaminated soil form this area was spread and handpicked twice to ensure that all pieces of asbestos containing materials were recovered and placed within sealed bags for disposal.

4.3.4 The remaining soils were loaded to waggons for offsite disposal to landfill in accordance with the standard methodology.

5.0 Japanese Knotweed Contaminated Soils

5.1 General

5.1.1 As stated above the site contained a large Japanese Knotweed infestation as shown on Japanese Knotweed Solutions Limited's drawing JK15-0868-001 Rev1.

5.1.2 VertaseFLI carried out an independent survey of the extent of the Japanese knotweed on site prior to commencing works. The majority of the stands were located along the eastern boundary however some isolated stands were identified within the main body of the mound and along the southern boundary. VertaseFLI also carried out offsite assessment of Japanese knotweed to determine the potential for re-infestation of the site.

5.1.3 Japanese Knotweed was identified approximately 0.5m beyond the northern boundary and immediately adjacent to the eastern boundary, in land owned by Manchester Grammar School utilised as sports fields and rough ground. The eastern boundary continues southward into land owned by UoM in which Japanese knotweed was also present beyond the site boundary by approximately 2m.

5.1.4 Whilst excavating knotweed along the southern boundary it was also determined that rhizomes were present beneath the adjacent roadway and could not be excavated without damage to the footpath and buried services located within the footpath (Electrical and fibre optic).

5.2 Excavation of Japanese Knotweed Contaminated Soils

5.2.1 Section 3.0 explains how the above ground vegetative matter including Japanese Knotweed crowns were removed from site.

5.2.2 Based on the visible crowns and investigative drawings selective excavation of JK impacted soils was undertaken and supervised by VFLI Japanese knotweed specialist to target below ground plant matter, rhizomes of Japanese Knotweed. The rhizomes and associated contaminated soils were carefully stockpiled on site and disposed of at a suitably licenced facility. Large rhizomes were handpicked and disposed of in a dedicated skip.

5.2.3 Excavators and any other hand tools and equipment used within the Japanese Knotweed excavation areas were dedicated to the task. If they were taken from the dedicated area they were washed thoroughly to prevent cross contamination.

5.2.4 Due to the presence of asbestos within the soils that the Japanese Knotweed was growing in, all works fell under the asbestos POW and ARA as described in section 4.0 above. All personnel working on the site used the boot wash and decontamination unit when entering and leaving the site thereby making the risk of cross contamination from both Japanese Knotweed and Asbestos negligible.

5.3 Additional works

5.3.1 Where the Japanese Knotweed infestation was present beyond the eastern site boundary in both Manchester Grammar School and UoM land the initial design was to install an impermeable JK barrier similar to the northern and southern boundaries. However this barrier would add further ground constraints to the foundation design of the future development, a further solutions was sought.

5.3.2 VertaseFLI proposed to investigate the extent of any additional works to eradicate through excavation all Japanese Knotweed impacted soils along this boundary therefore removing the risk of re infestation from beyond the site boundary. The works were undertaken and the findings are presented in Letter report CL 1706UOM-JK Investigation 001 issued on the 12th June 2017.

5.3.3 The concluding proposal of this letter was to excavate Japanese Knotweed Rhizomes to their full extent beyond the eastern boundary. This was approved by the client (UoM) and with approval from Manchester Grammar School the works were undertaken by VertaseFLI in accordance with the existing remediation method statement.

5.3.4 A detailed inspection of the excavations was made by VeratseFLI Japanese Knotweed Specialist to ensure that all Rhizomes had been removed. A photo log of these works including validation photographic evidence are presented in Appendix B.

6.0 Backfilling and Importation of Fill Material

6.1 Import of clean fill

6.1.1 The revised final formation levels as shown on BDP drawing P1A 00(9-) Z0 L214 (Appendix A) mitigated any requirement to import fill material to meet the final formation level.

6.1.2 The only areas that required backfill were where excavation was undertaken deeper beyond the final formation levels to chase out and eradicate Japanese Knotweed rhizomes.

6.1.3 The majority of the Japanese knotweed impacted soil was contained within the original raised mound of soil to be removed. The exceptions to this was soils near to the edges of the mound where Japanese Knotweed rhizomes had impacted both the mound material and made ground or natural soils beneath.

6.1.4 Excavations below formation level were therefore limited to two isolated areas in the south of the site, a larger portion along the eastern boundary and the northern boundary.

6.1.5 The exact dimensions of these excavation were surveyed and are presented on drawing D1706-10 presented in Appendix A.

6.1.6 A clean clay fill material was imported to site under a waste exemption ref WEX100775. A volume of 1000m^3 of clay was imported to site, the soils were tested prior to and on importation for a standard suite of analysis. All samples were not found to contain concentrations above S4UL or C4SL concentrations for residential use without home grown produce. Laboratory certificates are presented in Appendix E.

It was agreed in a memorandum from Hydrock that imported material would be tested at a frequency of 1 sample per 250m^3 of import or a minimum of 4 samples per material type.

6.1.7 Where removal of Japanese knotweed has extended into Manchester Grammar School land in the northern part of the eastern boundary a small volume 20m^3 of topsoil was imported and placed to reinstate the edge of the playing field. This material was similarly testing prior to and on import to site. The results of this testing is presented in Appendix E, all samples were found not to contain concentrations

above S4UL or C4SL concentrations for residential use without home grown produce and were therefore deemed suitable for use.

6.2 Post Remediation Inspections

6.2.1 Vertase FLI will inspect the site during the beginning and mid growing season within 2018 to further validate that all Japanese Knotweed has been removed from the site.

7.0 Japanese Knotweed Barrier

7.1 General

7.1.1 Japanese knotweed had been identified at multiple locations outside of the site boundary to the north and rhizomes are known to be present in a small area beneath the footpath beyond the south of the site.

7.1.2 To prevent the re-infestation of the site barriers have been placed at both locations preventing the spread of rhizomes into the remediated area from these offsite sources.

7.2 Design

7.2.1 The Japanese Knotweed barrier design comprises a light weight steel vertical sheet pile wall. It was be placed to an average depth of 3m bgl and a 100mm upstanding will remain above ground to prevent the accumulation of surface soils and litter above ground which could provide a growth pathway for rhizome migration.

7.2.2 This 100mm upstanding should be incorporated in the landscape design through a capping or kerbing scheme.

7.2.3 The sheet pile wall design drawing is presented in Appendix A. The exact location of the wall onsite is shown on the as built drawing D1706 11 also presented within appendix A.

7.3 Cross contamination

7.3.1 Viable Japanese Knotweed plants and associated Rhizomes are present to the north and south of the site and should be isolated from the remediated works.

7.3.2 During the next phase of works strict control of the northern and southern boundary must be maintained to prevent contact with the offsite sources of Japanese knotweed and transfer to the remediated soils within the site. This control should be in place particularly during the movement of temporary fencing or erecting of permanent fencing.

8.0 Demolition of Building

8.1 General

8.1.1 The maintenance building located in the north of the site comprised a single skin prefabricated concrete building with metal sheeting roof and several internal rooms partitioned with wood false walls.

8.1.2 A pre demolition asbestos survey of the building had been undertaken by Lucion Services Ltd (Job Ref 149402) in February 2017 on the building prior to VFLI's works. The survey identified four materials containing asbestos that required licenced removal prior to demolition.

- Debris to framework above a door containing amosite and chrysotile fibres
- A redundant fire door containing chrysotile insulation board
- Debris to timber frameworks containing asbestos cement
- External walls sealed with asbestos containing chrysotile bituminous product.

8.2 Licenced Removal of Asbestos

8.2.1 VertaseFLI employed a licensed asbestos removal company Keafer for the controlled removal of these products from the building prior to demolition.

8.2.2 This work was undertaken between the 03 May and 07 May 2017 under an ASB5 notification of Asbestos works.

8.2.3 No other licensed or non-licensed asbestos materials were identified during the works.

8.2.4 Following completion of the works an air clearance test was undertaken in the building by Lucion Services Ltd and a reoccupation certificate issued to VertaseFLI. Appendix F

8.3 Demolition

8.3.1 The building was stripped of internal walls and other materials that could be removed by hand prior to demolition with mechanical plant.

8.3.2 All strip lighting was removed and the florescent tubes disposed of as hazardous waste to a licenced facility in accordance with WEEE regulations 2013.

8.3.3 The building was carefully knocked down using a 35T excavator with mechanical jaw attachment. All metal, concrete and wood from the building was carefully segregated, sorted into skips and disposed of the suitable facilities. Any remaining materials were disposed of as general waste.

8.3.4 Photographs of the demolition works are presented within a photo log Appendix B

9.0 Validation

9.1 General

9.1.1 Validation samples were collected in accordance with Hydrock's approved Remediation Strategy. Samples were recovered from trial pits within the final formation layer on a 25m grid pattern.

9.1.2 Each trial pit was extended to the natural clay formation and a composite sample of the overlying madeground taken for validation that asbestos contaminated soils had been removed.

9.1.3 Samples were collected from each trial pit and dispatched to I2 Analytical Limited (Laboratories) for analysis of Asbestos Identification and Quantification for positive tests. The location of the validation samples are shown on sketch SK1706 006 Appendix A

9.1.4 All samples VS01-VS19 returned a result of non-detect or did not contain asbestos fibres exceeding the limit set by Hydrock in their remeidation stategy of <0.001% w/w. The only exception to this was VS02 which contained 0.016% w/w of Chrysotile asbestos fibres.

9.1.5 An area 5mx5m was excavated in the location of VS02 from formation level to natural ground. Four additional validation trial pits were excavated within the 25m grid of VS02 to increase confidence that the detection of asbestos within this sample was an isolated instance. All other sample (VS02.1, VS02.2, VS02.3 and VS02.4) did not contain asbestos above the limit of detection <0.001% w/w. Results are provided in Appendix D.

10.0 Earthworks

10.1 General

10.1.1 In areas where excavation below the specified formation layer was required to chase Japanese knotweed rhizome impacted soils, the formation level was reinstated using a clay import. The placement, compaction and geotechnical validation of this material is described below.

10.2 Laboratory Testing

10.2.1 Laboratory testing was undertaken on samples of each material type to establish the following properties

- Particle size distribution
- Moisture/dry density relationship
- Particle density
- Atterberg limits (liquid limit, plastic limit and plasticity index) for cohesive materials

10.2.2 Sampling frequencies are compliant with the requirements of the Specification for Earthworks

10.2.3 Three samples were tested and were classified as material type 2A & 2B. Test certificates are presented within Appendix G

10.3 Compaction Method

10.3.1 Prior to backfilling the formation layer at the base of the fill area was proof rolled and assessed for potential soft spots.

10.3.2 Compaction plant used was a Self-propelled vibratory tamping drum – mass per meter width of roll = 3412 kg/m

10.4 Compaction requirement for formation level

10.4.1 SHW Series 600 was used as a basis to specify the maximum layer thickness of the compacted materials (D) and the minimum number of passes (N) required by the compaction plant.

10.4.2 The compaction requirements (D and N) were determined on the basis of the material classification and the mass per metre width of roll of

the compaction plant. These requirements, taken from SHW Series 600.

Table 10.1. Compaction requirements for SHW Series 600 material classifications

Compaction equipment	SHW Series 600 Compaction Requirements	
	Method 1 Compaction (Class 2A)	, Method 2 Compaction (Class 2B)
Self-propelled vibratory tamping drum	200mm layer 9 passes	200mm layer 9 passes

10.5 Weather Conditions

10.5.1 The majority of backfilling was undertaken in relatively dry weather conditions. Exposed backfilled layers were proof rolled at the end of each day or immediately prior to a rainfall event to protect the reinstated layer from significant water ingress.

10.6 In-Situ Geotechnical Verification

10.6.1 Verification criteria for engineered fill is stated within the Earthworks Specification and states a safe bearing capacity for the final formation of equal to or greater than 50KN/m^2 (50Kpa).

10.6.2 Testing to confirm compliance with these criteria was undertaken at frequencies stipulated in the Earthworks Specification. In-situ tests were spaced to achieve good vertical coverage throughout the fill profile from the reduced formation to the final formation

10.7 Plate Bearing Test Results at final formation level.

10.7.1 The bearing capacity of the reinstated materials was verified using plate load testing 1 test per 2000m^2 on the formation layer and 1 per 500m^2 in areas where fill has been placed beneath the formation layer. Plate load tests were undertaken over a loading cycle applied pressure increments of 40kN/m^2 up to a maximum of 200kN/m^2 (i.e. four times the required bearing capacity of the reinstated materials).

10.7.2 Certificates of analysis for the plate load tests undertaken are provided in Appendix G. A summary of settlement results for the plate load tests is provided in **Error! Reference source not found.**. All plate load

tests demonstrated compliance with the required allowable bearing capacity for the reinstated fill of 50kN/m^2.

Table 10.2 Plate Bearing Test Results Summary

Test ID	Test Location	Settlement at 200KN/m^2 (mm)	Residual Plastic Settlement on Completion of the test (mm)
PBT 1	Backfilled area	5.27	2.38
PBT 2	Backfilled area	6.25	1.01
PBT 3	Backfilled area	4.88	0.90
PBT 4	Formation Level	3.00	0.30
PBT 5	Formation Level	4.65	0.38
PBT 6	Formation Level	5.39	0.43
PBT 7	Formation Level	3.44	0.93
PBT 8	Formation Level	3.97	0.08
PBT 9	Formation Level	5.79	0.75
PBT 10	Formation Level	5.98	1.34
Notes: All test confirm compliance with a safe bearing capacity of 50kN/m^2			

10.7.3 All test certificates are presented in Appendix G

10.7.4 The location of plate loading tests are shown on Sketch SK1706 010 shown within Appendix A.

11.0 Utilities

11.1 Water

11.1.1 A redundant 8inch water supply pipe was located along the eastern boundary of the site.

11.1.2 Water supply remains live in the north western corner of the site at the point it previously entered the former maintenance building.

11.2 Electric

11.2.1 Electrical supply was disconnected form the maintenance building prior to demolition works.

11.2.2 Electrical cables were detected within the grass verge between chancellors Way and the remediation site along both the western site boundary and beneath the pavement on the southern site boundary.

11.3 Gas

11.3.1 Gas supply to the maintenance building was disconnected prior to commencement of the demolition works.

11.4 Drainage

- A surface and foul drain were identified within the grass verge to the west of the site and beneath Chancellors Way.
- Numerous historic clay land drains are present beneath the site, some identified during trial pitting works.

12.0 Environmental Monitoring

12.1 General

12.1.1 Remediation boundary monitoring was undertaken throughout the works to ensure that the works did not impact the wider environment.

12.1.2 The monitoring was undertaken daily for noise, dust and odour generation during the works.

12.1.3 If any unacceptable conditions were identified at a boundary location the works were adjusted to mitigate any off site emissions.

12.2 Noise monitoring

12.2.1 Boundary monitoring of noise levels found that the highest noise levels were during the breaking of concrete, however were always below 80dB.

12.3 Dust

12.3.1 There were no visual dust emissions during the work at the boundary. Ground conditions were damp for periods throughout the works which helped to suppress any potential dust generation. Operatives remained vigilant of the potential for dust generation and the use of jet washes and dust suppression units were employed when surface soils began to dry.

12.4 Air Monitoring

12.4.1 Air monitoring both on the boundary and on individual onsite was independently undertaken by Lucion Services Ltd on behalf of Hydrock. There were no detections of airborne asbestos fibres above the control limit of 0.1f/ml for the duration of the works. These results will be formerly presented by Hydrock.

12.5 Odours

12.5.1 No odours were detected at the site boundary.

Appendix A
Drawings



DISCLAIMER :
SURVEY BASED ON VISUAL INSPECTION OF SURFACE GROWTH. JKSL HOLD NO LIABILITY FOR AREAS NOT IDENTIFIED IN INITIAL INVESTIGATION WORKS. CONTINUED MONITORING OF SITE IS RECOMMENDED

AREA OF JAPANESE KNOTWEED

LIKELY EXTENT OF RHIZOME WITHIN DEVELOPMENT BOUNDARY

N

SURVEY ORIENTATED TO MAGNETIC NORTH

Rev	Description	Date	By	Chk

Client
University of Manchester

Contract
Fallowfield Campus, Manchester

Drawing
Japanese Knotweed inspection location plan

Japanese Knotweed Solutions

Drawing No.	JK15-0868-001	Revision	Rev A
Scales	NTS	Date	27-11-2015
Drawn	JEH	Checked	AD

REFER TO DRAWING NOTES FOR TREES BOUNDARY

Proposed Formation Level on completion of Mound removal

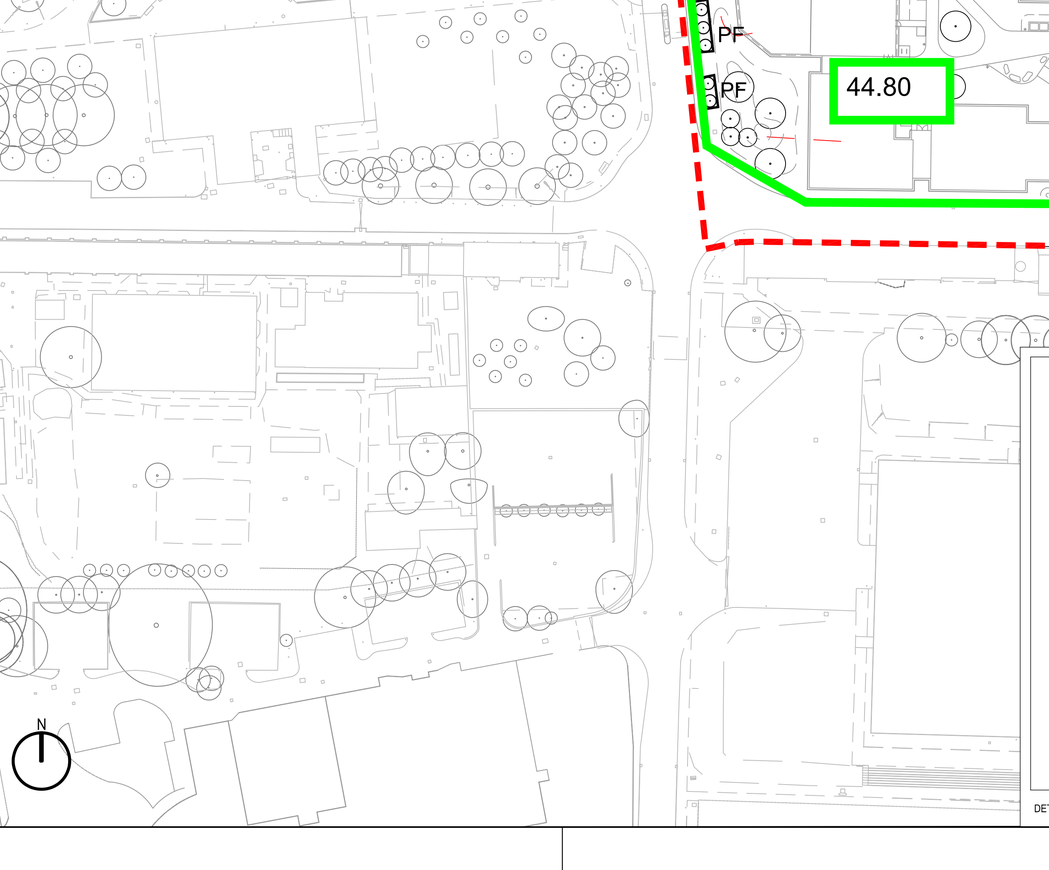
44.80

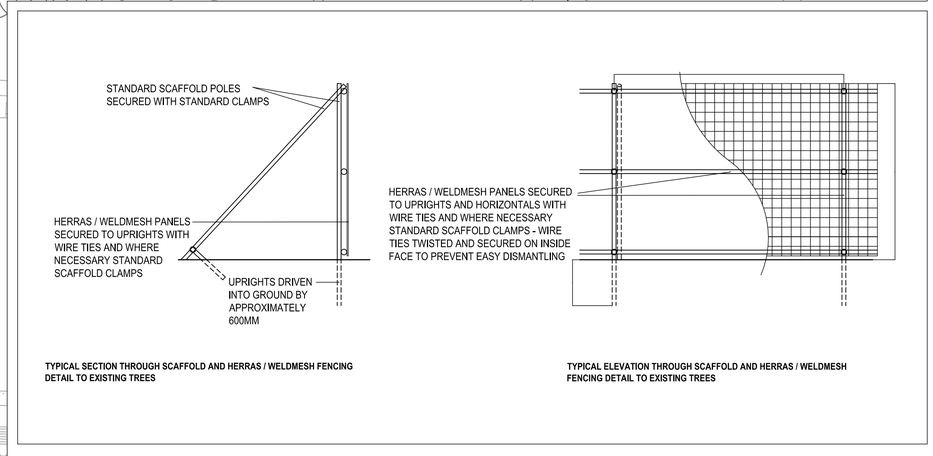
Grades from 43.70 to 44.60

44.60

44.80

PF





TYPICAL SECTION THROUGH SCAFFOLD AND HERRAS / WELDMESH FENCING DETAIL TO EXISTING TREES

TYPICAL ELEVATION THROUGH SCAFFOLD AND HERRAS / WELDMESH FENCING DETAIL TO EXISTING TREES

DETAILS ABOVE FOR ILLUSTRATIVE PURPOSES - NOT TO SCALE

KEY

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED AND PROTECTED IN ACCORDANCE WITH BS:5837 - 2012
- EXISTING TREE / GROUP OF TREES TO BE REMOVED DUE TO DEVELOPMENT OR CONDITION
- PROPOSED TREE - REFER TO SPECIFICATION SECTION Q31 AND LANDSCAPE DRAWINGS: P1A_00_(9-)_Z0_L_257 P1A_00_(9-)_Z0_L_258
- PF PROTECTIVE HERRAS FENCING TO BS5837:2012 TO BE ERECTED PRIOR TO CONSTRUCTION WORKS COMMENCING AND TO BE MAINTAINED THROUGHOUT CONSTRUCTION PERIOD UNTIL A TIME WHEN WORKS ARE REQUIRED IMMEDIATELY ADJACENT TO OR BENEATH TREE(S)

BUILDING DESIGN PARTNERSHIP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.

ALL DIMENSIONS SHOULD BE CHECKED ON SITE.

DO NOT SCALE FROM THIS DRAWING.

ANY DRAWING ERRORS OR DIVERGENCES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW.

NOTES

TO BE READ IN CONJUNCTION WITH DRAWINGS:

P1A_00_(9-)_Z0_L_200 - PHASE 1 LANDSCAPE MASTERPLAN
P1A_00_(9-)_Z0_L_207 - PLANTING STRATEGY PLAN
P1A_00_(9-)_Z0_L_241 - GENERAL ARRANGEMENT 1 OF 5
P1A_00_(9-)_Z0_L_242 - GENERAL ARRANGEMENT 2 OF 5
P1A_00_(9-)_Z0_L_243 - GENERAL ARRANGEMENT 3 OF 5
P1A_00_(9-)_Z0_L_244 - GENERAL ARRANGEMENT 4 OF 5
P1A_00_(9-)_Z0_L_245 - GENERAL ARRANGEMENT 5 OF 5
P1A_00_(9-)_Z0_L_251 - PLANTING PLAN 1 OF 5
P1A_00_(9-)_Z0_L_252 - PLANTING PLAN 2 OF 5
P1A_00_(9-)_Z0_L_253 - PLANTING PLAN 3 OF 5
P1A_00_(9-)_Z0_L_254 - PLANTING PLAN 4 OF 5
P1A_00_(9-)_Z0_L_255 - PLANTING PLAN 5 OF 5
P1A_00_(9-)_Z0_L_257 - TREE PLANTING PLAN
P1A_00_(9-)_Z0_L_271 - PROPOSED LEVELS PLAN 1 OF 5
P1A_00_(9-)_Z0_L_272 - PROPOSED LEVELS PLAN 2 OF 5
P1A_00_(9-)_Z0_L_273 - PROPOSED LEVELS PLAN 3 OF 5
P1A_00_(9-)_Z0_L_274 - PROPOSED LEVELS PLAN 4 OF 5
P1A_00_(9-)_Z0_L_275 - PROPOSED LEVELS PLAN 5 OF 5
P1A_00_(9-)_Z0_L_301 - LANDSCAPE SECTIONS
P00_00_(9-)_Z0_L_601 - TYPICAL CONSTRUCTION DETAILS
P00_00_(9-)_Z0_L_611 - TYPICAL TREE PIT DETAILS

REFER TO EXTERNAL WORKS SPECIFICATION

NOTES:
1. IMPACT OF DEVELOPMENT ON EXISTING TREES BEYOND SITE BOUNDARY TO BE ASSESSED BY ARBORICULTURALIST AT NEXT STAGE
2. REFER TO ARBORICULTURAL REPORT FOR DETAILS OF EXISTING TREES. DOCUMENT REFERENCE: 'MURRAY TREE CONSULTANCY PRELIMINARY TREE REPORT. 28TH FEBRUARY 2015'

REVISION	DESCRIPTION	DRAWN	CHECKED	DATE
P01	ADDITIONAL DRAWING NOTE ADDED. ISSUED FOR STAGE 2	SLB	JF	10.11.16
	FIRST ISSUE			

KEY PLAN

CLIENT

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PROJECT TITLE: OWENS PARK, FALLOWFIELD CAMPUS REDEVELOPMENT

PROJECT NUMBER: P2006665

DRAWING TITLE: TREE CONSTRAINTS PLAN

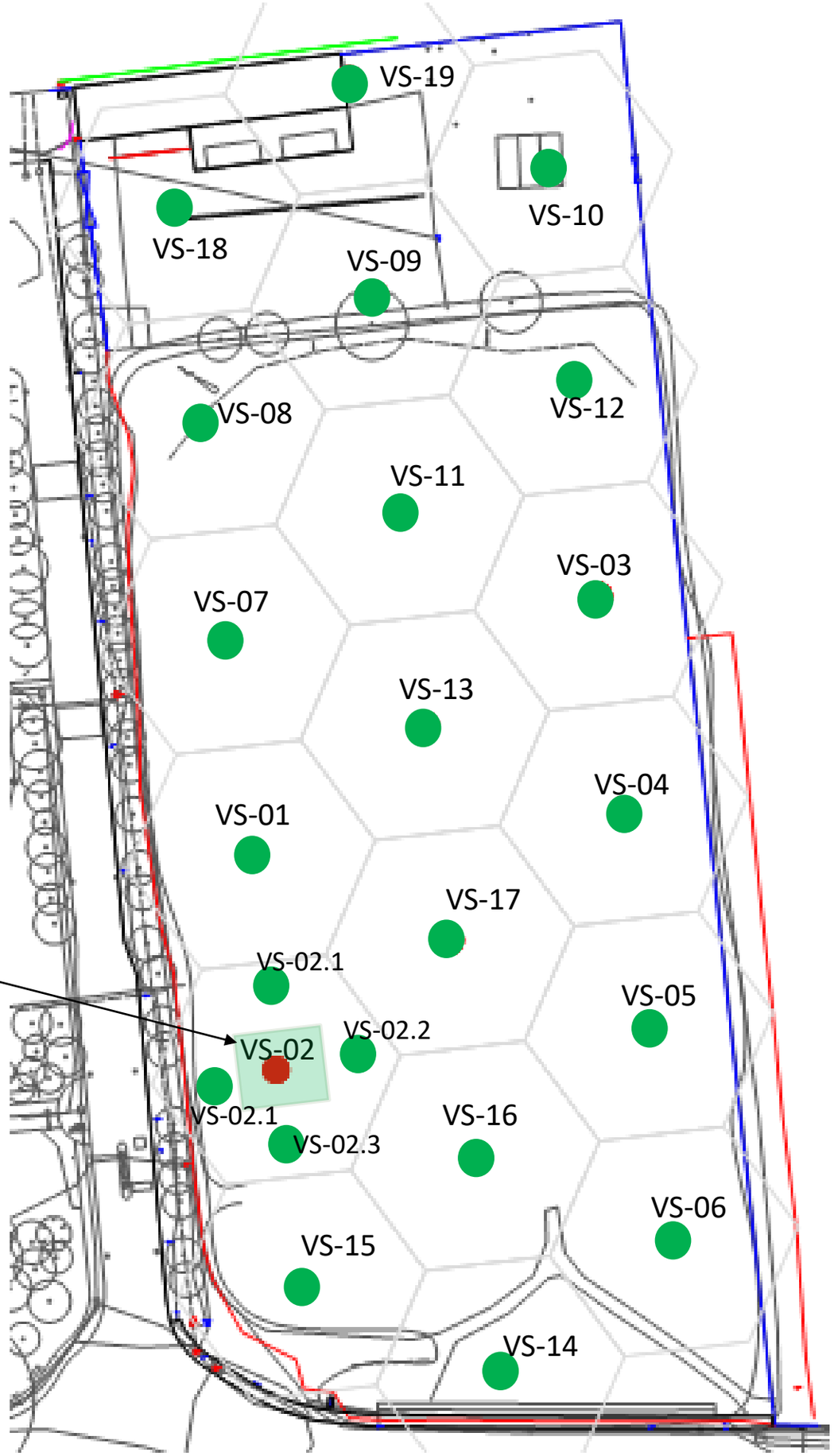
SCALE: @ A1 1:500

DATE: OCT '16

DRAWING NO.: P1A_00_(9-)_Z0_L_214

REVISION: P01

A4



5x5m excavation of soils where VS02 failed. Additional testing undertaken around failure.

Key

- Sample Pass <0.001%w/w
- Sample Pending
- Sample Fail >0.001%w/w

Rev	Description	Revised by	Date

Vertase FLI

□ Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

■ Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

Site Address:

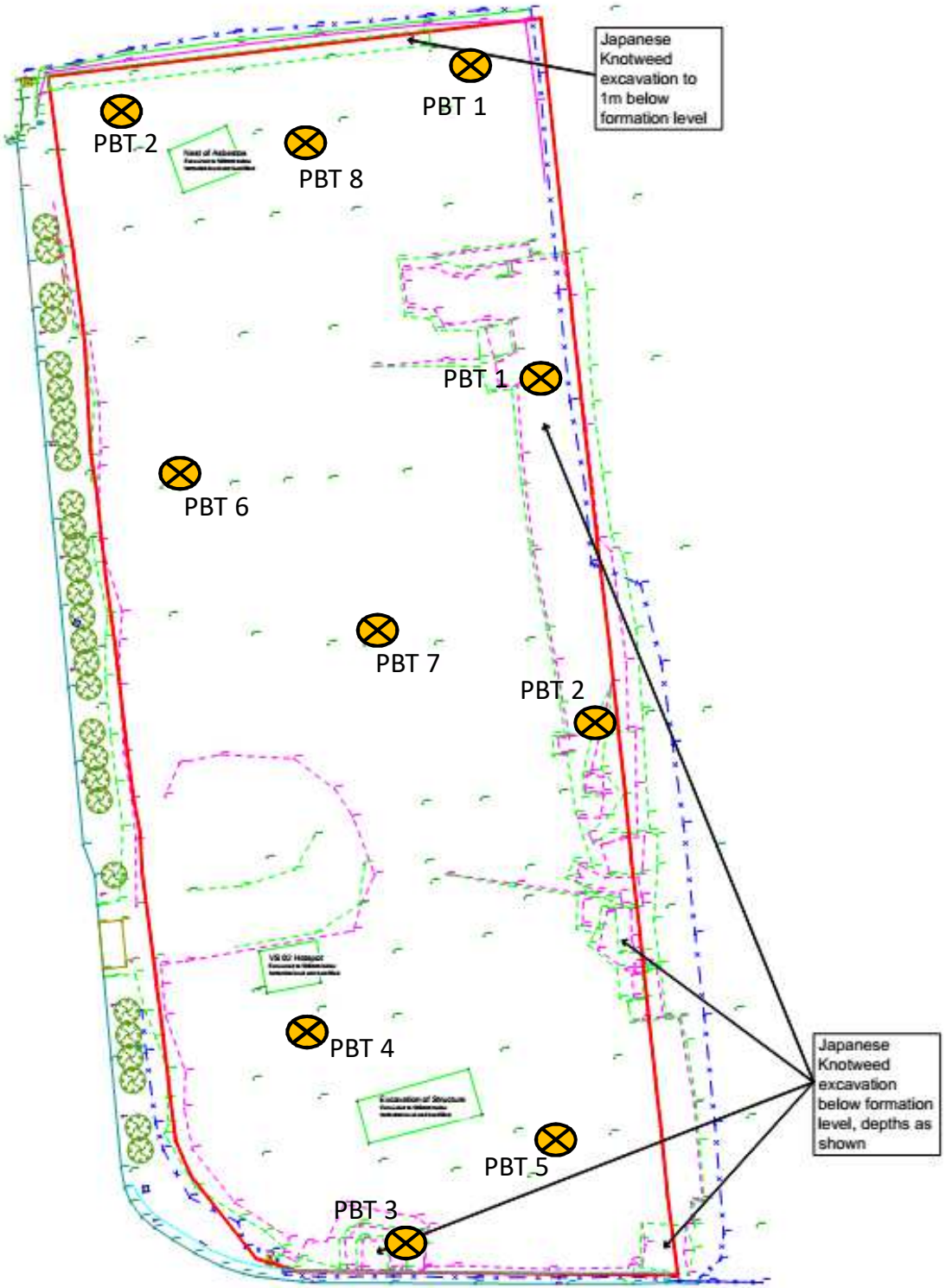
University of Manachester, Fallowfield Campus, Chancellors Way, Manchester

Title Asbestos Validation Location Plan

Client: University of Manchester

Drawn: CL	Approved: CL
Sketch: SK1706 06	Contract: 1706UOM

A4



Key

Plate Bearing Test Location

Rev	Description	Revised by	Date

Vertase FLI

□ Bristol Head Office: Tel: 01275 397600 Fax: 01275 397601

■ Sheffield Office: Tel: 01246 813289 Fax: 01246 812963

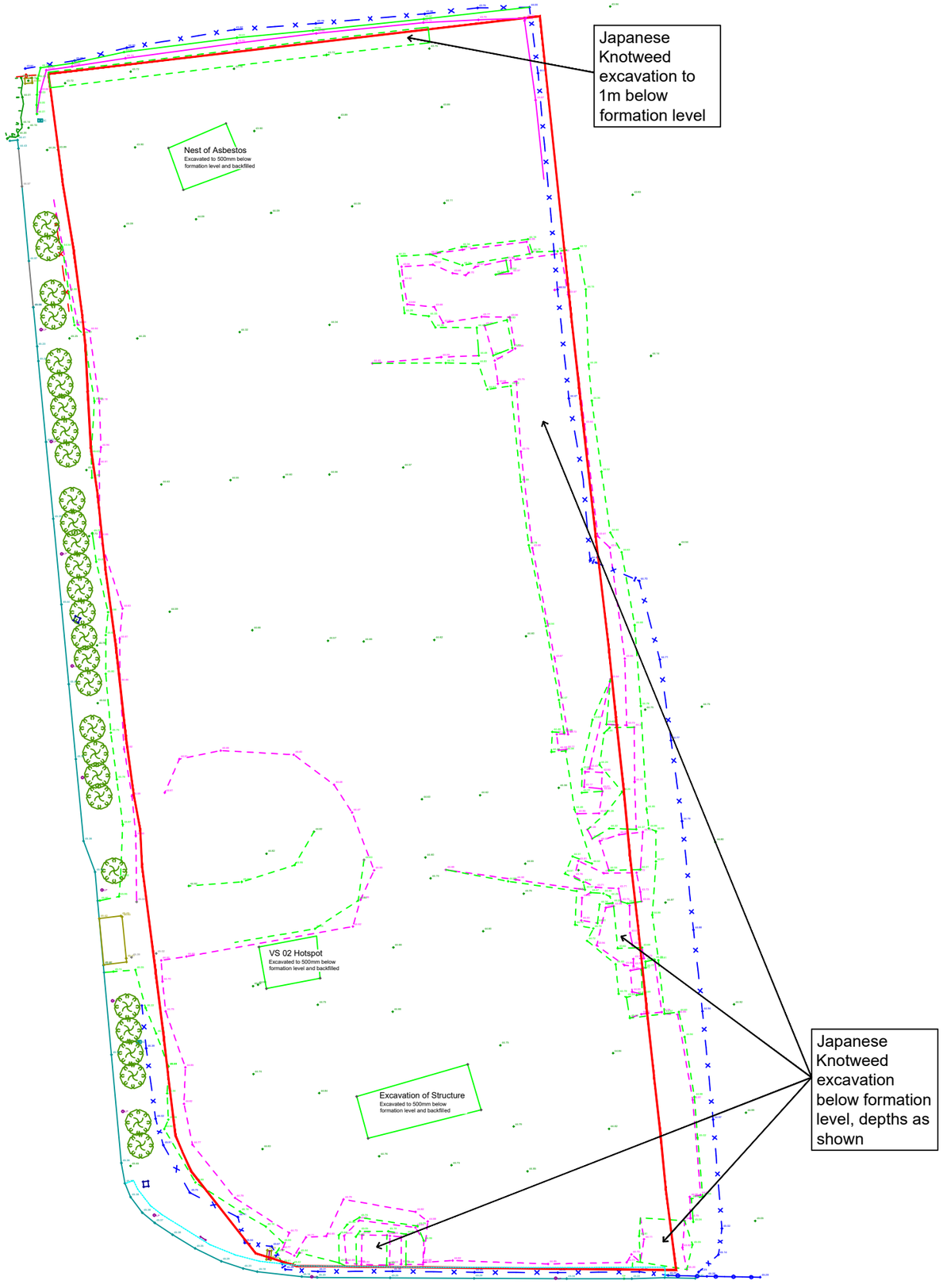
Site Address:

University of Manachester, Fallowfield Campus, Chancellors Way, Manchester

Title Plate Bearing Test Location

Client: University of Manchester

Drawn: CL	Approved: CL
Sketch: SK1706 10	Contract: 1706UOM



A3

Legend

- Site Boundary
- Heras Fencing
- Top of Bank
- Bottom of Bank
- Footpath

Rev.	Description	Revised By	Date
	FIRST ISSUE		31.07.17

Vertase FLI

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□	Hertford Office:	Tel: 01992 535757 Fax: 01992 535858
□	Manchester Office:	Tel: 0161 4372708 Fax: 0161 4376300

Rev:

Site Address:
University of Manchester
Fallowfield Campus
Chancellors Way
Manchester M14 6YZ

Title: Excavation below Formation Levels

Client: University of Manchester

Drawn: SCG	Checked: CL	Approved: CL
Dwg: D1706_10	Contract: 1706UOM	Scale: 1:625



A3

Legend

- Site Boundary
- Heras Fencing
- Top of Bank
- Bottom of Bank
- Footpath
- Kerb
- Drop Kerb
- Sheet Pile Wall
- Electric Cable
- Redundant Water Supply Pipe
- Fibre Optic Cable

Rev.	Description	Revised By	Date
	FIRST ISSUE		31-07-17

Vertase FLI

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□	Hertford Office:	Tel: 01992 535757 Fax: 01992 535858
□	Manchester Office:	Tel: 0161 4372708 Fax: 0161 4376300

Rev:

Site Address:
University of Manchester
Fallowfield Campus
Chancellors Way
Manchester M14 6YZ

Title: Final Asbuilt

Client: University of Manchester

Drawn: SCG	Checked: CL	Approved: CL
Dwg: D1706_11	Contract: 1706UOM	Scale: 1:625

Appendix B
Photo log



Maintenance Shed pre demolition



Northern part of site



Vegetated mound from western boundary



Three state Decontamination Unit used during the licenced removal of ACM from the Maintenance Shed.



Site following vegetation strip



Asbestos specialists hand picking ACM from soils



Dust suppression and wheel washing



Asbestos specialists inspecting soils and handpicking ACM



Asbestos specialists inspecting soils and handpicking ACM



Asbestos specialists inspecting soils and handpicking ACM



Site looking east to playing fields



Excavation and hand picking of Asbestos contaminated soils.



Two stage decontamination unit and segregation of designated area.



Eastern boundary



Japanese knotweed growing in grass of playing fields beyond site boundary



Trees, vegetation and Japanese Knotweed beyond northern boundary



Loading ACS to dump truck



Creation of southern loading area



Stockpiling processed ACS



Handpicking of Japanese Knotweed Rhizomes



Inspection of soils beneath southern access point



Tarmacked southern turning point



Investigation of Japanese Knotweed plants and rhizomes beyond the site boundary



Investigation of Japanese Knotweed plants and rhizomes beyond the site boundary



Eastern part of the site cut to formation level



Loading Waggons from southern access point



Waggon sheeting following loading



Soft stripping of internal walls of maintenance shed.



Chasing of Japanese knotweed rhizomes from soils beneath formation level along eastern boundary



Chasing of Japanese knotweed rhizomes from soils beneath formation level along southern boundary



Chasing of Japanese knotweed rhizomes from soils beneath formation level along eastern boundary



Chasing of Japanese knotweed rhizomes from soils beneath formation level along Southern boundary



Demolition of maintainance shed



Concentration of asbestos cement sheeting fragments



Hand picked asbestos cement sheeting fragments



Hotspot of hazardous asbestos lagging material identified in SI



BH6/1A –backfill with clay. Soils excavated to natural ground.



Dust suppression during excavation of hotspot



Dust suppression during excavation of hotspot



Hopper loaded with Soils containing hazardous asbestos lagging from hotspot BH6/1A



Hand picking of ACM from soils



Excavation and investigation of Japanese Knotweed along northern boundary



Exposure of concrete slab in northern part of site below formation level



Brick structure exposed below formation level



Proof rolling of formation level



View across northern part of site



Southern boundary at formation level



Reinstatement of soils along eastern boundary



VS01



VS01



VS02



VS02



VS03



VS03



VS04



VS04



VS05



VS05



VS06



VS06



VS07



VS07



VS08



VS08



VS13



VS13



VS12



VS12



VS10



VS10



VS11



VS14



VS15



VS15



VS17



VS17



VS16



VS16



VS18



VS18



VS19



VS19



VS09



VS09



VS02 –Excavated 5mx5m



VS02 –Excavated 5mx5m



VS02.1



VS02.2



VS02.3



VS02.4



South boundary 14.06.17 JK removed to vertical extents. Two linear meters of cross boundary rhizomes remains at depth of 0.7-1.2mbgl



South boundary 14.07.17 excavation benched to formation waiting for backfill



South East boundary 14.06.17 JK removed to extents



South boundary 14.06.17 JK rhizomes growing along clay land drainage. Chased out in their entirety



East boundary 15.06.17 JK excavation commences on the East boundary



East boundary 17.06.17 excavation continues marking out and chasing out rhizomes



East boundary 15.06.17 showing large JK rhizome from well established plants



East boundary 15.06.17 Rhizomes continuously hand picked and placed in to JK veg skip



East boundary 15.06.17 validation of excavation sides



East boundary 16.06.17 10m validation strip to base of stockpile



East boundary 16.06.17 JK rhizomes found in 10m validation strip beneath stockpile



Further works on the East boundary to northern extents of JK infestation



East boundary JK rhizomes identifies and chased out



East boundary validation of excavation



East boundary trial trench excavated to aid excavation validation



East boundary further trial trenches



Validation to excavation



Photograph showing continuation of JK removal works on east boundary



Photograph showing continuation of JK removal works on east boundary



Rhizomes identified growing within sites land drainage



Extent of excavation to east boundary JK rhizomes excavated to depth up to 2 meters



JK excavation works and 10m validation strip to northern extents of east boundary



Extent of JK excavation to northern extents of east boundary



Completed excavation to east boundary



JK plant identified on the south boundary (west end of south boundary)



South boundary JK plant removed by hand. Rhizomes identified within dig and chased out



South boundary. Extents of dig. Rhizomes removed in their entirety



Excavation and validation of north boundary commenced 5th July 2017



North boundary rhizomes identified and excavated 500mm beyond site boundary



Following removal of rhizomes a series of trial trenches were excavated within the excavation to depth of 2 meters



Validation of excavation sides and base



Rhizomes identified growing in to site



Photograph showing the excavation of rhizomes growing in to site



Completion photograph

Appendix C
Duty of Care Waste Transfer notes

Season tickets.

A1 SERVICES (MANCHESTER) LTD

VertaseFLI Number One Middle Bridge Business Park, Bristol Road,
Portishead, Bristol BS20 6PN
Tel: 01275 397600 Fax: 01275 397601

Vertase FLI

Duty of Care: Waste Transfer Note for Non Hazardous Waste **No.1706UOM/0001**

Section A: Description of Waste

A1. Please describe the waste that is being transferred: Non Hazardous Soils

A2. European Waste Classification (EWC) Code:

1	7	/	0	5	/	0	4

A3. How is the waste contained? Loose ☐ Lorry x Skip ☐ Other ☐

A4. What is the quantity of waste (volume, weight etc.?) **38,000 tonnes**

Section B: Current Holder of Waste – Transferor

By signing Section D below 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 Yes x

B1. Full Name (BLOCK CAPITALS):

Richard Pierce

B2. Company name and address

Vertase FLI Middle Bridge Business Park Bristol Road Portishead Bristol

Post code: **BS20 6PN** SIC Code: **39.00**

B3. Are you?

The producer of the waste? x The importer of the waste? ☐

The holder of an Environmental Permit? ☐

Permit No: .....

Issued by: .....

Registered waste exemption? ☐

Details including registration number: .....

A Registered Waste Carrier, Broker or Dealer? x Specify: **Carrier**

Registration number: **CBDU67853**

Section C: Person collecting the waste - Transferee

C1. Full Name (BLOCK CAPITALS):

.....

C2. Company Name and Address

Roy Braidwood & Sons Transport Ltd Lester Road Little Hulton Manchester Post code:**M38 0PT**

C3. Vehicle Reg No: .....

Transferee's Signature: .....

C4. Are you?

Holder of an Environmental Permit or Waste Management Licence? ☐

Licence Number: .....

Issued by: .....

Registered waste carrier, broker or dealer? x ☐

Registration Number: **CBDU91464**

Issued by: Environment Agency

Registered Waste exemption? ☐

Details and Registration Number: .....

Section D – The Transfer

D1. Address of transfer or collection point

University of Manchester Chancellors Way off Moseley Road Fallowfield Manchester

Post code: **M14 6YZ**

Date of Transfer: **11/05/17** Time of Transfer.....

Transferor's Signature: [signature] x

Full name: RICHARD PIERCE

Representing: VERTASE FLI

D2. Broker or Dealer who arranged transfer (if applicable)

.....

.....

..... Post code: .....

Registration Number: .....

Transferee's Signature [signature]

Full name: STEVE BRAIDWOOD

Representing: ROY BRAIDWOOD LTD

White Copy – to Carrier **Yellow Copy** – to Head Office **Pink Copy** – retain in book

Portishead, Bristol BS20 6PN
Tel: 01275 397600 Fax: 01275 397601

Duty of Care: Waste Transfer Note for Non Hazardous Waste **No.1706UOM/0002**

Section A: Description of Waste

A1. Please describe the waste that is being transferred: Non Hazardous Soils

A2. European Waste Classification (EWC) Code: | 1 | 7 | / | 0 | 5 | / | 0 | 4 |

A3. How is the waste contained? Loose ☐ Lorry x Skip ☐ Other ☐

A4. What is the quantity of waste (volume, weight etc.?) **16,000tonnes**

Section B: Current Holder of Waste – Transferor

By signing Section D below 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 Yes x

B1. Full Name (BLOCK CAPITALS):

Richard Pierce

B2. Company name and address

Vertase FLI Middle Bridge Business Park Bristol Road Portishead Bristol

Post code: **BS20 6PN** SIC Code: **39.00**

B3. Are you?

The producer of the waste? x The importer of the waste? ☐

The holder of an Environmental Permit? ☐

Permit No: .....

Issued by: .....

Registered waste exemption? ☐

Details including registration number: .....

A Registered Waste Carrier, Broker or Dealer? x Specify: **Carrier**

Registration number: **CBDU67853**

Section C: Person collecting the waste - Transferee

C1. Full Name (BLOCK CAPITALS):

.....

C2. Company Name and Address

Roy Braidwood & Sons Transport Ltd Lester Road Little Hulton Manchester Post code:**M38 0PT**

C3. Vehicle Reg No: .....

Transferee's Signature: .....

C4. Are you?

Holder of an Environmental Permit or Waste Management Licence? ☐

Licence Number: .....

Issued by: .....

Registered waste carrier, broker or dealer? x ☐

Registration Number: **CBDU91464**

Issued by: Environment Agency

Registered Waste exemption? ☐

Details and Registration Number: .....

Section D – The Transfer

D1. Address of transfer or collection point

University of Manchester Chancellors Way off Moseley Road Fallowfield Manchester

Post code: **M14 6YZ**

Date of Transfer: **11/05/17** Time of Transfer.....

Transferor's Signature: Richard Pierce

Full name: RICHARD PIERCE

Representing: VERTASE FLI.

D2. Broker or Dealer who arranged transfer (if applicable)

.....

.....

..... Post code: .....

Registration Number: .....

Transferee's Signature

Full name: STEVE BRAIDWOOD

Representing: ROY BRAIDWOOD LTD

White Copy – to Carrier **Yellow Copy** – to Head Office **Pink Copy** – retain in book

Appendix D
Laboratory Certificates
Formation Validation

SAMPLE AUDIT

Fallowfield Site Remediation Project

Sample Reference		VS-01	VS-02	VS-03	VS-04	VS-05	VS-06
Hydrock Cell reference							
GPS coordinates	E	386008	385910	386034	386045	386046	386042
	N	394242	394253	394301	394266	394246	394227
VFLI Sampler		Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley
Independent Hydrock Representative Witness		Chris Sayers	Chris Sayers	Chris Sayers	Chris Sayers	Chris Sayers	Chris Sayers
Formation mAOD		44.6	44.6	44.6	44.6	44.8	44.8
Depth of excavation mbgl		0.95	0.6	2.5	2.7	2.7	2.5
Depth to natural clay mbgl		0.5	0.4	0.95	0.8	1.2	1.7
Depth to natural clay mAOD		44.1	44.2	43.65	43.8	43.6	43.1
Certificate Reference		17-50709-2	17-50709-2	17-51454-1	17-51454-1	17-51454-1	17-51454-1
Asbestos ID		None Detect	Fibres	None Detect	None Detect	None Detect	Detected
Asbestos Quantification		N/A	0.016%w/w	N/A	N/A	N/A	<0.001%

Sample Reference		VS-07	VS-08	VS-09	VS-10	VS-11	VS-12
Hydrock Cell reference							
GPS coordinates	E	385997	385953		386024	386012	
	N	394293	394326		394547	394283	
VFLI Sampler		Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley
Independent Hydrock Representative Witness		Adam Cheers	Adam Cheers		Chris Sayers	Adam Cheers	Adam Cheers
Formation mAOD		44.6	44.6	44.6-43.7	44.6-43.7	44.6	44.6
Depth of excavation mbgl		0.8	0.9	0.5	0.8	0.8	0.8
Depth to natural clay mbgl		0.8	0.9	0.5	0.8	0.8	0.8
Depth to natural clay mAOD		43.8	43.7	#VALUE!	#VALUE!	43.8	43.8
Certificate Reference		17-52553-1	17-52553-1	17-54152-1	17-53615-1	17-52553-1	17-52553-1
Asbestos ID		None Detect	None Detect	None Detect	None Detect	None Detect	None Detect
Asbestos Quantification		N/A	N/A	N/A	N/A	N/A	N/A

SAMPLE AUDIT

Sample Reference		VS-13	VS-14	VS-15	VS-16	VS-17	VS-18
Hydrock Cell reference							
GPS coordinates	E	386001		386003	386025	386018	
	N	394321		394229	394245	394269	
VFLI Sampler		Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley
Independent Hydrock Representative Witness		Adam Cheers	Adam Cheers	Chris Sayers	Joe Chambers	Joe Chambers	
Formation mAOD		44.6	44.8	44.8	44.8	44.6	44.6-43.7
Depth of excavation mbgl		0.8	0.9	0.7	0.65	0.65	0.5
Depth to natural clay mbgl		0.8	0.9	0.7	0.65	0.65	0.5
Depth to natural clay mAOD		43.8	43.9	44.1	44.15	43.95	#VALUE!
Certificate Reference		17-52553-1	17-52553-1	17-53615-1	17-53615-1	17-53615-1	17-54152-1
Asbestos ID		None Detect	None Detect	Detected	None Detect	None Detect	None Detect
Asbestos Quantification		N/A	N/A	<0.001%	N/A	N/A	N/A

Sample Reference		VS-19	VS-02.1	VS-02.2	VS-02.3	VS-02.4
Hydrock Cell reference						
GPS coordinates	E		385995	386018	386010	385995
	N		394260	394255	394233	394247
VFLI Sampler		Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley	Claire Lilley
Independent Hydrock Representative Witness						
Formation mAOD		44.6-43.7	44.6	44.8	44.8	44.8
Depth of excavation mbgl		0.6	0.5	0.5	0.65	0.65
Depth to natural clay mbgl		0.6	0.5	0.5	0.65	0.65
Depth to natural clay mAOD		#VALUE!	44.1	44.3	44.15	44.15
Certificate Reference		17-54152-1	17-53615-1	17-53615-1	17-53615-1	17-53615-1
Asbestos ID		None Detect	Detected	None Detect	None Detect	None Detect
Asbestos Quantification		N/A	<0.001%	N/A	N/A	N/A

GEOLOGICAL LOG

Fallowfield Site Remediation Project

Sample	Depths		Description
VS01	0-0.5	Madeground	Black brown gravelly clay with abundent ash and fine to course gravel and concrete, brick
	0.5-0.95	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel.
VS02	0-0.4	Madeground	Black brown gravelly clay with abundent ash and fine to course gravel and concrete, brick
	0.4-0.6	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel.
VS03	0-0.95	Madeground	Black brown gravelly clay with abundent ash and fine to course gravel and concrete, brick
	0.95-2.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS04	0-0.8	Madeground	Black brown gravelly clay with abundent ash and fine to course gravel and concrete, brick
	0.82.7	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS05	0-1.2	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	1.2-2.7	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS06	0-1.7	Madeground	Black brown gravelly clay with abundent ash and fine to course gravel and concrete, brick
	1.7-2.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
	2.5	Natural	Coarse reddish brown SAND
VS07	0-0.75	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.75-0.8	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS08	0-0.8	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.8-0.9	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.

GEOLOGICAL LOG

Fallowfield Site Remediation Project

VS09	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS10	0-0.7	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.7-0.8	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS11	0-0.7	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.7-0.8	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS12	0-0.7	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.7-0.8	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS13	0-0.7	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.7-0.8	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS14	0-0.7	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.7-0.9	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS15	0-0.3	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.3-0.7	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS16	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5-0.65	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.

GEOLOGICAL LOG

Fallowfield Site Remediation Project

VS17	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5-0.65	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS18	0-0.4	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.4-0.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS19	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5-0.6	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS02.1	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS02.2	0-0.5	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.5	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS02.3	0-0.65	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.65	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.
VS02.4	0-0.65	Madeground	Black brown clayey gravel with abundent ash and fine to course gravel and concrete, brick
	0.65	Natural	Firm to stiff reddish brown with grey mottle CLAY with occasional fine light grey mudstone gravel, occasional ironstone and coal fragments.

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Analytical Report Number : 17-50709

Replaces Analytical Report Number : 17-50709, issue no. 1

Project / Site name:	Fallowfield	**Samples received on:**	06/06/2017
Your job number:	1706UOM	**Samples instructed on:**	06/06/2017
Your order number:		**Analysis completed by:**	12/06/2017
Report Issue Number:	2	**Report issued on:**	15/06/2017
Samples Analysed:	2 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 17-50709

Project / Site name: Fallowfield

Lab Sample Number				762408	762409			
Sample Reference				VS 01	VS 02			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.00-0.95	0.00-0.60			
Date Sampled				30/05/2017	30/05/2017			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.016			
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.016			

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

Analytical Report Number: 17-50709
Project / Site name: Fallowfield
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

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

Quantitative Analysis

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

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

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

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
762409	VS 02	0.00-0.60	173	Loose Fibres & Bitumen	**Chrysotile**	0.016	**0.016**

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

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

Analytical Report Number : 17-50709

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in ouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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.

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

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WD18 8YS

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e: reception@i2analytical.com

Analytical Report Number : 17-51454

Project / Site name:	Fallowfield	**Samples received on:**	14/06/2017
Your job number:	1706UOM	**Samples instructed on:**	14/06/2017
Your order number:		**Analysis completed by:**	19/06/2017
Report Issue Number:	1	**Report issued on:**	20/06/2017
Samples Analysed:	4 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 17-51454

Project / Site name: Fallowfield

Lab Sample Number				766542	766543	766544	766545	
Sample Reference				VS04	VS05	VS06	VS03	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				13/06/2017	13/06/2017	13/06/2017	13/06/2017	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	-	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001	-	
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001	-	

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

Analytical Report Number: 17-51454
Project / Site name: Fallowfield
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

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

Quantitative Analysis

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

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

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

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
766544	VS06		167	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

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

Analytical Report Number : 17-51454

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in ouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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.

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

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Analytical Report Number : 17-52553

Project / Site name:	Fallowfield	**Samples received on:**	23/06/2017
Your job number:	1706UOM	**Samples instructed on:**	23/06/2017
Your order number:	300204	**Analysis completed by:**	28/06/2017
Report Issue Number:	1	**Report issued on:**	28/06/2017
Samples Analysed:	6 soil samples		

Signed:

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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Analytical Report Number: 17-52553

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				772244	772245	772246	772247	772248
Sample Reference				VS07	VS08	VS11	VS12	VS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.90	0.00-0.75	0.00-0.75	0.00-0.70	0.00-0.75
Date Sampled				22/06/2017	22/06/2017	22/06/2017	22/06/2017	22/06/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

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Analytical Report Number: 17-52553

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				772249				
Sample Reference				VS14				
Sample Number				None Supplied				
Depth (m)				0.00-0.50				
Date Sampled				22/06/2017				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				

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

Analytical Report Number : 17-52553

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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.

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Analytical Report Number : 17-53615

Project / Site name:	Fallow Field	**Samples received on:**	05/07/2017
Your job number:	1706UOM	**Samples instructed on:**	05/07/2017
Your order number:		**Analysis completed by:**	10/07/2017
Report Issue Number:	1	**Report issued on:**	10/07/2017
Samples Analysed:	8 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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Analytical Report Number: 17-53615

Project / Site name: Fallow Field

Lab Sample Number				777812	777813	777814	777815	777816
Sample Reference				VS-15	VS-16	VS-17	VS-02-1	VS-02-2
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				04/07/2017	04/07/2017	04/07/2017	04/07/2017	04/07/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	-

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Analytical Report Number: 17-53615

Project / Site name: Fallow Field

Lab Sample Number				777817	777818	777819		
Sample Reference				VS-02-3	VS-02-4	VS-10		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/07/2017	04/07/2017	04/07/2017		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
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		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-		
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-		

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Analytical Report Number: 17-53615
Project / Site name: Fallow Field
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

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

Quantitative Analysis

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

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

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

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
777812	VS-15		142	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
777815	VS-02-1		128	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

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Analytical Report Number : 17-53615

Project / Site name: Fallow Field

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in ouse method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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.

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Analytical Report Number : 17-54152

Project / Site name:	Fallowfield	**Samples received on:**	11/07/2017
Your job number:	1706UOM	**Samples instructed on:**	11/07/2017
Your order number:	300204	**Analysis completed by:**	13/07/2017
Report Issue Number:	1	**Report issued on:**	14/07/2017
Samples Analysed:	3 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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Analytical Report Number: 17-54152

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				781128	781129	781130		
Sample Reference				VS-09	VS-18	VS-19		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				10/07/2017	10/07/2017	10/07/2017		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		

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

Analytical Report Number : 17-54152

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

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.

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Appendix E
Laboratory Certificates
Import Materials

S4UL Screening Criteria

	Residential with homegrown produce			Residential without homegrown produce			Allotment			Commerical			POS (resi)			POS (park)		
Heavy Metals	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Arsenic	37			40			43			640			79			170		
Beryllium	1.7			1.7			35			12			2.2			63		
Boron	290			11000			45			240000			21000			46000		
Cadmium	11			85			1.9			190			120			532		
Chormium III	910			910			18000			8600			1500			33000		
Chromium IV	6			6			1.8			33			7.7			220		
Copper	2400			7100			520			68000			12000			44000		
Mercury (elemental)	1.2			1.2			21			58			16			30		
Mercury (inorganic)	40			56			19			1100			120			240		
Methylmercury	11			15			6			320			40			68		
Nickel	130			180			53			980			230			800		
Selenium	250			430			88			12000			1100			180		
Vanadium	410			1200			91			9000			2000			5000		
Zinc	3700			40000			620			730000			81000			170000		
SOM	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**
BTEX																		
Benzene	0.087	0.17	0.37	0.38	0.7	1.4	0.017	0.034	0.075	27	47	90	72	72	73	90	100	110
Toluene	130	290	660	880	1900	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000
Ethylbenzene	47	110	260	83	190	440	16	39	90	5700	13000	27000	24000	24000	25000	17000	22000	27000
o-xylene	60	140	330	88	210	480	28	67	160	6600	15000	33000	41000	42000	43000	17000	24000	33000
m-xylene	59	140	320	82	190	450	31	74	170	6200	14000	31000	41000	42000	43000	17000	24000	32000
p-xylene	56	130	310	79	180	430	29	69	160	5900	14000	30000	41000	42000	43000	17000	23000	31000
Aliphatic																		
C5-C6	42	78	160	42	78	160	730	1700	3900	3200	5900	12000	570000	590000	600000	95000	130000	180000
C6-C8	100	230	530	100	230	530	2300	5600	13000	7800	17000	40000	600000	610000	620000	150000	220000	320000
C8-C10	27	65	150	27	65	150	320	770	1700	2000	4800	11000	13000	13000	13000	14000	18000	21000
C10-C12	130	330	760	130	330	770	2200	4400	7300	9700	23000	47000	13000	13000	13000	21000	23000	24000
C12-C16	1100	2400	4300	1100	2400	4400	1100	13000	13000	59000	82000	90000	13000	13000	13000	25000	25000	26000
C16-C35	65000	92000	110000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	480000	490000
C35-C44	65000	92000	110000	65000	92000	110000	260000	270000	270000	1600000	1700000	1800000	250000	250000	250000	450000	480000	490000
Aromatic																		
C5-C7	70	140	300	370	690	140	13	27	57	26000	46000	86000	56000	56000	56000	76000	84000	92000
C7-C8	130	290	660	860	1800	3900	22	51	120	56000	110000	180000	56000	56000	56000	87000	95000	100000
C8-C10	34	83	190	47	110	270	8.6	21	51	3500	8100	17000	5000	5000	5000	7200	8500	9300
C10-C12	74	180	380	250	590	1200	13	31	74	16000	28000	34000	5000	5000	5000	9200	9700	10000
C12-C16	140	330	660	1800	2300	2500	23	57	130	36000	37000	38000	5100	5100	5100	10000	10000	10000
C16-C21	260	540	930	1900	1900	1900	46	110	260	28000	28000	28000	3800	3800	3800	7600	7700	7800

S4UL Screening Criteria

	Residential with homegrown produce			Residential without homegrown produce			Allotment			Commerical			POS (resi)			POS (park)		
C21-C35	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900
C35-C44	1100	1500	1700	1900	1900	1900	370	820	1600	28000	28000	28000	3800	3800	3800	7800	7800	7900
SOM	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**
Polyaromatic Hydrocarbons																		
Acenapthene	210	510	1100	3000	47000	6000	34	85	200	84000	97000	100000	15000	15000	15000	29000	30000	30000
Acenapthylene	170	420	920	2900	4600	6000	28	69	160	83000	97000	100000	15000	15000	15000	29000	30000	30000
Anthracene	2400	5400	11000	31000	35000	37000	380	950	2200	520000	540000	540000	74000	74000	74000	150000	150000	150000
Benz(a)anthracene	7.2	11	13	11	14	15	2.9	6.5	13	170	170	180	29	29	29	49	56	62
Benzo(a)pyrene	2.2	2.7	3	3.2	3.2	3.2	0.97	2	3.5	35	35	36	5.7	5.7	5.7	11	12	13
Benzo(b)fluoranthene	2.6	3.3	3.7	3.9	4	4	0.99	2.1	3.9	44	44	45	7.1	7.2	7.2	13	15	16
Benzo(ghi)perylene	320	340	350	360	360	360	290	470	640	3900	4000	4000	640	640	640	1400	1500	1600
Benzo(k)fluoranthene	77	93	100	110	110	110	37	75	130	1200	1200	1200	190	190	190	370	410	440
Chrysene	15	22	27	30	31	32	4.1	9.4	19	350	350	350	57	57	57	93	110	120
Dibenz(ah)anthracene	0.24	0.28	0.3	0.31	0.32	0.32	0.14	0.27	0.43	3.5	3.6	3.6	0.57	0.57	0.58	1.1	1.3	1.4
Fluoranthene	280	560	890	1500	1600	1600	52	130	290	23000	23000	23000	3100	3100	3100	6300	6300	6400
Fluorene	170	400	860	2800	3800	4500	27	67	160	63000	68000	71000	9900	9900	9900	20000	20000	20000
Indeno(123-cd)pyrene	27	36	41	45	46	46	9.5	21	39	500	510	510	82	82	82	150	170	180
Napthalene	2.3	5.6	13	2.3	5.6	13	4.1	10	24	190	460	1100	4900	4900	4900	1200	1900	3000
Phenanthrene	95	220	440	1300	1500	1500	15	38	90	22000	22000	23000	3100	3100	3100	6200	6200	6300
Pyrene	620	1200	2000	3700	3800	3800	110	270	620	54000	54000	54000	7400	7400	7400	15000	15000	15000
Coal Tar (BaP as surrogate marker)	0.79	0.98	1.1	1.2	1.2	1.2	0.32	0.67	1.2	15	15	15	2.2	2.2	2.2	4.4	4.7	4.8
SOM	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**	**1.0%**	**2.5%**	**6.0%**
VOC's & SVOC's																		
1,2-dichloroethane (1,2-DCA)	0.0071	0.011	0.019	0.0092	0.013	0.023	0.0046	0.0083	0.016	0.67	0.97	1.7	29	29	29	21	24	28
1,1,1-Trichloroethane	8.8	18	39	9	18	40	48	110	240	660	1300	3000	14000	140000	140000	57000	76000	100000
1,1,2,2 Tetrachloroethane	1.6	3.4	7.5	3.9	8	17	0.41	0.89	2	270	550	1100	1400	1400	1400	1800	2100	2300
1,1,1,2 Tetrachloroethane	1.2	2.8	6.4	1.5	3.5	8.2	0.79	1.9	4.4	110	250	560	1400	1400	1400	1500	1800	2100
Terachloroethene (PCE)	0.18	0.39	0.9	0.18	0.4	0.92	0.65	1.5	3.6	19	42	95	1400	1400	1400	810	110	1500
Tetrachloromethane	0.026	0.056	0.13	0.026	0.056	0.13	0.45	1	2.4	2.9	6.3	14	890	920	950	190	270	400
Trichloroethene (TCE)	0.016	0.034	0.075	0.017	0.036	0.08	0.041	0.091	0.21	1.2	2.6	5.7	120	120	120	70	91	120
Trichloromethane	0.91	1.7	3.4	1.2	2.1	4.2	0.42	0.83	1.7	99	170	350	2500	2500	2500	2600	2800	3100
Vinyl Chloride	0.00064	0.00087	0.0014	0.00077	0.001	0.0015	0.00055	0.001	0.0018	0.059	0.077	0.12	3.5	3.5	3.5	4.8	5	5.4
Chlorobenzene	0.46	1	2.4	0.46	1	2.4	5.9	14	32	56	130	290	11000	13000	14000	1300	2000	2900
1,2 Dichlorobenzene	23	55	130	24	57	130	94	230	540	2000	4800	11000	90000	95000	98000	24000	36000	51000
1,3-Dichlorobenzene	0.4	1	2.3	0.44	1.1	2.5	0.25	0.6	1.5	30	73	170	300	300	300	390	440	470
1,4-dichlorobenzene	61	150	350	61	150	350	15	37	88	4400	10000	25000	17000	17000	17000	36000	36000	36000
1,2,3-Trichlorobenzene	1.5	3.6	8.6	1.5	3.7	8.8	4.7	12	28	102	250	590	1800	1800	1800	770	1100	1600

S4UL Screening Criteria

	Residential with homegrown produce			Residential without homegrown produce			Allotment			Commerical			POS (resi)			POS (park)		
1,2,4-Trichlorobenzene	2.6	6.4	15	2.6	6.4	15	55	140	320	220	530	1300	15000	17000	19000	1700	2600	4000
1,3,5-Trichlorobenzene	0.33	0.81	1.9	0.33	0.81	1.9	4.7	12	28	23	55	130	1700	1700	1800	380	580	860
1,2,3,4-Tetrachlorobenzene	15	36	78	24	56	120	4.4	11	26	1700	3080	4400	830	830	830	1500	1600	1600
1,2,3,5-Tetrachlorobenzene	0.66	1.6	3.7	0.75	1.9	4.3	0.38	0.9	2.2	49	120	240	78	79	79	110	120	130
1,2,4,5-Tetrachlorobenzene	0.33	0.77	1.6	0.73	1.7	3.5	0.06	0.16	0.37	42	72	96	13	13	13	25	26	26
Pentachlorobenzene	5.8	12	22	19	30	38	1.2	3.1	7	640	70	830	100	100	100	190	190	190
Hexaclorobenzene	1.8	3.3	4.9	4.1	5.7	6.7	0.47	1.1	2.5	110	120	120	16	16	16	30	30	30
Phenol	280	550	1100	750	1300	2300	66	140	280	760	1500	3200	760	1500	3200	760	1500	3200
Chlorophenols	0.87	2	4.5	94	150	210	0.13	0.3	0.7	3500	4000	4300	620	620	620	1100	1100	1100
Pentachlorophenol	0.22	0.52	1.2	27	29	31	0.03	0.08	0.19	400	400	400	60	60	60	110	120	120
Carbon Disulphide	0.14	0.28	0.62	0.14	0.29	0.62	4.8	10	23	11	22	47	11000	11000	12000	1300	1900	2700
Hexachlorobutadiene	0.29	0.7	1.6	0.32	0.78	1.8	0.25	0.61	1.4	31	66	120	25	25	25	48	50	51

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Analytical Report Number : 17-53614

Project / Site name:	Fallowfield	**Samples received on:**	05/07/2017
Your job number:	1706UOM	**Samples instructed on:**	05/07/2017
Your order number:	300204	**Analysis completed by:**	10/07/2017
Report Issue Number:	1	**Report issued on:**	10/07/2017
Samples Analysed:	3 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 17-53614

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				777820	777821	777822		
Sample Reference				CI-01	CI-02	CI-03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/07/2017	05/07/2017	06/07/2017		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	11	8.8	12		
Total mass of sample received	kg	0.001	NONE	1.3	1.3	1.3		
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.3	10.4	8.3		
Total Sulphate as SO_3	mg/kg	42	NONE	570	850	560		
Total Sulphate as SO_4	mg/kg	50	MCERTS	690	1000	680		
Fraction Organic Carbon (FOC)	N/A	0.001	NONE	0.0086	0.0066	0.0089		
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	0.7	0.9		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.17	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.15	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	0.54	1.4	0.79		
Anthracene	mg/kg	0.05	MCERTS	0.15	0.30	0.18		
Fluoranthene	mg/kg	0.05	MCERTS	0.71	1.8	1.0		
Pyrene	mg/kg	0.05	MCERTS	0.65	1.5	0.91		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.31	0.74	0.47		
Chrysene	mg/kg	0.05	MCERTS	0.37	0.85	0.39		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.34	0.78	0.37		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.17	0.37	0.27		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.30	0.66	0.40		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.15	0.35	0.19		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.21	0.44	0.25		
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3.90	9.73	5.25		

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Analytical Report Number: 17-53614

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				777820	777821	777822		
Sample Reference				CI-01	CI-02	CI-03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/07/2017	05/07/2017	06/07/2017		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	11	9.5		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	31	25		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	24	27		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	25	15	31		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	29	29	27		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	59	62	64		
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	13	17	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	16	17	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	1.7		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	5.1	6.6		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	17	16		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	15	53	62		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	19	75	86		

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Analytical Report Number : 17-53614

Project / Site name: Fallowfield

* 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 *
777820	CI-01	None Supplied	None Supplied	Brown clay.
777821	CI-02	None Supplied	None Supplied	Brown clay with gravel.
777822	CI-03	None Supplied	None Supplied	Brown clay.

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Analytical Report Number : 17-53614

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total sulphate (as SO3 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
CI-01		S	17-53614	777820	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
CI-01		S	17-53614	777820	b	TPHCWG (Soil)	L088/76-PL	b
CI-02		S	17-53614	777821	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
CI-02		S	17-53614	777821	b	TPHCWG (Soil)	L088/76-PL	b
CI-03		S	17-53614	777822	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
CI-03		S	17-53614	777822	b	TPHCWG (Soil)	L088/76-PL	b

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

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Analytical Report Number : 17-53658

Project / Site name:	Fallowfield	**Samples received on:**	05/07/2017
Your job number:	1706UOM	**Samples instructed on:**	05/07/2017
Your order number:		**Analysis completed by:**	12/07/2017
Report Issue Number:	1	**Report issued on:**	12/07/2017
Samples Analysed:	1 soil sample		

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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Analytical Report Number: 17-53658

Project / Site name: Fallowfield

Lab Sample Number				778056				
Sample Reference				CI-04				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				03/07/2017				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	8.7				
Total mass of sample received	kg	0.001	NONE	1.3				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.1				
Total Sulphate as SO_4	mg/kg	50	MCERTS	1200				
Fraction Organic Carbon (FOC)	N/A	0.001	NONE	0.0095				
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.3				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	0.59				
Fluorene	mg/kg	0.05	MCERTS	0.53				
Phenanthrene	mg/kg	0.05	MCERTS	1.9				
Anthracene	mg/kg	0.05	MCERTS	0.35				
Fluoranthene	mg/kg	0.05	MCERTS	1.4				
Pyrene	mg/kg	0.05	MCERTS	1.1				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.54				
Chrysene	mg/kg	0.05	MCERTS	0.47				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.43				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.23				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.42				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.21				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.29				
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	9.78				

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Analytical Report Number: 17-53658

Project / Site name: Fallowfield

Lab Sample Number				778056				
Sample Reference				CI-04				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				03/07/2017				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.2				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	33				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	55				
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	57				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	61				
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	3.2				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	11				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	20				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	66				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	100				

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Analytical Report Number : 17-53658

Project / Site name: Fallowfield

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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 *
778056	CI-04	None Supplied	None Supplied	Brown clay and sand with gravel.

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

Analytical Report Number : 17-53658

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
CI-04		S	17-53658	778056	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
CI-04		S	17-53658	778056	b	TPHCWG (Soil)	L088/76-PL	b

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

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Analytical Report Number : 17-54151

Project / Site name:	Fallowfield	**Samples received on:**	11/07/2017
Your job number:	1706UOM	**Samples instructed on:**	11/07/2017
Your order number:	300204	**Analysis completed by:**	14/07/2017
Report Issue Number:	1	**Report issued on:**	14/07/2017
Samples Analysed:	4 soil samples		

Signed:

Dr Irma Doyle
Senior Account Manager
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.

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

Analytical Report Number: 17-54151

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				781122	781123	781124	781125	
Sample Reference				TS-01	TS-02	TS-03	TS-04	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				11/07/2017	11/07/2017	11/07/2017	11/07/2017	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	14	12	12	14	
Total mass of sample received	kg	0.001	NONE	1.1	1.0	1.1	1.7	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.5	8.6	8.5	7.9	
Total Sulphate as SO_3	mg/kg	42	NONE	510	280	220	350	
Total Sulphate as SO_4	mg/kg	50	MCERTS	610	340	260	420	
Fraction Organic Carbon (FOC)	N/A	0.001	NONE	0.016	0.021	0.016	0.025	
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.6	2.0	1.6	2.5	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.32	
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.86	
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.76	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.47	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.45	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.65	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.27	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.26	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	4.85	

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Analytical Report Number: 17-54151

Project / Site name: Fallowfield
Your Order No: 300204

Lab Sample Number				781122	781123	781124	781125	
Sample Reference				TS-01	TS-02	TS-03	TS-04	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				11/07/2017	11/07/2017	11/07/2017	11/07/2017	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	4.0	1.5	2.0	11	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	7.4	7.7	8.6	21	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	13	15	20	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	16	13	11	69	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.3	7.6	7.4	13	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	34	31	27	67	
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 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	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 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	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 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	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 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	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 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	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 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	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	

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Analytical Report Number : 17-54151

Project / Site name: Fallowfield

* 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 *
781122	TS-01	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
781123	TS-02	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
781124	TS-03	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
781125	TS-04	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.

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Analytical Report Number : 17-54151

Project / Site name: Fallowfield

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total sulphate (as SO3 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
TS-01		S	17-54151	781122	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
TS-01		S	17-54151	781122	b	TPHCWG (Soil)	L088/76-PL	b
TS-02		S	17-54151	781123	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
TS-02		S	17-54151	781123	b	TPHCWG (Soil)	L088/76-PL	b
TS-03		S	17-54151	781124	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
TS-03		S	17-54151	781124	b	TPHCWG (Soil)	L088/76-PL	b
TS-04		S	17-54151	781125	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
TS-04		S	17-54151	781125	b	TPHCWG (Soil)	L088/76-PL	b

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

SLC
Soil & Land Consultants

Freeland Horticulture Ltd
Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Attention: Philippa Lambourne

Our Ref: SLC-12-AN-0543-SA

26 May2017

Dear Philippa

Topsoil Analysis Report : Astley, Greater Manchester Topsoil – May 2017

We have completed the analysis of the topsoil sample recently taken from the above site and have the pleasure of reporting our findings. The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes.

SOIL SAMPLING & EXAMINATION

At the time of our sampling visit the topsoil was stored in a stockpile. A series of 10 hand augered trial holes were constructed across the stockpile for the purpose of soil examination and sample collection. As the soil examination confirmed a consistent topsoil composition, the ten samples were combined together to form one composite sample for analysis purposes. The soil was described as a dark brown, slightly moist, friable *loamy sand* with a well developed, fine to medium granular structure. The soil contained a low fraction of small stones and no deleterious materials (eg. building waste materials, glass, roots or rhizomes of pernicious weeds) or unusual odours (eg. hydrocarbons) were recorded.

LABORATORY ANALYSIS

The topsoil sample was submitted to a UKAS accredited laboratory for routine physical and chemical parameters to confirm the composition and fertility of the soil. The following parameters were determined:

- pH & electrical conductivity values;
- major plant nutrients (N, P, K, Mg) & organic matter content;
- particle size distribution and stone content;
- heavy metals & potentially toxic elements (As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn, B);
- sulphate, sulphur, sulphide;
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16)
- banded aromatic and aliphatic petroleum hydrocarbons (C_5-C_{35}).

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

Freeland Horticulture 01322 619161

COMMENTS

pH & Electrical Conductivity (salinity) Values

The sample was alkaline in nature (pH 7.9) with a pH value that would be suitable for general landscaping purposes, and in particular for species classified as either *wide pH tolerant* or *lime tolerant.*

The electrical conductivity value using the soil:water extract was moderate (943S/cm) indicating that soluble salts are not present at levels that would be harmful to plants.

Organic Matter & Nutrient Status

The sample was rich in organic matter and all major plant nutrients. No further additions of compost or fertiliser are required, or indeed recommended, for at least the first growing season.

Particle Size Distribution & Stone Content

The sample contained 85% sand and fell into the *sandy loam* texture class. This particle size distribution is considered suitable for a broad range of landscape applications, including tree and shrub planting, turfing and seeding.

The sample was free from stones of 50 mm and upwards in diameter and only contained a slight fraction of smaller stones (1.2%). As such, stones will not restrict the use of the soil for landscaping purposes.

Potential Contaminants

We are not aware of any specified contaminant levels set for the proposed end-use of this topsoil so the following comments are based on the Soil Guideline Values (SGVs) for residential end-use presented in the Contaminated Land Exposure Assessment (CLEA) Model (EA/DEFRA:2002). The SGVs currently only consider a limited range of parameters so where a potential contaminant is not covered by the CLEA Model other relevant schedules for contamination assessment, such as the Dutch Guidelines, and professional judgement have been used.

Of the potential contaminants determined, none was found at levels that would indicate significant contamination.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes. From the soil examination and laboratory analysis, the soil is described as an alkaline, non-saline, loamy sand. The organic matter and nutrient levels are acceptable and no significant contamination was found with respect to the parameters determined. This soil would adhere to the current BS3882 specification for 'multipurpose grade'.

To conclude, based on our findings, the topsoil would be considered well-suited to general landscaping purposes provided the physical condition of the soil is maintained.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if you have any queries or comments.

Freeland Horticulture 01322 613161

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Astley, Greater Manchester
Month/Year	May 17
Our Ref	SLC-17-AN-0543-SA
Date	26 May 2017

		Composite sample
pH Value & Salinity		
pH value (1:2.5 soil/water ext)	units	7.9
Electrical Conductivity (1:2.5 soil/water ext)	µS/cm	943
Organic Matter & Nutrient Status		
Organic Matter (LOI)	%	4.8
Organic Carbon (Derived)	%	2.8
Total Nitrogen	%	0.190
Carbon:Nitrogen Ratio	:1	15
Available Phosphorus	mg/l	56.2
Available Potassium	mg/l	971
Available Magnesium	mg/l	209
Particle Size Analysis & Stones		
Clay (<0.002mm)	%	9
Silt (0.063-0.002mm)	%	6
Sand (2.0-0.063mm)	%	85
Texture Class	UK Class	Loamy Sand
Stones 2-20mm	% by DW	1.2
Stones 20-50mm	% by DW	0.0
Stones >50mm	% by DW	0.0
Potential Contaminants		
Total Arsenic (As)	mg/kg	3.1
Total Cadmium (Cd)	mg/kg	<0.1
Total Chromium (Cr)	mg/kg	<10
Hexavalent Chromium (CR^{VI})	mg/kg	<0.1
Total Copper (Cu)	mg/kg	12.8
Total Lead (Pb)	mg/kg	18.7
Total Mercury (Hg)	mg/kg	<0.2
Total Nickel (Ni)	mg/kg	<10
Total Selenium (Se)	mg/kg	0.10
Total Zinc (Zn)	mg/kg	37.2
Total Beryllium (Be)	mg/kg	<1
Total Barium (Ba)	mg/kg	50.8
Total Vanadium (V)	mg/kg	<10
Hot Water Soluble Boron (B)	mg/kg	1.6
Total Cyanide (CN)	mg/kg	<1
Elemental Sulphur (S)	mg/kg	<5
Easily Liberated Sulphide (S^{2-})	mg/kg	1.1
Water Soluble Sulphate (SO_4^{2-})	mg/l	72.2
Total Phenols Index	mg/kg	<1
Asbestos Screen	-	N.D.

Chain of Custody requires a Freeland Horticulture Delivery Ticket-01322 619161

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Astley, Greater Manchester
Month/Year	May 17
Our Ref	SLC-17-AN-0543-SA
Date	26 May 2017

Polyaromatic Hydrocarbons

Naphthalene	mg/kg	<0.05
Acenaphthylene	mg/kg	<0.05
Acenaphthene	mg/kg	<0.05
Fluorene	mg/kg	<0.05
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.05
Fluoranthene	mg/kg	0.2
Pyrene	mg/kg	0.2
Benzo[a]anthracene	mg/kg	0.1
Chrysene	mg/kg	0.1
Benzo[b]fluoranthene	mg/kg	0.1
Benzo[k]fluoranthene	mg/kg	<0.1
Benzo[a]pyrene	mg/kg	0.1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.1
Dibenzo[a,h]anthracene	mg/kg	<0.1
Benzo[g,h,i]perylene	mg/kg	<0.1
Total PAHs sum US EPA 16	mg/kg	<1

Banded Petroleum Hydrocarbons

Aliphatic TPH >C_5-C_6	mg/kg	<0.2
Aliphatic TPH >C_6-C_8	mg/kg	<0.4
Aliphatic TPH >C_8-C_{10}	mg/kg	<4
Aliphatic TPH >C_{10}-C_{12}	mg/kg	<4
Aliphatic TPH >C_{12}-C_{16}	mg/kg	<4
Aliphatic TPH >C_{16}-C_{21}	mg/kg	7.4
Aliphatic TPH >C_{21}-C_{35}	mg/kg	57.2
Aliphatic TPH >C_{35}-C_{44}	mg/kg	<12

Aromatic TPH >C_5-C_7	mg/kg	<0.02
Aromatic TPH >C_7-C_8	mg/kg	<0.02
Aromatic TPH >C_8-C_{10}	mg/kg	<0.02
Aromatic TPH >C_{10}-C_{12}	mg/kg	<4
Aromatic TPH >C_{12}-C_{16}	mg/kg	4.3
Aromatic TPH >C_{16}-C_{21}	mg/kg	<4
Aromatic TPH >C_{21}-C_{35}	mg/kg	31.2
Aromatic TPH >C_{35}-C_{44}	mg/kg	<0.2

Total Petroleum Hydrocarbons (C_5-C_{44})	mg/kg	107

BTEX

Benzene	mg/kg	<0.02
Toluene	mg/kg	<0.2
Ethyl Benzene	mg/kg	<0.04
m- & p- Xylene	mg/kg	<0.2
o-Xylene	mg/kg	<0.1

Chain of Custody requires a Freeland Horticulture Delivery Ticket-01322 619161

Appendix F
Certificate of Reoccupation to Maintenance Building

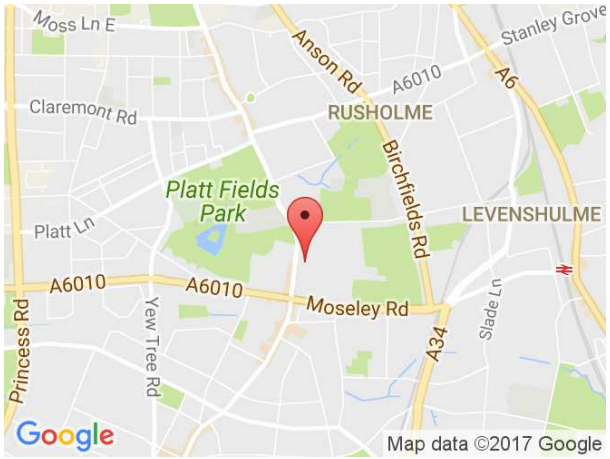
Lucion Environmental
Delivering Trusted Hazard Management to the Built Environment.

Lucion Environmental Ltd
Registered in England + Wales 6495874
VAT Registration Number 208156326

Certificate of Reoccupation

Job Ref No: ***190210****, Cert Ref No:* ***30874****, Account Ref No:* ***14003****, Contract Ref No:* ***25264***

c/o University of Manchester 126AL Richmond Park-Site Maintenance Offices & Stores Fallowfield Campus Chancellors Way Fallowfield Manchester M14 6HD



latlng: 53.444541,-2.217161



on site photo



general works area photo

Building	Level	Works-Area	Enclosure Used?	Enclosure Dimensions	Certificate Issue Date
Fallow Field Campus	0	maintenance stores enclosure	Yes	Area: 8m^2, Height: 2m	Friday, 12th May, 2017

Overall Certificate Status	Passed Tests	Failed Tests	WARNINGS
PASSED	4	0	0

Head Office
7 Halifax Court, Dunston,
Gateshead, NE11 9JT
E: *enquiries@lucion.co.uk*
T: *0345 5040 303*

UKAS TESTING
2569

Intro

This certificate is for the attention of	**Claire Lilley** **Vertase FLI Limited** Number One Middle Bridge Business Park Bristol Road Portishead Bristol BS20 6PN

Sampling & Evaluation Methods

In-house methods TOP02.08 & TOP02.09 in accordance with HSG 248 Asbestos - The Analyst's Guide to Sampling, Analysis and Clearance Procedures.

Notes: The samples referred to in this report will be retained for 6 months unless requested otherwise. Unless otherwise stated, there are no departures from the sampling and evaluation methods specified. Results detailed in this report relate only to the time, and corresponding conditions prevailing, when the sampling and examination were undertaken.

Notes to Test Accuracy

Airflow measured on site is recorded against a correction chart. Flow meters are calibrated against a UKAS certified master flow meter accurate to ±0.5%. In accordance with HSG248, if the combined effect of ambient temperature and pressure between calibration and sampling location exceeds 5% a correction is applied to the air sample volume. The calculated fibre concentration is given for each air sample taken. Where the corresponding reported fibre concentration is preceded by "<", the lower limit of quantification (LOQ) of the method has not been reached. For a 480 litre air sample with 200 graticule areas counted, the (LOQ) of this method is 0.010 fibres per cubic centimetre of air; samples of less volume/graticules will be reported to a lower LOQ (refer count sheet). While counting randomly distributed fibres, an expected degree of variation of 1.5 standard deviations from the mean count may occur. At clearance indicator level (0.01 fibres per cubic centimetre of air) a 480-litre air sample yielding a count of 20 fibres over 200 fields would have an expected standard deviation of ±8 fibres.

Sampling

When testing within an Enclosure and conducting a 4-Stage Clearance - the number of samples (Ns) is calculated by A1/3-1. Where enclosure is less than 3m in height: A is denoted by area. Where enclosure is greater than 3m in height: A is denoted by volume/3. Refer air sampling and fibre counting sheet.

When testing within a decontamination unit (DCU) - where the combined floor area of shower and dirty areas is less than 10m2; 1 air test has been carried out. During this test the door between these areas has been propped open. For combined floor areas exceeding 10m2 a sample in each area (i.e. shower and dirty end) will be taken.

For tests other than those associated with 4-Stage Clearance testing the analyst will apply the principles of current HSE guidance and experience combined with situational circumstances.

Where a photograph of the completed decontamination unit certificate appears in this report the analyst has completed an abridged report to be left inside the DCU; this abridged report should not be used in lieu of this comprehensive report.

Where sampling plans have been supplied; please note these are not to scale.

Where a sample filter has been deemed uncountable or biased the analyst will record this as "uncountable" in the count-sheet.

Field Blanks - Where site sampling and counting is carried out in a field laboratory a field blank is carried out by the analyst prior to the start of sampling and counting. The field blank constitutes a filter taken from a loaded but unused filter head that is mounted in the usual way and assigned a sample number which is recorded on the slide and the count sheet. Following sampling and analysis of the air tests, the results shall be assessed; where low counts (<0.01 fcm-^{3}) are obtained from some of the field samples, analysis of the field blank will not be necessary. Where elevated counts (>0.01 fcm-^{3}) are obtained on all field samples, then the field blank must be counted to exclude the possibility of contamination.

Disclaimers

Any opinions and interpretations expressed herein are outside the scope of UKAS accreditation. This certificate is valid only when it bears the signature of an authorised member of Lucion personnel. Please note the witnessing of smoke tests is outwith the scope of UKAS accreditation.

Representatives Signature - The signatory on report acknowledgement agrees to findings of this report being accurate and correct and Lucion Environmental Ltd issuing this report to the email address held on record for the job and does not require a copy of this report to be left on site. Furthermore Lucion Environmental Ltd cannot be held responsible for any actions undertaken following the issue of this report.

This certificate *may* be part of a series of works and should be read in conjunction with the Asbestos Analyst's Job Summary Report.

Report Contents

Test: Clearance Stage 1 (190210-1) - Passed 5
Test: Clearance Stage 2 (190210-2) - Passed 9
Test: Clearance Stage 3 (190210-3) - Passed 11
Sample: Inside enclosure (190210-3-1) 13
Sample: Inside enclosure pod (190210-3-2) 13
Sample: Field Blank (190210-3-3) 13
Test: Clearance Stage 4 (190210-4) - Passed 14
Test: Report Acknowledgement (190210-5) 16

Test: Clearance Stage 1 (190210-1) Passed

Stage Start Time	08:45:00
Stage End Time (set upon completion)	08:55:00
Enclosure / Work Area Desc. as per Contractor RAMS	Yes Maintenance stores. Direct connect for DCU
Works Description as Written on Contractor RAMS	Yes Removal of AIB debris to beams. Fully controlled
Has background air testing been performed	Yes
Has smoke test been performed	Yes J. Chambers
Has leak air testing been performed	No Background monitoring around area during works
Contractor RAMS checked and work appears to be according to RAMS	Yes
	No deviation

table continued from previous page...

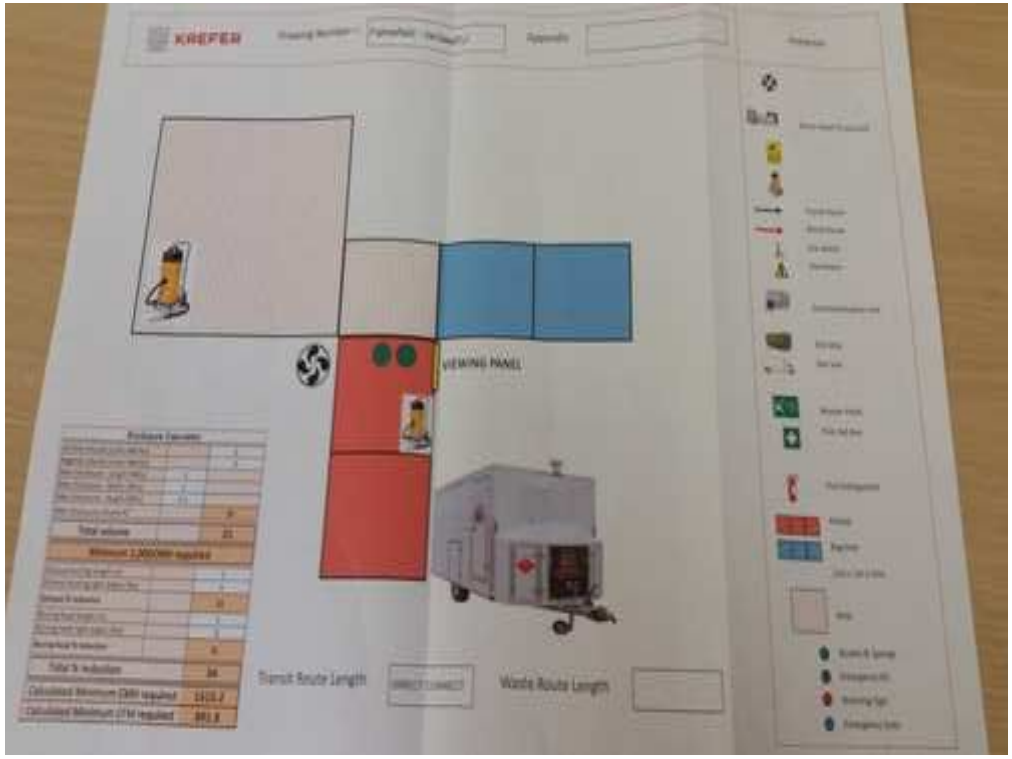
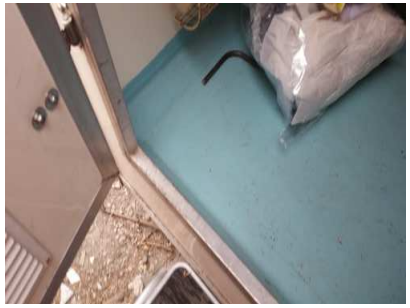
Contractor Methods Statement Diagram	
Negative Pressure Capacity	1500 cfm
Negative Pressure Unit	
Is operational vacuum cleaner present?	Yes
Is hygiene facility operational	Yes: 4 Man

table continued from previous page...

Hygiene Facilities Photo	
Is enclosure lighting adequate	Yes
Is enclosure access adequate	Yes
Is enclosure viewing / CCTV adequate	Yes
Enclosure Viewing / CCTV Photo	
Is enclosure / work area free of debris and waste	Yes
Is waste storage area free of debris and waste	Yes
Is transit route free of debris and waste	Yes
Transit Route Photo	
Are hygiene facilities free of debris and waste	Yes

table continued from previous page...

Hygiene Facilities Photo 2	
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 08:55:28

Test: Clearance Stage 2 (190210-2) Passed

Stage Start Time	09:00:00
Stage End Time (set upon completion)	09:40:00
Start time of visual	Friday, 12th May, 2017 @ 09:00:22
Is enclosure airlock clean	Yes
Is enclosure dry	Yes
Is enclosure / work area integrity adequate	Yes
Has the NPU filter been changed prior to visual?	Yes
Are plant / equipment covers removed	Not required
Are ceiling / walls / floor surfaces clean	Yes
Is culvert / drain / sump clean	Not required
Is boiler / tank / pipework / etc clean	Yes
Is support bracket clean	Yes
Is tray / cable / conduit clean	Yes
Are nuts / bolts / flanges / hatches clean	Not required
Is light fitting clean	Yes
Is ledge / window cill clean	Yes
Are screw holes / around nails cleaned or drilled	Not required AIB as debris and residue only. Beams wire brushed and removed where residues were present
Portable Equipment clean	Yes
Is polythene sheeting clean including folds	Yes
Is enclosure / work area surface vacuum cleaning adequate	Yes
Evidence of un-authorised lock down sprays?	No
Detail any areas not assessed	No access into cavity wall and voids. some restrictions from mobile scaffolding
Stage Warning?	No

table continued from previous page...

Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 09:40:34
Additional Photo 1	
Additional Photo 2	
Additional Photo 3	

Test: Clearance Stage 3 (190210-3) Passed

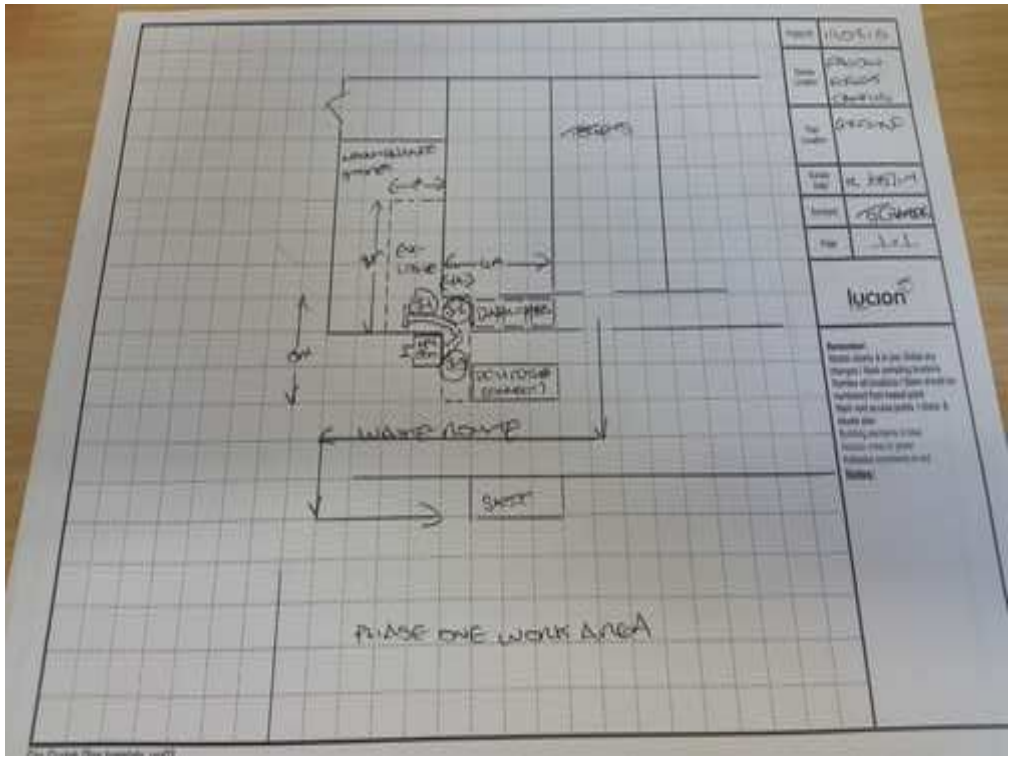
Enclosure Height (m)	2.00
Enclosure Area (m²)	8
Number of samples being taken	2
Stage Start Time	09:47:00
Stage End Time (set upon completion)	11:00:00
Enclosure Sketch	
Is original floor surface uncovered	Yes
Has enclosure surface disturbance method been used	Brushing
Duration Of Disturbance (minutes:seconds)	3:00
Is NPU / extractor switched off	Yes

table continued from previous page...

Is NPU / extractor sealed	Yes
Has NPU / extractor prefilter been changed	Yes
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 11:00:13
Additional Photo 1	
Additional Photo 2	

Test: Clearance Stage 3 (190210-3) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
190210-3	Friday, 12th May, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
998	1	MS018	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
190210-3-1	Inside enclosure	650	325	09:37:00	10:37:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
190210-3-2	Inside enclosure pod	19	1308	09:38:00	10:38:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
190210-3-3	Field Blank	602													

Test: Clearance Stage 4 (190210-4) Passed

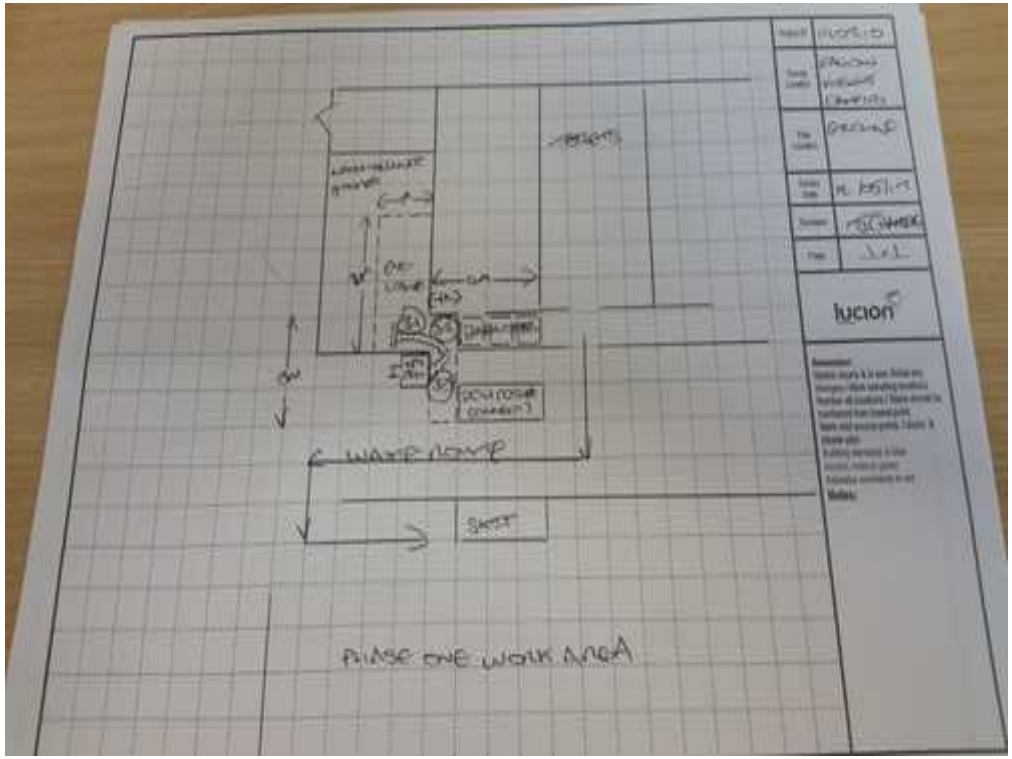
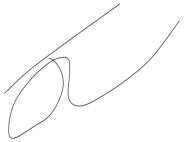
Stage Start Time	14:40:00
Stage End Time (set upon completion)	14:50:00
Enclosure Sketch	
Is the former work area / enclosure location clean?	Yes
All of enclosure removed	Yes
Cleanliness of adjacent locations is adequate	Yes
Is covered equipment clean	Yes
Are cable trays / light fittings / conduits etc clean	Yes
	Not required
Has visible waste been removed	Yes

table continued from previous page...

Are transit and waste route(s) adequately clean	Yes
	Not Required
Analyst Decontamination	Personal
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 14:50:38
Additional Photo 1	
Additional Photo 2	
Additional Photo 3	

Test: Report Acknowledgement (190210-5)

Issue Certificate of Reoccupation?	Yes
Representative's Signature Client Representative or Contractor	 S. Oldham
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 15:03:04

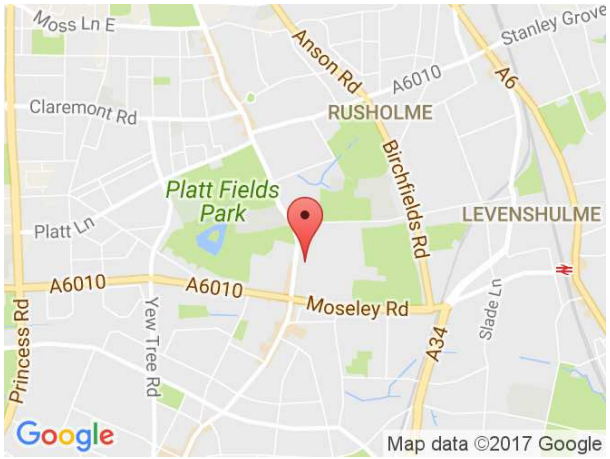
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Lucion Environmental Ltd
Registered in England + Wales 6495874
VAT Registration Number 208156326

Certificate of Reoccupation

Job Ref No: ***190210****, Cert Ref No:* ***30874****, Account Ref No:* ***14003****, Contract Ref No:* ***25264***

c/o University of Manchester 126AL Richmond Park-Site Maintenance Offices & Stores Fallowfield Campus Chancellors Way Fallowfield Manchester M14 6HD



latlng: 53.444541,-2.217161



on site photo



general works area photo

Building	Level	Works-Area	Enclosure Used?	Enclosure Dimensions	Certificate Issue Date
Fallow Field Campus	0	maintenance stores enclosure	Yes	Area: 8m^2, Height: 2m	Friday, 12th May, 2017

Overall Certificate Status	Passed Tests	Failed Tests	WARNINGS
PASSED	4	0	0

Head Office
7 Halifax Court, Dunston,
Gateshead, NE11 9JT
E: *enquiries@lucion.co.uk*
T: *0345 5040 303*

UKAS TESTING
2569

Intro

This certificate is for the attention of	**Claire Lilley** **Vertase FLI Limited** Number One Middle Bridge Business Park Bristol Road Portishead Bristol BS20 6PN

Sampling & Evaluation Methods

In-house methods TOP02.08 & TOP02.09 in accordance with HSG 248 Asbestos - The Analyst's Guide to Sampling, Analysis and Clearance Procedures.

Notes: The samples referred to in this report will be retained for 6 months unless requested otherwise. Unless otherwise stated, there are no departures from the sampling and evaluation methods specified. Results detailed in this report relate only to the time, and corresponding conditions prevailing, when the sampling and examination were undertaken.

Notes to Test Accuracy

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Sampling

When testing within an Enclosure and conducting a 4-Stage Clearance - the number of samples (Ns) is calculated by A1/3-1. Where enclosure is less than 3m in height: A is denoted by area. Where enclosure is greater than 3m in height: A is denoted by volume/3. Refer air sampling and fibre counting sheet.

When testing within a decontamination unit (DCU) - where the combined floor area of shower and dirty areas is less than 10m2; 1 air test has been carried out. During this test the door between these areas has been propped open. For combined floor areas exceeding 10m2 a sample in each area (i.e. shower and dirty end) will be taken.

For tests other than those associated with 4-Stage Clearance testing the analyst will apply the principles of current HSE guidance and experience combined with situational circumstances.

Where a photograph of the completed decontamination unit certificate appears in this report the analyst has completed an abridged report to be left inside the DCU; this abridged report should not be used in lieu of this comprehensive report.

Where sampling plans have been supplied; please note these are not to scale.

Where a sample filter has been deemed uncountable or biased the analyst will record this as "uncountable" in the count-sheet.

Field Blanks - Where site sampling and counting is carried out in a field laboratory a field blank is carried out by the analyst prior to the start of sampling and counting. The field blank constitutes a filter taken from a loaded but unused filter head that is mounted in the usual way and assigned a sample number which is recorded on the slide and the count sheet. Following sampling and analysis of the air tests, the results shall be assessed; where low counts (<0.01 fcm-^{3}) are obtained from some of the field samples, analysis of the field blank will not be necessary. Where elevated counts (>0.01 fcm-^{3}) are obtained on all field samples, then the field blank must be counted to exclude the possibility of contamination.

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Report Contents

Test: Clearance Stage 1 (190210-1) - Passed 5
Test: Clearance Stage 2 (190210-2) - Passed 9
Test: Clearance Stage 3 (190210-3) - Passed 11
Sample: Inside enclosure (190210-3-1) 13
Sample: Inside enclosure pod (190210-3-2) 13
Sample: Field Blank (190210-3-3) 13
Test: Clearance Stage 4 (190210-4) - Passed 14
Test: Report Acknowledgement (190210-5) 16

Test: Clearance Stage 1 (190210-1) Passed

Stage Start Time	08:45:00
Stage End Time (set upon completion)	08:55:00
Enclosure / Work Area Desc. as per Contractor RAMS	Yes Maintenance stores. Direct connect for DCU
Works Description as Written on Contractor RAMS	Yes Removal of AIB debris to beams. Fully controlled
Has background air testing been performed	Yes
Has smoke test been performed	Yes J. Chambers
Has leak air testing been performed	No Background monitoring around area during works
Contractor RAMS checked and work appears to be according to RAMS	Yes
	No deviation

table continued from previous page...

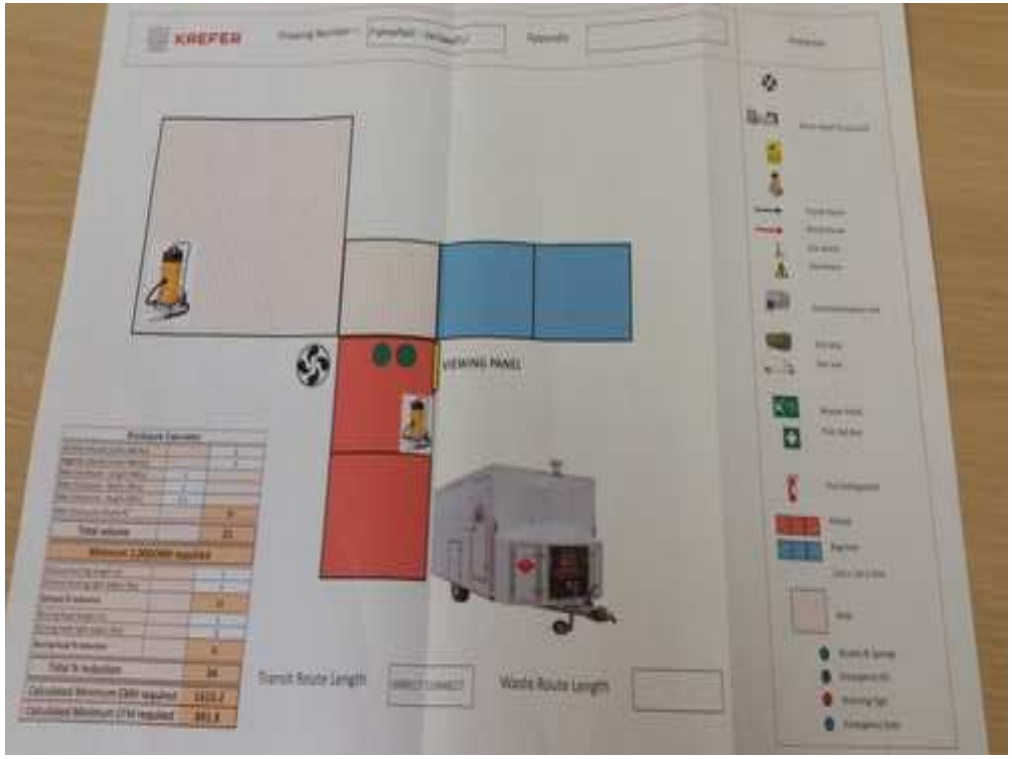
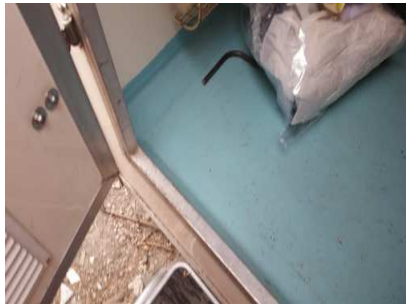
Contractor Methods Statement Diagram	
Negative Pressure Capacity	1500 cfm
Negative Pressure Unit	
Is operational vacuum cleaner present?	Yes
Is hygiene facility operational	Yes: 4 Man

table continued from previous page...

Hygiene Facilities Photo	
Is enclosure lighting adequate	Yes
Is enclosure access adequate	Yes
Is enclosure viewing / CCTV adequate	Yes
Enclosure Viewing / CCTV Photo	
Is enclosure / work area free of debris and waste	Yes
Is waste storage area free of debris and waste	Yes
Is transit route free of debris and waste	Yes
Transit Route Photo	
Are hygiene facilities free of debris and waste	Yes

table continued from previous page...

Hygiene Facilities Photo 2	
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 08:55:28

Test: Clearance Stage 2 (190210-2) Passed

Stage Start Time	09:00:00
Stage End Time (set upon completion)	09:40:00
Start time of visual	Friday, 12th May, 2017 @ 09:00:22
Is enclosure airlock clean	Yes
Is enclosure dry	Yes
Is enclosure / work area integrity adequate	Yes
Has the NPU filter been changed prior to visual?	Yes
Are plant / equipment covers removed	Not required
Are ceiling / walls / floor surfaces clean	Yes
Is culvert / drain / sump clean	Not required
Is boiler / tank / pipework / etc clean	Yes
Is support bracket clean	Yes
Is tray / cable / conduit clean	Yes
Are nuts / bolts / flanges / hatches clean	Not required
Is light fitting clean	Yes
Is ledge / window cill clean	Yes
Are screw holes / around nails cleaned or drilled	Not required AIB as debris and residue only. Beams wire brushed and removed where residues were present
Portable Equipment clean	Yes
Is polythene sheeting clean including folds	Yes
Is enclosure / work area surface vacuum cleaning adequate	Yes
Evidence of un-authorised lock down sprays?	No
Detail any areas not assessed	No access into cavity wall and voids. some restrictions from mobile scaffolding
Stage Warning?	No

table continued from previous page...

Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 09:40:34
Additional Photo 1	
Additional Photo 2	
Additional Photo 3	

Test: Clearance Stage 3 (190210-3) Passed

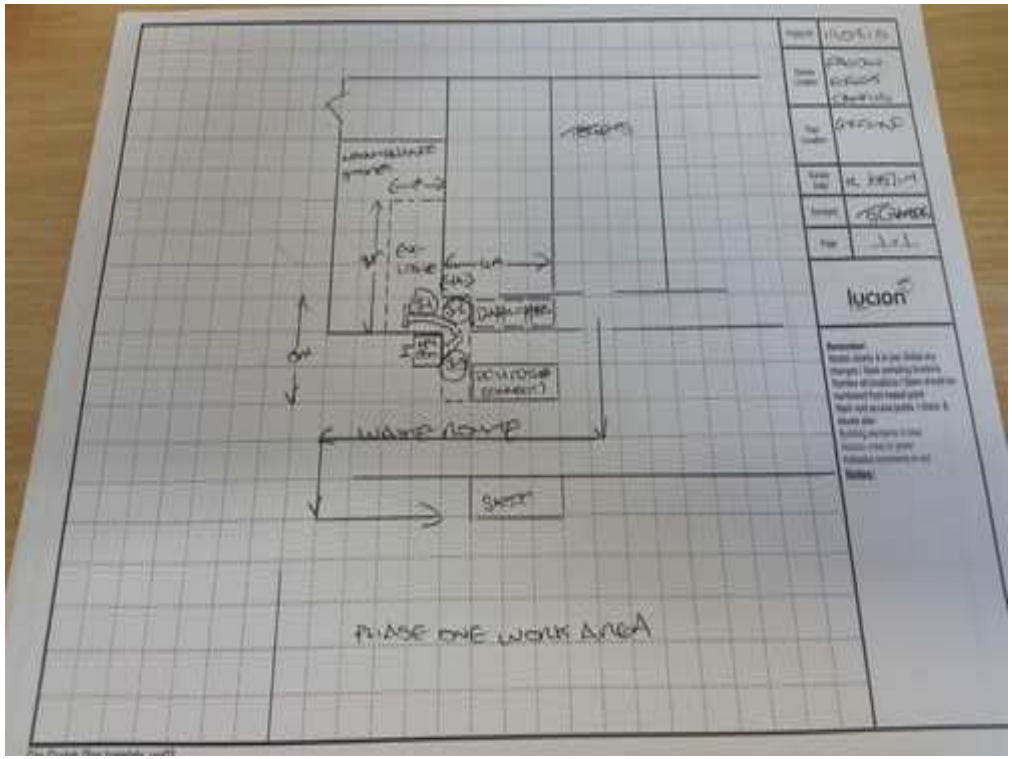
Enclosure Height (m)	2.00
Enclosure Area (m²)	8
Number of samples being taken	2
Stage Start Time	09:47:00
Stage End Time (set upon completion)	11:00:00
Enclosure Sketch	
Is original floor surface uncovered	Yes
Has enclosure surface disturbance method been used	Brushing
Duration Of Disturbance (minutes:seconds)	3:00
Is NPU / extractor switched off	Yes

table continued from previous page...

Is NPU / extractor sealed	Yes
Has NPU / extractor prefilter been changed	Yes
Air sample results	All air samples gave results below 0.01 fibres per cc of air.
Stage Warning?	No
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 11:00:13
Additional Photo 1	
Additional Photo 2	

Test: Clearance Stage 3 (190210-3) - Count Sheet

Lucion Report Number	Test Date	Sampled By	Counted By
190210-3	Friday, 12th May, 2017	Joseph Chambers	Joseph Chambers

Air Volume Correction Detail

T Cal (K)	T Site (C)	T Pcal (hPa)
293	12	1013

Microscope & Calculation Detail

P Site (hPa)	Correction Required	Micro No.	Graticule Dia (µm)	Test Slide Result (Grid No.)	Filter Dia. Exposed (mm)
998	1	MS018	100	5	22.5

Instrument Detail

Thermometer, Barometer, Timepiece	Flow (Hi)	Flow (Low)	HSE/NPL	Graticule Slide
WS108	FM060	FM	305	SM408

Sample Details

Sample No.	Sample Location	Head No.	Pump No.	Time On (hh:mm)	Time Off (hh:mm)	Run Time (mins)	Start Flow (lmin-1)	Int Flow (lmin-1)	End Flow (lmin-1)	Calc. Volume (l)	Corr. Volume (l)	Fibres	Fields	Calc. Conc. (Fibres cm^{-3})	Report. Conc. (Fibres cm^{-3})
190210-3-1	Inside enclosure	650	325	09:37:00	10:37:00	60	8.0		8.0	480	480	2.0	200	0.001	<0.01
190210-3-2	Inside enclosure pod	19	1308	09:38:00	10:38:00	60	8.0		8.0	480	480	4.0	200	0.002	<0.01
190210-3-3	Field Blank	602													

Test: Clearance Stage 4 (190210-4) Passed

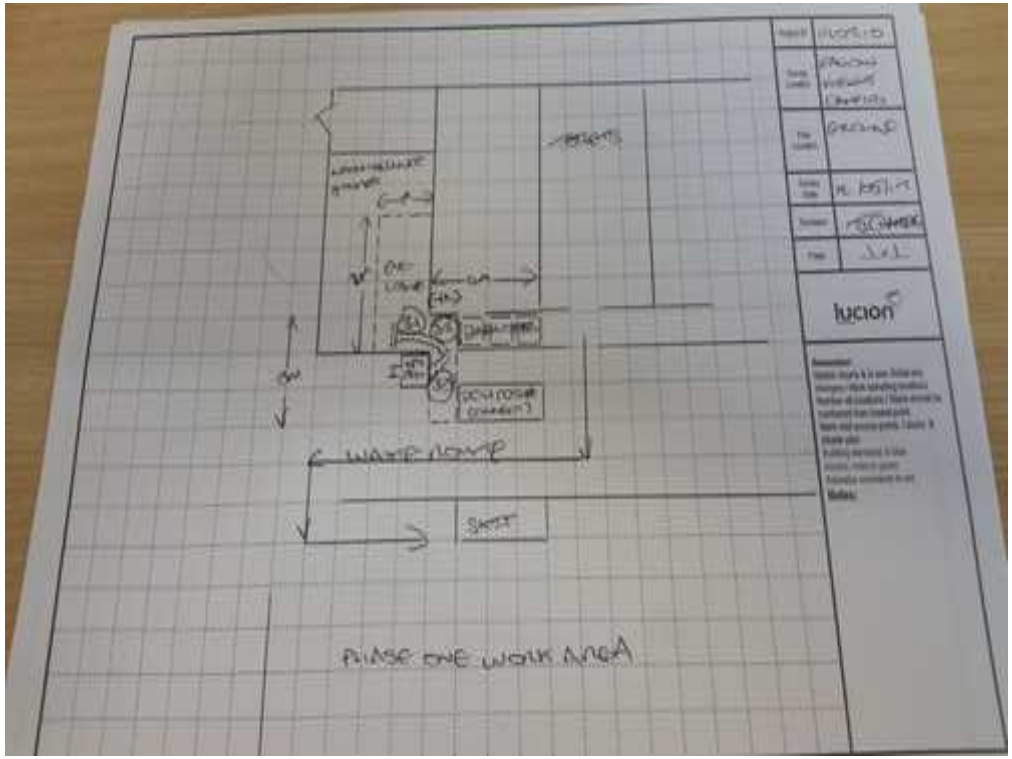
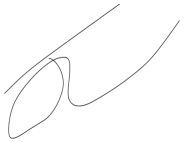
Stage Start Time	14:40:00
Stage End Time (set upon completion)	14:50:00
Enclosure Sketch	
Is the former work area / enclosure location clean?	Yes
All of enclosure removed	Yes
Cleanliness of adjacent locations is adequate	Yes
Is covered equipment clean	Yes
Are cable trays / light fittings / conduits etc clean	Yes
	Not required
Has visible waste been removed	Yes

table continued from previous page...

Are transit and waste route(s) adequately clean	Yes
	Not Required
Analyst Decontamination	Personal
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 14:50:38
Additional Photo 1	
Additional Photo 2	
Additional Photo 3	

Test: Report Acknowledgement (190210-5)

Issue Certificate of Reoccupation?	Yes
Representative's Signature Client Representative or Contractor	 S. Oldham
Analyst Signature Signature Date	 Friday, 12th May, 2017 @ 15:03:04

Appendix G
Geotechnical Test Certificates

2304

TEST CERTIFICATE

Determination of Moisture Content/ Dry Density Relationship

Tested in accordance with BS 1377-4: 1990: Clause 3.3 using 2.5kg [light] Rammer

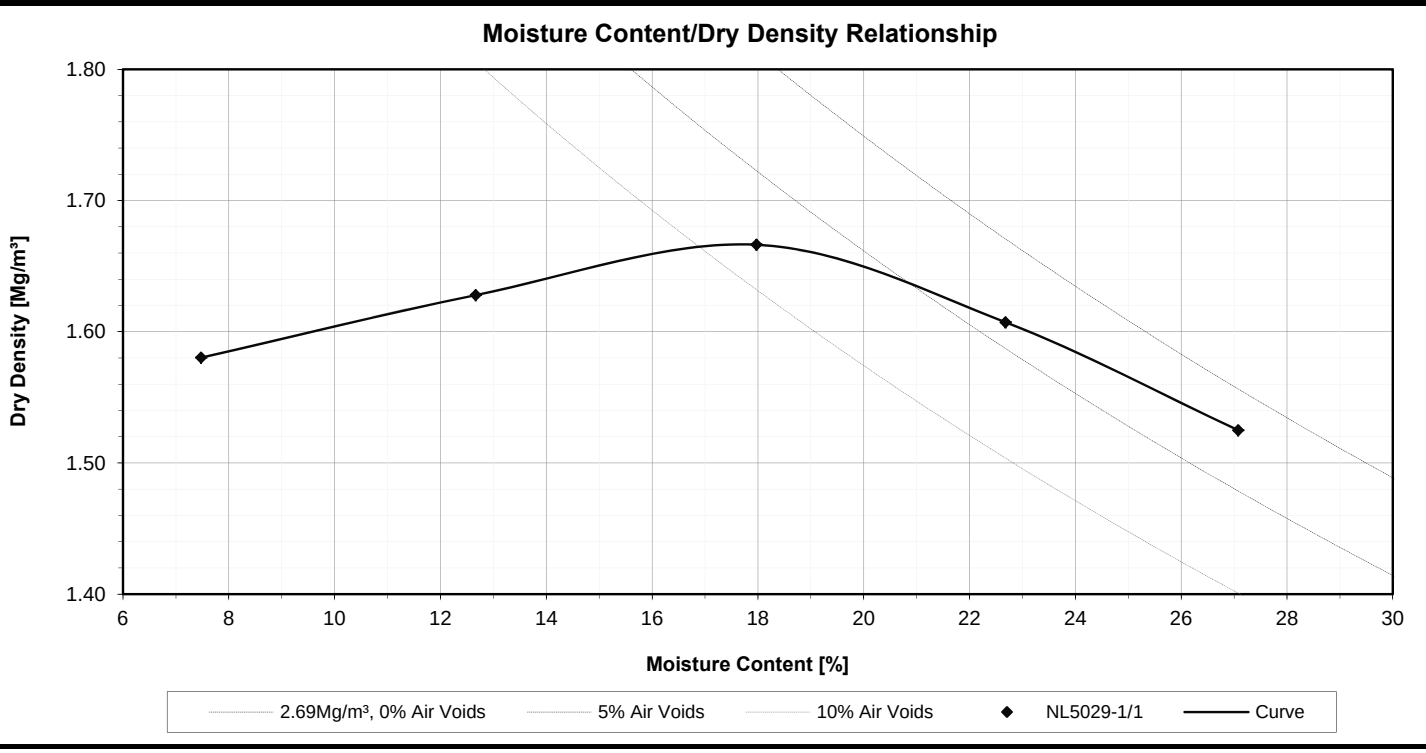
Quarry Farm View Bowbridge Lane
Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/1/752
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	28.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference: NL5029-1/1
Sample Reference: 1 (BLK)
Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay
Location: Not Given
Depth: 0.00m
Particle Density: 2.69 Mg/m³ Measured Value
% Retained 37.5mm: 0%
Sample Preperation: Separate Sample
% Retained 20mm: 0%
Grading Zone: Zone 1

As received Moisture Content [%]	Optimum Moisture Content [%]	Maximum Dry Density [Mg/m³]
17	18	1.67



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1
Form Number: EN/C/751 Version 27

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Whitchurch, Shropshire, SY13 2BS

2304

TEST CERTIFICATE

Determination of Moisture Content

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

Quarry Farm View Bowbridge Lane
Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-1/1/705
Client Reference: N/A
Job Number: NL5029-1
Date Sampled: 27.06.2017
Date Received: 27.06.2017
Date Tested: 27.06.2017
Certificate of Sampling: No
Sampling Certificate No.: N/A
Sampled By: Enverity

TEST RESULTS

Laboratory Reference	Sample Reference	Location	Depth Top	Depth Base	Description	Moisture Content [%]
NL5029-1/1	1 (BLK)	Not Given	0.00m	N/A	Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay	17
NL5029-1/2	2 (BLK)	Not Given	0.00m	N/A	Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay	13

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

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Enverity

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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Density

Tested in Accordance with BS 1377-2: 1990: Clause 8.2

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/1/708
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	28.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference	Client Sample Reference	Location	Average Particle Density [Mg/m³]
NL5029-1/1	1 (BLK)	Not Given	2.69

Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

Depth: 0.00m

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1
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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Clause 4.4 & 5: One Point Method

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/1/704
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
Contact:	Duncan Scott	Date Received:	27.06.2017
		Date Tested:	29.06.2017
Site Name:	Fallowfield	Certificate of Sampling:	No
Site Address:	University of Manchester	Sampling Certificate No.:	N/A
		Sampled By:	Enverity

Test Results:

Laboratory Reference: NL5029-1/1

Sample Reference: 1 (BLK)

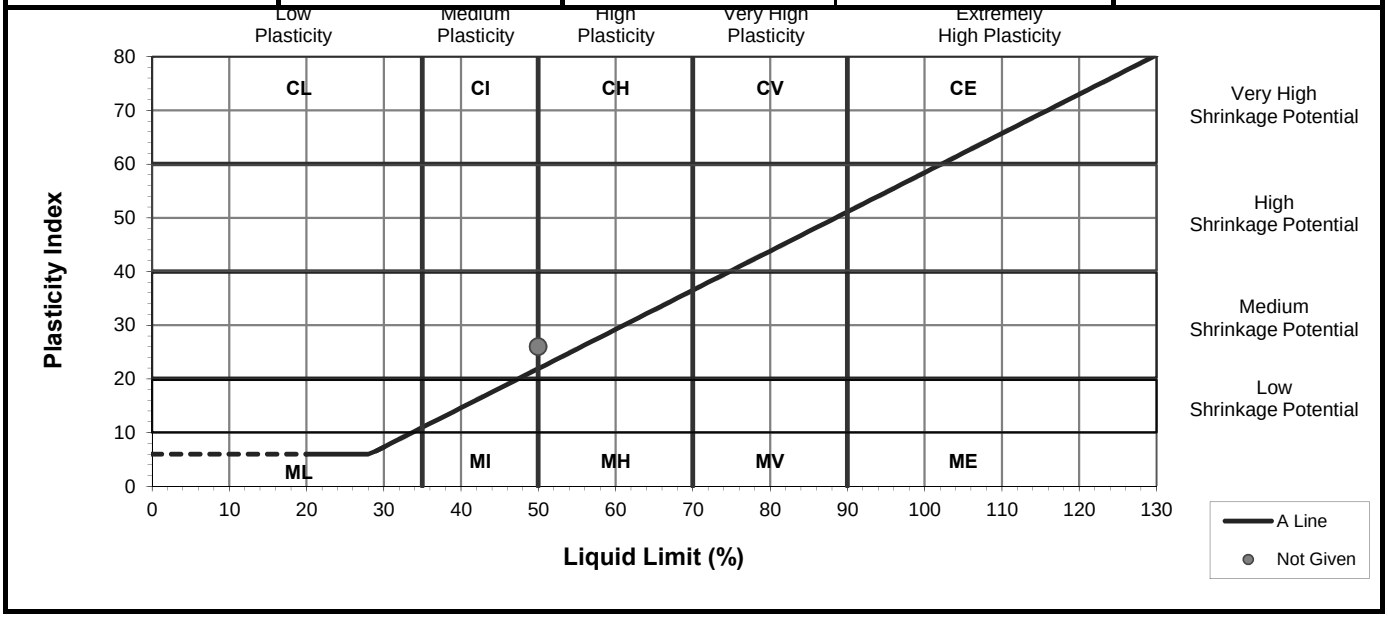
Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

Location: Not Given **Depth:** 0.00m

Sample Preparation: Prepared from Natural

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
17	50	24	26	84



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager Signed:

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1

Form Number: EN/C/704 Version 30

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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Size Distribution

Tested in Accordance with BS 1377-2: 1990: Method 9.2

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/1/709
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Lab Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	29.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

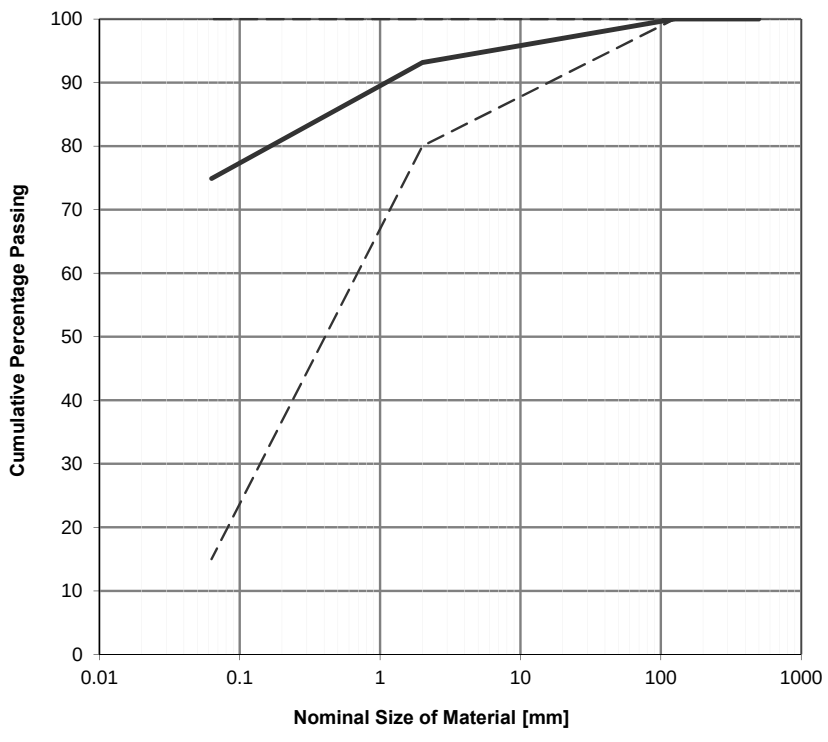
Laboratory Reference: NL5029-1/1
Sample Reference: 1 (BLK)

Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

Material Specification: Class 2B Dry Cohesive Fill Material
Specification for Highway Works (2007), Volume 1, Table 6/2

Location: Not Given
Supplier: Not Given
Source: Not Given

Depth: 0.00m



SIEVE ANALYSIS

Sieve Size [mm]	Passing [%]	Material Specification		
500	100			
300	100			
200	100			
150	100			
125	100	100	-	100
90	100			
75	100			
63	100			
50	100			
37.5	100			
28	100			
20	100			
14	100			
10	99			
6.3	98			
5.00	97			
3.35	96			
2.00	93	80	-	100
1.18	90			
0.600	86			
0.425	84			
0.300	81			
0.212	79			
0.150	77			
0.063	75	15	-	100

Comments: Sample complies with the grading specification.

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1
Form Number: EN/C/709 Version 22

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TEST CERTIFICATE

Determination of Moisture Content/ Dry Density Relationship

Tested in accordance with BS 1377-4: 1990: Clause 3.3 using 2.5kg [light] Rammer

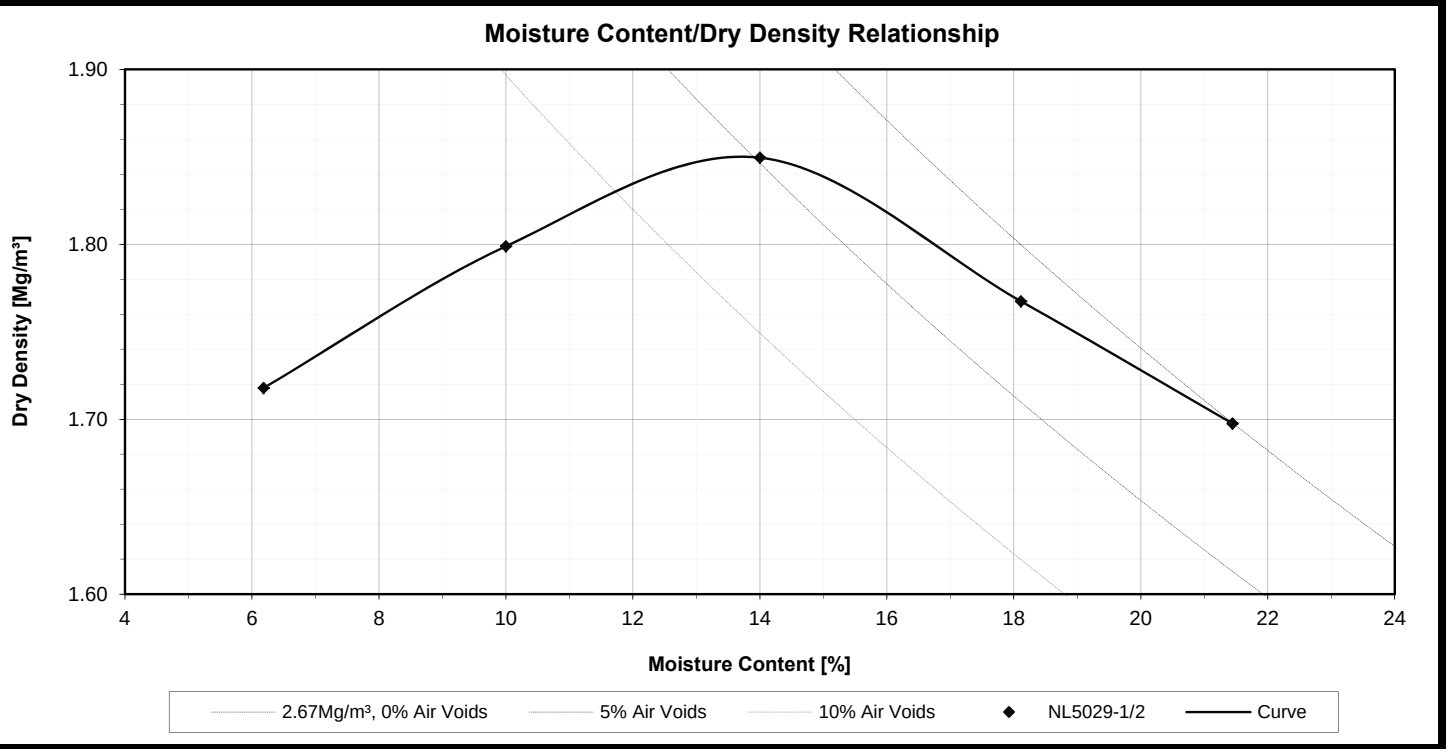
Enverity
Quarry Farm View Bowbridge Lane
Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/2/752
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	28.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference: NL5029-1/2
Sample Reference: 2 (BLK)
Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay
Location: Not Given
Depth: 0.00m
Particle Density: 2.67 Mg/m³ Measured Value
% Retained 37.5mm: 0%
Sample Preperation: Separate Sample
% Retained 20mm: 0%
Grading Zone: Zone 1

As received Moisture Content [%]	Optimum Moisture Content [%]	Maximum Dry Density [Mg/m³]
13	14	1.85



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1
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e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Density

Tested in Accordance with BS 1377-2: 1990: Clause 8.2

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/2/708
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	28.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference	Client Sample Reference	Location	Average Particle Density [Mg/m³]
NL5029-1/2	2 (BLK)	Not Given	2.67

Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

Depth: 0.00m

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1
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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Clause 4.4 & 5: One Point Method

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/2/704
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-1
		Date Sampled:	27.06.2017
Contact:	Duncan Scott	Date Received:	27.06.2017
		Date Tested:	29.06.2017
Site Name:	Fallowfield	Certificate of Sampling:	No
Site Address:	University of Manchester	Sampling Certificate No.:	N/A
		Sampled By:	Enverity

Test Results:

Laboratory Reference: NL5029-1/2

Sample Reference: 2 (BLK)

Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

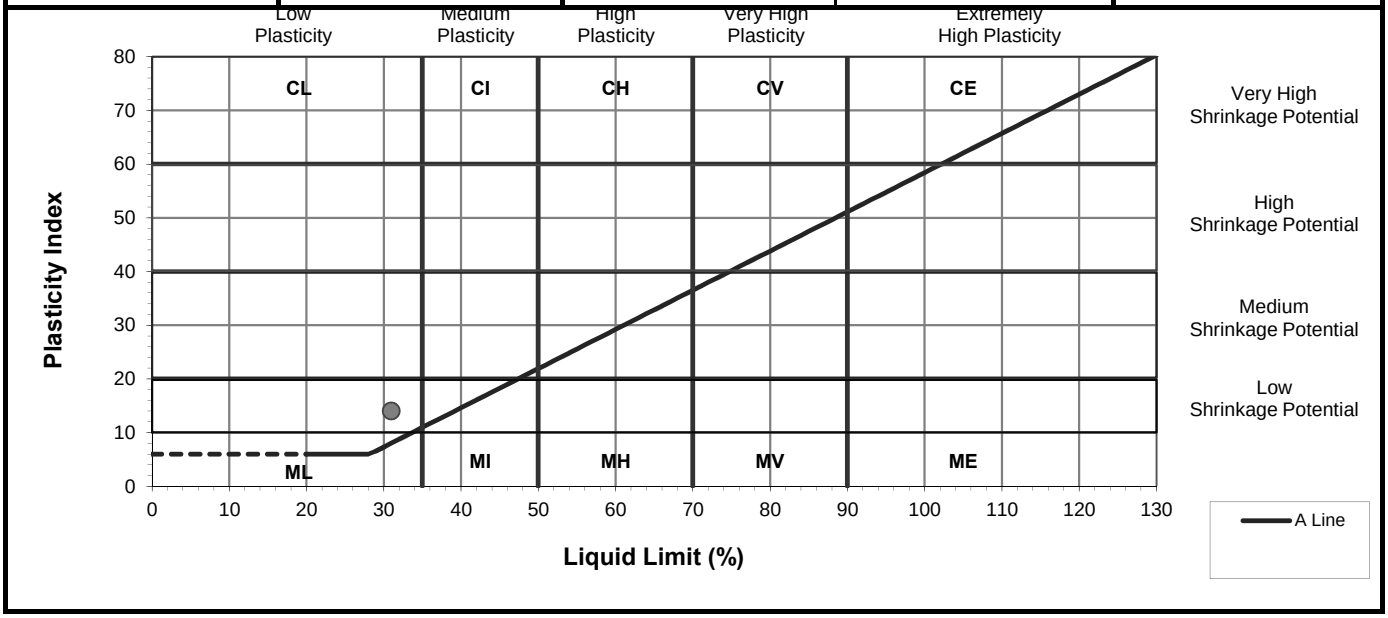
Location:

Depth: 0.00m

Sample Preparation: Prepared from Natural

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
13	31	17	14	91



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 29.06.2017 Page 1 of 1

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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Size Distribution

Tested in Accordance with BS 1377-2: 1990: Method 9.2

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-1/2/709
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Lab Job Number:	NL5029-1
		Date Sampled:	27.06.2017
		Date Received:	27.06.2017
Contact:	Duncan Scott	Date Tested:	29.06.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

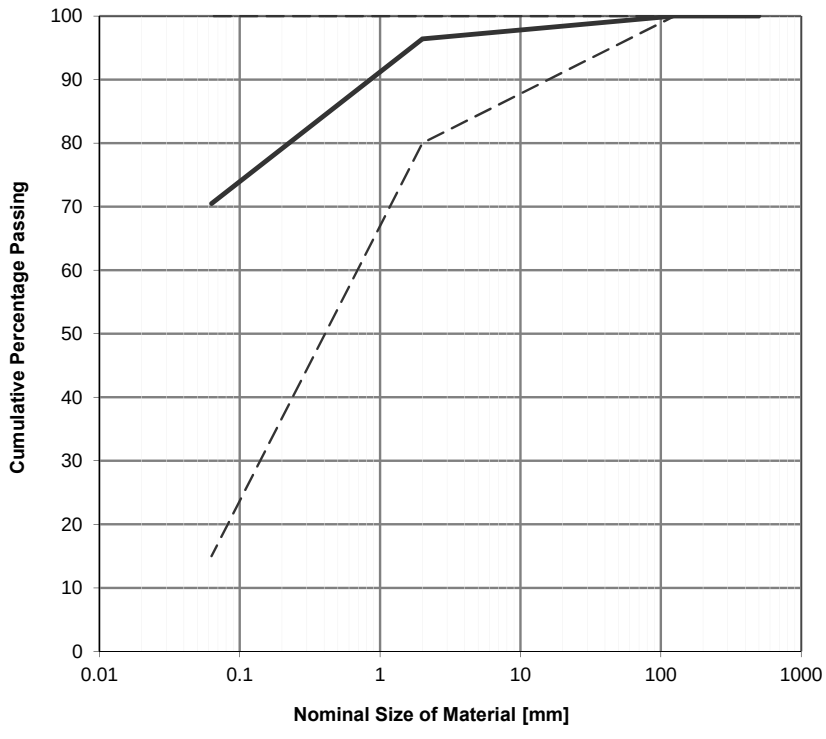
TEST RESULTS **Laboratory Reference:** NL5029-1/2
Sample Reference: 2 (BLK)

Sample Description: Stiff Dark Brown Slightly Gravelly Slightly Sandy Clay

Material Specification: Class 2A Wet Cohesive Fill Material
Specification for Highway Works (2007), Volume 1, Table 6/2

Location: Not Given
Supplier: Not Given
Source: Not Given

Depth: 0.00m



SIEVE ANALYSIS

Sieve Size [mm]	Passing [%]	Material Specification		
500	100			
300	100			
200	100			
150	100			
125	100	100	-	100
90	100			
75	100			
63	100			
50	100			
37.5	100			
28	100			
20	100			
14	100			
10	100			
6.3	99			
5.00	99			
3.35	98			
2.00	96	80	-	100
1.18	95			
0.600	93			
0.425	91			
0.300	86			
0.212	81			
0.150	77			
0.063	70	15	-	100

Comments: Sample complies with the grading specification.

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

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t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Moisture Content

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

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-2/8/705
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-2
		Date Sampled:	10.07.2017
		Date Received:	10.07.2017
Contact:	Duncan Scott	Date Tested:	17.07.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference	Sample Reference	Location	Depth Top	Depth Base	Description	Moisture Content [%]
NL5029-2/9	3 (BLK)	Not Given	0.00m	N/A	Firm Brown Slightly Gravelly Sandy Clay	16

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 18.07.2017

Form Number: EN/C/705 Version 24

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TEST CERTIFICATE

Determination of Moisture Content/ Dry Density Relationship

Tested in accordance with BS 1377-4: 1990: Clause 3.3 using 2.5kg [light] Rammer

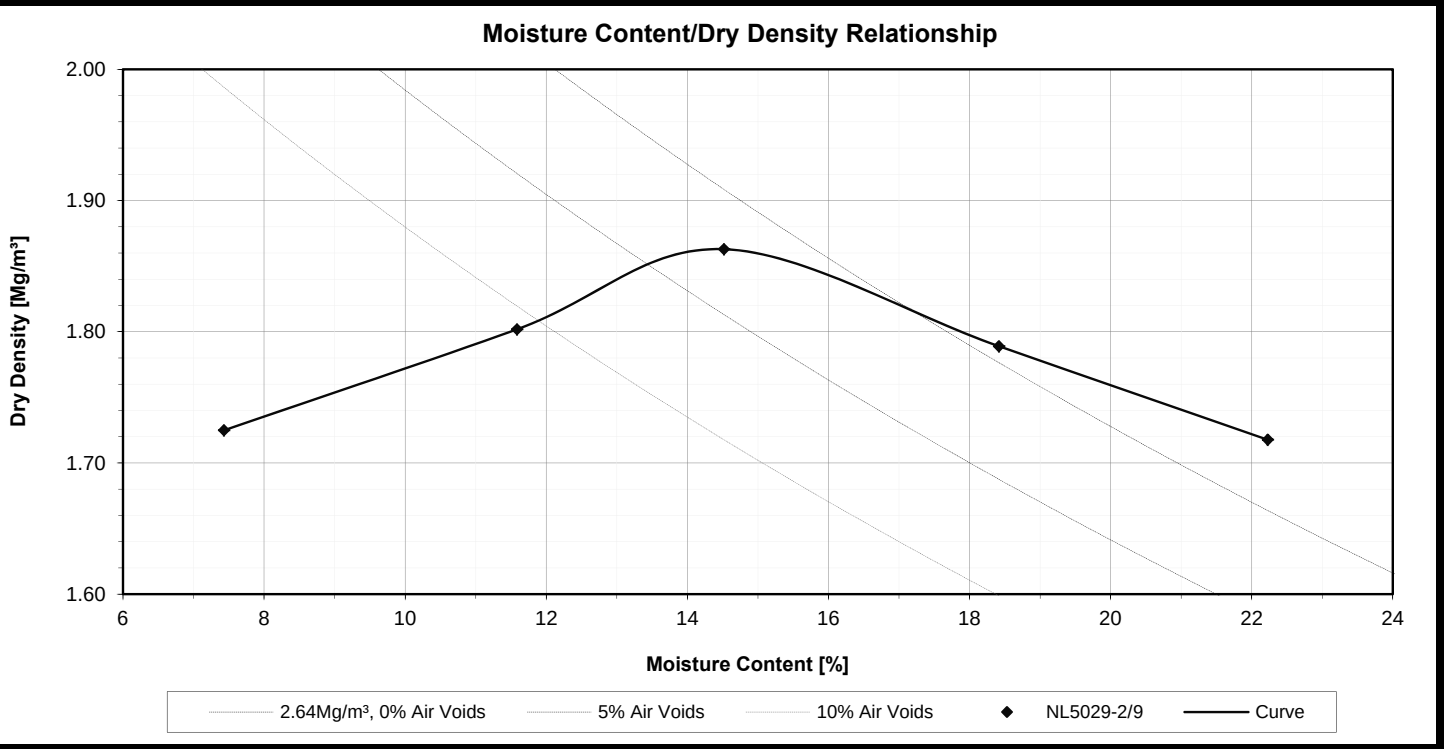
Quarry Farm View Bowbridge Lane
Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-2/9/752
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-2
		Date Sampled:	10.07.2017
		Date Received:	10.07.2017
Contact:	Duncan Scott	Date Tested:	18.07.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference: NL5029-2/9
Sample Reference: 3 (BLK)
Sample Description: Firm Brown Slightly Gravelly Sandy Clay
Location: 3 (BLK) **Depth:** 0.00m
Particle Density: 2.64 Mg/m³ Measured Value
% Retained 37.5mm: 0% **Sample Preperation:** Separate Sample
% Retained 20mm: 1% **Grading Zone:** Zone 2

As received Moisture Content [%]	Optimum Moisture Content [%]	Maximum Dry Density [Mg/m³]
16	15	1.86



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager Signed:

for and on behalf of Enverity Ltd

Date Reported: 18.07.2017 Page 1 of 1
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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Density

Tested in Accordance with BS 1377-2: 1990: Clause 8.2

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-2/9/708
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-2
		Date Sampled:	10.07.2017
		Date Received:	10.07.2017
Contact:	Duncan Scott	Date Tested:	18.07.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS

Laboratory Reference	Client Sample Reference	Location	Average Particle Density [Mg/m³]
NL5029-2/9	3 (BLK)	Not Given	2.64

Description: Firm Brown Slightly Gravelly Sandy Clay

Depth: 0.00m

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

for and on behalf of Enverity Ltd

Date Reported: 18.07.2017 Page 1 of 1
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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Clause 4.4 & 5: One Point Method

Client:	Vertase FLI Ltd	Certificate Number:	NL5029-2/9/704
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Job Number:	NL5029-2
		Date Sampled:	10.07.2017
Contact:	Duncan Scott	Date Received:	10.07.2017
		Date Tested:	20.07.2017
Site Name:	Fallowfield	Certificate of Sampling:	No
Site Address:	University of Manchester	Sampling Certificate No.:	N/A
		Sampled By:	Enverity

Test Results:

Laboratory Reference: NL5029-2/9

Sample Reference: 3 (BLK)

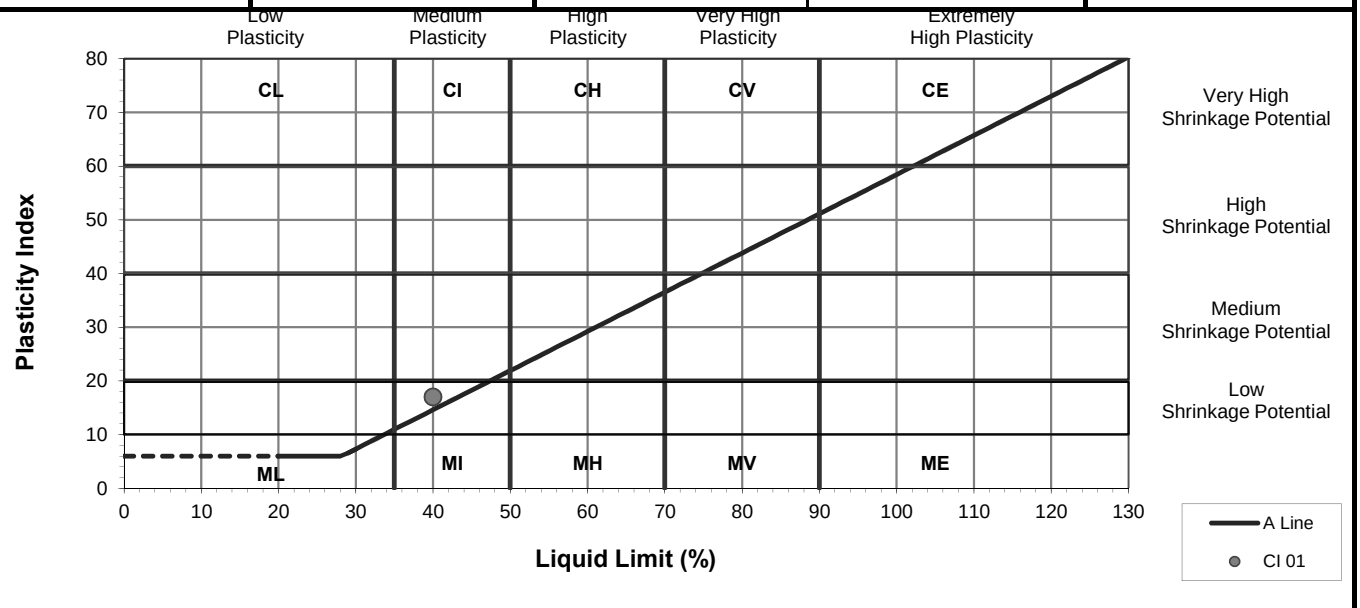
Sample Description: Firm Brown Slightly Gravelly Sandy Clay

Location:

Depth: 0.00m

Sample Preparation:

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
16	40	23	17	63



Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 18.07.2017 Page 1 of 1

Form Number: EN/C/704 Version 30

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Enverity

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Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Particle Size Distribution

Tested in Accordance with BS 1377-2: 1990: Method 9.2

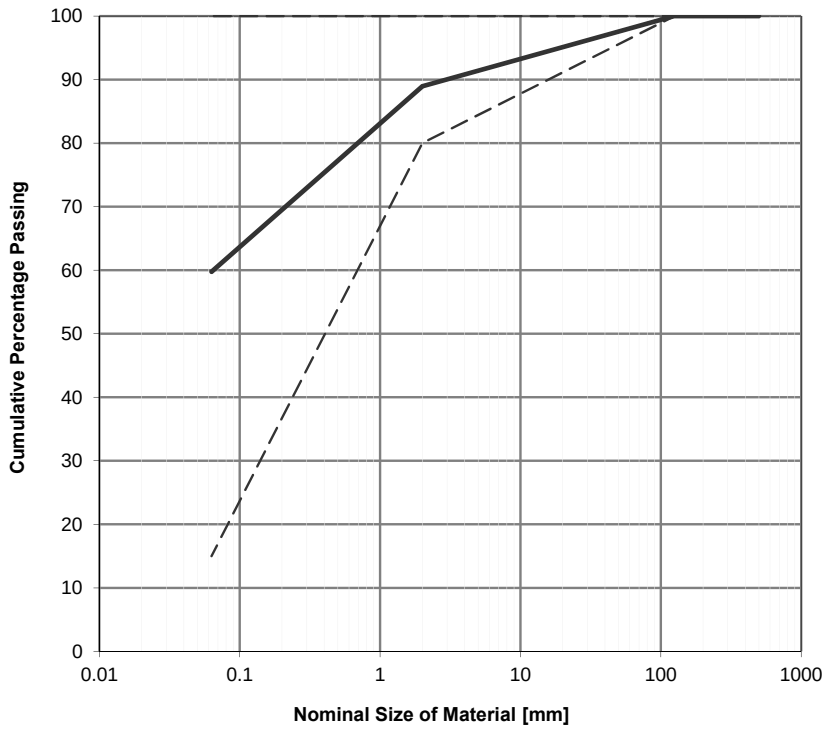
Client:	Vertase FLI Ltd	Certificate Number:	NL5029-2/9/709
Client Address:	19 Napier Court Barlborough Links, Barlborough Sheffield S43 4PZ	Client Reference:	N/A
		Lab Job Number:	NL5029-2
		Date Sampled:	10.07.2017
		Date Received:	10.07.2017
Contact:	Duncan Scott	Date Tested:	19.07.2017
		Certificate of Sampling:	No
Site Name:	Fallowfield	Sampling Certificate No.:	N/A
Site Address:	University of Manchester	Sampled By:	Enverity

TEST RESULTS **Laboratory Reference:** NL5029-2/9
Sample Reference: 3 (BLK)

Sample Description: Firm Brown Slightly Gravelly Sandy Clay

Material Specification: Class 2B Dry Cohesive Fill Material
Specification for Highway Works (2007), Volume 1, Table 6/2

Location: **Depth:** 0.00m
Supplier: Not Given
Source: Not Given



SIEVE ANALYSIS				
Sieve Size [mm]	Passing [%]	Material Specification		
500	100			
300	100			
200	100			
150	100			
125	100	100	-	100
90	100			
75	100			
63	100			
50	100			
37.5	100			
28	100			
20	99			
14	97			
10	95			
6.3	93			
5.00	92			
3.35	90			
2.00	89	80	-	100
1.18	87			
0.600	85			
0.425	84			
0.300	79			
0.212	73			
0.150	66			
0.063	60	15	-	100

Comments: Sample complies with the grading specification.

Approved Signatory: C. Major - Deputy Laboratory Manager Signed:

for and on behalf of Enverity Ltd

Date Reported: 18.07.2017 Page 1 of 1
Form Number: EN/C/709 Version 22

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Enverity

Quarry Farm View Bowbridge Lane
Newark Nottinghamshire NG24 3BZ
t: 01636 705100 f: 01636 640640
e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-2/1/715-2

Client Reference: N/A
Lab Job Number: NL5029-2

Date Received: 10.07.2017
Date Tested: 10.07.2017

Test Results:

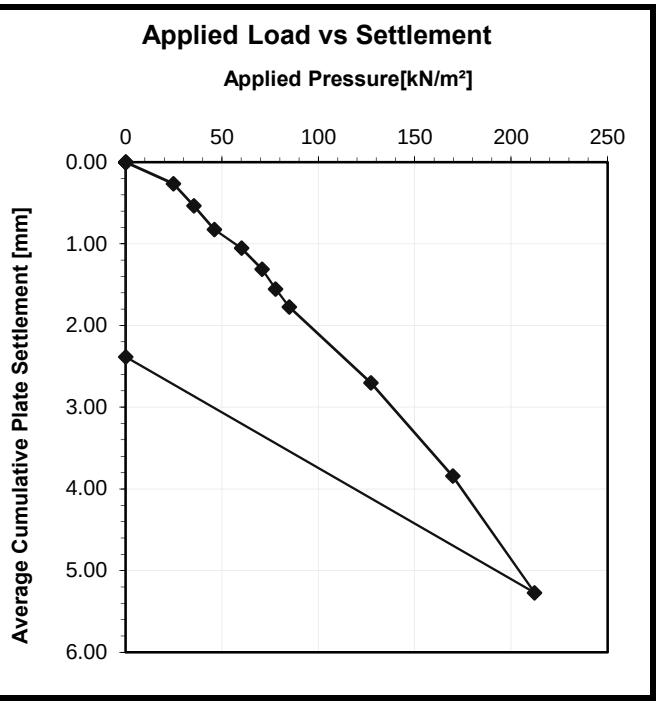
Laboratory Reference: NL5029-2/1
Sample Reference: PBT 1

Description: Brown Gravelly Clay

Test Location: PBT 1 **Depth:** 0.00m

Kentiledge Type: 21TN **Plate Diameter [m]:** 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
7	25	0.26
10	35	0.53
13	46	0.82
17	60	1.05
20	71	1.31
22	78	1.55
24	85	1.77
36	127	2.70
48	170	3.84
60	212	5.27
0	0	2.38
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 13.07.2017 Page 1 of 1
Form Number: EN/C/714-2 Version 16

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e: newark @ enverity . co . uk

TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-2/3/715-2

Client Reference: N/A
Lab Job Number: NL5029-2

Date Received: 10.07.2017
Date Tested: 10.07.2017

Test Results:

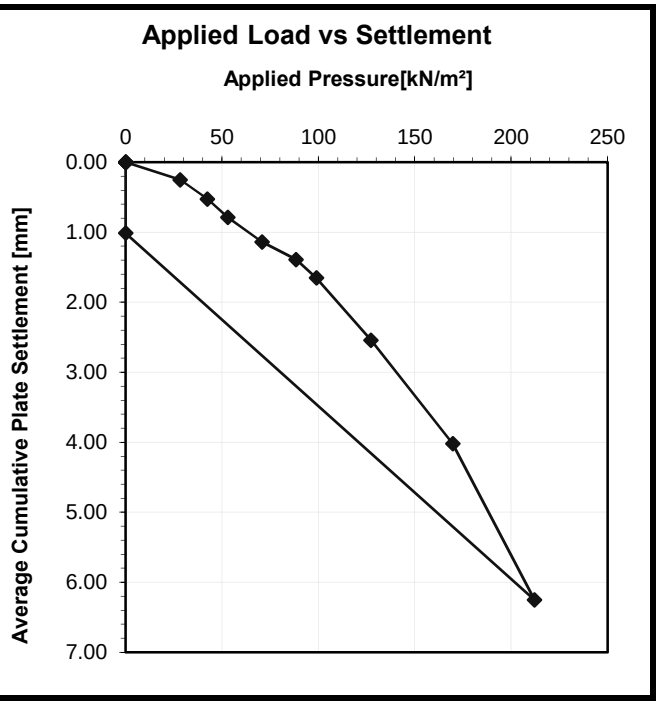
Laboratory Reference: NL5029-2/3
Sample Reference: PBT 2

Description: Brown Gravelly Clay

Test Location: PBT 2 **Depth:** 0.00m

Kentiledge Type: 21TN **Plate Diameter [m]:** 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
8	28	0.25
12	42	0.53
15	53	0.79
20	71	1.14
25	88	1.39
28	99	1.65
36	127	2.54
48	170	4.02
60	212	6.25
0	0	1.01
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 13.07.2017 Page 1 of 1
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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/4/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

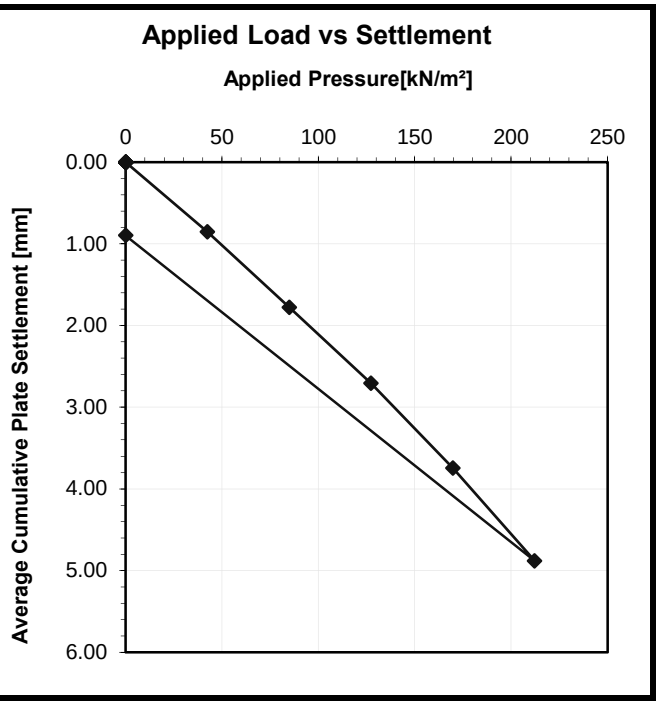
Laboratory Reference: NL5029-3/4
Sample Reference: PBT 3

Description:

Test Location: PBT 3 **Depth:** 0.00m

Kentiledge Type: 28TN **Plate Diameter [m]:** 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.85
24	85	1.78
36	127	2.71
48	170	3.74
60	212	4.88
0	0	0.90
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

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Date Reported: 20.07.2017 Page 1 of 1
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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/5/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

Laboratory Reference: NL5029-3/5
Sample Reference: PBT 4

Description: Black Gravelly Clay

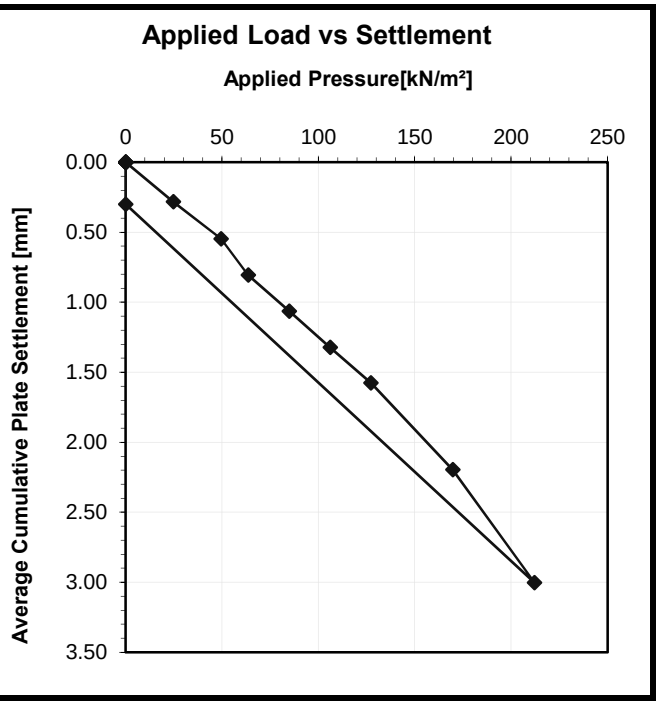
Test Location:

Depth: 0.00m

Kentiledge Type: 28TN

Plate Diameter [m]: 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
7	25	0.28
14	50	0.55
18	64	0.81
24	85	1.06
30	106	1.32
36	127	1.58
48	170	2.20
60	212	3.00
0	0	0.30
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/6/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

Laboratory Reference: NL5029-3/6
Sample Reference: PBT 5

Description: Black Gravelly Clay

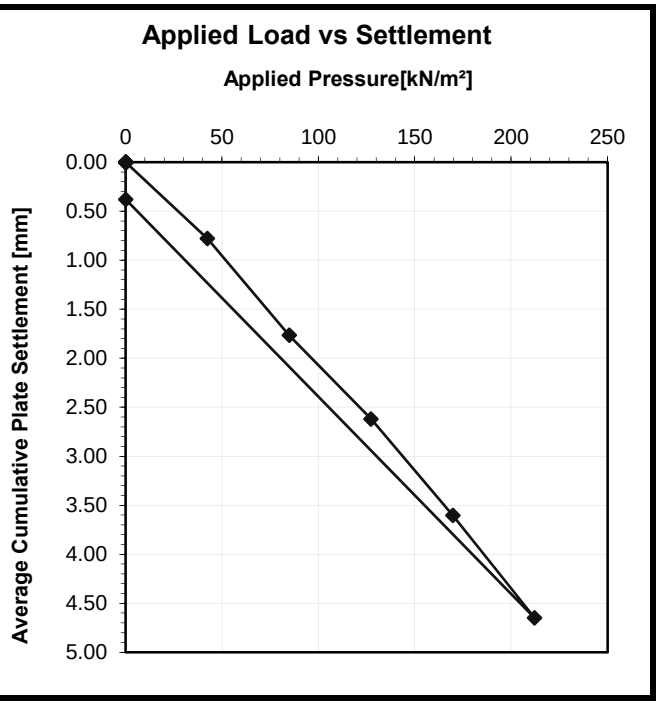
Test Location: PBT 5

Depth: 0.00m

Kentiledge Type: 28TN Excavator

Plate Diameter [m]: 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.78
24	85	1.77
36	127	2.62
48	170	3.60
60	212	4.65
0	0	0.38
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/7/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

Laboratory Reference: NL5029-3/7
Sample Reference: PBT 6

Description: Black Gravelly Clay

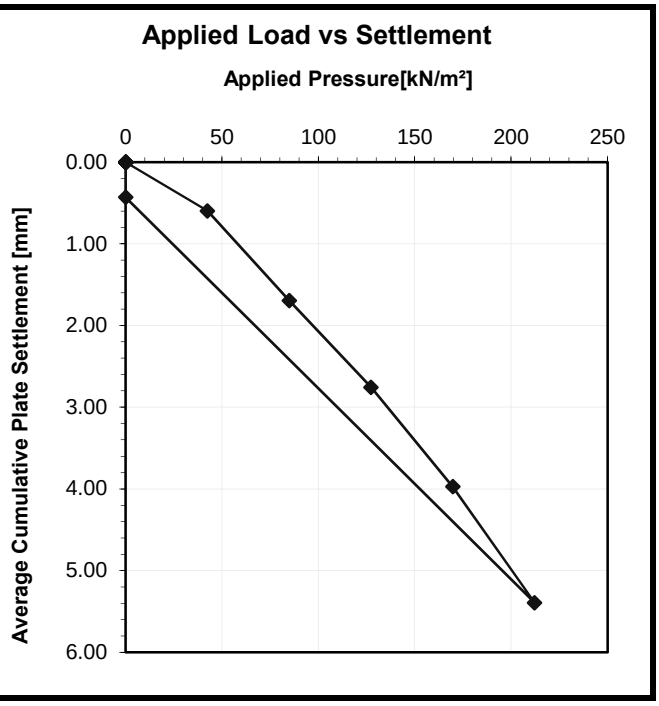
Test Location: PBT 6

Depth: 0.00m

Kentiledge Type: 28TN

Plate Diameter [m]: 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.60
24	85	1.69
36	127	2.76
48	170	3.97
60	212	5.39
0	0	0.43
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Certificate Number: NL5029-3/8/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

Laboratory Reference: NL5029-3/8
Sample Reference: PBT 7

Description: Black Gravelly Clay

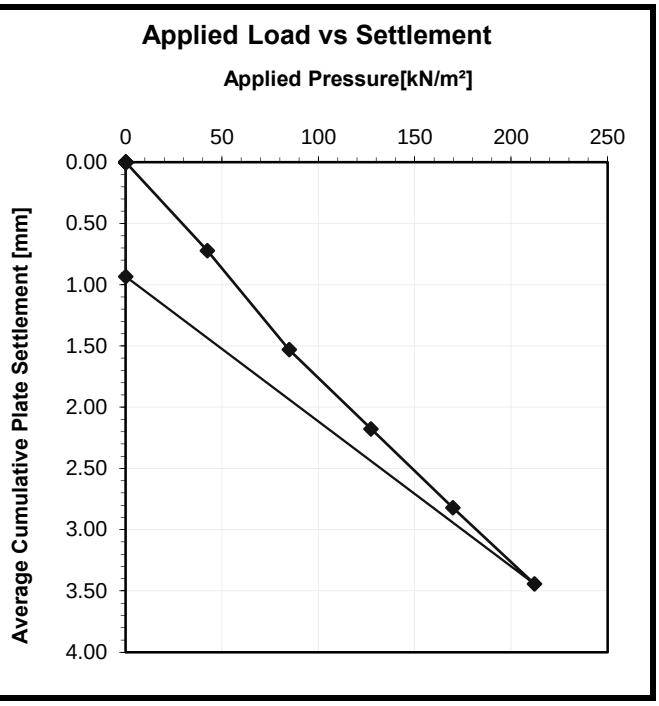
Test Location: PBT 7

Depth: 0.00m

Kentiledge Type: 28TN

Plate Diameter [m]: 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.72
24	85	1.53
36	127	2.18
48	170	2.82
60	212	3.44
0	0	0.93
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Certificate Number: NL5029-3/9/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

Laboratory Reference: NL5029-3/9
Sample Reference: PBT 8

Description: Black Gravelly Clay

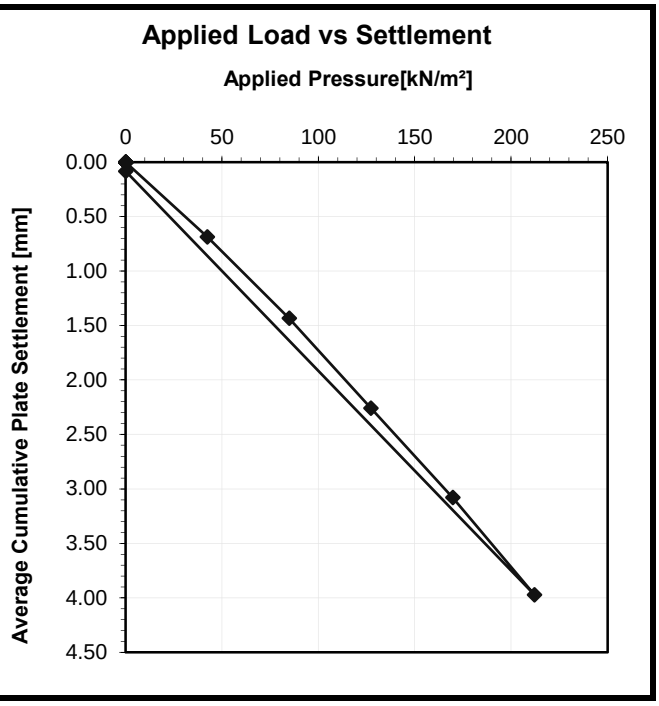
Test Location: PBT 8

Depth: 0.00m

Kentiledge Type: 28TN

Plate Diameter [m]: 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.69
24	85	1.43
36	127	2.26
48	170	3.08
60	212	3.97
0	0	0.08
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/3/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

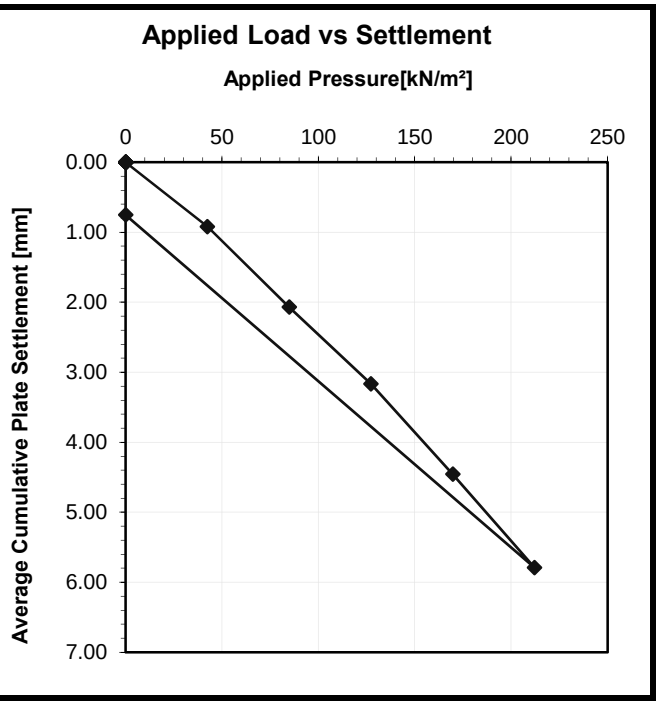
Laboratory Reference: NL5029-3/3
Sample Reference: PBT 9

Description:

Test Location: PBT 9 **Depth:** 0.00m

Kentiledge Type: 28TN **Plate Diameter [m]:** 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.92
24	85	2.07
36	127	3.17
48	170	4.46
60	212	5.79
0	0	0.75
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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Reg Office; Charleston House
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Enverity

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TEST CERTIFICATE

Determination of Incremental Plate Bearing Test

Tested in accordance with BS 1377-9: 1990

Client: Vertase FLI Ltd
Client Address: 19 Napier Court
Barlborough Links, Barlborough
Sheffield
S43 4PZ

Contact: Duncan Scott

Site Name: Fallowfield
Site Address: University of Manchester

Certificate Number: NL5029-3/2/715-2

Client Reference: N/A
Lab Job Number: NL5029-3

Date Received: 17.07.2017
Date Tested: 17.07.2017

Test Results:

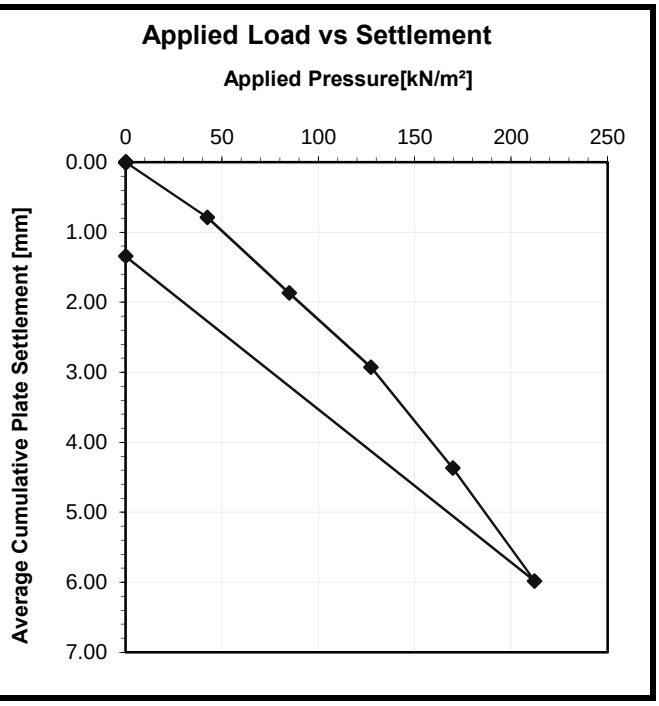
Laboratory Reference: NL5029-3/2
Sample Reference: PBT 10

Description:

Test Location: PBT 10 **Depth:** 0.00m

Kentiledge Type: 28TN **Plate Diameter [m]:** 0.60

Applied Load [kN]	Applied Pressure [kN/m²]	Average Plate Settlement [mm]
0	0	0.00
12	42	0.79
24	85	1.87
36	127	2.93
48	170	4.37
60	212	5.98
0	0	1.34
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00
0	0	0.00



Pressure at 1.25mm Settlement **Not Required**

Modulus of Subgrade Reaction **Not Required**

Equivalent CBR Value **Not Required**

Comments:

Approved Signatory: C. Major - Deputy Laboratory Manager

Signed:

for and on behalf of Enverity Ltd

Date Reported: 20.07.2017

Form Number: EN/C/714-2 Version 16

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