

Co-Op Live Arena

Verification Report – Part B (Landscaping)

BRA-BHE-XX-XX-RP-CG-0006

0042841

14 June 2024

Revision P01

Revision	Description	Issued by	Date	Checked
P01	Issue	JY	14/06/2024	GP

[https://burohappold.sharepoint.com/sites/0042841projectbradford/05_Discipline Specific/09_Ground Engineering/F9 Ground Eng- Site Inv/03 Reports/Verification/Verification Part B/BRA-BHE-XX-XX-RP-CG-0006 P01 Part B.docx](https://burohappold.sharepoint.com/sites/0042841projectbradford/05_Discipline%20Specific/09_Ground%20Engineering/F9%20Ground%20Eng-%20Site%20Inv/03_Reports/Verification/Verification%20Part%20B/BRA-BHE-XX-XX-RP-CG-0006%20P01%20Part%20B.docx)

This Report was prepared by Buro Happold Limited ("BH") for the sole benefit, use and information of BAM Construction Ltd for information. BH assumes no liability or responsibility for any reliance placed on this Report by any third party for any actions taken by any third party in reliance of the information contained herein. BH's responsibility regarding the contents of the Report shall be limited to the purpose for which the Report was produced and shall be subject to the express contract terms with BAM Construction Ltd. The Report shall not be construed as investment or financial advice. The findings of this Report are based on the available information as set out in this Report.

author **James Young**

date **14/06/2024**

approved **Geoffrey Perrett**

signature 

date **14/06/2024**

Contents

1	Introduction	4
2	Planned remediation actions	7
3	Verification of landscaping	9
4	Conclusions	13
5	References	14
	Appendix A Landscaping Drawings	
	Appendix B Disposal Records	
	Appendix C Chemical Data Sheets	
	Appendix D Import Records	
	Appendix E Sampling Location Plan and Chemical Data	

1 Introduction

1.1 Report scope

This Verification Report was prepared by Buro Happold on behalf of BAM Construction Ltd in accordance with the relevant Environment Agency Guidance [1] [2]. It forms the second part (Part B) of the verification process for the Co-Op Live Arena, Manchester, providing evidence of the successful completion of the final elements (soft landscaping) of the approved Remediation Strategy and Verification Plan [3]. This report relates specifically to soft landscaped areas, in particular those of above ground planters located within the public realm surrounding the arena, see Figure 1-1 below and Drawings provided in Appendix A.

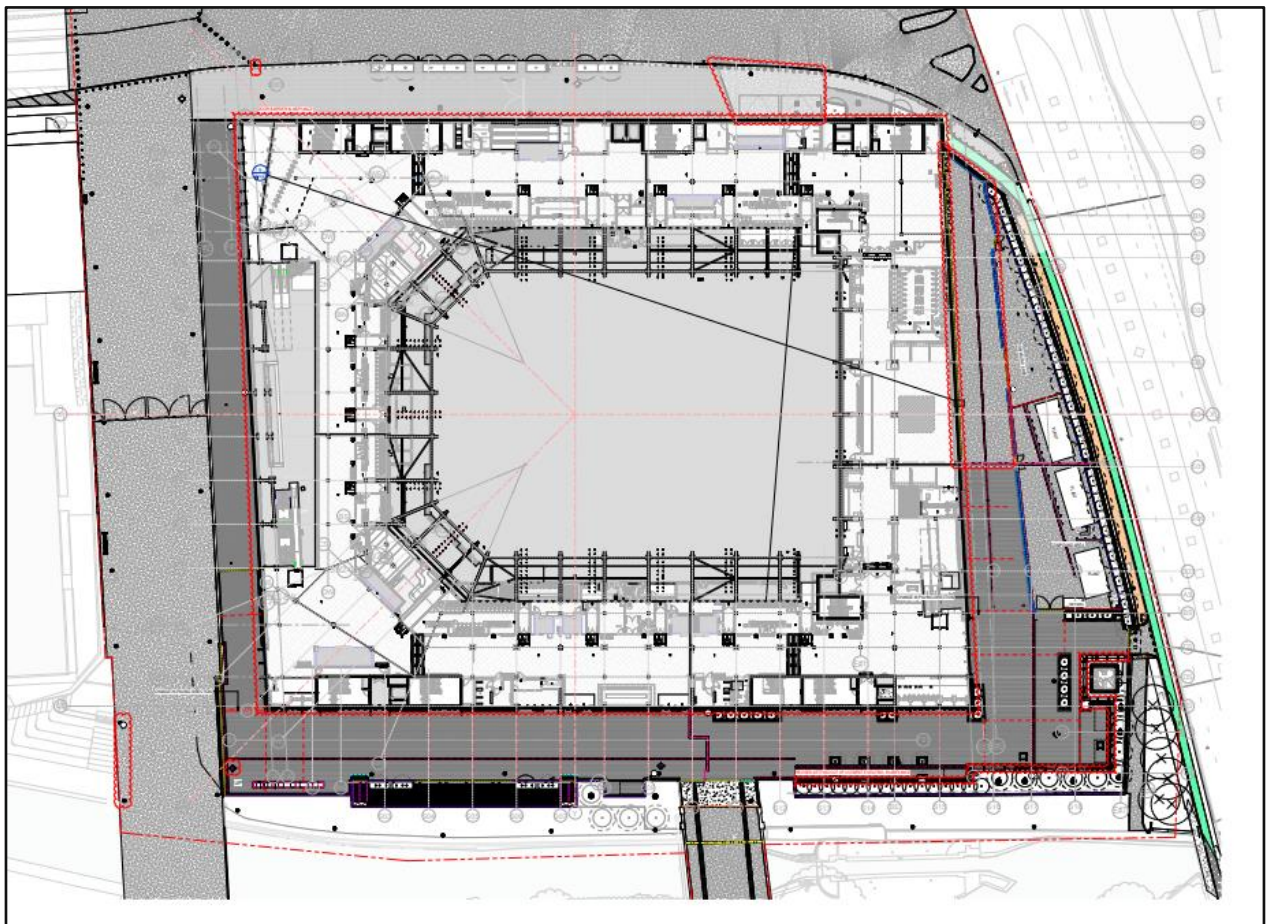


Figure 1-1 Location of landscaped areas (raised planters) within the public realm surrounding the Co-Op Live Arena

This report covers the verification of all soft landscaping across the Site (above ground planters located within the public realm) as detailed in Appendix A. This report therefore presents the information and evidence necessary to satisfy Planning (see Section 1.3) with respect to Part B – Landscaping for the Site.

1.2 Objectives

The particular objectives of this report with respect to Part B – Landscaping are to:

- i. Describe the verification activities that have been carried out;
- ii. Present supporting information on the remedial measures undertaken to mitigate the risks identified in the previous investigations; and
- iii. Describe the presence and remediation of any unforeseen contamination encountered during the landscaping works (if encountered).

1.3 Relevant planning conditions

This report has been prepared to address the requirements of Manchester City Council with respect to land affected by contamination set out planning condition 7b Planning Permission Ref. 126431/FO/2020 approved on the 23rd October 2020. Part of Condition 7 (part a) was discharged under application Ref. CDN/20/0767. In order to discharge Condition 7 in full, part (b) needs to be complied with. This requires a Completion/Verification Report to be submitted and approved in writing by the City Council as local planning authority, prior to the first use of the development. This report addresses this requirement. The conditions relevant to this Verification Report are presented below for ease of reference:

7) (a) *Notwithstanding the Geoenvironmental and Geotechnical Desk Study and gas calibration certificates stamped as received by the City Council, as Local Planning Authority, on the 30th March 2020 and 11th September 2020 respectively, prior to the commencement of development hereby approved, the following details shall be submitted for approval in writing by the City Council, as Local Planning Authority:*

Submission of a remediation strategy. The development shall then be carried out in accordance with the approved remediation strategy.

(b) *A Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority, prior to the first use of the development.*

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

Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to policies DM1 and EN18 of the Manchester Core Strategy (2012).

Planning Condition 9 addressed verification of the mine works and was formally discharged by the local authority on 28th May 2021, refer to Decision Notice CDN/21/0281.

In order to enable the discharge of Condition 7 (b) this Verification Report demonstrates how the risks from contamination have been mitigated by the implementation of the approved Remediation Strategy [3]. As described above, this report forms the second part of a two-part verification process specific to the Site. The first part (Part A – Groundworks) [4] was submitted on 31st of January and should be referred to for further information.

1.4 Responsible parties

The parties with responsibility for various elements of the landscaping installation and verification are summarised in Table 1-1. Construction for and installation of landscaping was undertaken by Ashlea Ltd. The landscape design was produced by Populus, with Freeland Horticulture Ltd the soil and landscape consultant. Buro Happold was the consultant to BAM Construction Ltd. Freeland Horticulture Ltd was a contractor and appointed to undertake verification testing of samples collected by Ashlea Ltd.

Table 1-1 - Parties with responsibility.

Name	Role	Description of responsibility	Contact information
BAM Construction Ltd	Principal Contractor	Contractor for the development construction	Metro, 2 nd Floor, 33 Trafford Road, Exchange Quay 2, Salford, M5 3NN 0161 877 9274
Turner and Townsend	Cost Consultant / Project Managers	Overall responsibility for all activities related to the redevelopment	6 th Floor. 55 Springs, Manchester, M2 2BY 0161 237 7750
Buro Happold Engineering Ltd	Consultant	Preparation of the Verification Report	230 Lower Bristol Road, Bath, BA2 3DQ 0122 532 0600
Provectus Remediation Ltd	Sub-contractor	Bulk earthworks contractor	Regent House, Bath Avenue, Wolverhampton, WV1 4EG 0190 281 0084.
Cementation Skanska Ltd	Sub-contractor	Grouting and piling works	Maple Cross House, Denham Way, Maple Cross, Hertfordshire, WD3 9SW
Careys Civil Engineering Ltd	Sub-contractor	Substructure contractor	Carey House, Great Central Way, Wembley, Middlesex, HA9 0HR
GCP Applied Technologies (UK) Ltd	Specialist	Supplier of ground gas and waterproofing systems (Product: Preprufe)	487-488 Ipswich Rd, Slough, SL1 4EP
Membrane Testing Solutions (MTS)	Specialist	Independent verifier of ground gas membrane and waterproofing	Parsonage House, Parsonage Street, Halstead, Essex, CO9 2JR
Populous	Landscape Architect	Landscape designer	14 Blades Court, Deodar Road, London, DW15 2NU 020 8874 7666
Freeland Horticulture Ltd	Soil and Landscape Consultant	Soil specialist and responsible for undertaking verification testing of imported soils	Rosedale Nursery, College Road, Hextable, Kent, BR8 7LT 01322 619 161
Ashlea Landscaping	Landscaping Sub-contractor	Construction for and installation of landscaping and responsible for undertaking verification sampling	Ashlea Limited, Scotland Road, Carnforth, Lancashire, LA5 9RE 01524 730 133

2 Planned remediation actions

2.1 Summary of pollutant linkages

In the UK, the assessment of risk from contamination follows the source-pathway-receptor approach. Site-specific pollutant linkages relevant to this development were identified with respect to the identified sources and future commercial use. Those that are relevant to this Part B - Landscaping report are reproduced below in Table 2-1 for ease of reference.

Table 2-1 - Summary of pollutant linkages.

Source	Pathway	Receptor
Made Ground with elevated concentrations of some elevated heavy metals, PAHs, TPH and asbestos	Direct contact in areas of landscaping	Site users of the development

2.2 Remedial objectives

The remediation objectives are set out in the approved Remediation Strategy prepared by Buro Happold [3]. The text below summarises the approved remediation design measures and / or actions. The overall aim of the strategy was to ensure that potential risks from land contamination at the site to future site users, neighbours, controlled waters, infrastructure, and ecological systems were suitably low. The strategy also aims to ensure that the construction of the development itself could be carried out safely without ground contamination giving rise to unacceptable risks to workers, neighbours, and other off-site receptors, in accordance with the National Planning Policy Framework (NPPF) [5].

The specific aims of the strategy are summarised as follows:

- To ensure any potentially risks to people or the environment are mitigated in both the short and long term;
- To meet specific planning conditions put in place by the local authority;
- To avoid regulatory intervention;
- To ensure both client and stakeholder expectations are satisfied; and
- To minimise long-term liabilities.

These aims formed the following objectives:

Contamination related

1. To ensure workers engaged in enabling works and construction of the proposed development are not exposed to concentrations of contamination in the solid, liquid or gaseous/vapour phase at concentrations that could give rise to acute risks;
2. To ensure occupiers / users of neighbouring land are not exposed to concentrations of contamination in dusts at concentration that could give rise to acute risks;
3. To ensure future site users and visitors are not exposed to concentrations of contamination that could give rise to acute or chronic risks;
4. To ensure the quality of surface waters (Ashton Canal and River Medlock) are not significantly impacted by any potentially mobile inorganic or organic contaminants in both the short and long terms;

5. To ensure soils in areas of soft landscaping meet appropriate physical and chemical criteria to enable health / growth of on-site plants; and
6. To ensure that the redeveloped site cannot be determined as 'Contaminated Land'.

Engineering related

7. To ensure the landform reduces rainwater infiltration and manages run off etc. in the long term and that run-off is also controlled during construction;
8. To ensure that the retaining structures on the site retain their integrity into the longer term;
9. To ensure that buildings and above ground infrastructure is protected against possible ingress and accumulation of hazardous gases and vapours; and
10. To ensure that any below ground infrastructure and services are designed taking the residual contamination profile into account.

Management related

11. To deliver the proposed development to time and budget;
12. To enable discharge of the relevant planning condition(s);
13. To minimise environmental impacts and ensure that 'nuisance' effects to occupiers / users of neighbouring land are mitigated to acceptably low; and
14. To ensure the remedial works undertaken are cost effective.

2.3 Critical performance characteristics

The critical performance characteristics associated with the Remediation Strategy [3], in particular those summarised in Section 2.1 relating to the Part B – Landscaping report are briefly described in the following text.

2.3.1 Control measures for direct contact – future site users

The details of these control measures were set out by Buro Happold [3] and are repeated below for ease of reference.

The potential risks to future site users from the presence of contamination have been assessed as moderate / low, reflecting the nature of the Made Ground, the frequency of occurrence of contaminants of concern in the Made Ground and the potential for exposure.

These potential risks will be mitigated by the presence of hardstanding across some parts of the site area in particular those to the north, where Made Ground left in-situ will predominantly be capped by hardstanding. Other areas include the building footprint and access roads / paths. Where soft landscaping is present within the public realm an appropriate thickness of suitable subsoil/topsoil will be required. Where subsoil/topsoil is placed over existing Made Ground soils a minimum thickness of 600mm should be afforded. Thicknesses of imported material will also be subject to horticultural requirements. The material should meet the relevant physical, biological, and chemical criteria including threshold values detailed in Appendix A of the Remediation Strategy [3]. The testing regime and the thickness of the material will need to be agreed, documented, and provided to the Local Authority as a verification note.

For areas of landscaping comprising raised planters or otherwise effectively isolated from underlying soils / Made Ground, the remedial objectives would be met provided that the imported soils meet the relevant physical, chemical and biological criteria.

3 Verification of landscaping

3.1 General

The following text describes the lines of evidence obtained to show the measures set out in the approved Remediation Strategy and Verification Plan [3] were implemented. The information is presented in a series of Appendices to this report:

- Appendix A – Landscape Drawings;
- Appendix B – Disposal Records;
- Appendix C – Chemical Data Sheets;
- Appendix D – Import Records; and
- Appendix E – Sampling Location Plan and Chemical Data.

3.2 Construction workforce – health, safety and hygiene regime

Whilst no site inspections were conducted by Buro Happold over the duration of the landscaping works, information was regularly provided by the contractor undertaking the works. Good standard practice, health and safety and hygiene was adopted throughout (consistent with those implemented during the enabling earthworks). For example, appropriate PPE was always worn by personnel, there was good control of site traffic and plant and there was no evidence of environmental nuisance (or hazard) associated with dust generation from construction activities. The implementation of these measures by the workforce was deemed sufficient during the landscaping works. These measures / controls ensured that any possible risks to the construction workforce associated with potentially contaminated materials, either via direct contact or airborne dust was limited and appropriately mitigated. Evidence of this good practice is shown below in Figure 3-1.



Figure 3-1 Early soft landscaping works within the public realm surrounding the Co-Op Live Arena

3.3 Additional excavations and disposal of soils

Further to the completion of the earthworks, Adana Construction undertook further excavations to reduce site levels in areas of proposed soft landscaping. This was primarily to facilitate the construction of tree pits and planters surrounding the arena in areas of public realm. A total of 80 No. loads (~20 tonnes per load) were removed via 8-wheeler lorries including inert and non-hazardous waste soils. A summary of all soils removed is presented in Table 3-1 below. Example copies of Waste Transfer Tickets are provided in Appendix B.

Table 3-1 Soils removed from site by Adana Construction

End destination	Haulage Company	Material classification	Tonnage
Recycling Centre Orchard Street, TS, EAWML/50093	J O'Shea & Sons Ltd	Non-hazardous soil and stones (17 05 04)	1,260
Recycling Centre Orchard Street, TS, EAWML/50093	J O'Shea & Sons Ltd	Inert soil and stones (17 05 04)	340
			Total: 1,600

3.4 Topsoil / subsoil

The Remediation Strategy [3] required that the clean-cover system be comprised of at least 600mm of topsoil / subsoil in areas where soft landscaping resides over existing site soils (Made Ground), to provide a sufficient thickness suitable for its proposed end use. Where landscaping is situated at podium level or in raised planters, thicknesses must meet horticultural requirements set by the landscape architect. The strategy also states that material imported from off-site sources can be tested at source to ensure conformity prior to transport to site and placement. Testing should then also be undertaken in-situ for verification purposes to ensure frequency of testing at a rate of one sample per 250m³ or a minimum of five samples across the site (whichever is greater).

It should be noted that a testing regime for all imported topsoil / subsoil materials was agreed between BAM and Manchester City Council in advance of the landscaping works. The regime required that one test be undertaken for every 200m³ of imported material placed.

3.5 Imported materials

One variety of topsoil and one variety of subsoil were imported to satisfy the requirements of the landscaping scheme. These were sampled off-site and prior to placement by Tim O'Hare Associates and NRM Laboratories respectively. (See Appendix C – Chemical Data Sheets). Chemical testing of the subsoil / topsoil was also undertaken upon placement, details of which are presented in Section 3.6 below. Ashlea Landscaping also undertook inspection of the imported material on arrival to site and during placement to ensure it was of a good quality and placed to a suitable thickness (See Figure 3-2). Both the topsoil and subsoil products were free of visual and olfactory evidence of contamination and other unsuitable material. The material references, sources and volumes are provided in Table 3-2.

The off-site sampling data confirmed all determinands for the two soil types to be satisfactory with respect to their defined thresholds as outlined within the agreed Remediation Strategy [3]. Records of this data can be found within Appendix C of this report.



Figure 3-2 Placement of imported subsoil and topsoil

Table 3-2 - Imported topsoil and subsoil materials.

Material reference	Source	Volume imported (m³)
General Planting Topsoil	Freeland Horticulture Ltd, Rosedale Nursery, College Road, Hextable, Kent, BR8 7LT	373
Lightweight Subsoil (loamy sand)	Freeland Horticulture Ltd, Rosedale Nursery, College Road, Hextable, Kent, BR8 7LT	581
		Total: 954

A selection of delivery tickets for imported topsoil and subsoil can be found within Appendix D of this report.

3.6 Ashlea Landscaping Ltd verification

On completion of the landscaping works, Ashlea Landscaping were commissioned by BAM Construction to perform verification of the soft-landscaped areas (raised planters) within the public realm surrounding the Co-Op Live Arena. The scope of works comprised:

- Verify the placement of imported topsoil / subsoil to a suitable thickness (meeting horticultural parameters); and

- Sample and test topsoil / subsoil capping layer at a rate of 1 per 200m³ (in accordance with the testing regime agreed with Manchester City Council), with chemical analysis and assessment in line with the Remediation Strategy [3].

3.6.1 Verification of raised planters

Ashlea Landscaping undertook 5 no. hand-excavated trial pits from across the site to collect in-situ samples of placed soil material and to provide evidence that capping material was placed to a sufficient thickness. It should be noted that given landscaping comprised raised planters which by design, effectively isolate imported material from existing Made Ground soils, there are no thickness requirements other than to meet horticultural parameters.

Positions of each sample's location are detailed within the sampling location plan (See Appendix E). Analysis was undertaken on 5 no. samples of topsoil and 5 no. samples of subsoil. Concentrations of all determinands from the samples tested were suitable with respect to the thresholds provided within the agreed Remediation Strategy [3]. No asbestos containing materials were detected. Copies of these test reports can be found within Appendix E.

Based on the above, the subsoil and topsoil imported into all the raised planters was considered compliant with the overall requirements of the Remediation Strategy [3].

4 Conclusions

4.1 Achievement of remedial objectives

Based on the above and the evidence provided within this report, the Remediation Strategy (summarised in Section 2) has been successfully delivered with respect to the Co-Op Live Arena landscape works (raised planters) by meeting the contamination, engineering and management related objectives.

The specific aims of the strategy were:

- To ensure any potentially risks to people or the environment are mitigated in both the short and long term;
- To meet specific planning conditions put in place by the local authority;
- To avoid regulatory intervention;
- To ensure both client and stakeholder expectations are satisfied; and
- To minimise long-term liabilities.

4.2 Compliance with Remediation Strategy

4.2.1 Earthworks, landscaping, and contamination

Approximately 1,600 tons of residual Made Ground / natural material was excavated and removed during the landscaping works to reduce level and facilitate the construction of the raised planters. All material removed from Site was disposed of appropriately to suitably licensed waste facilities under an approved EWC.

Limited volumes of subsoil and topsoil (581m³ and 373m³) were imported from a source providing suitable materials (demonstrated by source data provided by the supplier where required). These soils were placed in raised planters withing the public realm surrounding the Co-Op Live Arena.

In-situ data was collected from 5 no. samples of topsoil and 5 no. samples of subsoil in accordance with the testing regime agreed with Manchester City Council.

All samples (topsoil and subsoil) recorded concentrations of all determinands (heavy metals, inorganic and organic determinands) compliant with the relevant criteria and no asbestos containing materials were detected.

4.2.2 Long-term monitoring

Due to the implementation of the Remediation Strategy, and the absence of any discovery of unforeseen / unexpected contamination and associated residual risk, no long-term monitoring of the Site is required.

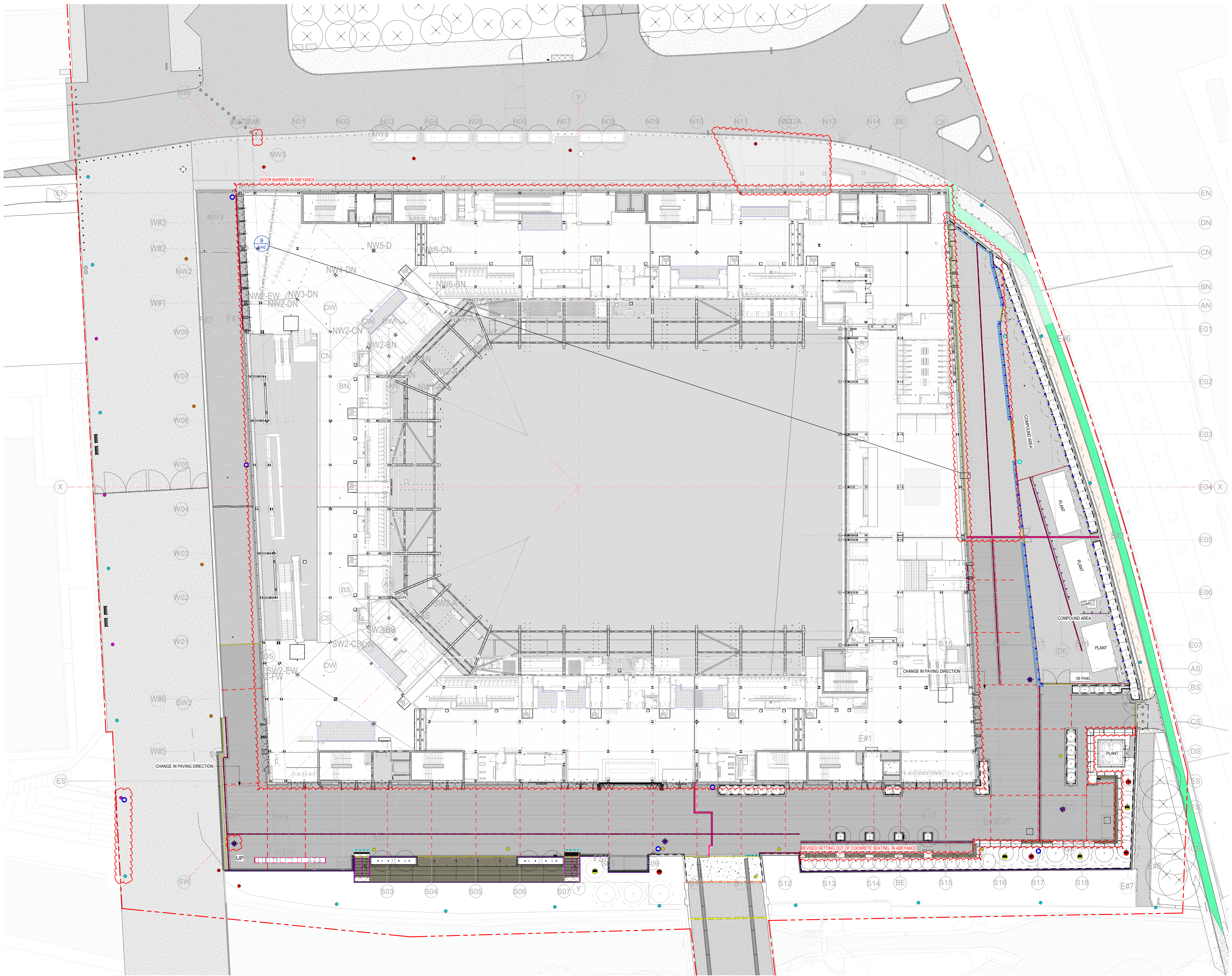
4.3 Status of site at completion of works

This report (Verification Report – Part B) forms the second part of a two-stage Verification Report that has been prepared following completion of installation of landscaping as set out in with the Remediation Strategy and Verification Plan [3]. It presents the evidence demonstrating the effective implementation of the final remedial measures for the Site. Based on the above, it is concluded that the provisions of Condition 7(b) have been met, reflecting the implementation of the Remediation Strategy and there being no requirement for any long-term monitoring. Accordingly, this report should be submitted to the local authority for their consideration with respect to the discharge of this condition.

5 References

- [1] Environment Agency, Land Contamination Risk Management (LCRM)
<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>, 2021.
- [2] Environment Agency, "Land contamination: technical guidance," 2016. [Online]. Available:
<https://www.gov.uk/government/collections/land-contamination-technical-guidance>. [Accessed 2022].
- [3] Buro Happold Engineering Ltd, "BRA-BHE-XX-XX-RP-CG-0006 P02 Remediation Strategy," 2020.
- [4] Buro Happold, "Co-Op Live Arena, Verification Report - Part A (Groundworks)," 2024.
- [5] Ministry of Housing, Communities and Local Government, "National Planning Policy Framework," 2021.

Appendix A Landscaping Drawings



Sustainability Code (as defined in ISO 19650-2:2018)

Work in Progress (WIP)

S0 - Under Construction

Shared (Non-Contractual)

S1 - Suitable for co-ordination

S2 - Suitable for information

S3 - Suitable for review & comment

S4 - Suitable for sign-off

S5 - Withdrawn

S6 - Suitable for PM authorisation

S7 - Suitable for AM authorisation

Published (Contractual)

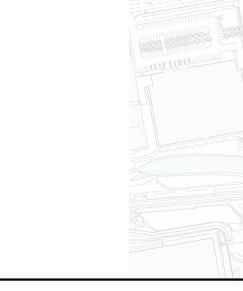
A1, A2, A3, etc - Authorised and accepted

B1, B2, B3, etc - Partial sign-off (with comments)

Published (AIM Acceptance)

CR - As constructed record document

KEY PLAN



KEY

PROJECT BOUNDARY

EXT-101, EXT-102, EXT-103, EXT-104 CONCRETE BLOCK

PAVING (NON PERMEABLE WITH 6MM JOINT)

EXT-105, EXT-106 CONCRETE BLOCK PAVING

PERMEABLE SOUND WITH 10MM JOINT

EXT-112 CONCRETE PAVING SLAB

EXT-181, EXT-183 TIMBER DECKING

EXT-131 TARMAC

EXT-135 COATED MACADAM PAVING - WITH

TEXTUREFLEX TOP COAT

EXT-121 PAVING SURFACE TO MATCH EXISTING

EXT-191 TACTILE HAZARD WARNING STRIP PAVING

EXT-535 NATURAL AGGREGATE LOOSE

EXT-201, EXT-202, EXT-203 CONCRETE KERB

EXT-211 METAL RAISED KERB

EXT-221 METAL EDGING

EXT-311 PRECAST CONCRETE SEATING WALL

EXT-312 TIMBER TOP TO SEATING WALL

EXT-313 ACCESSIBLE ARMREST FOR SEATING WALL

EXT-321 LITTER BIN

EXT-425 DOOR BARRIER

EXT-331 METAL PLANTER

EXT-333 CONCRETE PLANTER

EXT-301 PAS RATED STATIC BOLLARD

EXT-302 PAS RATED RETRACTABLE BOLLARD

EXT-409 SLIDING GATE

EXT-405, EXT-406, EXT-407 GATE

EXT-194 FLOORBOX

EXT-401 FENCE

EXT-471 CONCRETE WALL

EXT-415, EXT-416 HANDRAIL

EXT-411, EXT-412, EXT-415 BALUSTRADE

EXT-419 BARRIER INTEGRATED WITH SHELF

EXT-418, HEAD OF STEP BARRIER

EXT-427 VEHICLE SAFETY BARRIER

EXT-801 SLOT DRAIN TYPE 1

EXT-803 SLOT DRAIN TYPE 3

EXT-811 FLOOR GULLY

WAYFINDING TOTEM

ZONE FOR NAMING RIGHTS SIGNAGE

POP-UP AREA

PROPOSED LIGHTING COLUMN

EXISTING LIGHTING COLUMN TO BE RETAINED

EXISTING LIGHTING COLUMN TO BE RELOCATED

EXISTING LIGHTING COLUMN TO BE RELOCATED

RELOCATED EXISTING LIGHTING COLUMN

CCTV CAMERA

BAT BOX

BIRD BOX

MOVEMENT JOINT

THIS DRAWING IS ONLY TO SCALE IF IT IS

REPRODUCED AT THE CORRECT PAPER SIZE

1:250@A0

ALL INTERNAL LAYOUTS AND USES ARE SHOWN

FOR ILLUSTRATIVE PURPOSES ONLY AND ARE

NOT FOR DETERMINATION

drawn



© COPYRIGHT. ALL RIGHTS RESERVED.

THIS WORK IS COPYRIGHT AND CANNOT BE REPRODUCED OR COPIED IN ANY FORM OR BY

ANY MEANS WITHOUT THE WRITTEN PERMISSION OF POPULOUS. EXPRESS OR IMPLIED.

TO USE THIS DOCUMENT FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF

POPULOUS IS A BREACH OF THE AGREEMENT AND WILL BE PROSECUTED TO THE FULL

EXTENT OF THE LAW.

USE FOR DESIGN PURPOSES ONLY. NOT TO BE USED FOR CONSTRUCTION.

drawn

POPULOUS®

14 BLADES COURT | DODDAR ROAD | LONDON | SW15 2NU | UNITED KINGDOM

TELEPHONE +44 (0)20 874 7665 FAX +44 (0)20 874 7470

ALL PRODUCTION & INTELLECTUAL PROPERTY RIGHTS RESERVED © POPULOUS 2023

REVISIONS

REV DATE DESCRIPTION

C02 11.02.2022 LANDSCAPE UPDATES DCR R0063 FOLLOWING RFI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

07.06.2022 LANDSCAPE UPDATE FOLLOWING DCR R0063 AND SI

Appendix B Disposal Records



DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: 
ryan.atherton (Mar 26, 2024 17:28 GMT)
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: 

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) CARRIERS REPRESENTATIVE:
NAME (PRINT): Kieran O'Shea
SIGNATURE: 
- 4) DISPOSERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: 

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History



Document created by Kieran O Shea (kieran@joshea.co.uk)

2024-03-26 - 5:16:15 PM GMT



Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature

2024-03-26 - 5:16:19 PM GMT



Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)

2024-03-26 - 5:16:40 PM GMT



Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton

2024-03-26 - 5:28:26 PM GMT



Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)

Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server



Agreement completed.

2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

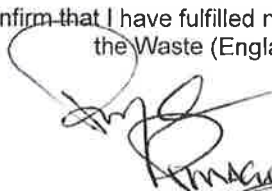
Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	2900	Full Name	Andy Hird
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	30-Jan-2024 10:24:54	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MV19 UZM
Order Number			

From:		To:	
Full Name	Paul	Full Name	Andy
Weighbridge number	0	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	30-Jan-2024 10:24:54 53.490455627441 -2.200020313263	Time and Date	30-Jan-2024 10:42:10 53.49059 -2.2036718
Signature		Signature	

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



30/1/24



DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: R. Atherton
ryan.atherton (Mar 26, 2024 17:28 GMT)
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) CARRIERS REPRESENTATIVE:
NAME (PRINT): Kieran O'Shea
SIGNATURE: Kieran O Shea
- 4) DISPOSERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History

-  Document created by Kieran O Shea (kieran@joshea.co.uk)
2024-03-26 - 5:16:15 PM GMT
-  Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature
2024-03-26 - 5:16:19 PM GMT
-  Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)
2024-03-26 - 5:16:40 PM GMT
-  Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton
2024-03-26 - 5:28:26 PM GMT
-  Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)
Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server
-  Agreement completed.
2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

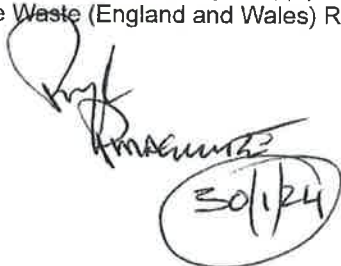
Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	2988	Full Name	James Devenport
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	30-Jan-2024 15:42:08	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MV18 UCT
Order Number			

From:		To:	
Full Name	John	Full Name	James
Weighbridge number	0	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	30-Jan-2024 15:42:08 53.494709014893 -2.189279794693	Time and Date	30-Jan-2024 15:42:44 53.4870957 -2.1989772
Signature		Signature	

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





DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: R Atherton
ryan.atherton (Mar 26, 2024 17:28 GMT)
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) CARRIERS REPRESENTATIVE:
NAME (PRINT): Kieran O'Shea
SIGNATURE: Kieran O Shea
- 4) DISPOSERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History

-  Document created by Kieran O Shea (kieran@joshea.co.uk)
2024-03-26 - 5:16:15 PM GMT
-  Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature
2024-03-26 - 5:16:19 PM GMT
-  Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)
2024-03-26 - 5:16:40 PM GMT
-  Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton
2024-03-26 - 5:28:26 PM GMT
-  Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)
Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server
-  Agreement completed.
2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	3074	Full Name	Andy Hird
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	01-Feb-2024 12:02:40	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MV19 UZM
Order Number			

From:		To:	
Full Name	John Griffin	Full Name	Andy
Weighbridge number	0	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	01-Feb-2024 12:02:40 53.495067596436 -2.206548929214	Time and Date	01-Feb-2024 12:03:26 53.4950665 -2.2065489
Signature		Signature	

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


01/02/24



DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: 
ryan.atherton@mar26, 2024 17:28 GMT
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT): Kieran O'Shea
SIGNATURE: 

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024

3) CARRIERS REPRESENTATIVE:

4) DISPOSERS REPRESENTATIVE:

NAME (PRINT): Kieran O'Shea

NAME (PRINT): Kieran O'Shea

SIGNATURE: 

SIGNATURE: 

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History



Document created by Kieran O Shea (kieran@joshea.co.uk)

2024-03-26 - 5:16:15 PM GMT



Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature

2024-03-26 - 5:16:19 PM GMT



Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)

2024-03-26 - 5:16:40 PM GMT



Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton

2024-03-26 - 5:28:26 PM GMT



Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)

Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server



Agreement completed.

2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

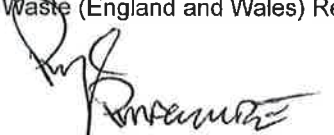
Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	3081	Full Name	Andy Hird
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	01-Feb-2024 16:21:34	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MV19 UZM
Order Number			

From:		To:	
Full Name	Jimmy	Full Name	Andy
Weighbridge number	0	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	01-Feb-2024 16:21:34 53.484580993652 -2.198946237564	Time and Date	01-Feb-2024 16:22:12 53.4851105 -2.1980258
Signature		Signature	

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






DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: *Ryan*
ryan.atherton (Mar 26, 2024 17:28 GMT)
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: *Kieran O Shea*

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024

3) CARRIERS REPRESENTATIVE:

4) DISPOSERS REPRESENTATIVE:

NAME (PRINT): Kieran O'Shea

NAME (PRINT) Kieran O'Shea

SIGNATURE: *Kieran O Shea*

SIGNATURE: *Kieran O Shea*

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History

-  Document created by Kieran O Shea (kieran@joshea.co.uk)
2024-03-26 - 5:16:15 PM GMT
-  Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature
2024-03-26 - 5:16:19 PM GMT
-  Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)
2024-03-26 - 5:16:40 PM GMT
-  Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton
2024-03-26 - 5:28:26 PM GMT
-  Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)
Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server
-  Agreement completed.
2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	3122	Full Name	Steve Roberts
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	02-Feb-2024 13:21:56	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MV69 MHZ
Order Number			

From:		To:	
Full Name	Cane Snowden	Full Name	Steve Roberts
Weighbridge number	50	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	02-Feb-2024 13:21:56 53.513851165771 -2.213317632675	Time and Date	02-Feb-2024 13:45:45 53.4887589 -2.2002946
Signature		Signature	

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


22/24



DUTY OF CARE – CONTROLLED WASTE TRANSFER NOTE

SECTION A – DESCRIPTION OF WASTE

- 1) PLEASE DESCRIBE THE WASTE BEING TRANSFERRED: Soils & Stones, Hardcore, Concrete, Tarmac
- 2) EUROPEAN WASTE CODE: EWC: 17.05.04 17.01.07 17.01.01 17.03.02
- 3) WHAT IS THE QUANTITY OF WASTE (M3/ TONNES: 3,500 m3

SECTION B – PRODUCER OF WASTE

- 1) FULL NAME (BLOCK CAPITALS): Adana Construction Ltd
- 2) ADDRESS: Adana House, 140 Higher Hillgate, Stockport, SK1 3QT
- 3) SIC CODE: 41100

By signing in SECTION E below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) regulations 2011 ☐

SECTION C – CARRIER OF WASTE

FULL NAME: J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

REGISTERED WASTE CARRIER NUMBER: CBDU90839 – ISSUED BY ENVIROMENT AGENCY

SECTION D – DISPOSER OF THE WASTE

- 1) COMPANY NAME (BLOCK CAPITALS):
- 2) COMPANY ADDRESS:

3) WML/ PERMIT NUMBER:

ISSUED BY:

☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL

WASTE MANAGEMENT LICENSE NUMBER: EAWML 50093

SECTION E – FIRST TRANSFER (PRODUCER TO CARRIER)

- 1) SITE ADDRESS: Co op Live, 1 Sports City Way, Etihad, Campus, Manchester, M11 3DU
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) PRODUCERS REPRESENTATIVE:
NAME (PRINT): Ryan Atherton
SIGNATURE: R Atherton
ryan.atherton (Mar 26, 2024 17:28 GMT)
- 4) CARRIERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

SECTION F – SECOND TRANSFER (CARRIER TO DISPOSER)

- 1) DISPOSAL SITE:
☐ J O'SHEA & SONS LTD, ORCHARD ST, PENDELTON, SALFORD, MANCHESTER, M6 6FL
- 2) DATES OF TRANSFER: 15/07/2023 15/07/2024
- 3) CARRIERS REPRESENTATIVE:
NAME (PRINT): Kieran O'Shea
SIGNATURE: Kieran O Shea
- 4) DISPOSERS REPRESENTATIVE:
NAME (PRINT) Kieran O'Shea
SIGNATURE: Kieran O Shea

Adana Coop Live

Final Audit Report

2024-03-26

Created:	2024-03-26
By:	Kieran O Shea (kieran@joshea.co.uk)
Status:	Signed
Transaction ID:	CBJCHBCAABAAquMBHs6bkpdUf9FDhLVtpUTgkSSSZ9RI

"Adana Coop Live" History



Document created by Kieran O Shea (kieran@joshea.co.uk)

2024-03-26 - 5:16:15 PM GMT



Document emailed to Ryan Atherton (ryan.atherton@adanaconstruction.com) for signature

2024-03-26 - 5:16:19 PM GMT



Email viewed by Ryan Atherton (ryan.atherton@adanaconstruction.com)

2024-03-26 - 5:16:40 PM GMT



Signer Ryan Atherton (ryan.atherton@adanaconstruction.com) entered name at signing as ryan atherton

2024-03-26 - 5:28:26 PM GMT



Document e-signed by ryan atherton (ryan.atherton@adanaconstruction.com)

Signature Date: 2024-03-26 - 5:28:28 PM GMT - Time Source: server



Agreement completed.

2024-03-26 - 5:28:28 PM GMT



Adobe Acrobat Sign



J. O'Shea & Sons Ltd
Orchard Street
Pendelton
Salford
Greater Manchester
M6 6FL

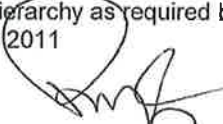
Tel: 01619259800
Email: info@joshea.co.uk
Web: www.joshea.co.uk

Waste Transfer Note

Description of Transfer		Driver	
Ticket Number	3181	Full Name	Steve Cosgrove
Waste regulation code	17 - 05 - 04 Non - Hazardous Material	Company Name and Address	J. O'Shea & Sons Ltd Orchard Street, Pendelton, Salford, Greater Manchester , M6 6FL
Quantity in Loads	1 Loads 8w Tipper		
Transfer Date and Time	08-Feb-2024 14:30:18	Driver Signature	
Waste Carrier Registration Number	CBDU90839	Vehicle Registration Number	MT19 UBN
Order Number			

From:		To:	
Full Name	Jimmy	Full Name	Richard
Weighbridge number	0	Weighbridge number	0
SIC Code	41100		
Company Name and Address	Adana Construction Ltd Co-op Live, 1 Sport city Way Etihad Campus Manchester M11 3DU	Company Name and Address	J. O'shea & Sons Orchard St , Pendelton, Salford, M6 6FL
Time and Date	08-Feb-2024 14:30:18 53.485233306885 -2.197980880737	Time and Date	08-Feb-2024 14:30:44 53.4852334 -2.1979809
Signature		Signature	

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





Appendix C Chemical Data Sheets



Freeland Horticulture Ltd
Rosedale Nursery
College Road
Hextable
Kent BR8 7LT

Attention: Philippa Lambourne

Our Ref: SLC-1223-SA

29 November 2023

Dear Philippa

Topsoil Analysis Report: Astley, Greater Manchester Topsoil November 2023

We have completed the analysis of the topsoil sample recently taken from the above site and it has been forwarded to an approved laboratory for analysis and have the pleasure of reporting our findings. The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes and its compliance with the current British Standard for topsoil (BS3882).

SOIL SAMPLING & EXAMINATION

At the time of our sampling visit the topsoil was stored in a stockpile. A series of 10 hand augered trial holes were constructed across the stockpile for the purpose of soil examination and sample collection. As the soil examination confirmed a consistent topsoil composition, the ten samples were combined together to form one composite sample for analysis purposes. The soil was described as dark brown, slightly moist and friable with a well-developed, fine to medium granular structure. The soil contained a low fraction of small stones and no deleterious materials (eg. building waste materials, glass, roots or rhizomes of pernicious weeds) or unusual odours (eg. hydrocarbons) were recorded.

LABORATORY ANALYSIS

The topsoil sample was submitted to a UKAS and MCERTS accredited laboratory for routine physical and chemical parameters to confirm the composition and fertility of the soil. The following parameters were determined:

- ⊕ pH & electrical conductivity values;
- ⊕ major plant nutrients (N, P, K, Mg) & organic matter content;
- ⊕ particle size distribution and stone content;
- ⊕ heavy metals & potentially toxic elements (As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn, B);
- ⊕ sulphate, sulphur, sulphide;
- ⊕ total cyanide and total (mono) phenols;
- ⊕ speciated PAHs (US EPA16)
- ⊕ banded aromatic and aliphatic petroleum hydrocarbons (C₅-C₃₅).
- ⊕ Asbestos

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

Phone: 01322 619161;

*Freeland horticulture Ltd, Registered in England: Rosedale Nursery, College Road, Hextable, Kent BR8 7LT
Company Registration No: 04015968*

COMMENTS**pH & Electrical Conductivity (salinity) Values**

The sample was alkaline in nature (pH 8.5) with a pH value that would be considered suitable for general landscaping purposes.

The electrical conductivity (salinity) value using the soil:water extract was (1009µS/cm) indicating that soluble salts are not present at levels that would be harmful to plants.

The electrical conductivity values by CaSO₄ extract (BS3882 requirement) fell below the maximum specified value (3300µS/cm) given in BS3882:2015.

Organic Matter & Nutrient Status

The sample was rich in organic matter and all major plant nutrients. No further additions of compost or fertiliser are required, or indeed recommended, for at least the first growing season.

The C:N ratio of the sample was acceptable for general landscape purposes.

Particle Size Distribution & Stone Content

The sample contained 83% sand and fell into the sandy loam texture class. This particle size distribution is considered suitable for a broad range of landscape applications, including tree and shrub planting, turfing and seeding.

The sample was Virtually free from stones of 50 mm and upwards in diameter and only contained a slight fraction of smaller stones (1.4%). As such, stones will not restrict the use of the soil for landscaping purposes.

Potential Contaminants

We are not aware of any specified contaminant levels set for the proposed end-use of this topsoil. This includes human health, environmental protection and metals considered toxic to plants. In the absence of any site-specific assessment criteria, the concentrations that affect human health have been compared with the 'residential with homegrown produce' land use in the Suitable For Use Levels presented in 'The LQM/CIEH S4Us' for Human Health Risk Assessment (2015) and DEFRA SP1010: 'Development of Category 4 Screening Levels' for Assessment of Land Affected by Contamination – Policy Companion Document (2014).

Of the potential contaminants determined, none was found at levels that would exceed their respective guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes. From the soil examination and laboratory analysis, the soil is described as an alkaline, non-saline, sandy loam. The organic matter and nutrient levels are acceptable, and no significant contamination was found with respect to the parameters determined. This soil would adhere to the current BS3882 specification for 'multipurpose grade'.

To conclude, based on our findings, the topsoil would be considered well-suited to general landscaping purposes provided the physical condition of the soil is maintained.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if you have any queries or comments.

George Longmuir MSc Soil Sci. M.I Soil Sci.

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Astley, Greater Manchester
Month/Year	November 23
Our Ref	1223-SA
Date	29 November 2023

Composite sample

pH Value & Salinity

pH value (1:2.5 soil/water ext)	units	8.5
Electrical Conductivity (1:2.5 soil/water ext)	µS/cm	1009
Electrical Conductivity (1:2.5 soil/CaSO ₄ ext)	µS/cm	3055

Organic Matter & Nutrient Status

Organic Matter (LOI)	%	7.3
Organic Carbon (Derived)	%	4.2
Total Nitrogen	%	0.320
Carbon:Nitrogen Ratio	:1	13.3
Available Phosphorus	mg/l	83.4
Available Potassium	mg/l	1471
Available Magnesium	mg/l	219

Particle Size Analysis & Stones

Clay (<0.002mm)	%	6
Silt (0.063-0.002mm)	%	11
Sand (2.0-0.063mm)	%	83
Texture Class	UK Class	Sandy Loam

Stones 2-20mm	% by DW	1.4
Stones 20-50mm	% by DW	0.0
Stones >50mm	% by DW	0.0

Potential Contaminants

Total Arsenic (As)	mg/kg	<3
Total Cadmium (Cd)	mg/kg	0.21
Total Chromium (Cr)	mg/kg	16.3
Hexavalent Chromium (Cr ^{VI})	mg/kg	<0.2
Total Copper (Cu)	mg/kg	13.5
Total Lead (Pb)	mg/kg	25.0
Total Mercury (Hg)	mg/kg	<0.2
Total Nickel (Ni)	mg/kg	<10
Total Selenium (Se)	mg/kg	0.11
Total Zinc (Zn)	mg/kg	50.9
Total Beryllium (Be)	mg/kg	<1
Total Barium (Ba)	mg/kg	35.5
Total Vanadium (V)	mg/kg	<10
Hot Water Soluble Boron (B)	mg/kg	1.9
Total Cyanide (CN)	mg/kg	<1
Elemental Sulphur (S)	mg/kg	7.2
Easily Liberated Sulphide (S)	mg/kg	<1
Water Soluble Sulphate (SO ₄)	mg/l	70.2
Total Phenols Index	mg/kg	<1
Asbestos Screening	-	N.D.

Chain of Custody Required - Freeland Ticket: 01322 619161

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Astley, Greater Manchester
Month/Year	November 23
Our Ref	1223-SA
Date	29 November 2023

Polyaromatic Hydrocarbons

Naphthalene	mg/kg	<0.05
Acenaphthylene	mg/kg	<0.05
Acenaphthene	mg/kg	<0.05
Fluorene	mg/kg	<0.05
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.05
Fluoranthene	mg/kg	0.1
Pyrene	mg/kg	0.1
Benzo[a]anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo[b]fluoranthene	mg/kg	<0.1
Benzo[k]fluoranthene	mg/kg	<0.1
Benzo[a]pyrene	mg/kg	<0.1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.1
Dibenzof[a,h]anthracene	mg/kg	<0.1
Benzo[g,h,i]perylene	mg/kg	<0.1
Total PAHs sum US EPA 16	mg/kg	<1

Banded Petroleum Hydrocarbons

Aliphatic TPH >C ₅ -C ₆	mg/kg	<0.05
Aliphatic TPH >C ₆ -C ₈	mg/kg	<0.05
Aliphatic TPH >C ₈ -C ₁₀	mg/kg	<0.05
Aliphatic TPH >C ₁₀ -C ₁₂	mg/kg	<10
Aliphatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aliphatic TPH >C ₁₆ -C ₂₁	mg/kg	<10
Aliphatic TPH >C ₂₁ -C ₃₅	mg/kg	28.0
Aliphatic TPH >C ₃₅ -C ₄₄	mg/kg	28.0

Aromatic TPH >C ₅ -C ₇	mg/kg	<0.05
Aromatic TPH >C ₇ -C ₈	mg/kg	<0.05
Aromatic TPH >C ₈ -C ₁₀	mg/kg	<0.05
Aromatic TPH >C ₁₀ -C ₁₂	mg/kg	<10
Aromatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aromatic TPH >C ₁₆ -C ₂₁	mg/kg	<10
Aromatic TPH >C ₂₁ -C ₃₅	mg/kg	47.0
Aromatic TPH >C ₃₅ -C ₄₄	mg/kg	47.0

Total Petroleum Hydrocarbons (C ₅ -C ₄₄)	mg/kg	150
---	-------	-----

BTEX

Benzene	mg/kg	<0.02
Toluene	mg/kg	<0.2
Ethyl Benzene	mg/kg	<0.04
m- & p- Xylene	mg/kg	<0.2
o-Xylene	mg/kg	<0.1



Certificate of Analysis

Client: PHILIPPA LAMBOURNE
(G281) FREELAND HORTICULTURE LTD
ROSEDALE NURSERY
COLLEGE ROAD
HEXTABLE
KENT BR8 7LT

Originator: ASTLEY MAY 21
SOIL

Lab ID: 49425 - 512222
Sample ID: ASTLEY MAY 21
Fresh Sample Weight: 1275 (g)

Date Received: 16/04/2021
Date Reported: 26/04/2021

BS 8601 : 2013 SPECIFICATION FOR SUBSOIL Multipurpose Grade

		Unit	Result	Compliant with range (Y/N)		
				Multi-P	Acid	Calc
Texture:	Clay	% w/w	7	<i>See area of permitted soil textural classes in Fig. 1.</i>		
	Silt	% w/w	9			
	Sand	% w/w	84			
	Textural Class		Loamy Sand			
Mass Loss on Ignition:		% w/w	<0.5	Y	Y	Y
Coarse	>2 mm	% w/w	2.0	Y	Y	Y
Fragment	>20 mm	% w/w	0.0	Y	Y	Y
Content:	>75 mm	% w/w	0.0	Y	Y	Y
Soil pH:			5.5	Y	Y	N
Carbonate:		% w/w	<1			N
Exchangeable Sodium Percentage:		%	0.5	Y	Y	Y
Phytotoxic Contaminants:	Total Zinc	mg/kg	<10	Y	Y	Y
	Total Copper	mg/kg	1.9	Y	Y	Y
	Total Nickel	mg/kg	<10	Y	Y	Y
Visible Contaminants:	> 2mm	% w/w	0.00	Y	Y	Y
	Plastics	% w/w	0.00	Y	Y	Y
	Sharps	% w/w	0.00	Y	Y	Y
	Weight of Sharps	g	0.0			
Available Plant Nutrients:	Phosphorus	mg/l	11.4 (1)*			
	Potassium	mg/l	55.2 (0)*			
	Magnesium	mg/l	205.2 (4)*			
Additional Analysis:	Available Sodium	mg/l	5.5			
	Available Calcium	mg/l	665.0			
	Conductivity	uS/cm	2010			
	Conductivity CaSO4 Adj.	uS/cm	50			
Compliance:				Y	Y	N

Results are expressed on a dry matter basis.

* Soil indices from RB209

Released by:

Myles Nicholson

Date: 26/04/2021

DECLARATION:

I certify that this sample has been analysed by NRM Ltd. in accordance with BS 8601 Specification for Subsoil (2013).

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS
Tel: +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com



Analytical Report

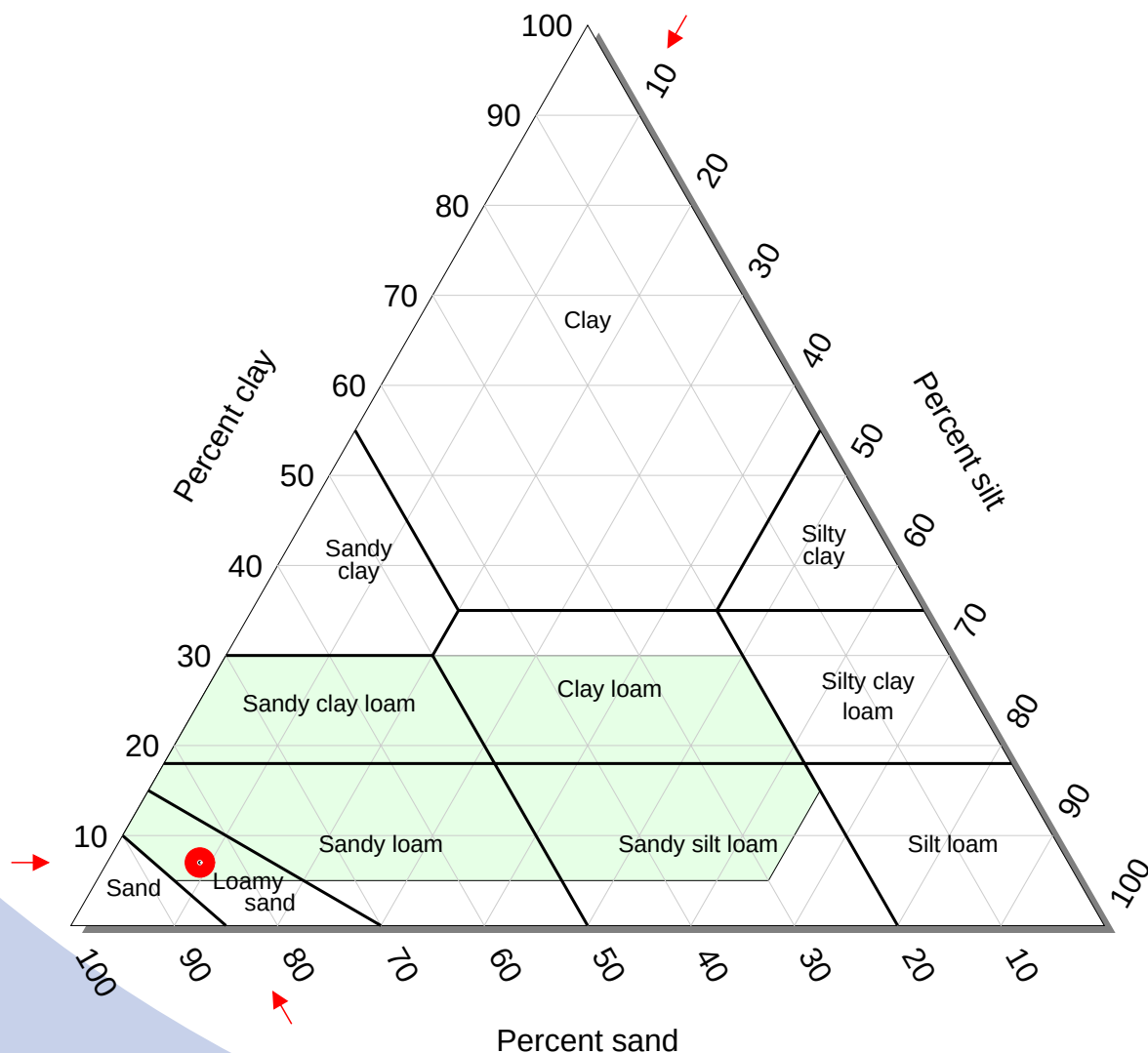
Client: PHILIPPA LAMBOURNE
(G281) FREELAND HORTICULTURE LTD
ROSDALE NURSERY
COLLEGE ROAD
HEXTABLE
KENT BR8 7LT

Originator: ASTLEY MAY 21
SOIL

Lab ID: 49425 - 512222
Sample ID: ASTLEY MAY 21
Fresh Sample Weight: 1275 (g)

Date Received: 16/04/2021
Date Reported: 26/04/2021

Fig. 1. Textural Class: Loamy Sand (compliant)



Key



Area within which texture of subsoil is required to fall.

Appendix D Import Records

DELIVERY AND ORDER NOTE

DATE 30-4-24	CUSTOMER REF 233747	HAULIER REG No. MK21 EPV
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA COOP LIVE		
ADDRESS COOP LIVE OFF GIBSON STREET ALAN TURNIS WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD SUBSOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25504	
TRANSFER WEIGHT	
30/04/2024 Progressive Rcd 1 Weight 11920 kg	10:59:15 23:15 2033
30/04/2024 Progressive Rcd 2 Weight Weighing net 31940 kg 20020 kg	10:48:59 23:15 2033
ANY VEHICLE GOING THROUGH HIGHER GREEN OR ASTLEY GREEN WILL BE BANNED FROM SITE.	

ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

DELIVERY AND ORDER NOTE

DATE 30-4-24	CUSTOMER REF 233748	HAULIER REG No. MK2 EPX
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA COOP LIVE		
ADDRESS COOP LIVE OFF GIBSON STREET ALAN TURNIS WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD SUBSOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25505	
TRANSFER WEIGHT	
30/04/2024 Progressive Rcd 1 Weight 11860 kg	11:19:33 23:17 2034
30/04/2024 Progressive Rcd 2 Weight Weighing net 32000 kg 20140 kg	11:26:53 23:18 2034
ANY VEHICLE GOING THROUGH HIGHER GREEN OR ASTLEY GREEN WILL BE BANNED FROM SITE.	

ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

DELIVERY AND ORDER NOTE

DATE 2-4-24	CUSTOMER REF 230702	HAULIER REG No. 10472 80Z
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA COOP LIVE		
ADDRESS COOP LIVE OFF GIBSON STREET ALAN TURNIS WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD STE SMETH		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25366	
TRANSFER WEIGHT	
30/03/2024 Progressive Rcd 1 Weight 11920 kg	03:08:45 23:01 1985
30/03/2024 Progressive Rcd 2 Weight Weighing net 31940 kg 20020 kg	03:44:12 23:04 1985
ANY VEHICLE GOING THROUGH HIGHER GREEN OR ASTLEY GREEN WILL BE BANNED FROM SITE.	

ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

DELIVERY AND ORDER NOTE

DATE 2-4-24	CUSTOMER REF 230705	HAULIER REG No. MK21 EPX
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA COOP LIVE		
ADDRESS COOP LIVE OFF GIBSON STREET ALAN TURNIS WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD SUBSOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25367	
TRANSFER WEIGHT	
30/03/2024 Progressive Rcd 1 Weight 11860 kg	03:50:51 23:05 1985
30/03/2024 Progressive Rcd 2 Weight Weighing net 32000 kg 20140 kg	03:58:14 23:06 1985
ANY VEHICLE GOING THROUGH HIGHER GREEN OR ASTLEY GREEN WILL BE BANNED FROM SITE.	

ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.

DELIVERY AND ORDER NOTE

DATE 7-2-24	CUSTOMER REF 225468	HAULIER REG No. MK21EPX
DRIVER'S NAME J HANDFORD		HAULIER
CUSTOMER ASHLEA		
ADDRESS CO-OP LIVE OFF GIBBON STREET ALAN TURNER WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD LIGHT WEIGH SUB SOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

07/02/2024
Progressive
Rcd
1. Weight
11920 kg

07/02/2024
Progressive
Rcd
2. Weight
Weighing net
31820 kg
19320 kg

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DISCREPANCIES/DAMAGE TO BE NOTIFIED WITHIN 7 DAYS OF DELIVERY.
ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

Freeland
HORTICULTURE LIMITED

Rosedale Nursery, College Road,
Hextable, Kent, BR8 7LT
Tel: 01322 619161
Fax: 01322 619135
enquiries@freelandhorticulture.co.uk

DELIVERY AND ORDER NOTE

DATE 7-2-24	CUSTOMER REF 225470	HAULIER REG No. DG72A02
DRIVER'S NAME J HANDFORD		HAULIER
CUSTOMER ASHLEA		
ADDRESS CO-OP LIVE OFF GIBBON STREET ALAN TURNER WAY MANCHESTER		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD LIGHT WEIGH SUB SOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25057

TRANSFER WEIGHT

07/02/2024
Progressive
Rcd
1. Weight
12000 kg

07/02/2024
Progressive
Rcd
2. Weight
Weighing net
31620 kg
19220 kg

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DISCREPANCIES/DAMAGE TO BE NOTIFIED WITHIN 7 DAYS OF DELIVERY.
ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.

Freeland
HORTICULTURE LIMITED

Rosedale Nursery, College Road,
Hextable, Kent, BR8 7LT
Tel: 01322 619161
Fax: 01322 619135
enquiries@freelandhorticulture.co.uk

DELIVERY AND ORDER NOTE

DATE 29-4-24	CUSTOMER REF 233343	HAULIER REG No. RK19 KPJ
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA COOP LIVE		
ADDRESS COOP LIVE OFF GIBBON STREET ALAN TURNER WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD TOPSOIL		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25496

TRANSFER WEIGHT

29/04/2024
Progressive
Rcd
1. Weight
13020 kg

29/04/2024
Progressive
Rcd
2. Weight
Weighing net
31740 kg
18720 kg

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DISCREPANCIES/DAMAGE TO BE NOTIFIED WITHIN 7 DAYS OF DELIVERY.
ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

Freeland
HORTICULTURE LIMITED

Rosedale Nursery, College Road,
Hextable, Kent, BR8 7LT
Tel: 01322 619161
Fax: 01322 619135
enquiries@freelandhorticulture.co.uk

DELIVERY AND ORDER NOTE

DATE 29-4-24	CUSTOMER REF 233341	HAULIER REG No. DG72A02
DRIVER'S NAME HANDFORD		HAULIER
CUSTOMER ASHLEA		
ADDRESS CO-OP LIVE GIBBON STREET ALAN TURNER WAY MANCHESTER M11 3DU		
CUSTOMER'S SIGNATURE		CUSTOMER'S NAME PRINT
DESCRIPTION OF LOAD		
CONSIGNOR'S SIGNATURE		DRIVER'S SIGNATURE
PRINT		PRINT

TICKET No. 25497

TRANSFER WEIGHT

29/04/2024
Progressive
Rcd
1. Weight
12180 kg

29/04/2024
Progressive
Rcd
2. Weight
Weighing net
31500 kg
19320 kg

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DISCREPANCIES/DAMAGE TO BE NOTIFIED WITHIN 7 DAYS OF DELIVERY.
ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.



Rosedale Nursery, College Road,
Hextable, Kent, BR8 7LT
Tel: 01322 619161
Fax: 01322 619135
enquiries@freelandhorticulture.co.uk

TICKET No. 25195

TRANSFER WEIGHT

DATE 15-3-24
CUSTOMER REF 228877
HAULIER REG No. RM19 KPT

DRIVER'S NAME J HANDFORD

CUSTOMER ASHLEA

ADDRESS CC-OP LIVE
OFF GIBBON STREET
ALAN TURING WAY
MANCHESTER M11 3DU

CUSTOMER'S SIGNATURE CUSTOMER'S NAME PRINT

DESCRIPTION OF LOAD TOP SOIL

CONSIGNOR'S SIGNATURE DRIVER'S SIGNATURE
PRINT PRINT

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DELIVERY AND ORDER NOTE

DATE 15-3-24 CUSTOMER REF 227569 HAULIER REG No. DG72 AOZ

DRIVER'S NAME J HANDFORD

CUSTOMER ASHLEA

ADDRESS CC-OP LIVE
OFF GIBBON STREET
ALAN TURING WAY
MANCHESTER M11 3DU

CUSTOMER'S SIGNATURE CUSTOMER'S NAME PRINT

DESCRIPTION OF LOAD TOP SOIL

CONSIGNOR'S SIGNATURE DRIVER'S SIGNATURE
PRINT PRINT

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.



Rosedale Nursery, College Road,
Hextable, Kent, BR8 7LT
Tel: 01322 619161
Fax: 01322 619135
enquiries@freelandhorticulture.co.uk

TICKET No. 25263

TRANSFER WEIGHT

DATE 15-3-24 CUSTOMER REF 228877 HAULIER REG No. RM19 KPT

DRIVER'S NAME J HANDFORD

CUSTOMER ASHLEA

ADDRESS CC-OP LIVE
OFF GIBBON STREET
ALAN TURING WAY
MANCHESTER M11 3DU

CUSTOMER'S SIGNATURE CUSTOMER'S NAME PRINT

DESCRIPTION OF LOAD TOP SOIL

CONSIGNOR'S SIGNATURE DRIVER'S SIGNATURE
PRINT PRINT

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DELIVERY AND ORDER NOTE

DATE 15-3-24 CUSTOMER REF 228877 HAULIER REG No. RM19 KPT

DRIVER'S NAME J HANDFORD

CUSTOMER ASHLEA

ADDRESS CC-OP LIVE
OFF GIBBON STREET
ALAN TURING WAY
MANCHESTER M11 3DU

CUSTOMER'S SIGNATURE CUSTOMER'S NAME PRINT

DESCRIPTION OF LOAD TOP SOIL

CONSIGNOR'S SIGNATURE DRIVER'S SIGNATURE
PRINT PRINT

ANY VEHICLE GOING THROUGH
HIGHER GREEN OR ASTLEY GREEN
WILL BE BANNED FROM SITE.

DISCREPANCIES/DAMAGE TO BE NOTIFIED WITHIN 7 DAYS OF DELIVERY.
ALL TRADING TAKES PLACE ON FREELAND HORTICULTURE LTD CONDITIONS OF SALE, COPIES OF WHICH ARE AVAILABLE ON REQUEST.
CUSTOMERS ORDERING VEHICLE OFF THE PUBLIC ROAD, DO SO ENTIRELY AT THEIR OWN RISK AND WILL BE LIABLE FOR ANY DAMAGE INCURRED.

Appendix E Sampling Location Plan and Chemical Data



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Ben Farmer
Ashlea Limited
Scotland Road
Carnforth
Lancashire LA5 9RE

4th June 2024

Our Ref: TOHA/24/1334/1/SS/Rev.1

Your Ref: PO B18315-15-BF

Dear Sirs

Topsoil Analysis Report: Co-op Live

We have completed the analysis of the soil samples recently submitted, referenced **TS1**, **TS2** and **TS3** and have pleasure reporting our findings.

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*), including the following clauses:

- Clause Q28/114 (Testing – 1. Planting Topsoil and Cell System Topsoil Testing);
- Clause Q28/115 (Environmental Performance);
- Clause Q28/210 (Systems – Type EXT-551 General Planting Soil).

This report presents the results of analysis for the samples submitted to our office, and it should be considered 'indicative' of the topsoil source.

SAMPLE EXAMINATION

The topsoil samples were reasonably consistent in appearance and were described as dark brown (Munsell Colour 10YR 3/3), moist to very moist, slightly plastic, slightly calcareous LOAMY SANDS with weak to poorly developed, medium to very coarse, sub-angular blocky structures*. The samples were virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No deleterious materials or unusual odours, roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

ANALYTICAL SCHEDULE

The samples were submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soils, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity values;
- calcium carbonate;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The samples fell into the *loamy sand* texture class, which are usually considered suitable for planting applications provided the soil's physical condition is satisfactory. The samples were compliant with Clause Q28/210.

The samples were virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity rates were 1.2 mm/h to 2.7 mm/r. These fell just below the specified rate of 4 mm/hr.

pH and Electrical Conductivity Values

The samples were strongly alkaline in reaction (pH 8.3 - 8.5) with high calcium carbonate levels. This pH range would be considered suitable for tree and ornamental shrub planting provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting. Both samples were compliant with Clause Q28/210.

The electrical conductivity (salinity) values (water and CaSO₄ extracts) were moderate, which indicates that soluble salts should not be present at levels that would be harmful to plants. Both samples were compliant with Clause Q28/210.

Organic Matter and Fertility Status

The samples were adequate to well supplied with organic matter and all major plant nutrients. The samples were compliant with Clause Q28/210.

The C:N ratios of the samples were acceptable for the proposed landscape types.

Potential Contaminants

With reference to *Table 1 – General Assessment Criteria* of the supplied Populous specification, of the potential contaminants determined, none was found at levels that exceeded their maximum permissible values.

CONCLUSION

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*).

From the soil examination and subsequent laboratory analysis, the samples were described as strongly alkaline, non-saline, very calcareous, virtually stone-free *loamy sands* with single grain structures. The samples contained sufficient reserves of organic matter and all major plant nutrients, and no contaminants exceeded their respective specified maximum limits.

To conclude, based on our findings, the samples were almost fully compliant with the requirements of the Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*). The rates for saturated hydraulic conductivity fell just below the minimum specified rate.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Tim White
BSc MSc MSc SoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP



Client:	Ashlea Limited
Project:	Co-op Live
Job:	Topsoil Analysis
Date:	04/06/2024
Job Ref No:	TOHA/24/1334/1/SS/Rev.1

Sample Reference		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.063mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand	%	UKAS
Texture Class (UK Classification)	--	UKAS
Stones (2-20mm)	% DW	GLP
Stones (20-50mm)	% DW	GLP
Stones (>50mm)	% DW	GLP

Saturated Hydraulic Conductivity (m)	mm/hr	A2LA
--------------------------------------	-------	------

pH Value (1:2.5 water extract)	units	UKAS
Calcium Carbonate	%	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Exchangeable Sodium Percentage	%	UKAS

Organic Matter (LOI)	%	UKAS
Total Nitrogen (Dumas)	%	UKAS
C : N Ratio	ratio	UKAS
Extractable Phosphorus	mg/l	UKAS
Extractable Potassium	mg/l	UKAS
Extractable Magnesium	mg/l	UKAS

Total Arsenic (As)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benz(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

Asbestos Screen	ND/D	ISO 17025
-----------------	------	-----------

LS = LOAMY SAND

The topsoil samples were reasonably consistent in appearance and were described as dark brown (Munsell Colour 10YR 3/3), moist to very moist, slightly plastic, slightly calcareous SANDY LOAMS with weak to poorly developed medium to very coarse sub-angular blocky structures. The samples were virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No deleterious materials or unusual odours, roots or rhizomes of pernicious weeds were observed.

TS1

10
10
28
22
24
4
2
80
LS
2
1
0

1.2

8.5
3.5
871
2793
9.7

4.7
0.24
11
54
876
146

6
< 0.2
11
< 1.8
15
18
< 0.3
10
< 1.0
45
0.8
< 1.0
< 1.0

0.10
< 0.05
< 0.05
< 0.05
0.09
< 0.05
0.15
0.11
0.08
0.11
0.14
0.06
0.09
< 0.05
< 0.05
0.09
1.0

< 0.020
< 0.020
< 0.050
< 1.0
< 2.0
< 8.0
< 8.0
< 10
< 0.010
< 0.010
< 0.050
< 1.0
< 2.0
< 10
< 10
< 10

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected

TS2

10
9
23
19
26
5
8
81
LS
2
1
0

2.6

8.5
5.2
883
2694
11.6

6.0
0.30
12
28
686
132

5
< 0.2
8
< 1.8
13
13
< 0.3
8
< 1.0
34
1.1
< 1.0
< 1.0

0.09
< 0.05
< 0.05
< 0.05
0.14
< 0.05
0.21
0.17
0.11
0.13
< 0.05
< 0.05
< 0.05
0.07
< 0.05
0.09
1.0

< 0.020
< 0.020
< 0.050
< 1.0
3
< 8.0
53
56
< 0.010
< 0.010
< 0.050
< 1.0
2.2
< 10
28
30

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected

TS3

8
7
27
24
28
4
2
85
LS
1
0
0

2.7

8.3
3.7
990
2851
12.1

6.8
0.34
12
28
716
134

5
< 0.2
8
< 1.8
13
14
< 0.3
8
< 1.0
34
1.2
< 1.0
< 1.0

0.07
< 0.05
< 0.05
< 0.05
0.09
< 0.05
0.12
0.08
0.07
0.07
< 0.05
< 0.05
< 0.05
0.07
< 0.05
< 0.05
< 0.80

< 0.020
< 0.020
< 0.050
< 1.0
< 2.0
< 8.0
57
57
< 0.010
< 0.010
< 0.050
< 1.0
3.4
< 10
39
42

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected

Tim White

Tim White
BSc MSc MSoilSci CSci
Senior Associate



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Ben Farmer
Ashlea Limited
Scotland Road
Carnforth
Lancashire LA5 9RE

30th May 2024
Our Ref: TOHA/24/1373/1/SS
Your Ref: PO B18315-15-BF

Dear Sirs

Topsoil Analysis Report: Co-op Live

We have completed the analysis of the soil samples recently submitted, referenced **TS4** and **TS5** and have pleasure reporting our findings.

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*), including the following clauses:

- Clause Q28/114 (Testing – 1. Planting Topsoil and Cell System Topsoil Testing);
- Clause Q28/115 (Environmental Performance);
- Clause Q28/210 (Systems – Type EXT-551 General Planting Soil).

This report presents the results of analysis for the samples submitted to our office, and it should be considered 'indicative' of the topsoil source.

SAMPLE EXAMINATION

The topsoil samples were described as dark brown to reddish brown (Munsell Colour 7.5YR 3/3-5YR 4/4), dry to slightly moist, friable, very calcareous LOAMY SANDS with single grain structures. The samples were slightly stony. TS4 contained frequent woody fragments. No deleterious materials, unusual odours, roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

ANALYTICAL SCHEDULE

The samples were submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soils, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity values;
- calcium carbonate;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The samples fell into the *loamy sand* texture class, which are usually considered suitable for planting applications provided the soil's physical condition is satisfactory. Both samples were compliant with Clause Q28/210.

The samples were virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity rates were 2.3mm/hr for Sample TS4, and 2.9mm/hr for Sample TS5. These fell just below the specified rate of 4 mm/hr.

pH and Electrical Conductivity Values

The samples were strongly alkaline in reaction (pH 8.3 - 8.5) with high calcium carbonate levels. This pH range would be considered suitable for tree and ornamental shrub planting provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting. Both samples were compliant with Clause Q28/210.

The electrical conductivity (salinity) values (water and CaSO₄ extracts) were moderate, which indicates that soluble salts should not be present at levels that would be harmful to plants. Both samples were compliant with Clause Q28/210.

Organic Matter and Fertility Status

The samples were adequate to well supplied with organic matter and all major plant nutrients. Both samples were compliant with Clause Q28/210.

The C:N ratios of the samples were acceptable for the proposed landscape types.

Potential Contaminants

With reference to *Table 1 – General Assessment Criteria* of the supplied Populous specification, of the potential contaminants determined, none was found at levels that exceeded their maximum permissible values.

CONCLUSION

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*).

From the soil examination and subsequent laboratory analysis, the samples were described as strongly alkaline, non-saline, very calcareous, virtually stone-free *loamy sands* with single grain structures. The samples contained sufficient reserves of organic matter and all major plant nutrients, and no contaminants exceeded their respective specified maximum limits.

To conclude, based on our findings, the samples were almost fully compliant with the requirements of the Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*). The rates for saturated hydraulic conductivity fell just below the minimum specified rate.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Tim O'Hare

BSc MSc FSoilSci FBIAC CSci
Principal Consultant

For & on behalf of Tim O'Hare Associates LLP



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	Ashlea Limited
Project:	Co-op Live
Job:	Topsoil Analysis
Date:	30/05/2024
Job Ref No:	TOHA/24/1373/1/SS

Sample Reference		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.063mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand	%	UKAS
Texture Class (UK Classification)	--	UKAS
Stones (2-20mm)	% DW	GLP
Stones (20-50mm)	% DW	GLP
Stones (>50mm)	% DW	GLP

Saturated Hydraulic Conductivity (m)	mm/hr	A2LA
--------------------------------------	-------	------

pH Value (1:2.5 water extract)	units	UKAS
Calcium Carbonate	%	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Exchangeable Sodium Percentage	%	UKAS

Organic Matter (LOI)	%	UKAS
Total Nitrogen (Dumas)	%	UKAS
C : N Ratio	ratio	UKAS
Extractable Phosphorus	mg/l	UKAS
Extractable Potassium	mg/l	UKAS
Extractable Magnesium	mg/l	UKAS

Total Arsenic (As)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benz(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

Asbestos Screen	ND/D	ISO 17025
-----------------	------	-----------

LS = LOAMY SAND

The topsoil samples were described as dark brown to reddish brown (Munsell Colour 7.5YR 3/3-5YR 4/4), dry to slightly moist, friable, very calcareous LOAMY SANDS and SANDS with single grain structures. The samples were slightly stony. TS4 contained frequent woody fragments. No deleterious materials, unusual odours, roots or rhizomes of pernicious weeds were observed.

Results of analysis should be read in conjunction with the report they were issued with

TS4

9
10
29
26
20
3
3
81
LS
2
0
0

2.3

8.3
4.8
1097
2945
9.7

5.3
0.32
10
42
691
138

4
< 0.2
10
< 1.8
17
15
< 0.3
9.4
< 1.0
35
0.4
< 1.0
< 1.0

< 0.05
< 0.05
< 0.05
< 0.05
0.09
< 0.05
0.21
< 0.05
0.11
0.12
< 0.05
< 0.05
0.11
0.08
< 0.05
0.07
< 0.80

< 0.020
< 0.020
< 0.050
< 1.0
< 2.0
< 8.0
41
41
< 0.010
< 0.010
< 0.050
< 1.0
< 2.0
< 10
37
37

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected

TS5

5
8
37
28
19
2
1
87
LS
2
2
0

2.9

8.5
3.8
1017
2993
11.5

4.7
0.28
10
34
624
128

6
< 0.2
11
< 1.8
21
16
< 0.3
9.9
< 1.0
42
0.6
< 1.0
< 1.0

< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
0.12
0.1
0.07
0.09
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.80

< 0.020
< 0.020
< 0.050
< 1.0
< 2.0
< 8.0
27
27
< 0.010
< 0.010
< 0.050
< 1.0
< 2.0
< 10
< 10
< 10

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected

Tim O'Hare
BSc MSc FISO Sci FBIAC CSci
Principal Consultant



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr Ben Farmer
Ashlea Limited
Scotland Road
Carnforth
Lancashire LA5 9RE

4th June 2024

Our Ref: TOHA/24/1334/2/SS/Rev.1

Your Ref: PO B18315-15-BF

Dear Sirs

Subsoil Analysis Report: Co-op Live

We have completed the analysis of the soil samples recently submitted, referenced **SS1**, **SS2** and **SS3**, and have pleasure reporting our findings.

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*), including the following clauses:

- Clause Q28/115 (Environmental Performance);
- Clause Q28/210 (Systems – Type EXT-551 General Planting Soil) #;

there is no specification for Normal Weight Subsoil within the Populous specification so the results have been compared against the relevant parameters given in Clause Q28/210.

This report presents the results of analysis for the samples submitted to our office, and it should be considered 'indicative' of the subsoil source.

SAMPLE EXAMINATION

The subsoil samples were consistent in appearance and were described as reddish brown (Munsell Colour 5YR 4/4), moist, friable, slightly calcareous SANDS with single grain structures. The samples were virtually stone-free and no observable deleterious materials, unusual odours or roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

ANALYTICAL SCHEDULE

The samples were submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soils, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay);
- stone content (2-20mm, 20-75mm, >75mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity values;
- calcium carbonate;
- exchangeable sodium percentage;
- organic matter content;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The samples fell into the *sand* texture class, which are usually considered suitable for planting applications provided the soil's physical condition is satisfactory. The samples fell slightly out of range.

The samples were virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity rates were 1.0 to 1.5 mm/hr, which falls just below the specified rate of 4 mm/hr.

pH and Electrical Conductivity Values

The samples were strongly alkaline in reaction (pH 8.5 to 8.9) with high calcium carbonate (lime) contents. Sample SS2 was compliant, and samples SS1 and SS3 were non-compliant.

The electrical conductivity (salinity) values (water and CaSO₄ extracts) were low and compliant, which indicates that soluble salts were not present at levels that would be harmful to plants.

Organic Matter

The organic matter contents were low (<0.5%) and acceptable for landscape subsoil.

Potential Contaminants

With reference to *Table 1 – General Assessment Criteria* of the supplied Populous specification, of the potential contaminants determined, none was found at levels that exceeded their maximum permissible values.

CONCLUSION

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*).

From the soil examination and subsequent laboratory analysis, the samples were described as strongly alkaline, non-saline, very calcareous, virtually stone-free sands with single grain structures. The samples had low organic matter contents, and no contaminants exceeded their respective specified maximum limits.

To conclude, based on our findings, the samples were almost fully compliant with the requirements of the Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*). The total sand content of the samples, the pH value of samples SS1 and SS3 and the rates for saturated hydraulic conductivity were just outside the specified requirements.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Tim White
BSc MSc MScSoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP



Results of analysis should be read in conjunction with the report they were issued with



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr Ben Farmer
Ashlea Limited
Scotland Road
Carnforth
Lancashire LA5 9RE

30th May 2024
Our Ref: TOHA/24/1373/2/SS
Your Ref: PO B18315-15-BF

Dear Sirs

Subsoil Analysis Report: Co-op Live

We have completed the analysis of the soil samples recently submitted, referenced **SS4** and **SS5**, and have pleasure reporting our findings.

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*), including the following clauses:

- Clause Q28/115 (Environmental Performance);
- Clause Q28/210 (Systems – Type EXT-551 General Planting Soil) #;

there is no specification for Normal Weight Subsoil within the Populous specification so the results have been compared against the relevant parameters given in Clause Q28/210.

This report presents the results of analysis for the samples submitted to our office, and it should be considered 'indicative' of the subsoil source.

SAMPLE EXAMINATION

The subsoil samples were described as reddish brown (Munsell Colour 5YR 4/4), dry to slightly moist, friable, very calcareous SANDS and LOAMY SANDS with single grain structures. The samples were slightly stony and no unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

ANALYTICAL SCHEDULE

The samples were submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soils, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay);
- stone content (2-20mm, 20-75mm, >75mm);
- saturated hydraulic conductivity;
- pH and electrical conductivity values;
- calcium carbonate;
- exchangeable sodium percentage;
- organic matter content;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The samples fell into the *sand* (SS4) and *loamy sand* (SS5) texture classes, which are usually considered suitable for planting applications provided the soil's physical condition is satisfactory. Sample SS5 compliant with Clause Q28/210, sample SS4 fell slightly out of range.

The samples were virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

Saturated Hydraulic Conductivity

The saturated hydraulic conductivity rates were both 1mm/hr, which falls just below the specified rate of 4 mm/hr.

pH and Electrical Conductivity Values

The samples were strongly alkaline in reaction (pH 8.5 and 8.9) with high calcium carbonate (lime) contents. Sample Ss4 was compliant, and sample SS5 was non-compliant.

The electrical conductivity (salinity) values (water and CaSO₄ extracts) were low and compliant, which indicates that soluble salts were not present at levels that would be harmful to plants.

Organic Matter

The organic matter contents were low (<0.5%) and acceptable for landscape subsoil.

Potential Contaminants

With reference to *Table 1 – General Assessment Criteria* of the supplied Populous specification, of the potential contaminants determined, none was found at levels that exceeded their maximum permissible values.

CONCLUSION

The purpose of this analysis was to determine the compliance of the samples with the requirements of the supplied Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*).

From the soil examination and subsequent laboratory analysis, sample SS4 was described as strongly alkaline, non-saline, very calcareous, virtually stone-free *sand* with a single grain structure. The sample had a low organic matter content, and no contaminants exceeded their respective specified maximum limits.

Sample SS5 was described as strongly alkaline, non-saline, very calcareous, virtually stone-free *loamy sand* with a single grain structure. The sample had a low organic matter content, and no contaminants exceeded their respective specified maximum limits.

To conclude, based on our findings, the samples were almost fully compliant with the requirements of the Populous specification (*Coop Live – Q28 Topsoil Growing Medium and Ameliorants – Doc Ref. BRA-POP-ZZ-ZZ-SP-A-7106 – Tender 4B Update – 30/04/2021*). The total sand content of SS4, the pH value of SS5 and the rates for saturated hydraulic conductivity were just outside the specified requirements.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Tim O'Hare
BSc MSc F1SoilSci FBIAC CSci
Principal Consultant

For & on behalf of Tim O'Hare Associates LLP



Tim O'Hare
BSc MSc FSoilSci FBIAC CSci
Principal Consultant

James Young

Buro Happold Limited
The Featherstone Building
66 City Road
London
EC1Y 2AL
UK

T: +44 (0)207 927 9700

F: +44 (0)870 787 4145

Email: james.young@burohappold.com