

Rajdeep Sohanpall
Technical Coordinator
Bellway Homes Limited (North London)



by email: Rajdeep.Sohanpall@bellway.co.uk

16th March 2021

Our ref. LP2396/HG/I rev2

Dear Rajdeep,

Re: Verification report for the provision of clean cover at 30-32 Blyth Road, Hayes, London

I Introduction

Leap Environmental Ltd (hereafter referred to as **LEAP**) has been appointed by Bellway Homes Limited (North London) (Bellway) to inspect and validate the provision of clean cover capping in soft landscaped areas at a site known as 30-32 Blyth Road, Hayes, London, UB3 IBY. This report provides verification of capping works in seven soft landscaped planting areas to the front of low-rise residential properties at the site.

2 Previous Work

The following reports refer to work that has been undertaken by **LEAP** and others, which should be read in conjunction with this letter report:

- Listers, '*Ground Investigation 30-32 Blyth Road, Hayes, Middlesex, UB3 IBY*', dated May 2015 (Ref. 15-02-004);
- **LEAP**, '*Phase 2 Ground Contamination Investigation & Assessment at 30-32 Blyth Road, Hayes, Middlesex, UB3 IBY*' dated 12th June 2018 (Ref: LPI624/SI); and
- **LEAP**, '*Remediation Method Statement on Site at 30-32 Blyth Road, Hayes, UB3 IBY, for Bellway Homes (North London) Ltd*', 26 March 2019 (Ref: LPI624/RMS).

3 Background

The site is located within an area of residential redevelopment on a former industrial area in Hayes, London. The rectangular-shaped site is located on Blyth Road and is bordered by a railway line to the south. Adjacent sites to the east and west have been recently or are in the process of being redeveloped as apartment blocks.

Historically the site was used as an engineering works and prior to the redevelopment a disused industrial building occupied approximately two thirds of the site. All buildings on site were demolished as part of the redevelopment. The site now comprises seven two-storey residential houses in the north of the site and an L-shaped building with ground floor commercial units and apartments from the first floor and above, with associated car parking spaces in the east and central portions of site. Landscaped areas are present between Blyth Road and the residential houses in the north and along the western boundary. No private gardens are present.

Previous intrusive investigations encountered made ground comprising concrete, asphalt with demolition materials to depths of between 0.33 m bgl and 2.2 m bgl, underlain by sandy clayey gravels of the Lynch Hill Gravel Member between 2.2 m bgl and 6.0 m bgl, and stiff clays of the London Clay Formation at depth. No evidence of visual or olfactory evidence of contamination was noted in the soils encountered, with the exception of suspected asbestos containing materials (ACMs) in one location (BH02) in the southwest corner of the site. Laboratory testing recorded concentrations of PAHs and lead above screening criteria in the made ground samples that were analysed. Free fibres of asbestos were also detected in one soil sample (LE02), but below levels of quantification (0.001%).

3.1 Remediation Method Statement

The remedial requirements for the development are set out in the **LEAP** remediation method statement (RMS) (Ref: LPI624/RMS dated March 2019).

The RMS required that, in areas of soft landscaping, the made ground was to be excavated to a minimum depth of 450mm and a geomembrane/deter to dig layer placed at the base of the excavation. The levels were then required to be made up with suitable clean cover soils including 150mm minimum of topsoil as a suitable growing medium. If ACMs were encountered in the vicinity of garden plots made ground was required to be excavated to either 1m below the finished level or to the natural strata and followed by validation testing of the excavation sides and bases to ensure all contaminated ground is removed.

All imported soils were subject to the test parameters appended to the RMS and a defined testing frequency of three samples per source and a further one sample per 100-150m³ of topsoil and one sample per 150-300 m³ of subsoil.

4 Plot Verifications

4.1 Site Visit

LEAP attended site on 16th February 2020 to inspect the clean cover placed in the landscaped areas in Plots 1 to 7. Drawing 3951-BBLA-SP-00-DR-101-H dated 13/12/18 (Appendix A) illustrates the locations of the soft landscaped areas.

At the time of the visit small areas of land approximately 1.5 m long by 0.80 m wide had been excavated in the plots, as shown by the photographic record provided in Appendix B. Bellway confirmed that the landscaped areas as excavated at the time of the visit were the extents of the soft landscaping areas to the front of the low-rise buildings and will be utilised for shrub planting.

At the time of the visit it was not possible to inspect the underlying ground in the soft landscaped areas for the presence of ACMs because the plots were either in the process of being filled or because wooden boards were covering the area. Bellway reported to LEAP that ACM had not been observed at the base of the plot areas.

4.2 Thickness of Cover System

Bellway reported that all areas had been excavated to the required depth and that the voids had been lined with a geotextile membrane. During the site visit and through photographic evidence provided by Bellway, this membrane was noted to be present in all plots (Appendix B). It was not possible to verify the full depth of clean cover at the time of the inspection visit due the absence of topsoil within the plots and the ongoing backfilling works. However, Bellway has since provided photographic evidence of the subsoil and topsoil fill depths for all locations (as Appendix B).

Table 1 below summarises the topsoil and subsoil thicknesses provided on the Bellway photographic records in Appendix B.

Table 1 Details of the Clean Cover Inspection

Plot Number	Subsoil Thickness (mm)	Geotextile membrane present?	Topsoil Thickness (mm)	Overall Thickness (mm)
1	480	Yes	270	750
2	490	Yes	240	730
3	480	Yes	230	710
4	470	Yes	270	740
5	470	Yes	270	740
6	510	Yes	270	780
7	470	Yes	230	700

The topsoil and subsoil for use as backfill in the landscaped areas was stored on-site within bulk bags, as shown in Appendix B. A sample of subsoil was taken from Plot 4 for verification analysis. Due to the ongoing and incomplete works, other verification samples of topsoil and subsoil were taken from the bulk bags.

4.3 Chemical Quality of Cover Soils

Bellway reported that the topsoil imported to site was a manufactured topsoil provided by Freeland Horticulture Ltd. The topsoil was described on conformance certificates provided by Bellway (Appendix C), as a dark brown friable sandy loam with small stones and no reported visual or odorous evidence of contamination. LEAP noted that the topsoil was a dark brown slightly gravelly silty clayey fine to coarse sand. The gravel was subrounded to subangular fine to medium flints with occasional rootlets and wood fragments, with an earthy odour.

Bellway reported that the subsoils imported to site were provided by Bourne Amenity Ltd. LEAP encountered this as a brownish orange slightly silty fine to medium sand.

Laboratory test certificates assessing the physical and chemical quality of the topsoil and subsoil prior to importing to site were provided by Bellway (see Appendix C). The test certificates provided by Bellway meet the chemical acceptability criteria for use as topsoil / subsoil in private gardens listed in the RMS.

Verification chemical testing of the materials within the bulk bags and Plot 4 was carried out at The Environmental Laboratory in East Sussex. The laboratory results along with a screening table are presented in Appendix D. No exceedances were detected in the topsoil or subsoil samples that were tested when assessed against the acceptability criteria in the RMS.

5 Conclusions

Approximately 4.0 m³ of subsoil has been placed in the seven soft landscaped areas inspected by LEAP and it is estimated that approximately 1.3 m³ of topsoil will be used in these areas. In total three subsoil and three topsoil samples were collected for laboratory analysis. This is compliant with the sampling density specified in the RMS.

Based on the site inspection by LEAP, the photographic records provided by Bellway and the laboratory test certificates, it is considered that the shrub planting areas at the front of Plots 1 to 7 meet the chemical acceptability criteria listed in the RMS.

Yours sincerely,



Hannah Gutteridge

Enc.

Appendix A – Figures

Appendix B – Photographs

Appendix C – Bellway-Supplied Laboratory Certificates

Appendix D – Screening Table and Laboratory Certificate

Limitations

This letter report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed.

This report is generally consistent with the Eurocode requirements for a Ground Investigation Report, noting the limitations on brief to provision of pile design information only. However, the laboratory testing has been carried out on samples which do not comply with the Eurocode classifications as identified in tables 2 and 3 of EN ISO 22475-1. This report should not be deemed as a Geotechnical Design Report, and where any calculations have been made, these are not Eurocode compliant and are for indicative purposes only.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted, and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

This report is confidential to the Client, and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk.

APPENDIX A – FIGURES

Figures

- All rights described in chapter IV of the copyright, designs and patents act 1988 have been generally asserted
- Where any drawing is to be read in conjunction with another, including specialists, the two drawings shall be cross-checked and any discrepancies reported to the architect before the work is put in hand
- All dimensions are in millimetres, all levels are in metres, unless shown otherwise
- Any discrepancies in dimensions or details on or between these drawings/specifications should be drawn to the attention of the boon brown and or the engineer in writing for clarification
- Drawing prepared solely for the use of client, as detailed in text box, and is not to be copied, lent or used by any third party without written permission



Refer to Drawing No. 3951-BBLA-SP-00-DR-190 for Key

H	21.09.20	PL5 and existing fence label added	SO
G	24.08.20	Tender update following S73	SO
F	13.11.19	Architects Base Update	SF
E	25.06.19	Tender Issue	DR
D	30.05.19	Updated to New GF Layout	DR
C	12.04.19	To Client Comments	DR
B	06.02.19	Highways Comments	DR
Rev	Date	Description	Drm

boon brown

Motivo Tintagel House T: 01935 420803
Alvington 92 Albert Embankment T: 0207 4989158
Yeovil London F: 01935 475466
Somerset SE1 7TY W: www.boonbrown.com
BA20 2FG E: info@boonbrown.com

Project

Blyth Road, Hayes

Client

Bellway

Drawing Title

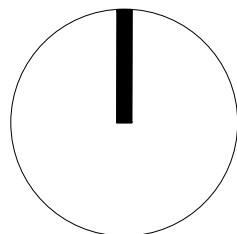
General arrangement -
Ground Floor

Status TENDER

Scale 1:150 @ A1 Date 13/12/18

Drawn D,R CHKD OC

DWG No. 3951-BBLA-SP-00-DR-101 Rev. H



APPENDIX B – SITE PHOTOGRAPHS

Site Photographs



Plate 1: Plot 1 hand dug pit with thickness of subsoil indicated (Provided by Bellway).



Plate 2: Plot 1 hand dug with geomembrane visible (Provided by Bellway).



Plate 3: Plot 1 hand dug pit with thickness of topsoil indicated (Provided by Bellway).



Plate 4: Plot 2 hand dug pit with thickness of subsoil indicated (Provided by Bellway).



Plate 5: Plot 2 hand dug with geomembrane visible (Provided by Bellway).



Plate 6: Plot 2 hand dug pit with thickness of topsoil indicated (Provided by Bellway).



Plate 7: Plot 3 hand dug pit with thickness of subsoil indicated (Provided by Bellway).



Plate 8: Plot 3 hand dug with geomembrane visible (Provided by Bellway).



Plate 9: Plot 3 with thickness of topsoil indicated (provided by Bellway).



Plate 10: Plot 4 with geotextile wrap around subsoil within shrub planting area (Taken by LEAP Engineer).



Plate 11: Plot 4 hand dug pit with thickness of subsoil indicated (Provided by Bellway).



Plate 12: Plot 4 with thickness of topsoil indicated (provided by Bellway).



Plate 13: Plot 5 hand dug pit with thickness of subsoil indicated and geotextile membrane visible (Provided by Bellway).



Plate 14: Plot 5 hand dug pit with thickness of subsoil indicated and geotextile membrane visible (Provided by Bellway).



Plate 15: Plot 6 with thickness of topsoil indicated (provided by Bellway).



Plate 16: Plot 7 hand dug pit with thickness of subsoils indicated and geotextile membrane visible (Provided by Bellway).



Plate 17: Plot 7 with thickness of topsoil indicated (provided by Bellway).



Plate 18: Topsoil bulk bag 3 from which a sample was taken for analysis (Taken by LEAP Engineer).



Plate 19: Topsoil bulk bags 1 and 2 from which samples were taken for analysis (Taken by LEAP Engineer).



Plate 20: Subsoil bulk bags 1 and 2 from which samples were taken for analysis (Taken by LEAP Engineer).

APPENDIX C – BELLWAY-SUPPLIED SOIL LABORATORY CERTIFICATES

Bellway-Supplied Soil
Laboratory Certificates



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

Attention: Philippa Lambourne

Our Ref: 0862-SA

26 August 2020

Dear Philippa

Topsoil Analysis Report : Potters Bar – August 2020

We have completed the analysis of the topsoil sample recently taken from the above site and have the pleasure of reporting our findings. The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes.

SOIL SAMPLING & EXAMINATION

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

LABORATORY ANALYSIS

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

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

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

COMMENTS

Phone: 01322 619161

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

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 value using the soil:water extract was moderate (1066µS/cm) indicating that soluble salts are not present at levels that would be harmful to plants.

Organic Matter & Nutrient Status

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

Particle Size Distribution & Stone Content

The sample contained 85% sand and fell into the *loamy sandy* texture class. This particle size distribution is considered suitable for a broad range of landscape applications, including tree and shrub planting, turfing and seeding.

The sample was free from stones of 50 mm and upwards in diameter and only contained a slight fraction of smaller stones (21.6%). As such, stones will not restrict the use of the soil for landscaping purposes.

Potential Contaminants

We are not aware of any specified contaminant levels set for the proposed end-use of this topsoil so the following comments are based on the Soil Guideline Values (SGVs) for residential end-use presented in the Contaminated Land Exposure Assessment (CLEA) Model (EA/DEFRA:2002). The SGVs currently only consider a limited range of parameters so where a potential contaminant is not covered by the CLEA Model other relevant schedules for contamination assessment, such as the Dutch Guidelines, and professional judgement have been used.

Of the potential contaminants determined, none was found at levels that would indicate significant contamination.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes. From the soil examination and laboratory analysis, the soil is described as an alkaline, non-saline, 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 all aspects of 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	Potters Bar, Hertfordshire
Month/Year	August 20
Our Ref	0862-SA
Date	26 August 2020

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	1066
Neutralising Value (CaCO ₃ equivalent)	%	1.4
Neutralising Value (CaO equivalent)	%	<1

Organic Matter & Nutrient Status

Organic Matter (LOI)	%	6.2
Organic Carbon (Derived)	%	3.6
Total Nitrogen	%	0.258
Carbon:Nitrogen Ratio	:1	14
Available Phosphorus	mg/l	68.4
Available Potassium	mg/l	1282
Available Magnesium	mg/l	138

Particle Size Analysis & Stones

Clay (<0.002mm)	%	7
Silt (0.063-0.002mm)	%	8
Sand (2.0-0.063mm)	%	85
Texture Class	UK Class	Very Sandy

Stones 2-20mm	% by DW	21.6
Stones 20-50mm	% by DW	0.0
Stones >50mm	% by DW	0.0

Potential Contaminants

Total Arsenic (As)	mg/kg	16.7
Total Cadmium (Cd)	mg/kg	0.39
Total Chromium (Cr)	mg/kg	17.0
Hexavalent Chromium (Cr ^{VI})	mg/kg	0.3
Total Copper (Cu)	mg/kg	20.6
Total Lead (Pb)	mg/kg	22.5
Total Mercury (Hg)	mg/kg	<0.2
Total Nickel (Ni)	mg/kg	23.3
Total Selenium (Se)	mg/kg	0.32
Total Zinc (Zn)	mg/kg	125
Total Beryllium (Be)	mg/kg	<1
Total Barium (Ba)	mg/kg	47.8
Total Vanadium (V)	mg/kg	30.4
Hot Water Soluble Boron (B)	mg/kg	1.6
Total Cyanide (CN)	mg/kg	<1
Elemental Sulphur (S)	mg/kg	<5
Easily Liberated Sulphide (S ²⁻)	mg/kg	<1
Water Soluble Sulphate (SO ₄ ²⁻)	mg/l	105
Total Phenols Index	mg/kg	<1
Asbestos Screen	-	N.D.

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Potters Bar, Hertfordshire
Month/Year	August 20
Our Ref	0862-SA
Date	26 August 2020

Polyaromatic Hydrocarbons

Naphthalene	mg/kg	<0.05
Acenaphthylene	mg/kg	<0.05
Acenaphthene	mg/kg	<0.05
Fluorene	mg/kg	<0.05
Phenanthrene	mg/kg	0.1
Anthracene	mg/kg	<0.05
Fluoranthene	mg/kg	0.2
Pyrene	mg/kg	0.2
Benzo[a]anthracene	mg/kg	0.1
Chrysene	mg/kg	0.1
Benzo[b]fluoranthene	mg/kg	<0.1
Benzo[k]fluoranthene	mg/kg	<0.1
Benzo[a]pyrene	mg/kg	<0.1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.1
Dibenzo[a,h]anthracene	mg/kg	<0.1
Benzo[g,h,i]perylene	mg/kg	<0.1
Total PAHs sum US EPA 16	mg/kg	<1

Banded Petroleum Hydrocarbons

Aliphatic TPH >C ₅ -C ₆	mg/kg	1.2
Aliphatic TPH >C ₆ -C ₈	mg/kg	<0.4
Aliphatic TPH >C ₈ -C ₁₀	mg/kg	<4
Aliphatic TPH >C ₁₀ -C ₁₂	mg/kg	<4
Aliphatic TPH >C ₁₂ -C ₁₆	mg/kg	<4
Aliphatic TPH >C ₁₆ -C ₂₁	mg/kg	10.2
Aliphatic TPH >C ₂₁ -C ₃₅	mg/kg	36.2
Aliphatic TPH >C ₃₅ -C ₄₄	mg/kg	<12

Aromatic TPH >C ₅ -C ₇	mg/kg	<0.02
Aromatic TPH >C ₇ -C ₈	mg/kg	<0.02
Aromatic TPH >C ₈ -C ₁₀	mg/kg	<0.02
Aromatic TPH >C ₁₀ -C ₁₂	mg/kg	<4
Aromatic TPH >C ₁₂ -C ₁₆	mg/kg	<4
Aromatic TPH >C ₁₆ -C ₂₁	mg/kg	7.1
Aromatic TPH >C ₂₁ -C ₃₅	mg/kg	14.8
Aromatic TPH >C ₃₅ -C ₄₄	mg/kg	<0.2

Total Petroleum Hydrocarbons (C ₅ -C ₄₄)	mg/kg	68.3
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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: BAT AND BALL SUBSOIL
SOIL

Lab ID: 44695 - 424605
Sample ID: SUBSOIL 20/02/19
Fresh Sample Weight: 1506 (g)

Date Received: 20/02/2019
Date Reported: 27/02/2019

BS 8601 : 2013 SPECIFICATION FOR SUBSOIL Multipurpose Grade

		Unit	Result	Compliant with range (Y/N)		
				Multi-P	Acid	Calc
Texture:	Clay	% w/w	18	See area of permitted soil textural classes in Fig. 1.		
	Silt	% w/w	6			
	Sand	% w/w	76			
	Textural Class		Sandy Loam			
Mass Loss on Ignition:		% w/w	0.9	Y	Y	Y
Coarse	>2 mm	% w/w	0.3	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:			7.8	Y	N	Y
Carbonate:		% w/w	<1			N
Exchangeable Sodium Percentage:		%	0.5	Y	Y	Y
Phytotoxic	Total Zinc	mg/kg	33.5	Y	Y	Y
Contaminants:	Total Copper	mg/kg	4.2	Y	Y	Y
	Total Nickel	mg/kg	25.6	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	13.8 (1)*			
	Potassium	mg/l	81.8 (1)*			
	Magnesium	mg/l	157.3 (3)*			
Additional Analysis:	Available Sodium	mg/l	8.1			
	Available Calcium	mg/l	988.5			
	Conductivity	uS/cm	2068			
	Conductivity CaSO4 Adj.	uS/cm	108			
Compliance:				Y	N	N

Results are expressed on a dry matter basis.

* Soil indices from RB209

Released by:

Darren Whitbread

Date: 27/02/2019

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

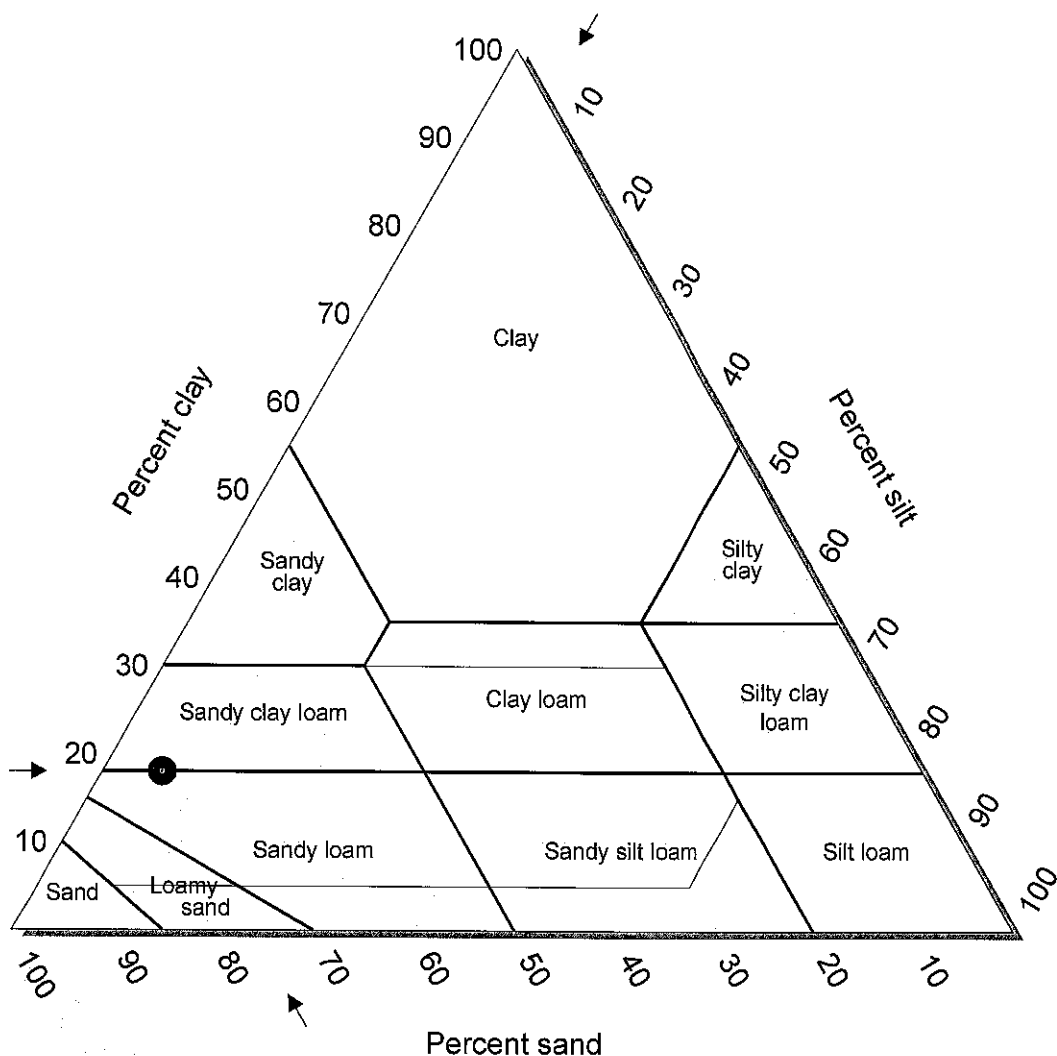
Client: PHILIPPA LAMBOURNE
(G281) FREELAND HORTICULTURE LTD
ROSEDALE NURSERY
COLLEGE ROAD
HEXTABLE
KENT BR8 7LT

Originator: BAT AND BALL SUBSOIL
SOIL

Lab ID: 44695 - 424605
Sample ID: SUBSOIL 20/02/19
Fresh Sample Weight: 1506 (g)

Date Received: 20/02/2019
Date Reported: 27/02/2019

Fig. 1. Textural Class: Sandy Loam (compliant)



Key



Area within which texture of subsoil is required to fall.

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:** www.nrm.uk.com



Analytical Report

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

Originator: BAT AND BALL SUBSOIL
SOIL

Lab ID: 44695 - 424605
Sample ID: SUBSOIL 20/02/19
Fresh Sample Weight: 1506 (g)

Date Received: 20/02/2019
Date Reported: 27/02/2019

		Unit	Result
Additional Analysis:	Very Coarse Sand 1.0 - 2.0mm	% w/w	1
	Coarse Sand 0.5 - 1.0mm	% w/w	13
	Medium Sand 0.25 - 0.50mm	% w/w	42
	Fine Sand 0.15 - 0.25mm	% w/w	15
	Very Fine Sand 0.05 - 0.15mm	% w/w	5
	Silt 0.002 - 0.05mm	% w/w	6

Results are expressed on a dry matter basis unless otherwise specified.

Released by:

Darren Whitbread

Date: 27/02/2019

Material: Subsoil
Source: Bourne Amenity Ltd
Date Tested: 04/08/2020
Tested Against: BS8601:2013
Tested By: Tim O'Hare Associates (Report ID TOHA/20/9575/2/SS)

Parameter	Unit	BS8601:2013 Range	Result	Compliance
Texture:				
Clay (<0.002mm)	% w/w	5 - 30%	5	Yes
Silt (0.002 - 0.05mm)	% w/w	0 - 65%	2	Yes
Sand (0.063 - 2.0mm)	% w/w	20 - 90%	93	Yes*
Textual Class:				
Sand				
Stones (2 - 20mm)	% w/w DW	40%	2	Yes
Stones (20-75mm)	% w/w DW	20%	0	Yes
Stones (>75mm)	% w/w DW	0%	0	Yes
Sand Fraction (USGA Sieve Sizes):				
Very Fine Sand (0.05 - 0.15mm)	% w/w	n/a	2	--
Fine Sand (0.15 - 0.25mm)	% w/w	n/a	7	--
Medium Sand (0.25 - 0.50mm)	% w/w	n/a	46	--
Coarse Sand (0.50 - 1.0mm)	% w/w	n/a	34	--
Very Coarse Sand (1.0 - 2.0mm)	% w/w	n/a	4	--
Organic Matter (LOI)	% w/w	0.0 - 2.0	<0.5	Yes
Ph		5.5 - 8.5	7.9	Yes
Exchangeable Sodium Percentage	%	< 15%	1.5	Yes
Phytotoxic Contaminants:				
Total Zinc	mg/kg	0 - 200	14	Yes
Total Copper	mg/kg	0 - 135	4	Yes
Total Nickel	mg/kg	0 - 75	<1.0	Yes
Available Nutrients:				
Phosphorus	mg/l	n/a	8	--
Potassium	mg/l	n/a	9	--
Magnesium	mg/l	n/a	7	--
Additional Analysis:				
Electrical Conductivity (1:2:5 water extract)	µS/cm	n/a	48	--
Electrical Conductivity (CaSO4 extract)	µS/cm	n/a	2013	--
Saturated Hydraulic Conductivity	mm/hr	n/a	66	--
Visible Contaminants:				
>2.0mm	% w/w	< 0.5	0.0	Yes
Plastics	% w/w	< 0.25	0.0	Yes
Sharps	% w/w	0.0	0.0	Yes

Parameter	Unit	Guidelines	Value	Result	Compliance
Heavy Metals and Hydrocarbons					
Total Antimony (Sb)	mg/kg	S4UL	<500	<1.0	Yes
Total Arsenic (As)	mg/kg	S4UL	<37	7	Yes
Total Barium (Ba)	mg/kg	S4UL	<1300	11	Yes
Total Beryllium (Be)	mg/kg	S4UL	<1.7	0.3	Yes
Total Cadmium (Cd)	mg/kg	S4UL	<11	<0.2	Yes
Total Chromium III (Cr)	mg/kg	S4UL	<910	12	Yes
Hexavalent Chromium (Cr Vi)	mg/kg	S4UL	<6	<4.0	Yes
Total Cyanide (Cn)	mg/kg	Dutch Action Value (DAV)	<20	<1	Yes
Total Lead (Pb)	mg/kg	SP1010 (Defra Category 4)	<200	1.7	Yes
Total Mercury (Hg)	mg/kg	S4UL	<1.2	<0.3	Yes
Total (mono) Phenols	mg/kg	S4UL^	<550	<1.0	Yes
Total Selenium (Se)	mg/kg	S4UL	<250	<1.0	Yes
Total Vanadium (V)	mg/kg	S4UL	<410	26	Yes
Water Soluble Boron (B)	mg/kg	S4UL	<290	0.3	Yes
Water Soluble Sulphate (SO4)	g/l	BRE Special Digest 1:2005 (BRE)	<1.2	0.0042	Yes
Acenaphthylene	mg/kg	S4UL^	<420	<0.05	Yes
Acenaphthene	mg/kg	S4UL^	<510	<0.05	Yes
Anthracene	mg/kg	S4UL^	<5400	<0.05	Yes
Benzo (a) Anthracene	mg/kg	S4UL^	<11	<0.05	Yes
Benzo (a) Pyrene	mg/kg	S4UL^	<2.7	<0.05	Yes
Benzo (b) Fluoranthene	mg/kg	S4UL^	<3.3	<0.05	Yes
Benzo (g,h,i) Perylene	mg/kg	S4UL^	<340	<0.05	Yes
Benzo (k) Fluoranthene	mg/kg	S4UL^	<93	<0.05	Yes
Chrysene	mg/kg	S4UL^	<22	<0.05	Yes
Dibenzo (a,h) Anthracene	mg/kg	S4UL^	<0.28	<0.05	Yes
Fluoranthene	mg/kg	S4UL^	<560	<0.05	Yes
Fluorene	mg/kg	S4UL^	<400	<0.05	Yes
Indeno (1,2,3-cd) Pyrene	mg/kg	S4UL^	<36	<0.05	Yes
Naphthalene	mg/kg	S4UL^	<5.6	<0.05	Yes
Phenanthrene	mg/kg	S4UL^	<220	<0.05	Yes
Pyrene	mg/kg	S4UL^	<1200	<0.05	Yes
Aliphatic TPH (C5 - C6)	mg/kg	S4UL^	<78	<0.001	Yes
Aliphatic TPH (C6 - C8)	mg/kg	S4UL^	<230	<0.001	Yes
Aliphatic TPH (C8 - C10)	mg/kg	S4UL^	<65	<0.001	Yes
Aliphatic TPH (C10 - C12)	mg/kg	S4UL^	<330	<1.0	Yes
Aliphatic TPH (C12 - C16)	mg/kg	S4UL^	<2400	<2.0	Yes
Aliphatic TPH (C16 - C21)	mg/kg	S4UL^	<92000	<8.0	Yes
Aliphatic TPH (C21 - C35)	mg/kg	S4UL^		<8.0	Yes
Aliphatic TPH (C5 - C35)	mg/kg	S4UL^	<92000	<10	Yes
Aromatic TPH (C5 - C7)	mg/kg	S4UL^	<140	<0.001	Yes
Aromatic TPH (C7 - C8)	mg/kg	S4UL^	<290	<0.001	Yes
Aromatic TPH (C8 - C10)	mg/kg	S4UL^	<83	<0.001	Yes
Aromatic TPH (C10 - C12)	mg/kg	S4UL^	<180	<1.0	Yes
Aromatic TPH (C12 - C16)	mg/kg	S4UL^	<330	<2.0	Yes
Aromatic TPH (C16 - C21)	mg/kg	S4UL^	<540	<10	Yes
Aromatic TPH (C21 - C35)	mg/kg	S4UL^	<1500	<10	Yes
Aromatic TPH (C5 - C35)	mg/kg	S4UL^	<1500	<10	Yes
Benzene	mg/kg	S4UL^	<0.17	<0.001	Yes
Toluene	mg/kg	S4UL^	<290	<0.001	Yes
Ethylbenzene	mg/kg	S4UL^	<110	<0.001	Yes
O-xylene	mg/kg	S4UL^	<140	<0.001	Yes
M-xylene	mg/kg	S4UL^	<140	<0.001	Yes
P-xylene	mg/kg	S4UL^	<130		Yes
MTBE	mg/kg	Sail Guideline Values	<470	<0.001	Yes
Asbestos	mg/kg	Control of Asbestos Regulations 2006	Absent	Absent	Yes

APPENDIX D – SCREENING TABLE AND LABORATORY CERTIFICATE

Screening Table and
Laboratory Certificate

LP2396 Blyth Road: Screening Table for Verification of Samples for Plots 1 to 7

				Sample Type: Sample I.D: Sample Depth (m): Sampling Date:	Topsoil Bag 1 - 16/02/2021	Topsoil Bag 2 - 16/02/2021	Topsoil Bag 3 - 16/02/2021	Subsoil Bag 1 - 16/02/2021	Subsoil Bag 2 - 16/02/2021	Subsoil Plot 4 0.05 16/02/2021
Determinand	Units	LOD	Leap Assessment Criteria							
Metals										
Arsenic	mg/kg	1	32	23.7	24.3	31.1	22.4	19.1	17.7	
Cadmium	mg/kg	0.5	10	0.7	0.7	0.8	< 0.5	< 0.5	< 0.5	
Chromium	mg/kg	5	3,000	29.2	27.6	31.7	46.6	41.7	40.0	
Copper	mg/kg	5	2,330	39.7	40.6	58.8	5.4	< 5.0	< 5.0	
Lead	mg/kg	5	200	52.1	43.1	55.7	6.7	5.1	< 5.0	
Mercury	mg/kg	0.5	170	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Nickel	mg/kg	5	130	39.0	38.3	47.5	31.9	27.0	25.6	
Selenium	mg/kg	1	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc	mg/kg	5	3,700	190	192	241	38.7	30.0	30.3	
Inorganics										
Hexavalent Chromium	mg/kg	0.1	4.3	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	
Miscellaneous										
Asbestos	-	-	Presence	NAD	NAD	NAD	NAD	NAD	NAD	
pH	pH units	0.1	6.5-9.5	8.5	8.5	8.7	8.1	7.8	8.1	
Polyaromatic hydrocarbons										
Naphthalene	mg/kg	0.1	2.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	0.1	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	0.1	210	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Fluorene	mg/kg	0.1	170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Phenanthrene	mg/kg	0.1	95	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Anthracene	mg/kg	0.1	2,400	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Fluoranthene	mg/kg	0.1	280	0.2	0.3	0.1	< 0.1	< 0.1	< 0.1	
Pyrene	mg/kg	0.1	620	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo (a) pyrene	mg/kg	0.1	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	

NAD - no asbestos detected

 = Exceedances over LEAP Acceptance Criteria from RMS

ELAB Reference	227715	227716	227717	227718	227719	227720
Customer Reference	Bag 1	Bag 2	Bag 3	Bag 1	Bag 2	
Sample ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sampling Time						

Determinand	SOP	Units	LOD						
Soil sample preparation parameters									
Material removed	in house	%	0.1	14.2	9.9	17.1	< 0.1	< 0.1	< 0.1
Description of Inert material re	in house		0	Stones	Stones	Stones	None	None	None
Metals									
Arsenic	300	mg/kg	1	23.7	24.3	31.1	22.4	19.1	17.7
Cadmium	300	mg/kg	0.5	0.7	0.7	0.8	< 0.5	< 0.5	< 0.5
Chromium	300	mg/kg	5	29.2	27.6	31.7	46.6	41.7	40.0
Copper	300	mg/kg	5	39.7	40.6	58.8	5.4	< 5.0	< 5.0
Lead	300	mg/kg	5	52.1	43.1	55.7	6.7	5.1	< 5.0
Mercury	300	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	300	mg/kg	5	39.0	38.3	47.5	31.9	27.0	25.6
Selenium	300	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	300	mg/kg	5	190	192	241	38.7	30.0	30.3
Inorganics									
Hexavalent Chromium	110	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous									
pH	113	pH units	0.1	8.5	8.5	8.7	8.1	7.8	8.1
Total Organic Carbon	210	%	0.01	2.8	2.9	2.5	0.06	0.03	0.05
Polyaromatic hydrocarbons									
Naphthalene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	133	mg/kg	0.1	0.2	0.3	0.1	< 0.1	< 0.1	< 0.1
Pyrene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	133	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1
Chrysene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	133	mg/kg	0.1	0.2	0.2	0.2	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	133	mg/kg	0.1	0.2	0.2	0.2	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	133	mg/kg	0.1	n/t	n/t	n/t	n/t	n/t	< 0.1
Benzo[g,h,i]perylene	133	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Coronene	133	mg/kg	0.1	n/t	n/t	n/t	n/t	n/t	< 0.1
Total PAH(16)	133	mg/kg	0.4	1.0	1.2	0.9	< 0.4	< 0.4	< 0.4
Total PAH(16) + Coronene	133	mg/kg	0.4	n/t	n/t	n/t	n/t	n/t	< 0.4
Benzo (j) fluoranthene GCMS	in house	mg/kg	0.1	n/t	n/t	n/t	n/t	n/t	< 0.1



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 21-32149

Issue: 2. Replaces Analytical Report number 21-32149; issue no.1

Date of Issue: 19/02/2021

Contact: Kate Baker

Customer Details: Leap Environmental Ltd
Book House
Glebelands Centre
Dorking
Surrey RH4 3HW

Quotation No: Q14-00063

Order No: LPO-3359

Customer Reference: LP2396

Date Received: 17/02/2021

Date Approved: 19/02/2021

Details: Blyth Road (Bellway)

Approved by:

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 21-32149, issue number 2

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
227715	Topsoil Bag 1	16/02/2021	17/02/2021	Sandy silty loam	
227716	Topsoil Bag 2	16/02/2021	17/02/2021	Sandy silty loam	
227717	Topsoil Bag 3	16/02/2021	17/02/2021	Sandy silty loam	
227718	Subsoil Bag 1	16/02/2021	17/02/2021	Sand	
227719	Subsoil Bag 2	16/02/2021	17/02/2021	Sand	
227720	Plot 4 0.05	16/02/2021	17/02/2021	Sand	

Results Summary

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Report No.: 21-32149, issue number 2

ELAB Reference	227715	227716	227717	227718	227719
Customer Reference	Bag 1	Bag 2	Bag 3	Bag 1	Bag 2
Sample ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	Topsoil	Topsoil	Topsoil	Subsoil	Subsoil
Sample Depth (m)					
Sampling Date	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021

Determinand	Codes	Units	LOD					
Soil sample preparation parameters								
Material removed	N	%	0.1	14.2	9.9	17.1	< 0.1	< 0.1
Description of Inert material removed	N		0	Stones	Stones	Stones	None	None
Metals								
Arsenic	M	mg/kg	1	23.7	24.3	31.1	22.4	19.1
Cadmium	M	mg/kg	0.5	0.7	0.7	0.8	< 0.5	< 0.5
Chromium	M	mg/kg	5	29.2	27.6	31.7	46.6	41.7
Copper	M	mg/kg	5	39.7	40.6	58.8	5.4	< 5.0
Lead	M	mg/kg	5	52.1	43.1	55.7	6.7	5.1
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	39.0	38.3	47.5	31.9	27.0
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	190	192	241	38.7	30.0
Inorganics								
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous								
pH	M	pH units	0.1	8.5	8.5	8.7	8.1	7.8
Total Organic Carbon	N	%	0.01	2.8	2.9	2.5	0.06	0.03
Polyaromatic hydrocarbons								
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2	0.3	0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	0.2	0.2	0.2	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	0.2	0.2	0.2	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	1.0	1.2	0.9	< 0.4	< 0.4

Results Summary

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Report No.: 21-32149, issue number 2

ELAB Reference	227720
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	Plot 4
Sample Depth (m)	0.05
Sampling Date	16/02/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	17.7
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	40.0
Copper	M	mg/kg	5	< 5.0
Lead	M	mg/kg	5	< 5.0
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	25.6
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	30.3
Inorganics				
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
pH	M	pH units	0.1	8.1
Total Organic Carbon	N	%	0.01	0.05
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.7
Anthracene	M	mg/kg	0.1	0.5
Fluoranthene	M	mg/kg	0.1	1.3
Pyrene	M	mg/kg	0.1	1.1
Benzo(a)anthracene	M	mg/kg	0.1	0.5
Chrysene	M	mg/kg	0.1	0.7
Benzo(b)fluoranthene	M	mg/kg	0.1	1.1
Benzo(k)fluoranthene	M	mg/kg	0.1	1.2
Benzo(a)pyrene	M	mg/kg	0.1	1.0
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	1.6
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.4
Benzo[g,h,i]perylene	M	mg/kg	0.1	1.4
Total PAH(16)	M	mg/kg	0.4	11.7



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Results Summary

Report No.: 21-32149, issue number 2

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
227715		Topsoil Bag 1	Brown Sandy Soil,Stones,Root	No asbestos detected	n/t	n/t	n/t	n/t
227716		Topsoil Bag 2	Brown Sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
227717		Topsoil Bag 3	Brown sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
227718		Subsoil Bag 1	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
227719		Subsoil Bag 2	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
227720	0.05	Plot 4	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32149, issue number 2

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	18/02/2021	110	Colorimetry
pH	M	Air dried sample	18/02/2021	113	Electromeric
PAH (GC-FID)	M	As submitted sample	18/02/2021	133	GC-FID
Total organic carbon/Total sulphur	N	Air dried sample	18/02/2021	210	IR
Asbestos identification	U	Air dried sample	18/02/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	18/02/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32149, issue number 2

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

LOD LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
ELAB are unable to provide an interpretation or opinion on the content of this report.
The results relate only to the sample received.
PCB congener results may include any coeluting PCBs
Uncertainty of measurement for the determinands tested are available upon request
Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

-
- | | |
|---|--|
| a | No date of sampling supplied |
| b | No time of sampling supplied (Waters Only) |
| c | Sample not received in appropriate containers |
| d | Sample not received in cooled condition |
| e | The container has been incorrectly filled |
| f | Sample age exceeds stability time (sampling to receipt) |
| g | Sample age exceeds stability time (sampling to analysis) |

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
All water samples will be retained for 7 days following the date of the test report
Charges may apply to extended sample storage