



Remediation Verification Report for a New Music Block, Martin Harris Centre for Music and Drama, University of Manchester

Prepared for J Greenwood (Builders) Ltd

June 2023

10/2084.1/001 Rev. 0

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DOCUMENT CONTROL SHEET

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Document	Remediation Verification Report	
Project Name	New Music Block, Martin Harris Centre for Music and Drama, University of Manchester	
Reference	10/2084.1/001 Rev.00	
Date	June 2023	

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Document Production Record

Revision	Date	Revision Description		Name
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1.0 Introduction

1.1 Background

Clancy Consulting Ltd has been instructed by J Greenwood (Builders) Ltd to prepare a Verification Report for the remediation and ground preparation works for the site known as the New Music Block, located at the Martin Harris Centre, University of Manchester. A site location plan is shown in Appendix I.

This follows a Phase 1 Desk Study, Phase 2 Site Investigation and subsequent Remediation Method Statement (RMS) undertaken at the site. The findings of these can be found in the following documents:

- Clancy Consulting Ltd report 'Phase 1 Preliminary Risk Assessment, New Music Block, Martin Harris Centre for Music and Drama' Ref: 10/2084/001 dated April 2022.
- Clancy Consulting Ltd report 'Phase 2 Site Investigation Report, New Music Block, Martin Harris Centre for Music and Drama' Ref: 10/2084/002 Rev.01 dated October 2022.
- Clancy Consulting Ltd report 'Remediation Method Statement, New Music Block, Martin Harris Centre for Music and Drama' Ref: 10/2084/003 dated March 2023.

The above documents should be read in conjunction with this report.

1.2 Proposed Development & Objectives

It is proposed to develop the site with a two-storey music block within an existing courtyard of the Martin Harris Centre of Music and Drama. Proposed site layouts and floor plans are shown in Appendix I.

The purpose of this report is to:

- Summarise the background to the works.
- Outline the remediation works undertaken.
- Detail any variations to the works prescribed in the RMS.
- Outline any further works required to assist in discharging planning conditions.

J Greenwood (Builders) Ltd carried out the remediation and ground preparatory works in general accordance with the agreed RMS. Departures from the RMS are outlined in Section 6. The works were carried out in May 2023 with a Clancy Consulting Ltd engineer in attendance on a full time basis.

1.3 Limitations of the Study

Clancy Consulting Ltd cannot be held responsible for any omissions, misrepresentation, errors or inaccuracies with the supplied third party report information. The report is written in the context of an agreed scope of work and budget and should not be used in a different context. New information or improved practices and changes in legislation may require a reinterpretation of the report in whole or in part.

Clancy Consulting Ltd reserves the right to amend either conclusions or recommendations in light of any further information that may become available. The report is provided for the sole use J Greenwood (Builders) Ltd for the objectives discussed previously only and is confidential to them.

The report may not be relied upon by any other party without prior written consent of Clancy Consulting Ltd. Those using this information in subsequent assessments or evaluations do so at their own risk.

2.0 Summary of Phase 1 Preliminary Risk Assessment Report

2.1 Introduction

The following section summarises relevant Phase 1 Preliminary Risk Assessment Report data.

2.2 Site Location & Description

The site is located at the Martin Harris Centre for Music and Drama, The University of Manchester, Bridgeford Street, Manchester M13 9PL, approximately 1.70km to the south of Manchester city centre at Ordnance Survey (OS) Coordinates 384420, 396600. The site is located within an undeveloped courtyard to the north of the Centre. The site is accessed from Bridgeford Street to the north and is located within the main Manchester University campus.

A site location plan is presented in Appendix I. A series of photographs showing the site during the remediation are presented in Appendix II.

2.3 Site History

The site comprised vacant land to the rear of residential dwellings in Manchester until the 1940's when the site became part of a depot. This was later removed and replaced with a dental hospital until the 2000's when the site was incorporated into the Drama and Music Centre.

2.4 Environmental Setting

The site is underlain by an Undifferentiated Secondary Aquifer and Principal Aquifer, relating to the Devensian Till and Chester Formation, respectively. The site is also located within Zone III (Total Catchment) of a SPZ. The nearest groundwater abstraction is in excess of 500m from the site.

The River Medlock is present approximately 790m to the north of the site. Given its distance, this watercourse is not considered to be at significant risk from contaminants of concern recorded beneath the site.

3.0 Summary of Previous Intrusive Investigation Works

3.1 General

Clancy Consulting produced a Phase 1 Preliminary Risk Assessment Report in April 2022 (Report Reference 10/2084/001). Further intrusive investigation and contamination assessment was carried out by Clancy Consulting Ltd in October 2022 (Report Reference 10/2084/002).

A summary of the intrusive investigation works is presented below:

3.2 Scope of Investigation Works

- Four window sample boreholes (WS1 to WS4) to a maximum depth of 4.40m below ground level (bgl) in the corners of the footprint of the proposed building.
- In situ geotechnical testing throughout the depth of each borehole.
- Installation of groundwater and ground gas monitoring wells in boreholes WS02, WS03 and WS04.
- Soil samples were collected at regular intervals from each exploratory hole for chemical and geotechnical laboratory analysis.

Ground gas monitoring was undertaken within wells installed in boreholes on four occasions from 30th June to 28th July 2022.

3.3 Ground Conditions

Made Ground was recorded beneath a limited thickness of tarmac hard surfacing in each borehole position, ranging in thickness from approximately 0.85m to 1.90m. The Made Ground was variable in nature, but typically comprised a granular grey to dark-brown sandy, gravel. Gravel comprised fine to coarse brick, concrete, clinker, metal, glass, and coal.

Clinker and coal are often associated with elevated concentrations of metals and PAH. Hydrocarbon odours or staining were also encountered in borehole WS01 at 0.60m to 0.70m bgl, borehole WS02 at 0.60m to 1.65m bgl and borehole WS03 at 0.60m to 1.40m bgl.

Glaciofluvial Sheet Deposits were recorded beneath the Made Ground at depths ranging from approximately 0.85m to 1.90m bgl and ranged in thickness from approximately 0.10m to 1.45m. The stratum was variable in nature, but generally comprised light-brown, slightly gravelly, fine to medium sand, or a soft to firm, green-grey, slightly gravelly, slightly sandy clay with relict plant remains.

The Devensian Till was recorded beneath the Glaciofluvial Sheet Deposits at depths ranging from approximately 1.70m to 2.30m bgl. The stratum generally comprised dark brown, firm to stiff, slightly gravelly clay. Gravel comprised fine to medium mudstone, sandstone and siltstone. No visual or olfactory evidence of contamination was noted within this stratum.

The Chester Formation was recorded beneath the Devensian Till at depths ranging from approximately 3.45m to 4.15m bgl and was present to the base of each borehole at a maximum depth of approximately 4.40m bgl. The stratum comprised weathered sandstone, recovered as red, slightly gravelly, fine to medium sand. Gravel comprised fine to coarse sandstone. No visual or olfactory evidence of contamination was noted within this stratum.

Groundwater strikes were not recorded in any of the boreholes during intrusive works. Groundwater levels recorded within wells during subsequent groundwater monitoring visits were restricted to more granular layers of these strata and appear to be representative of a relatively localised groundwater table within the Glaciofluvial Sheet Deposits and Devensian Till.

3.4 Contamination Assessment

Metals, PAH and TPH compounds were not recorded in samples collected from Made Ground beneath the site at concentrations in excess of adopted assessment criteria protective of human health receptors. Asbestos containing materials and loose fibres were also not recorded any of the samples submitted for screening. Therefore, contaminants of concern were not recorded in soil samples analysed from beneath the site at concentrations in excess of assessment criteria protective of users of public open spaces.

Although not present at concentrations considered likely to pose a significant risk to human health receptors, recorded concentrations of PAH and diesel range TPH recorded in samples of Made Ground analysed from boreholes WS01 and WS02 may pose a potential risk to groundwater within the underlying Chester Formation Principal Aquifer. It was therefore recommended that Made Ground that is visually / olfactorily impacted with hydrocarbon contamination are to be removed as part of the development process and disposed of appropriately off-site.

3.5 Gas Monitoring

Based on four rounds of monitoring undertaken at the site, the ground gas regime corresponds to CIRIA Characteristic Situation 1 (CS1). However, carbon dioxide concentrations up to 6% v/v were recorded, the guidance states that consideration should be given to raising to CIRIA CS2 where Carbon Dioxide concentrations exceed 5% v/v. On this basis, installation of gas protection measures appropriate to this characterisation within all new structures at the site was recommended.

3.6 Identified Contamination Sources

The site investigation identified the following contamination sources:

- Elevated concentrations of PAH and diesel range TPH recorded in samples of Made Ground analysed from boreholes WS01 and WS02.
- Olfactory/visual evidence of hydrocarbon contamination recorded within Made Ground in exploratory holes WS01, WS02 and WS03.

A plan showing the approximate locations of the window sample boreholes where PAH and diesel range TPH, and locations where olfactory evidence of hydrocarbon contamination was recorded is presented in Appendix I as drawing No. 10/2084/002.

4.0 Overview of Enabling & Remediation Works

4.1 General Aims

Based on the information obtained during the site investigation, the recommended enabling and remediation works comprised the following:

- Site Setup / H&S Provision.
- Excavation and removal of soils that are visually / olfactory impacted with hydrocarbon contamination and disposed appropriately off-site.
- Supervision and validation of works by a suitable qualified consultant.
- Installation of ground gas protection measures in line with CS2 conditions. Protective measures should be designed in accordance with guidance provided in BS8485: 2015 “Code of Practice for the Design of Protective Measures for Methane & Carbon Dioxide Ground Gases for New Buildings”.
- The installation of the gas protective measures will need to be independently verified by an experienced engineer in accordance with guidance provided in CIRIA Report C735 to ensure discharge of planning conditions relating to contaminated land.
- Provision of verification report documenting the remediation works undertaken to assist with discharge of planning conditions relating to contaminated land.

4.2 Risk Assessment & Soils Screening Values (SSVs)

The Clancy Consulting Ltd Phase 2 Site Investigation report included analysis of chemical testing results from soil samples analysed from across the site to assess the potential risk to future site users. The results of chemical testing were compared against the LQM/CIEH S4ULs for Human Health Risk Assessment 2015 along with DEFRA Category 4 Screening Levels and CL:AIRE C4SLs.

As the proposed development will comprise a two-storey university building, the chemical test results were compared against soil screening values (SSVs) for a public open space end use.

5.0 Remediation Works Undertaken

5.1 Excavation of Contaminated Soils

Clancy Consulting Ltd began supervision of the enabling works and excavation of contaminated soils by J Greenwood (Builders) Ltd between 22nd and 30th May 2023.

The excavation of contaminated soils was carried out on 22nd, 23rd and 30th May, initially starting at the hotspot in the vicinity of borehole WS2, in the southwestern corner of the site. The works progressed eastward through the site before moving north, with the final excavation covering the footprint of the proposed building.

All of the Made Ground soils were identified as being contaminated or potentially contaminated, and therefore excavated and removed to an off-site stockpile, which was underlined with visqueen sheeting and bunded to prevent run-off/cross contamination. Any natural materials showing visual or olfactory evidence of contamination, along with associated PID readings above 10ppm or in areas where contamination hotspots had been previously identified, were also excavated to the depth required to remove these soils from site.

Natural clay soils were encountered at the base of the excavations at depths of approximately 1.50m to 2.00m bgl. No visual or olfactory evidence of contamination was noted within these clay soils. Soil arisings not displaying evidence of contamination, but still requiring removal from site as part of the enabling works, were stockpiled separately from the contaminated materials.

Verification samples (referenced V1 to V20) were collected from the base and side walls of the excavations and submitted to a UKAS / MCerts accredited laboratory for targeted hydrocarbon testing to confirm the remaining in-situ soils were uncontaminated. Following recovery of verification samples, the excavations were backfilled with clean arisings.

A Verification Sampling Location Plan is provided in Appendix I. Daily site records are provided in Appendix II and a photographic log in Appendix III. All chemical test results from the verification samples are presented in Appendix IV.

During the excavation works, a previously undiscovered below ground tank was encountered in the central part of the site, as shown in the Verification Plan. The tank was subsequently emptied by a licensed contractor (Mantank) before being removed. Details of the tank's excavation are presented in Section 6.1 below.

5.2 Contaminated Materials

During the excavations, identified contaminated soils were stockpiled temporarily on a bunded plastic sheeting to be removed off site at a later date. Verification samples were taken from the sides and base of excavations after removal of such 'hotspots' and in selected locations at formation level across the site for chemical laboratory analysis to ensure that only chemically suitable materials remained *in-situ*. The chemical laboratory test results were screened against the appropriate published Soil Screening Value (SSVs) for residential end use with plant uptake, being the most conservative approach.

Previously identified contamination 'hotspot' areas were targeted and removed as part of these works, along with any soils deemed potentially contaminated by the supervising engineer based on visual and olfactory inspection and findings of the PID, with verification samples retrieved and tested from these areas. All locations of spot samples are shown within the Verification Sample Location Plan included in Appendix I.

Where contamination 'hotspots' contained elevated concentrations of volatile contaminants or where previously unidentified hydrocarbon contamination was identified, impacted soils were excavated and samples from the surrounding soils submitted to a UKAS/MCerts accredited laboratory and tested for speciated TPH and speciated PAHs.

The results of chemical analyses undertaken on verification samples obtained from across the site indicate that the soils tested are generally below the appropriate published SSVs for a residential end use without plant uptake with an SOM of 1%.

The chemical analysis results are provided in Appendix IV. A Verification Sample Location Plan showing the locations of sample locations during the remediation works is presented in Appendix I.

5.3 Disposal of Contaminated Soils

As noted in the daily site records (provided as Appendix III), soil arisings displaying visual or olfactory evidence of contamination were stockpiled on bunded visqueen sheeting to prevent surface run-off and were all disposed off-site.

Details of soil volumes removed from site to the receiving landfill site (Cheshire Soils and Aggregates Ltd, Greenside Way, Chadderton M24 1SW) and the full set of waste consignment notes can be provided by J Greenwood (Builders) Ltd upon request, if required.

6.0 Variations to Remediation Strategy

6.1 Excavation of Previously Unidentified Below Ground Structure

During the reduce level excavation, a previously unidentified sub surface structure was encountered. A previously unidentified buried tank was uncovered in the central portion of the site during the excavation works. The tank was located approximately 1.00m below ground surface. Upon inspection the tanks appeared to be partially filled with a liquid, the nature of which is undetermined.

The excavation works stopped until a licenced contractor, Mantank Ltd, attended site and removed the liquid from the tank. The tank was then removed, and the surrounding excavations were then subsequently undertaken to assess the surrounding soils with any impacted soils surrounding the tank removed. Verification samples V16 to V20 were collected from that area.

The locations of the features described above are illustrated on the Verification Sample Location Plan in Appendix I.

6.2 Excavation of Contaminated Soils in Area of WS01

As part of the remediation strategy, the soils in the area of WS01 *'shall be excavated and loaded either directly onto sheeted road-going wagons for disposal at a suitable licenced landfill site, or temporarily stockpiled on site in a designated area.'* Prior to Clancy Consulting Ltd.'s arrival on site, J Greenwood (Builders) Ltd had excavated soils within this area in order to facilitate new drainage installation and have confirmed that an excavation of approximately 1.5m bgl was carried out with circa 15m³ of soil removed. The soils excavated from this area, were placed on the stockpile for removal off-site.

Photographs have been provided by J Greenwood (Builders) Ltd from that area and are attached in the photographic log in Appendix III.

6.3 Ground Gas Protective Measures

As part of the remediation works, installation of ground gas protection measures in line with CS2 conditions were required for the proposed new building. However, following provision of additional information regarding the proposed development and its construction details, these requirements have been revised.

In accordance with BS8485:2015+A1:2019 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings', the proposed Music Block development is a Type C building (educational facility), which requires a minimum gas protection score of 2.5. This is to be achieved by the incorporation of a 250mm clear ventilated sub-floor void with side ventilation (10 vents measuring 215mm x 65mm each, installed on two opposing walls) complying with Annex B.6. of BS8485:2015+A1:2019, which stipulates of a minimum area of side ventilation of 1500mm²/ m run of wall on at least two opposite sides for small to medium width buildings.

Detailed foundation drawings are presented in Appendix V.

It is recommended as a minimum that the appointed contractor provides a detailed photographic record of the sub-floor construction clearly demonstrating the 250mm clear ventilated sub-floor void and the installation of the periscopes.

7.0 Site Certification

The remediation of hydrocarbon contaminated soils and enabling works have been carried out by J Greenwood (Builders) Ltd and inspected by Clancy Consulting Ltd in general accordance with the agreed Remediation Method Statement dated March 2023. Variations from the Remediation Method Statement have been detailed in Section 6 of this report.

On satisfactory completion of the required gas protection design discussed in Section 6.3 of this document, we would consider the site to be in a suitable condition for its proposed use.

APPENDIX I
DRAWINGS

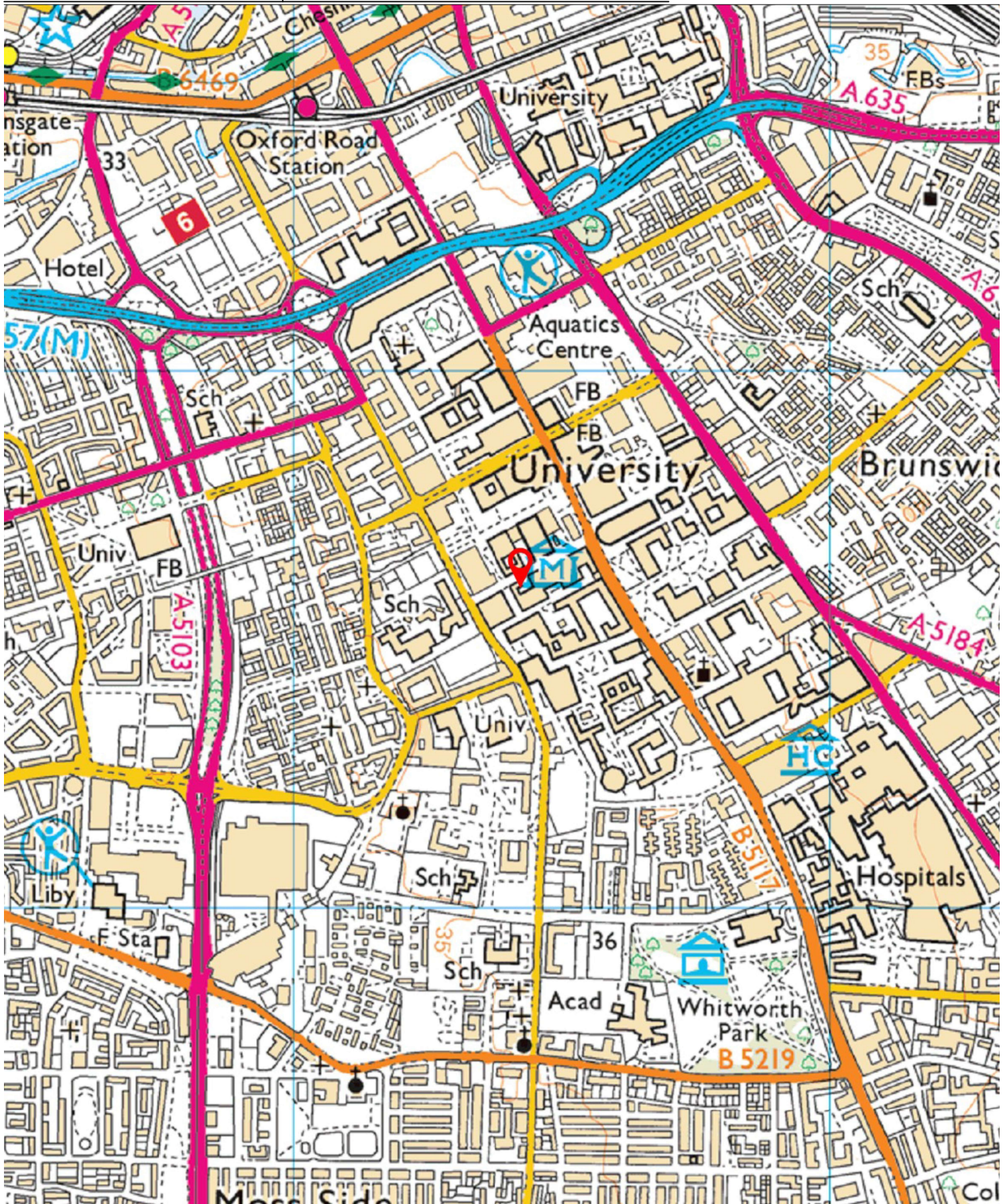
Client **University of Manchester**

Project **Martin Harris Drama and Music Centre**

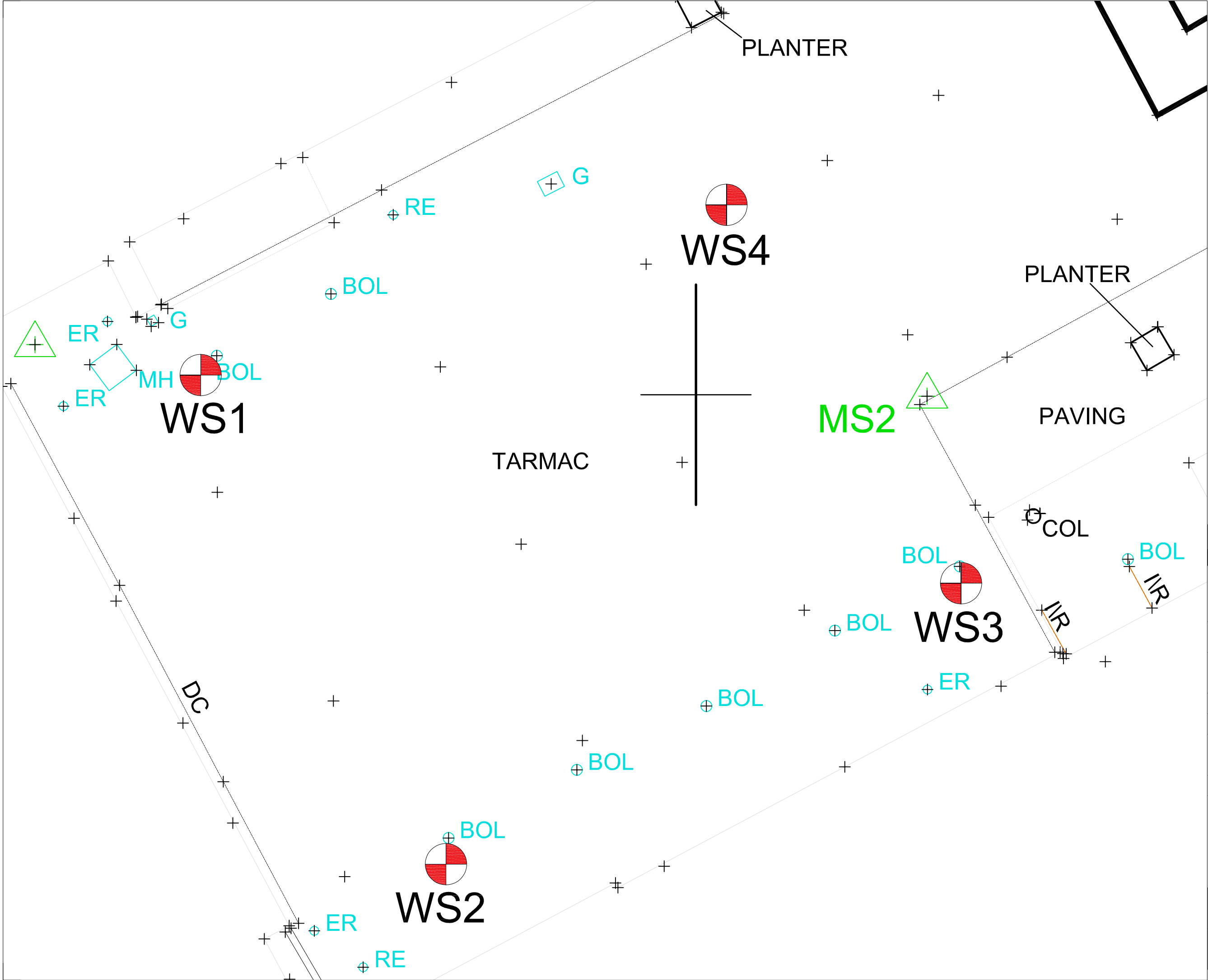
Title **Site Location Plan**

Office **Altrincham**

Discipline **Geo-environmental**



00 Rev	March 22 Date	Site Location Plan Description	EB By	RP Check	NR App.	Drawn EB	Date March 22	COPYRIGHT: THE COPYRIGHT OF THIS DRAWING IS VESTED IN CLANCY CONSULTING. IT SHALL NOT BE USED WITHOUT PERMISSION BY ANYONE FOR ANY PURPOSE. DO NOT SCALE THIS DRAWING ELECTRONICALLY OR MANUALLY. WORK TO FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. DO NOT TURN ON LAYERS THAT HAVE BEEN TURNED OFF. DO NOT THAW LAYERS THAT HAVE BEEN FROZEN.	Job number 10/2084	Drawing number 01	Revision 00
						Checked DK	Scale @ A4 NTS				
						Approved NR	Status FINAL				



Key

Window

sample

Borehole

Location

A	June 2022	Original Drawing	SP	CHK.	APP.
Rev	Date	Description	By	Check	App.

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Client
University of Manchester

Project
Martin Harris New Music Block
University of Manchester

Office
Altrincham

Discipline
Geo-Environmental

Title
Exploratory Hole Location Plan

Scale @ A3
NTS

Status
Draft

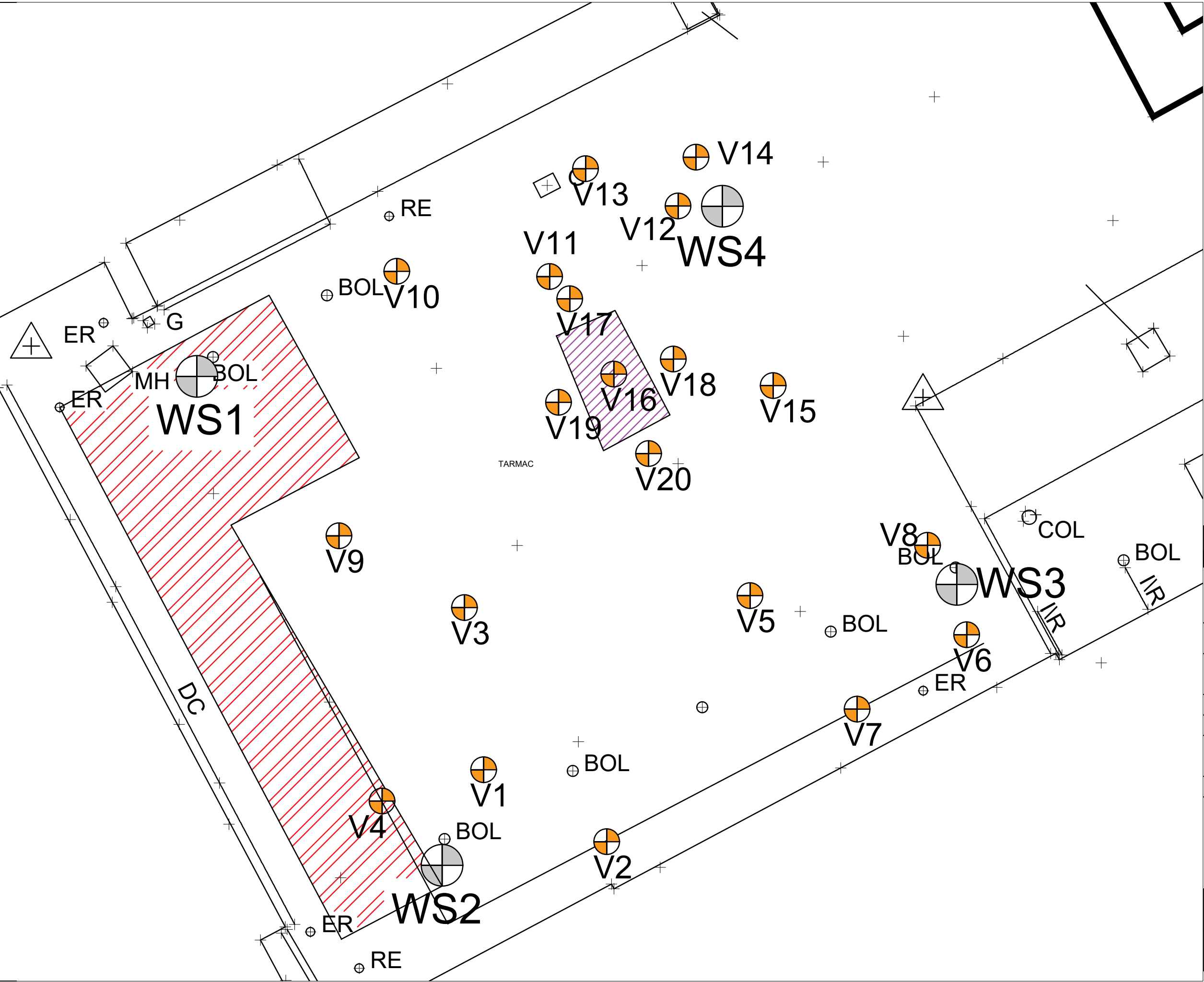


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Originator	Job Number	Discipline	Building/Zone
CCL	10/2084	GEO	-
Type	Level	Drawing No.	Revision
GA	00	002	1

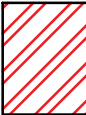
Birmingham 0121 200 7800 · Glasgow 0141 222 1725 · Liverpool 0151 613 6000 · Newcastle 0191 221 0702 · Norwich 01603 365199 · Preskiss 01292 452375 · Reading 0118 941 7588



Key



Window Sample
Boreholes - June 2022



Area pre dug out
by client.



Verification Sample

A	June 2022	Original Drawing	SP	CHK	APP.
Rev	Date	Description	By	Check	App.

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Client

J Greenwood Ltd

Project

Martin Harris New Music Block
University of Manchester

Office

Altrincham

Discipline

Geo-Environmental

Title

Verification Plan

Scale @ A3

NTS

Status

Draft



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Originator	Job Number	Discipline	Building/Zone
CCL	10/2084.1	GEO	-
Type	Level	Drawing No.	Revision
GA	00	001	1

0114 611 0000 - Newcastle 0191 221 0202 - Bolton 01603 305100 - Preston 01292 420375 - Reading 0118 941 7885

APPENDIX II
PHOTOGRAPHIC LOG



Photograph A – Image taken in the south western corner of the site facing east. Image showing black hydrocarbon staining within the Made Ground soils on site, subject to excavation.



Photograph B – Image taken in the south western corner of the site facing east. Image showing the black hydrocarbon-impacted soils being excavated directly into a dumper headed for a offsite stockpile.



Photograph C – Image taken offsite. Image showing banded stockpile of contaminated soils ready for removal to landfill.



Photograph D – Image taken offsite. Image showing banded stockpile of contaminated soils ready for removal to landfill.



Photograph E – Image taken south of site facing north. Image showing the removal of the steel tank on site.



Photograph F – Image taken south of site facing north west. Image showing the resulting hydrocarbon impacted soils after the removal of the tank.



Photograph G – Image taken north east of site facing west. Image showing the resulting hydrocarbon impacted soils being excavated out after tank removal.



Photograph H – Image taken west of site facing north east. Image showing the clean uncontaminated ground in the location of the former tank after the excavating works.



Photograph I – Image taken centre of site facing west. Image showing the clean uncontaminated ground in the location of the former tank after the excavating works.



Photograph J (taken via Dave Shacklady J Greenwood (Builders) Limited) – Image taken west of site facing north. Image showing the natural ground and drainage in the location of WS1 following the clients removal of soils in the area.

[illegible]

APPENDIX III
DAILY SITE RECORDS

Site Name:	Martin Harris, New Music Block
Job Number:	10/2084.1
Date:	22/5/23
Visit By:	Sean Pilling
Weather at time on inspection:	Sunny
Building / Block:	-

Activity

- Introduction by site contractor
- Excavation of southern half of the site inclusive of hot spot WS1. Removal of any contaminated material to an offsite stockpile, underlined by visqueen sheeting.
- Excavations between 1.5-2.00mm of ground level. Proving natural clean ground in each area.
- Area of WS2 140+ PPM on PID.
- Samples collected from base and sides of excavations for verification testing.
- SS1 and SS2 collected from rear stockpiles for WAC analysis.

Samples

[illegible]

Name: Sean Pilling

Signature: S.Pilling

Date: 22/5/23

Site Name:	Martin Harris, New Music Block
Job Number:	10/2084.1
Date:	23/5/23
Visit By:	Sean Pilling
Weather at time on inspection:	Sunny
Building / Block:	-

Activity

- Excavation of northern half of the site inclusive of hot spot WS2. Removal of any contaminated material to an offsite stockpile, underlined by visqueen sheeting.
- Excavations between 1.5-2.00mm of ground level. Proving natural clean ground in each area.
- Samples collected from base and sides of excavations for verification testing.
- Uncovered central tank (3m x 1.2m) on site. PID reading 1000+PPM. Liquid inside. Liquid likely water, very slight hydrocarbon scent from sample taken, no sheen, 0 PPM on PID.
- Tank remained in situ.

Samples

No.	Description
7	V9-V15 taken from base and sides of excavation (verification samples)

Name: Sean Pilling

Signature: S.Pilling

Date: 23/5/23

Site Name:	Martin Harris, New Music Block
Job Number:	10/2084.1
Date:	30/5/23
Visit By:	Sean Pilling
Weather at time on inspection:	Sunny
Building / Block:	-

Activity

- (Prior to arrival) Tank removed of liquid by mantank
- Tank removed from the ground and taken offsite.
- All hydrocarbon contamination associated with the tank removed to stockpile.
- Verification samples taken from base of former tank.
- No further works required – awaiting laboratory results.

Samples

No.	Description
5	V16-V20 taken from base of the former tank

Name: Sean Pilling

Signature: S.Pilling

Date: 30/5/23

APPENDIX IV
CHEMICAL TESTING RESULTS

FINAL ANALYTICAL TEST REPORT SUPPLEMENT TO TEST REPORT 23/05039/1

Amendments: Request for project/sample information change

Envirolab Job Number: 23/05039
Issue Number: 2

Date: 05 July, 2023

Client: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
UK
WA14 4NX

Project Manager: Desy Korai/Sean Pilling
Project Name: Martin Harris Building Uni Of Manchester Verification
Project Ref: 10/2084.1
Order No: 32446
Date Samples Received: 23/05/23
Date Instructions Received: 24/05/23
Date Analysis Completed: 02/06/23

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/1	23/05039/2	23/05039/3	23/05039/4	23/05039/5	23/05039/6	23/05039/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V1	V2	V3	V4	V5	V6	V7			
Depth to Top	1.40	0.80	1.40	0.80	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5A	6A	5A	4A	5A	6A	4A			
% Stones >10mm _A	<0.1	1.8	8.9	13.5	<0.1	2.9	8.2	% w/w	0.1	A-T-044

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/1	23/05039/2	23/05039/3	23/05039/4	23/05039/5	23/05039/6	23/05039/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V1	V2	V3	V4	V5	V6	V7			
Depth to Top	1.40	0.80	1.40	0.80	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5A	6A	5A	4A	5A	6A	4A			
PAH-16MS										
Acenaphthene _A ^{M#}	0.01	<0.01	<0.01	0.07	0.05	<0.01	0.06	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.03	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	0.12	0.06	<0.02	0.13	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	0.11	<0.04	0.41	0.14	<0.04	0.44	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	0.11	<0.04	0.46	0.13	<0.04	0.46	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	0.10	<0.05	0.48	0.14	<0.05	0.46	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	0.35	0.08	<0.05	0.27	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	0.21	<0.07	<0.07	0.22	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	0.11	<0.06	0.57	0.17	<0.06	0.52	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	0.06	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	0.81	0.32	<0.08	0.77	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	0.01	0.06	0.05	<0.01	0.06	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	0.06	<0.03	0.36	0.08	<0.03	0.31	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	0.05	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.06	<0.03	0.04	0.55	0.28	<0.03	0.59	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	0.12	<0.07	0.85	0.30	<0.07	0.79	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	0.61	<0.08	5.43	1.80	<0.08	5.22	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/1	23/05039/2	23/05039/3	23/05039/4	23/05039/5	23/05039/6	23/05039/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V1	V2	V3	V4	V5	V6	V7			
Depth to Top	1.40	0.80	1.40	0.80	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23	22-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5A	6A	5A	4A	5A	6A	4A			
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	2	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	3	11	<1	<1	2	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	3	10	<1	<1	2	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	<1	6	3	92	1	4	9	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	6	10	114	1	4	14	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<2	<2	<2	<2	1	<2	<2	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	<1	<1	2	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	1	4	9	<1	<1	6	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	5	3	25	3	1	30	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	<1	17	1	61	5	5	97	mg/kg	1	A-T-055s
Total Aromatics _A	<2	23	9	99	9	6	133	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	<2	29	18	214	10	10	147	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/8	23/05039/9	23/05039/10	23/05039/11	23/05039/12	23/05039/13	23/05039/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V8	V9	ss1	SS2	V11	V12	V13			
Depth to Top	0.80	1.40	1.40	1.40	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	23-May-23	23-May-23	23-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5AD	5A	5A	5AB	5A	5A	6A			
% Stones >10mm _A	6.2	<0.1	14.4	4.8	<0.1	4.0	2.3	% w/w	0.1	A-T-044
pH _D ^{M#}	-	-	8.08	8.03	-	-	-	pH	0.01	A-T-031s
Arsenic _D ^{M#}	-	-	15	8	-	-	-	mg/kg	1	A-T-024s
Beryllium _D	-	-	1.4	1.0	-	-	-	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	-	-	1.0	<1.0	-	-	-	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	-	-	0.7	<0.5	-	-	-	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	-	-	66	39	-	-	-	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	-	-	<1	<1	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	-	-	189	77	-	-	-	mg/kg	1	A-T-024s
Mercury _D	-	-	0.47	<0.17	-	-	-	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	-	-	23	20	-	-	-	mg/kg	1	A-T-024s
Selenium _D ^{M#}	-	-	<1	<1	-	-	-	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	-	-	27	23	-	-	-	mg/kg	1	A-T-024s
Zinc _D ^{M#}	-	-	62	48	-	-	-	mg/kg	5	A-T-024s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of
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Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/8	23/05039/9	23/05039/10	23/05039/11	23/05039/12	23/05039/13	23/05039/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V8	V9	ss1	SS2	V11	V12	V13			
Depth to Top	0.80	1.40	1.40	1.40	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	23-May-23	23-May-23	23-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5AD	5A	5A	5AB	5A	5A	6A			
Asbestos in Soil (inc. matrix)										
Asbestos in soil ^g	-	-	NAD	NAD	-	-	-			A-T-045
Asbestos Matrix (visual) _o	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _o	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _o	-	-	N/A	N/A	-	-	-			A-T-045

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Lab Sample ID	23/05039/8	23/05039/9	23/05039/10	23/05039/11	23/05039/12	23/05039/13	23/05039/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V8	V9	ss1	SS2	V11	V12	V13			
Depth to Top	0.80	1.40	1.40	1.40	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	23-May-23	23-May-23	23-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5AD	5A	5A	5AB	5A	5A	6A			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	0.22	0.08	<0.01	<0.01	0.06	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	0.03	0.02	<0.01	<0.01	0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	0.26	0.11	<0.02	<0.02	0.11	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	0.66	0.31	<0.04	<0.04	0.23	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	0.64	0.29	<0.04	<0.04	0.18	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	0.62	0.31	<0.05	<0.05	0.18	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	0.35	0.16	<0.05	<0.05	0.08	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	0.28	0.14	<0.07	<0.07	0.08	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	0.75	0.34	<0.06	<0.06	0.25	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	1.42	0.63	<0.08	<0.08	0.52	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	0.23	0.08	<0.01	<0.01	0.07	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	0.40	0.18	<0.03	<0.03	0.10	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	0.24	0.05	<0.03	<0.03	0.05	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.05	<0.03	1.42	0.51	<0.03	<0.03	0.56	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	1.43	0.65	<0.07	<0.07	0.53	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08	9.03	3.86	<0.08	<0.08	3.01	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/8	23/05039/9	23/05039/10	23/05039/11	23/05039/12	23/05039/13	23/05039/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V8	V9	ss1	SS2	V11	V12	V13			
Depth to Top	0.80	1.40	1.40	1.40	1.40	1.40	0.80			
Depth To Bottom										
Date Sampled	22-May-23	22-May-23	22-May-23	22-May-23	23-May-23	23-May-23	23-May-23			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	5AD	5A	5A	5AB	5A	5A	6A			
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	5	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	26	2	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	157	11	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	152	11	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	5	<1	191	22	2	<1	1	mg/kg	1	A-T-055s
Total Aliphatics _A	5	<1	532	47	2	<1	1	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<2	<2	3	<2	<2	<2	<2	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	<1	12	1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	2	<1	82	10	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	2	<1	103	26	1	<1	5	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	5	<1	77	53	4	<1	11	mg/kg	1	A-T-055s
Total Aromatics _A	9	<2	276	91	5	<2	16	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	14	<2	808	138	7	<2	17	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/15	23/05039/16						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V14	V15								
Depth to Top	0.80	0.80								
Depth To Bottom										
Date Sampled	23-May-23	23-May-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	4AB	6A								
% Stones >10mm _A	9.0	<0.1						% w/w	0.1	A-T-044

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/15	23/05039/16						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V14	V15								
Depth to Top	0.80	0.80								
Depth To Bottom										
Date Sampled	23-May-23	23-May-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	4AB	6A								
PAH-16MS										
Acenaphthene _A ^{M#}	0.42	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.12	<0.01						mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.70	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.06	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.92	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.89	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.98	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.77	<0.07						mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	2.29	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.22	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	3.96	<0.08						mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.50	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.10	<0.03						mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.20	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	3.36	<0.03						mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	4.06	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	24.6	<0.08						mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/05039

Client Project Name: Martin Harris Building Uni Of Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05039/15	23/05039/16						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	V14	V15								
Depth to Top	0.80	0.80								
Depth To Bottom										
Date Sampled	23-May-23	23-May-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	4AB	6A								
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<10	<1						mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<10	<1						mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<10	<1						mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<10	<1						mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	49	1						mg/kg	1	A-T-055s
Total Aliphatics _A	49	1						mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<20	<2						mg/kg	1	A-T-055s
Aro >C10-C12 _A	<10	<1						mg/kg	1	A-T-055s
Aro >C12-C16 _A	24	<1						mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	90	2						mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	231	5						mg/kg	1	A-T-055s
Total Aromatics _A	344	7						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	393	9						mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

General

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

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

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

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Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
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Subscript "A"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

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

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
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5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

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

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

This is reported as '% stones >10mm'.

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

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

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

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

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

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

Client:	Clancy Consulting, Dunham Court, 2 Dunham Road, Altrincham, Cheshire, UK, WA14 4NX	Project No:	23/05039
Project:	Martin Harris Building Uni Of Manchester Verification	Date Received:	24/05/2023 (am)
Clients Project No:	10/2084.1	Cool Box Temperatures (°C):	16.6, 12.6, 12.5

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples $5 \pm 3^{\circ}\text{C}$), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/05039/1	23/05039/2	23/05039/3	23/05039/4	23/05039/5	23/05039/6	23/05039/7	23/05039/8	23/05039/9	23/05039/10	23/05039/11	23/05039/12
Client Sample No												
Client Sample ID/Depth	V1 1.40m	V2 0.80m	V3 1.40m	V4 0.80m	V5 1.40m	V6 1.40m	V7 0.80m	V8 0.80m	V9 1.40m	ss1 1.40m	SS2 1.40m	V11 1.40m
Date Sampled	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	22/05/23	23/05/23
A-T-004s										31/05/2023	31/05/2023	
A-T-007s										30/05/2023	30/05/2023	
A-T-019s	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023	26/05/2023
A-T-022s	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023
A-T-024s										27/05/2023	27/05/2023	
A-T-025w										31/05/2023	31/05/2023	
A-T-026w										31/05/2023	31/05/2023	
A-T-026w (F)										31/05/2023	31/05/2023	
A-T-027s										26/05/2023	26/05/2023	
A-T-030s										30/05/2023	30/05/2023	
A-T-031s										27/05/2023	27/05/2023	
A-T-031w										31/05/2023	31/05/2023	
A-T-032s										30/05/2023	30/05/2023	
A-T-032w										31/05/2023	31/05/2023	
A-T-037w										31/05/2023	31/05/2023	
A-T-040s										30/05/2023	30/05/2023	
A-T-044	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023
A-T-045										25/05/2023	25/05/2023	
A-T-050w										31/05/2023	31/05/2023	
A-T-055s	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023
A-T-ANCs										27/05/2023	27/05/2023	
Calc-As Recd	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023	02/06/2023
Calc-no stones										31/05/2023	31/05/2023	
Probe (w)										31/05/2023	31/05/2023	

Lab Sample ID	23/05039/13	23/05039/14	23/05039/15	23/05039/16
Client Sample No				
Client Sample ID/Depth	V12 1.40m	V13 0.80m	V14 0.80m	V15 0.80m
Date Sampled	23/05/23	23/05/23	23/05/23	23/05/23
A-T-004s				
A-T-007s				
A-T-019s	26/05/2023	26/05/2023	26/05/2023	26/05/2023
A-T-022s	30/05/2023	30/05/2023	30/05/2023	30/05/2023
A-T-024s				
A-T-025w				
A-T-026w				
A-T-026w (F)				
A-T-027s				
A-T-030s				
A-T-031s				
A-T-031w				
A-T-032s				
A-T-032w				
A-T-037w				
A-T-040s				
A-T-044	30/05/2023	30/05/2023	30/05/2023	30/05/2023
A-T-045				
A-T-050w				
A-T-055s	02/06/2023	02/06/2023	02/06/2023	02/06/2023
A-T-ANCs				
Calc-As Recd	02/06/2023	02/06/2023	02/06/2023	02/06/2023
Calc-no stones				
Probe (w)				

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

End of Report

FINAL ANALYTICAL TEST REPORT SUPPLEMENT TO TEST REPORT 23/05311/2

Amendments: Request for project/sample information change

Envirolab Job Number: 23/05311
Issue Number: 3

Date: 05 July, 2023

Client: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
UK
WA14 4NX

Project Manager: Desy Korai/Sean Pilling
Project Name: Martin Harris Building Uni Of Manchester Verification
Project Ref: 10/2084.1
Order No: 32462
Date Samples Received: 31/05/23
Date Instructions Received: 01/06/23
Date Analysis Completed: 06/06/23

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 23/05311

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05311/1	23/05311/2	23/05311/3	23/05311/4	23/05311/5			Units	Limit of Detection	Method ref
Client Sample No	V16	V17	V18	V19	V20					
Client Sample ID										
Depth to Top										
Depth To Bottom	1.40	1.40	1.40	1.40	1.40					
Date Sampled	30-May-23	30-May-23	30-May-23	30-May-23	30-May-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	1A	1A	1A	1A					
% Stones >10mm _A	<0.1	<0.1	2.0	2.8	<0.1			% w/w	0.1	A-T-044

Envirolab Job Number: 23/05311

Client Project Name: Martin Harris Building Uni Of
Manchester Verification

Client Project Ref: 10/2084.1

Lab Sample ID	23/05311/1	23/05311/2	23/05311/3	23/05311/4	23/05311/5			Units	Limit of Detection	Method ref
Client Sample No	V16	V17	V18	V19	V20					
Client Sample ID										
Depth to Top										
Depth To Bottom	1.40	1.40	1.40	1.40	1.40					
Date Sampled	30-May-23	30-May-23	30-May-23	30-May-23	30-May-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	1A	1A	1A	1A					
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02			mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04			mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04			mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05			mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05			mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07			mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06			mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04			mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08			mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03			mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.48	<0.03	<0.03	<0.03	<0.03			mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03			mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07			mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	0.48	<0.08	<0.08	<0.08	<0.08			mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/05311

Client Project Name: Martin Harris Building Uni Of Manchester Verification

Client Project Ref: 10/2084.1

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Client Sample No	V16	V17	V18	V19	V20					
Client Sample ID										
Depth to Top										
Depth To Bottom	1.40	1.40	1.40	1.40	1.40					
Date Sampled	30-May-23	30-May-23	30-May-23	30-May-23	30-May-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	1A	1A	1A	1A					
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	1	3	<1	<1	1			mg/kg	1	A-T-055s
Total Aliphatics _A	1	3	<1	<1	1			mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	0.38	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	2	<1	<1	<1	<1			mg/kg	1	A-T-055s
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Aro >C12-C16 _A	<1	1	<1	<1	<1			mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	7	<1	<1	<1			mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	<1	7	<1	<1	<1			mg/kg	1	A-T-055s
Total Aromatics _A	5	15	<1	<1	<1			mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	6	18	<1	<1	1			mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	0.38	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	0.04	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	0.08	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	0.02	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
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Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

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

Client:	Clancy Consulting, Dunham Court, 2 Dunham Road, Altrincham, Cheshire, UK, WA14 4NX	Project No:	23/05311
Project:	Martin Harris Building Uni Of Manchester Verification	Date Received:	01/06/2023 (am)
Clients Project No:	10/2084.1	Cool Box Temperatures (°C):	14.3

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples $5 \pm 3^{\circ}\text{C}$), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/05311/1	23/05311/2	23/05311/3	23/05311/4	23/05311/5
Client Sample No	V16	V17	V18	V19	V20
Client Sample ID/Depth					
Date Sampled	30/05/23	30/05/23	30/05/23	30/05/23	30/05/23
A-T-019s	05/06/2023	05/06/2023	05/06/2023	05/06/2023	05/06/2023
A-T-022s	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023
A-T-044	05/06/2023	05/06/2023	05/06/2023	05/06/2023	05/06/2023
A-T-055s	05/06/2023	05/06/2023	05/06/2023	05/06/2023	05/06/2023
Calc-As Recd	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023

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

End of Report

Final Test Report

Envirolab Job Number: 23/05039
Issue Number: 1
Date: 2-Jun-23

Client: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
UK, WA14 4NX

Project Manager: Desy Korai/Sean Pilling
Project Name: Martin Harris Building Uni Of Manchester Verification
Project Ref: 10/2084.1
Order No: 32446

Date Samples Received: 23-May-23
Date Instructions Received: 24-May-23
Date Analysis Completed: 2-Jun-23

Notes - Soil analysis

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

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

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

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

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

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

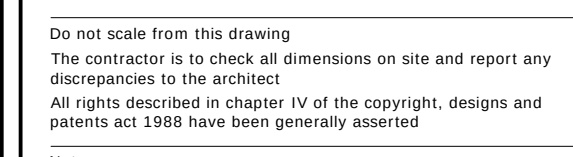


Gemma Berrisford
Client Manager

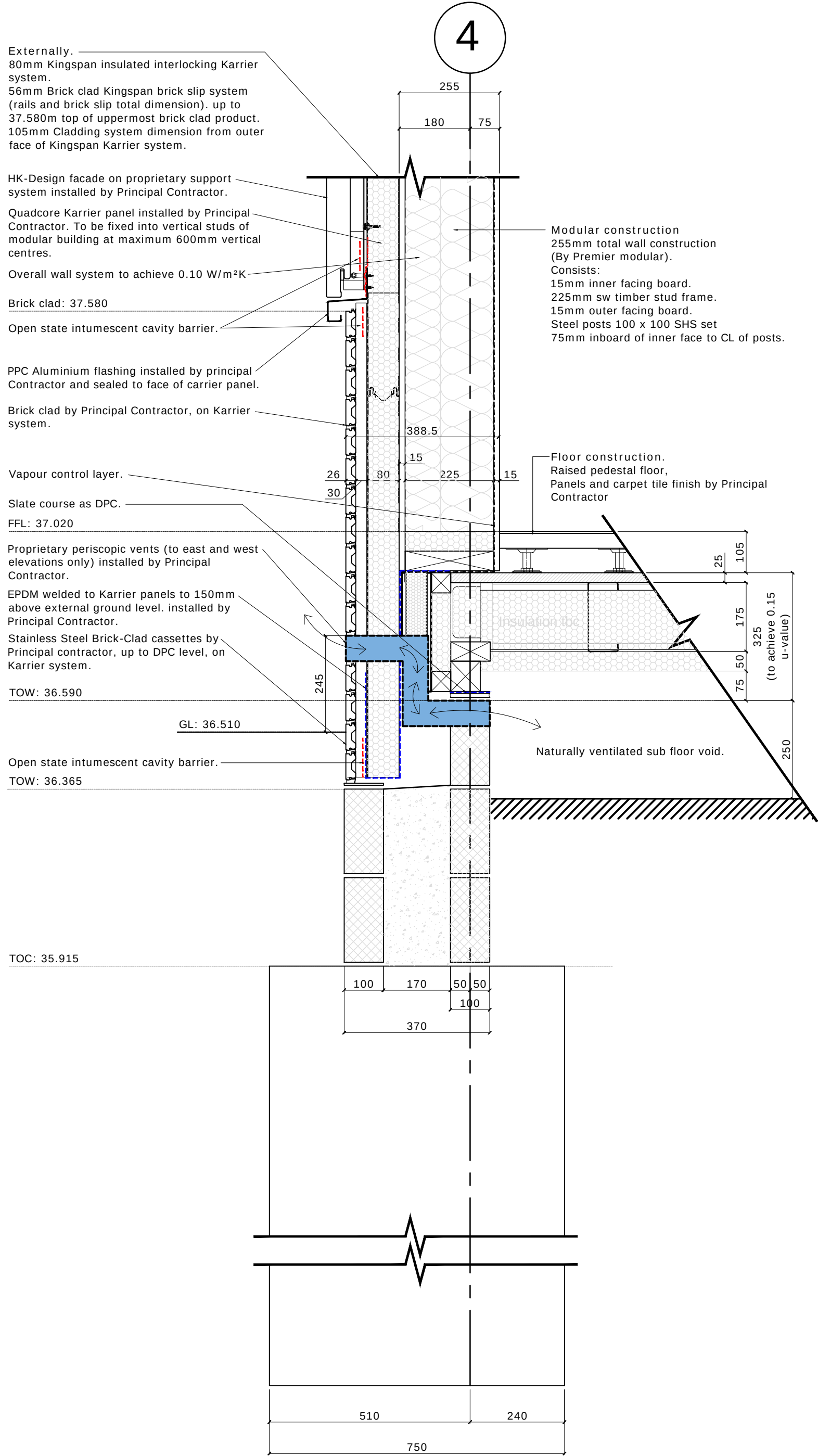
Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	23/05039/10	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample Number								
Client Sample ID				ss1				
Depth to Top								
Depth to Bottom								
Date Sampled				22/05/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5A				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N	8.08	-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.16	-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.07	-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	N	N	4.5	-	-	10	
Total Organic Carbon (%) _D	A-T-032	N	N	2.3	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	9.11	100	-	-	
Mineral Oil (mg/kg) _{A EH, CU, 1D, AL}	A-T-007	N	N	172	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-	
Eluate Analysis				10:1 mg/l	10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.004	0.040	0.5	2	25
Barium	A-T-025	N	N	0.045	0.450	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.01	0.5	10	70
Copper	A-T-025	N	N	0.006	0.060	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.017	0.170	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.02	0.4	10	40
Lead	A-T-025	N	N	0.012	0.120	0.5	10	50
Antimony	A-T-025	N	N	0.003	0.030	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	0.020	4	50	200
Chloride	A-T-026	N	N	3	26	800	15000	25000
Fluoride	A-T-026	N	N	0.4	4.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	27	268	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	102	1020	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	<200	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.9				
Conductivity (µS/cm)	A-T-037	N	N	205				
Mass Sample (kg)				0.202				
Dry Matter (%)	A-T-044	N	N	86.7				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	23/05039/11				
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				SS2				
Depth to Top								
Depth to Bottom								
Date Sampled				22/05/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5AB				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N	8.03	-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.1	-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.08	-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	N	N	4.4	-	-	10	
Total Organic Carbon (%) _D	A-T-032	N	N	3.37	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	3.9	100	-	-	
Mineral Oil (mg/kg) _{A EH_CU_1D_AL}	A-T-007	N	N	108	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-	
Eluate Analysis				10:1	10:1	Limit values for compliance leaching test using		
				mg/l	mg/kg	BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.002	0.020	0.5	25	
Barium	A-T-025	N	N	0.035	0.350	20	300	
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	5	
Chromium	A-T-025	N	N	<0.001	<0.01	0.5	70	
Copper	A-T-025	N	N	<0.004	<0.04	2	100	
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	2	
Molybdenum	A-T-025	N	N	0.017	0.170	0.5	30	
Nickel	A-T-025	N	N	<0.002	<0.02	0.4	40	
Lead	A-T-025	N	N	0.001	0.010	0.5	50	
Antimony	A-T-025	N	N	0.002	0.020	0.06	5	
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	7	
Zinc	A-T-025	N	N	<0.002	<0.02	4	200	
Chloride	A-T-026	N	N	3	26	800	25000	
Fluoride	A-T-026	N	N	0.3	3.0	10	500	
Sulphate as SO ₄	A-T-026	N	N	48	483	1000	50000	
Total Dissolved Solids	A-T-035	N	N	134	1340	4000	100000	
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	
Dissolved Organic Carbon	A-T-032	N	N	<2.0	<200	500	1000	
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.8				
Conductivity (µS/cm)	A-T-037	N	N	269				
Mass Sample (kg)				0.217				
Dry Matter (%)	A-T-044	N	N	80.7				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

APPENDIX V
FOUNDATION DRAWINGS

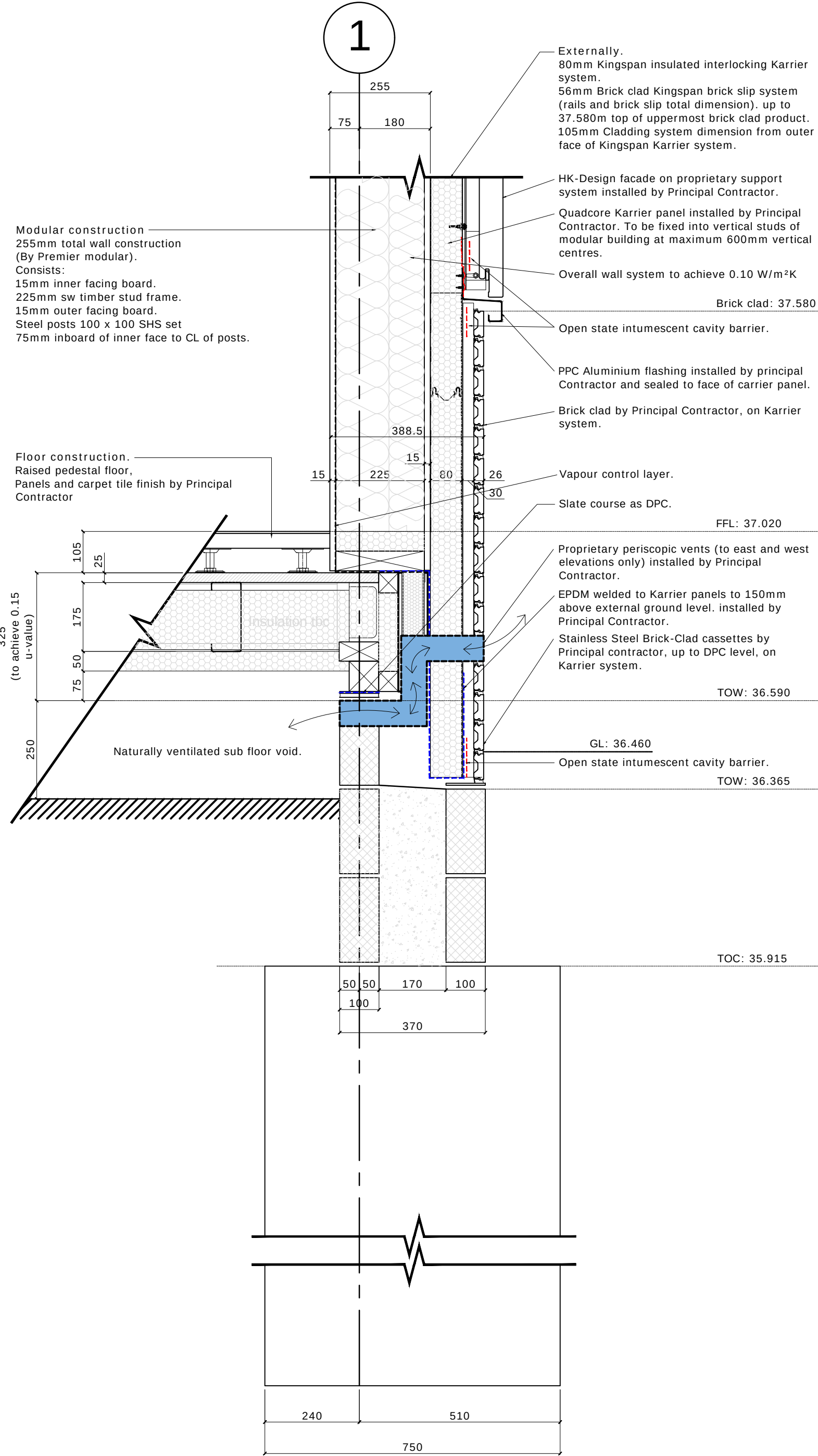


Scale 1:50	Drawn JSA	Date 18.04.23
Drawing Purpose FOR CONSTRUCTION		Status A
Ref 2080-JSA-ZZ-ZZ-DR-A-16200		Rev. C1
Job No. Origin. Zone Level Type Dis. Number		



Section J - J

SCALE: 1:10



Section K - K

SCALE: 1:10

Rev	Description	Date	By	Chk
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Fulcrum
2 Sidney Street
Sheffield S1 4RH
Telephone +44(0)1142761651
Website www.jeffersonsheard.com



Project
Martin Harris
Music Practice Building

Drawing
Foundation sections
J-J & K-K

Scale 1:10	Drawn JSA	Date 18.04.23	Status A
Drawing Purpose FOR CONSTRUCTION			Rev. P1
Ref 2080-JSA-ZZ-ZZ-DR-A-16303			Job No. Origin_Zone Level Type Dis. Number