Our Ref: lt.2401021.002.03
Your Ref: -

25 April 2025

The Old Chapel
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B&X Construction Ltd
c/ o London Borough of Hillingdon Council

By email only

Dear Anne,

ENDEAVOUR SEA SCOUTS GROUP, COWLEY – VERIFICIATION STATEMENT

TEC have been instructed by B&X Construction Ltd on behalf of London Borough of Hillingdon Council, to undertake verification testing of the completed soft landscaped areas, in support of the development at Endeavour Sea Scouts Group, Cowley. All works were undertaken in accordance with our proposal email dated 29th January 2024 to B&X Construction Ltd.

Background

The site is located off Moorfield Road, Cowley (Figure 1). The site is approximately 0.05 hectares in size, with the centre of the site located at approximate National Grid Reference 505800, 181300. The nearest postcode to the site is UB8 3SJ.

The proposed development is understood to comprise the demolition of the existing scout hut and construction of a new scout hut with areas of soft landscaping and hard infrastructure (Figure 2).

It is understood that planning permission has been granted by London Borough of Hillingdon Council (ref: 77079/APP/2022/534) for the development, and that Condition 5 related to the requirement for a Remediation Strategy and subsequent and Verification Report have also been applied.

TEC have previously prepared the following reports for the site:

- Endeavour Sea Scout Group, Cowley – Desk Study and Ground Investigation Report. Prepared for London Borough of Hillingdon Council. Report reference 2105014.001.01, dated July 2021;
- Endeavour Sea Scout Group, Cowley – Geotechnical Assessment Addendum Report. Prepared for London Borough of Hillingdon Council. Report reference 2105014.002.01A, dated September 2021;
- Endeavour Sea Scout Group, Cowley – Remediation Strategy and Verification Plan. Prepared for Prepared for London Borough of Hillingdon Council. Report reference 2401021.001.01, dated February 2024; and
- Endeavour Sea Scout Group, Cowley. Prepared for Prepared for London Borough of Hillingdon Council. Report reference 2401021.002.02, dated 11 February 2025.

Full reference should be made to all of the previous reporting and assessment, although a summary of the salient information in relation remedial requirements at the site is provided in the following section.

Previous Reports Summary

Ground Investigation and Encountered Ground Conditions (2021)

Ground investigation works undertaken at the site in 2021 comprised the advancement of window samples boreholes and shallow trial pits at positions in the approximate location requested by London Borough of Hillingdon to characterise and describe the underlying ground materials, and to collect geochemical and geotechnical samples for analysis.

Made ground was recorded across the site (to depths of at least 1.0mbgl) recorded to a maximum depth of >1.6mbgl. This was locally observed to be underlain by the silty clays, sands and gravels of the Langley Silt Member to a maximum observed depth of 1.9mbgl. No groundwater or perched water was encountered at the site during the TEC ground investigations.

Contamination Summary

No visual or olfactory evidence of gross contamination was observed during the ground investigation. Laboratory analysis of representative made ground materials recorded exceedances of the GAC for heavy metals (lead (WS03 and WS06) and beryllium (WS03) and PAH compounds when considering a residential site end use.

An asbestos screen completed on samples of the made ground at the laboratory recorded no suspected asbestos containing material or detectable asbestos fibres.

Remediation Requirements

Therefore, based upon the ground conditions and contamination recorded, it was recommended that where soft landscaping is proposed, in such areas and where made ground remains after finished site levels have been achieved, localised exposure to potential contaminants could not be discounted and a suitable cover system may be required within areas of soft landscaping.

The proposed development plan indicates a large portion of the site area is to be covered by the footprint of the proposed development buildings or hardstanding. Where present, such hard cover features would remove the identified potential contaminant pathways in relation to site end users.

Based upon the contaminants recorded within WS03 and WS05, it was recommended that either a minimum depth of 460mm of clean cover should be provided within proposed soft landscaped area, where made ground remains, or alternatively, given the limited and localised nature of these exceedances, it was recommended that further testing and assessment may be undertaken once final site levels are achieved, to determine the requirement for any such remedial measures.

Remediation Works

Summary of Works

Remedial works were undertaken by B & X Construction Ltd and in summary, the external areas on site had been installed with either block paving (hardstanding), or the soft landscaped areas on site were covered with a geotextile marker membrane overlain with clean imported topsoil as detailed within the TEC report ref: 2401021.002.02.

As previously noted, it was not possible to install the recommended 460mm depth simple cover system within the limited areas of communal soft landscaping due to the presence of numerous existing trees present at the site. It was noted that the trees present onsite have extensive root protection zones identified within the Arboricultural Method Statement ref. TH 3066 dated 17 September 2021 prepared by Trevor Heaps Arboricultural Consultancy Ltd (see attached drawing). These root protection zones extend across the proposed areas of communal soft landscaping. The extent of the trees in relation to the proposed soft landscaping is shown on Figure 2.

Therefore, as the soft landscaping at the site is a managed communal area, exposure to soils within the root protection zones (and across all soft landscaped areas) has been prevented by the provision of a geogrid system (in this case Tensar SS20), infilled and overlain with a nominal thickness of clean free draining topsoil as a top dressing. Details of which are presented within TECs report ref: (2401021.002.02).

Imported Soil

Information provided by B & X Construction Ltd and detailed within TEC report ref:2401021.002.02, indicates ~3m^3 of topsoil (Hallstone Blended Loam Topsoil) was delivered to site on 25 October 2024, with a further ~3m^3 of the same delivered on 28 October and 29 October 2024 (total 9m^3). It was noted that following the placement of the geogrid system, an additional ~ 6m^3 of the same material was delivered to site on 01 and 04 February 2025.

A Tim O'Hare Associates report (ref: TOHA/24/1592/SS, dated 4th November 2024) was supplied to TEC (see report ref: 2401021.002.02) for the imported topsoil placed at the site. Review of this report indicates the material comprises very dark greyish brown, slightly moist, friable, slightly calcareous loamy sand with a weakly developed, very fine to fine granular structure. The sample was further reported to be slightly stony and containing a high proportion of organic fines and frequent woody fragments. No unusual odours, deleterious materials, roots or rhizomes or pernicious weeds were observed by Tim O'Hare Associates during analysis.

The Tim O'Hare Associates report further indicates that material tested was fully compliant with the requirements of the British Standards for Topsoil (BS3882:2015 – Specification for Topsoil: Table 1, Multipurpose Topsoil). However, the report documents that "*the report and results should not be used by third parties as a means of verification or validation testing or waste designation purposes, especially after the topsoil has left the Hallstone Developments Ltd site*".

TEC note that the concentration of contaminants reported for this sample all fall below the GAC's outlined within the approved Remediation Strategy and Verification Plan.

Verification Sampling – April 2025

Methodology

Following the previous works on site, it is understood that the works undertaken previously were not acceptable to London Borough of Hillingdon Council, and therefore an additional clean cover system has been placed within soft landscaped areas on site directly overlying the topsoil already placed within the root protection zones during the earlier works by BX Construction Ltd in order to comply with the TEC Remediation Strategy and Verification Plan (report ref.: 2401021.001.01, dated February 2024). TEC attended site on 11 April 2025 in order to undertake additional verification sampling of the placed clean cover system to determine if it complies with the approved Remediation Strategy and subsequent detailed remedial works letter (ref: 2401021.002.02) for the site.

5No. hand dug pits (HDP101 to HDP105) were advanced to a maximum depth of 0.49mbgl at locations presented within the enclosed Figure 2. It should be noted that all areas of the imported material associated with the soft landscaping associated with the development were noted as having been placed above the original ground level of the site. This is due to the identified root protection zones causing restriction to any excavation of materials in these parts of the site (and the majority of the communal soft landscaping).

Encountered Ground Conditions

A summary of encountered ground conditions for the clean cover imported to site is provided in the table below. Photographs of the materials encountered, together with a selection of photos of exploratory locations, types of materials and depths of materials encountered are presented within Appendix A.

Table 1: Encountered Cover System Materials

Location	Depth (mbgl)	Materials Description
HDP101	0.0 to 0.48	Brown to dark brown slightly clayey sandy silt with abundant organic material and rare gravel of fine subangular chert, mudstone and sandstone (TOPSOIL). Black geogrid at 0.41m and blue root protection textile at 0.48mbgl.
HDP102	0.0 to 0.48	Brown to dark brown slightly clayey, silty sand with abundant organic material and rare gravel of fine subangular chert (TOPSOIL).
HDP103	0.0 to 0.49	Brown to dark brown slightly clayey, silty sand with abundant organic material and rare gravel of fine subangular chert and mudstone (TOPSOIL). Black geogrid at 0.49mbgl.
HDP104	0.0 to 0.49	Brown to dark brown slightly gravelly, slightly clayey, sandy silt with abundant organic material. Gravel of fine subangular chert and sandstone (TOPSOIL). Black geogrid at 0.49mbgl.
HDP105	0.0 to 0.48	Brown to dark brown slightly gravelly, slightly clayey, sandy silt with abundant organic material. Gravel of fine subangular chert, mudstone and sandstone (TOPSOIL). Black geogrid at 0.45bgl.

Geochemical Analysis

Representative samples of the encountered topsoil and subsoil were collected from the hand dug pits and chemically tested at i2 Analytical Ltd, a UKAS/MCERTS accredited laboratory, for a selection of the following parameters:

- *Heavy metals and metalloids;*
- *Total Organic Carbon (TOC);*
- *Phenols (monohydric);*
- *Total Cyanide;*
- *Sulphate, sulphide sulphur and pH;*
- *Speciated Polyaromatic Hydrocarbons (PAH);*
- *Total Petroleum Hydrocarbons (TPH-CWG), including BTEX and MTBE; and*
- *Asbestos Screen.*

Geochemical certificates of analysis for this phase of works are presented within the enclosed Appendix B.

Geochemical Analysis

Based upon previous discussions with B & X Construction Ltd, it is understood that Hillingdon Borough Council require assessment criteria for human health risk assessment of the site to utilise screening values for a "residential with homegrown produce" site end use.

TEC have referenced the Environment Agency SGV's, Defra Category 4 Screening Levels (C4SLs) and LQM/CIEH S4ULs for Human Health Risk Assessment 'Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3126. All rights reserved.'

Summary of Results

The full human health generic quantitative risk assessment is presented within the enclosed Appendix C for geochemical samples collected from the assumed imported clean cover materials (topsoil).

The results of the assessment recorded no exceedances of the tested materials. In addition, no asbestos was detected within the cover materials sampled.

Conclusions and Recommendations

On the basis of the additional sampling undertaken, it is considered that the depth of clean cover placed complies with the approved Remediation Strategy for the site (460mm). The chemical quality of the placed materials is noted to comply with approved Remediation Strategy, with no contaminant concentrations recorded to exceed GACs for a residential with homegrown produce" site end use.

Closure

Should you have any questions or queries regarding the above information, please do not hesitate to contact us.

Yours sincerely

Prepared by:

Sophie Thomas
Principal Consultant

Authorised by:

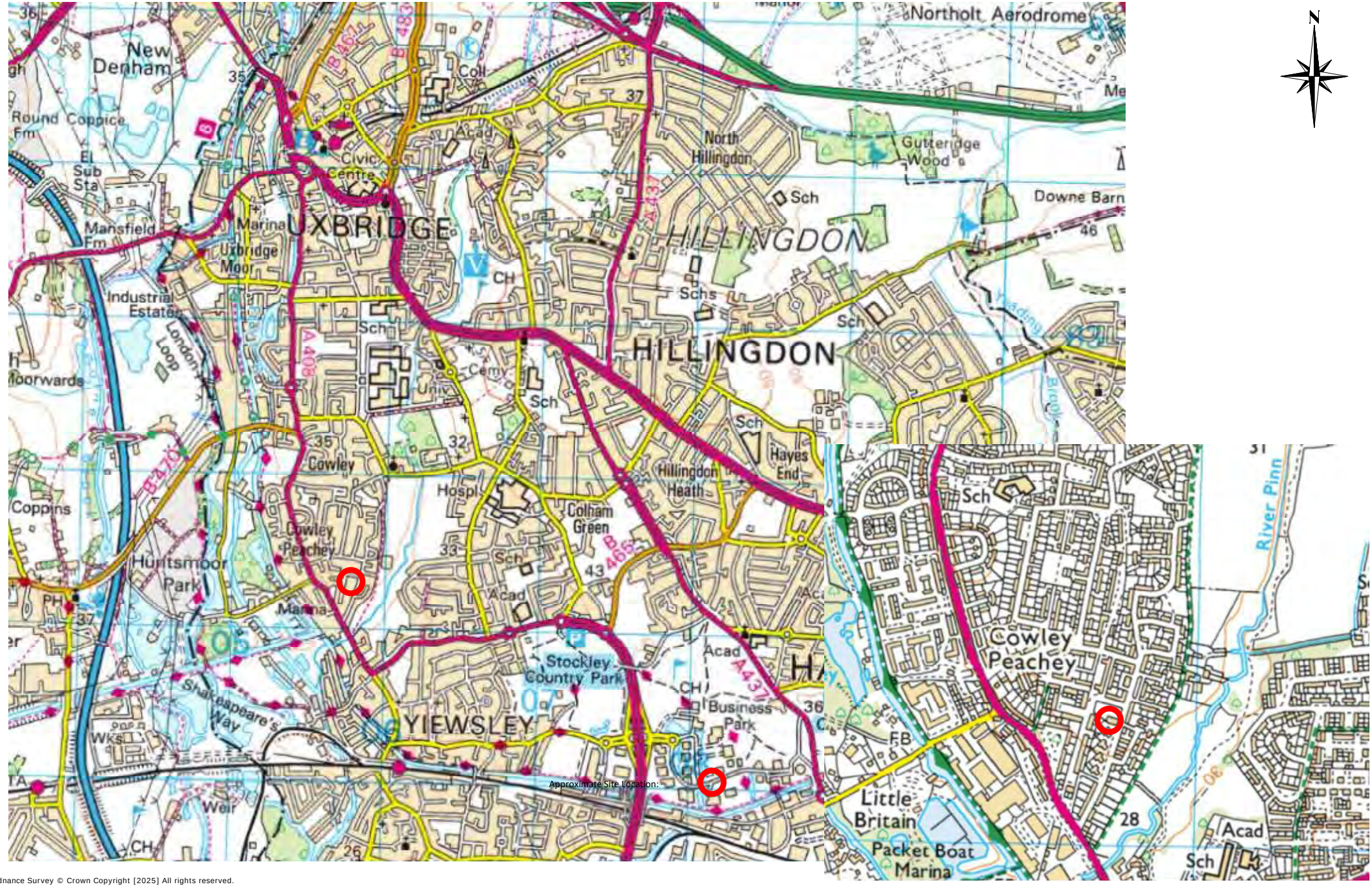
Ruth Easterbrook
Technical Director

For and on behalf of
TEC

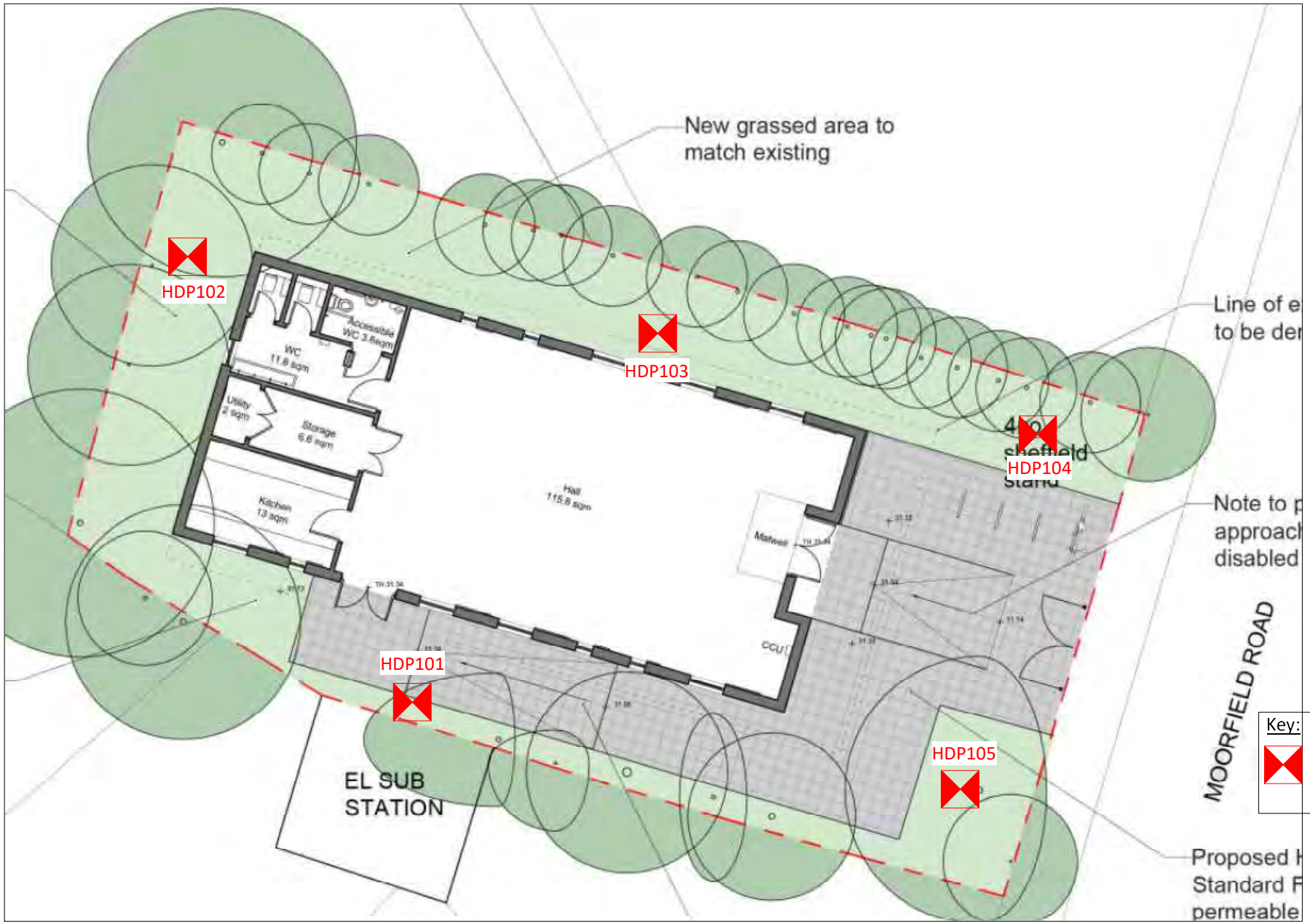
Enclosed:

Figure 1 - Site Location Plan
Figure 2 - Proposed Development and Verification Location Plan
Tree Protection Plan: Ref. TH/A3/3066/TPP dated 17/09/2021 – Trevor Heaps Arboricultural Consultancy Ltd
Appendix A - Site Photographs (TEC 11.04.2025)
Appendix B - Geochemical Laboratory Analysis: i2 Analytical Ltd (2025) Report No.: 25-018388
Appendix C - Generic Quantitative Risk Assessment: Human Health

Figures



tec	TEC The Old Chape 35a Southover Wells, Somerset BA5 1UH	Tel: 01749 67776C Email: info@tecon.co.uk Web: www.tecon.co.uk	Site Name: Endeavour Sea Scout Group, Cowley	Drawing Name Site Location Plan	Client Name: London Borough of Hillingdon Counci	Project No: 2401021	Figure No: 1	Date: April 2025	Scale: NTS

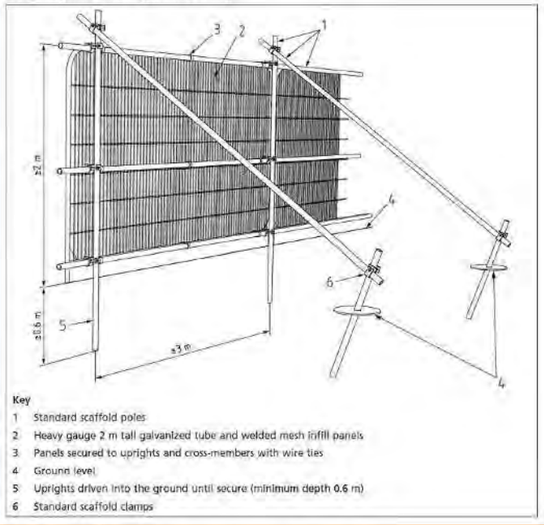


Extract of Inter Urban Studios 'Endeavour Sea Scout Group - Proposed Site Plan'. Dwg No.: PL-03 A, 29.03.22.

tec	TEC The Old Chapel 35a Southover Wells, Somerset BA5 1UH	Tel: 01749 677760 Email: info@tecon.co.uk Web: www.tecon.co.uk	Site Name Endeavour Sea Scout Group, Cowley	Drawing Name Proposed Development and Verification Location Plan	Client Name: London Borough of Hillingdon Council	Project No: 2401021.002.03	Figure No: 2	Date: April 2025	Scale: NTS

Appendix 9: Tree Protection Plan

Default specification for protective fencing



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

At this site, operations are to occur in the following sequence:

1. Carry out tree work operations highlighted yellow in the tree data schedule (Appendix 2). All tree works are to be carried out by a competent and experienced arborist to current British Standards (see Appendix 5.9 for assistance finding a suitable arborist).

2. Erect protective fencing along the position(s) shown by the dashed red line/s on the TPP.

3. Lay ground protection and/or retain suitably hard-wearing existing hard surfaces within the area(s) shown by the diagonal blue lines on the TPP.

4. Provide a photographic record of all tree protection to arboricultural consultant - this will be forwarded to and approved by the Council's Arboricultural Officer and must demonstrate that all aspects of tree and ground protection measures have been implemented in accordance with this Arboricultural Report. The tree protection measures shall be retained until completion of all works hereby permitted.

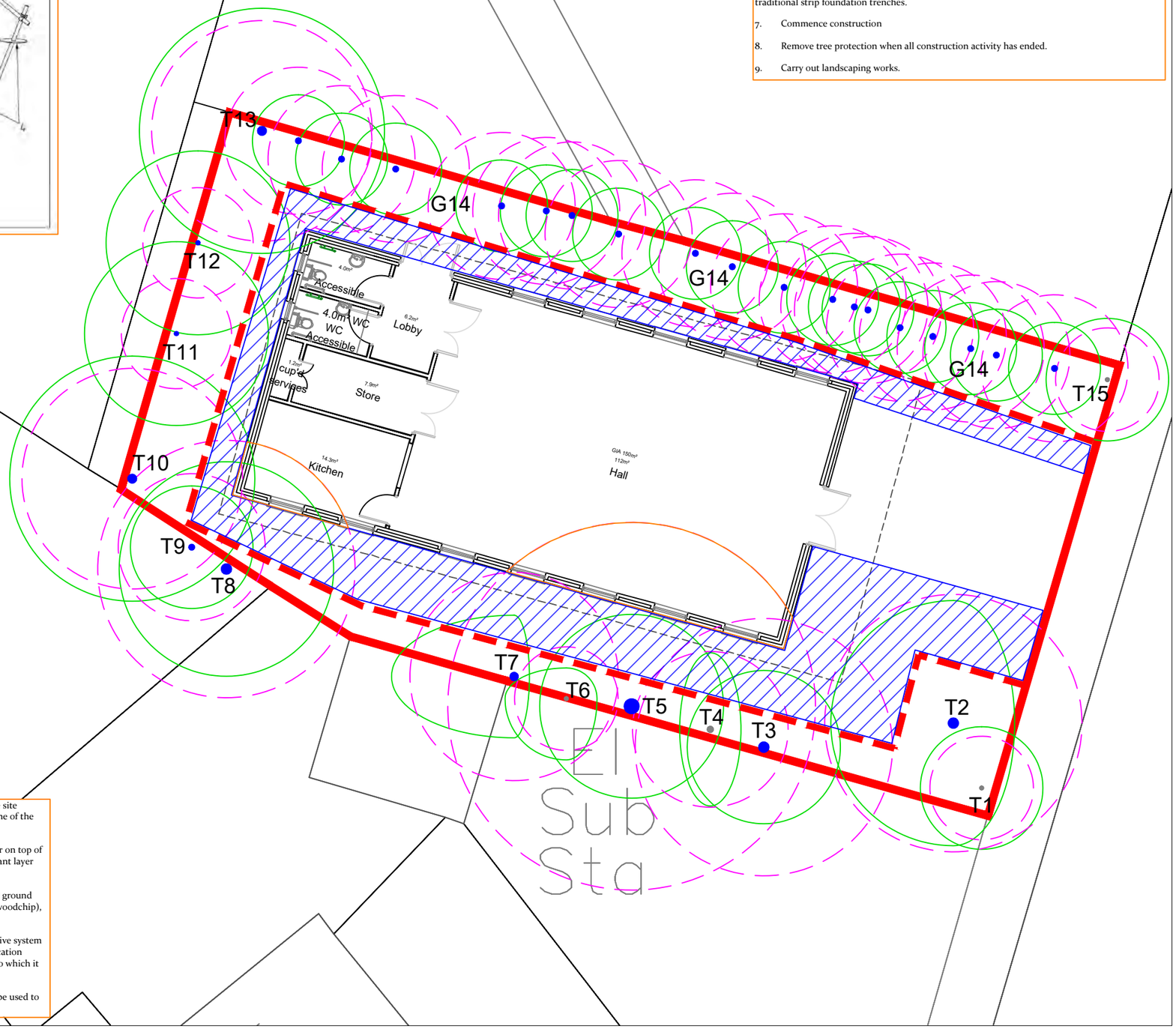
5. Demolish existing building, leaving any suitable hard surfaces in situ (as ground protection).

6. Working from on top of existing hard surfaces and/or suitable ground protection, excavate traditional strip foundation trenches.

7. Commence construction

8. Remove tree protection when all construction activity has ended.

9. Carry out landscaping works.



Plan Legend

- Tree/s to be retained
- Tree/s to be removed
- Centre colours
- Category A Tree
- Category B Tree
- Category C Tree
- Category U Tree
- Root Protection Area (RPA) If amended, the original is a dotted blue circle
- RPA Incursion. Extra care to be taken during excavations (see supporting report)
- Protective fencing
- CEZ — Construction & storage exclusion zone
- Ground protection or existing hard surface to remain

Temporary ground protection should be able to support any traffic entering or using the site without being distorted or causing compaction of underlying soil and might comprise one of the following:

1. For pedestrian-movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

2. For pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;

3. For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

NOTE: If ground protection is to be laid near areas to be excavated, sheet piling should be used to shore up the sides of the excavations prior to being used (by pedestrians or machinery)

Scale: 1:150 @ A3
0 3m 6m

Site Address: Endeavour Sea Scout Gp
Moorfield Road, Cowley, UB8 3SJ

Client: L B Hillingdon
Drawing No: TH/A3/3066/TPP

Job Ref: TH 3066 | Date: 17/09/2021

Trevor Heaps
Aboricultural Consultancy Ltd

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trevor@trevorheaps.co.uk
www.trevorheaps.co.uk

End of Report

Appendix A

Site Photographs

Photograph 1: View of completed imported material for soft landscaping, facing west.

Photograph 2: View of graded completed soft landscaping along the northern boundary, facing east.

Photograph 3: View of graded completed soft landscaping along the rear of the structure, western boundary, facing north.

Photograph 4: View of graded completed soft landscaping along the southern boundary, facing west.

Photograph 5: View of graded completed soft landscaping along the southern boundary, facing east.

Photograph 6: View of graded completed soft landscaping along the eastern boundary, facing south-east.

Photograph 7: View of HDP101.

Photograph 8: View of topsoil from HDP101.

Photograph 9: View of HDP102.

Photograph 10: View of materials from HDP102.

Photograph 11: View of HDP103.

Photograph 12: View of materials from HDP103.

Photograph 13: View of HDP104.

Photograph 14: View of materials from HDP104.

Photograph 15: View of HDP105.

Photograph 16: View of materials from HDP105.

Appendix B

Geochemical Laboratory Analysis

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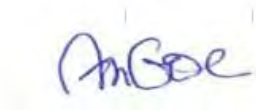
e: reception@i2analytical.com

Analytical Report Number : 25-018388

Project / Site name:	Endeavour, Cowley	Samples received on:	11/04/2025
Your job number:	2401021.002	Samples instructed on/ Analysis started on:	11/04/2025
Your order number:		Analysis completed by:	22/04/2025
Report Issue Number:	1	Report issued on:	22/04/2025
Samples Analysed:	3 soil samples		



Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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

Analytical Report Number: 25-018388
Project / Site name: Endeavour, Cowley

Lab Sample Number				510202	510203	510204
Sample Reference				HDP102	HDP104	HDP105
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.30-0.40	0.20-0.30	0.35-0.45
Date Sampled				11/04/2025	11/04/2025	11/04/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	18	21
Total mass of sample received	kg	0.1	NONE	2	2	2
Asbestos						
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DKI	DKI	DKI
Analysis completed	N/A	N/A	N/A	16/04/2025	16/04/2025	16/04/2025
General Inorganics						
pH (L099)	pH Units	N/A	MCERTS	8.1	8.1	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	1300	1200	2100
Sulphide	mg/kg	1	MCERTS	110	5.2	6.7
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	4.7	4.5	5.2
Total Phenols						
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.07
Fluorene	mg/kg	0.05	MCERTS	0.08	< 0.05	0.11
Phenanthrene	mg/kg	0.05	MCERTS	0.5	0.39	1.1
Anthracene	mg/kg	0.05	MCERTS	0.17	0.1	0.34
Fluoranthene	mg/kg	0.05	MCERTS	1.2	0.99	2.5
Pyrene	mg/kg	0.05	MCERTS	1	0.87	2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.58	0.45	1.1
Chrysene	mg/kg	0.05	MCERTS	0.53	0.42	1.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.53	0.55	1.3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.3	0.16	0.58
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.49	0.43	1.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.31	0.3	0.64
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.11	0.09	0.21
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.31	0.31	0.65
Total PAH						
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	6.16	5.06	12.8

Analytical Report Number: 25-018388
Project / Site name: Endeavour, Cowley

Lab Sample Number				510202	510203	510204
Sample Reference				HDP102	HDP104	HDP105
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.30-0.40	0.20-0.30	0.35-0.45
Date Sampled				11/04/2025	11/04/2025	11/04/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status			
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.4	8.1	9.8
Barium (aqua regia extractable)	mg/kg	1	MCERTS	71	68	79
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.36	0.47	0.49
Boron (water soluble)	mg/kg	0.2	MCERTS	1.8	3.2	3.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	0.4	0.5
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	14	17	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	410	30	33
Lead (aqua regia extractable)	mg/kg	1	MCERTS	33	44	63
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.3	9.9	15
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	20	23	26
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	210	89	110
Petroleum Hydrocarbons						
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	28	15	32
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	28	15	32
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	35	22	34
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	35	22	34
TPH (EC10 - EC40) $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	76	55	98
VOCs						
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0

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

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* 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 *
510202	HDP102	None Supplied	0.30-0.40	Brown loam with gravel and vegetation
510203	HDP104	None Supplied	0.20-0.30	Brown loam with gravel and vegetation
510204	HDP105	None Supplied	0.35-0.45	Brown loam with gravel and vegetation

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

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 dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
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	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	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	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in soil (low level)	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	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

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Water matrix abbreviations:
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Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Appendix C

Generic Quantitative Risk Assessment: Human Health

Project Number: 2401021.002.03		Lab Sample Number	510202	510203	510204						
Project Name: Endeavour Sea Scouts, Cowley		Sample Reference	HDP102	HDP104	HDP105						
Site End Use:	GAC (mg/kg)	Sample Number	None Supplied	None Supplied	None Supplied						
Residential with homegrown produce		Depth (m)	0.30-0.40	0.20-0.30	0.35-0.45						
		Date Sampled	11/04/2025	11/04/2025	11/04/2025						
Determinand			1	2	3						
Arsenic	37[1]	mg/kg	7.40	8.10	9.80						
Boron	290[3]	mg/kg	1.80	3.20	3.90						
Cadmium	22[1]	mg/kg	0.20	0.40	0.50						
Chromium (total)	910[3]	mg/kg	14.00	17.00	18.00						
Chromium (VI)	21[1]	mg/kg	< 1.2	< 1.2	< 1.2						
Copper	2400[3]	mg/kg	410.00	30.00	33.00						
Lead	200[1]	mg/kg	33.00	44.00	63.00						
Mercury	40[2]	mg/kg	< 0.3	< 0.3	< 0.3						
Nickel	130[2]	mg/kg	8.30	9.90	15.00						
Selenium	350[2]	mg/kg	< 1.0	< 1.0	< 1.0						
Zinc	3700[3]	mg/kg	210.00	89.00	110.00						
Beryllium	1.7[3]	mg/kg	0.36	0.47	0.49						
Vanadium	410[3]	mg/kg	20.00	23.00	26.00						
Barium	1300[4]	mg/kg	71.00	68.00	79.00						
Cyanide (Total)	20[5]	mg/kg	< 1.0	< 1.0	< 1.0						
Phenol (Monohydric)	120[3]	mg/kg	< 1.0	< 1.0	< 1.0						
Sulphide	-	mg/kg	110.00	5.20	6.70						
Total Organic Carbon (TOC)	-	%	4.70	4.50	5.20						
Naphthalene	2.3[3]	mg/kg	< 0.05	< 0.05	< 0.05						
Acenaphthylene	170[3]	mg/kg	< 0.05	< 0.05	< 0.05						
Acenaphthene	210[3]	mg/kg	< 0.05	< 0.05	0.07						
Fluorene	170[3]	mg/kg	0.08	< 0.05	0.11						
Phenanthrene	95[3]	mg/kg	0.50	0.39	1.10						
Anthracene	2400[3]	mg/kg	0.17	0.10	0.34						
Fluoranthene	280[3]	mg/kg	1.20	0.99	2.50						
Pyrene	620[3]	mg/kg	1.00	0.87	2.00						
Benzo(a)anthracene	7.2[3]	mg/kg	0.58	0.45	1.10						
Chrysene	15[3]	mg/kg	0.53	0.42	1.10						
Benzo(b)fluoranthene	2.6[3]	mg/kg	0.53	0.55	1.30						
Benzo(k)fluoranthene	77[3]	mg/kg	0.30	0.16	0.58						
Benzo(a)pyrene	2.2[3]	mg/kg	0.49	0.43	1.10						
Indeno(1,2,3-cd)pyrene	27[3]	mg/kg	0.31	0.30	0.64						
Dibenz(a,h)anthracene	0.24[3]	mg/kg	0.11	0.09	0.21						
Benzo(ghi)perylene	320[3]	mg/kg	0.31	0.31	0.65						
Speciated Total EPA-16 PAHs	-	mg/kg	6.16	5.06	12.80						
Benzene	0.087[3]	µg/kg	< 5.0	< 5.0	< 5.0						
Toluene	130[3]	µg/kg	< 5.0	< 5.0	< 5.0						
Ethylbenzene	47[3]	µg/kg	< 5.0	< 5.0	< 5.0						
p & m-xylene	56[3]	µg/kg	< 5.0	< 5.0	< 5.0						
o-xylene	60[3]	µg/kg	< 8.0	< 8.0	< 8.0						
MTBE (Methyl Tertiary Butyl Ether)	49[4]	µg/kg	< 5.0	< 5.0	< 5.0						
TPH Aliphatic C5 - C6	42[3]	mg/kg	< 0.010	< 0.010	< 0.010						
TPH Aliphatic C6 - C8	100[3]	mg/kg	< 0.010	< 0.010	< 0.010						
TPH Aliphatic C8 - C10	27[3]	mg/kg	< 0.010	< 0.010	< 0.010						
TPH Aliphatic C10 - C12	130[3]	mg/kg	< 1.0	< 1.0	< 1.0						
TPH Aliphatic C12 - C16	1100[3]	mg/kg	< 2.0	< 2.0	< 2.0						
TPH Aliphatic C16 - C21	65000[3]	mg/kg	< 8.0	< 8.0	< 8.0						
TPH Aliphatic C21 - C35	65000[3]	mg/kg	28.00	15.00	32.00						
TPH Aromatic C5 - C7	70[3]	mg/kg	< 0.010	< 0.010	< 0.010						
TPH Aromatic C7 - C8	130[3]	mg/kg	< 0.010	< 0.010	< 0.010						
TPH Aromatic C8 - C10	34[3]	mg/kg	< 0.020	< 0.020	< 0.020						
TPH Aromatic C10 - C12	74[3]	mg/kg	< 1.0	< 1.0	< 1.0						
TPH Aromatic C12 - C16	140[3]	mg/kg	< 2.0	< 2.0	< 2.0						
TPH Aromatic C16 - C21	260[3]	mg/kg	< 10	< 10	< 10						
TPH Aromatic C21 - C35	1100[3]	mg/kg	35.00	22.00	34.00						

Notes:

[1] DEFRA C4SLs (2014)

[2] Environment Agency SGVs (2009)

[3] LQM/CIEH S4ULs (2015) *'Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3126. All rights reserved.'.*

[4] CL:AIRE, AGS & EIS (2009)

[5] Dutch Intervention Value for free cyanide (VROM 2000)

*All GACs based on a sandy soil and Soil Organic Matter (SOM) of 1% where applicable.

Concentration does not exceed GAC

Concentration exceeds GAC

No set GAC