

12 March 2025

Our reference: 3750855/CCV/2

Dominic Slater
Technical Coordinator
BDW Southern Counties

Re: Parcel 7, Finchampstead: Verification of Clean Cover in Plots 133, 141 and 142

Dear Dominic

1. INTRODUCTION AND SCOPE

Leap Environmental, a trading name of RSK Environment Ltd (hereafter referred to as **LEAP**) was appointed by BDW Southern Counties (hereafter referred to as 'the client') to undertake the verification of clean cover in Plots 133, 141, 142 at the site referred to as Parcel 7, Finchampstead. A site location plan is presented in Drawing Ref. 3750855-LW-111-XX-D-G-11101-C01, **Appendix B**.

The works were undertaken by means of **LEAP**'s fee proposal LPQ11939 dated 29 January 2025 including RSK Standard Terms and Conditions which forms the appointment between **LEAP** and the Client.

It is understood that the site is being redeveloped by BDW Southern Counties with 200 residential dwellings with associated private gardens, open landscaping and infrastructure, as shown on Drawing BAR-FIN-500 RevB in **Appendix B**. Prior to development the site was predominantly greenfield aside from some made ground in the east of the site, which was shown to pose a risk to future site users. Remedial measures were required to be undertaken on impacted plots, Plots 133, 141 and 142, with the placement of clean cover in the rear gardens. This report presents verification of the remedial works undertaken in Plots 133, 141 and 142 only.

2. PREVIOUS REPORTS

The site has been the subject of previous investigations by others. The reader is referred to the previous relevant report, which should be read in conjunction with this report:

- Eastwood and Partners 'Phase 2 Geotechnical and Geo-environmental site investigation of Parcel 7 Hogwood Farm (Finchwood Park Development) for Cala Homes Thames and Legal and General Homes Ltd' Issue 2, Dated 17th January 2022. Report Ref. 41623.

3. BACKGROUND

The Parcel 7 site area is part of the broader Finchwood Park Development. Access to the site was off Wheat Street and through the BDW Southern Counties development site. The approximate national grid reference is 476837, 164503, and the site sits at an approximate elevation of 58.00 m above Ordnance Datum (AOD).

The parcel is bordered to the north by Parcels 1 and 8, to the east by the former Hogwood Industrial Estate, to the south by Parcel 6, a former greenfield site, and to the west is Parcel 2, also a former greenfield land.

Historical mapping shows the site to have remained undeveloped prior to the current works, except for the addition of an agricultural barn shown on the 2017 map, which based on Google Earth imagery was thought to be present by 2010.

The site is mapped as being underlain by the London Clay Formation, with no superficial deposits shown as being present across the site. According to Eastwood and Partners (report ref. 41623), the solid bedrock beneath the site is classified as Unproductive Strata.

Plots 133, 141 and 142, on which this report focuses, are located east of the irregularly shaped parcel, over the approximate location to where the barn identified on historical maps was previously positioned.

An intrusive investigation completed across the Parcel, conducted by Eastwood and Partners, identified made ground in the east of the site comprising silty, sandy clay with gravel of brick, concrete, sandstone and ceramic, which were generally found in the former barn area. Sampling and laboratory testing of the made ground detected elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) with respect to a proposed residential end use. The PAHs were considered to pose a potential risk to the future residents and as such the made ground was not considered suitable to remain in residential gardens or areas of soft landscaping. The investigation highlighted four samples of made ground with elevated levels of several PAH compounds around the former barn. These are summarised in **Table 1** below:

Table 1: Summary of contaminated samples within the parcel

PAH Compounds	Recorded Concentration (mg/kg)			
	TP301 (0.3 m)	TP302 (0.2 m)	TP303 (1.5 m)	TP304 (1.0 m)
Benzo(a)anthracene	15	13	~	~
Benzo[b]fluoranthene	24	22	5.3	4.9
Benzo[a]pyrene	21	20	4.0	3.6
Dibenz(a,h)Anthracene	2.6	2.3	0.49	0.38

3.1 Remediation requirements

LEAP understand that the proposals for remediating contamination on site are detailed in Section 9.1 (Risk Assessment) of the Phase 2 Eastwood and Partners report (Ref: 41623).

The report stated that the made ground was considered physically and chemically unsuitable to remain at shallow depth in gardens or across soft landscaping areas. The material was to be removed from said areas and placed beneath areas of hardstanding (if deemed geotechnically suitable) or disposed of offsite. Alternatively, a 600 mm capping layer of clean soil, including at least 100 mm of topsoil, was required if the made ground remained in place in gardens and landscaped areas.

LEAP understand that no formal Remediation Strategy or similar was produced, and that the remedial activities detailed in the Phase II report as described above were approved through submission of the Phase II report for planning.

4. FIELDWORK

LEAP attended the site on 29 January 2025, to inspect the clean cover placed in the private gardens of Plots 133, 141, and 142. During the inspection no topsoil was present, and it was reported by the site manager that they could not place the topsoil due to delays. However, the site manager reported that the topsoil proposed to be used in these plots was a manufactured topsoil which was imported to site for use in all gardens, and which had already been placed in an adjacent plot (Plot 134).

As part of the inspection verification inspection pits were excavated in each of the three plots, through the subsoil to the underlying soils. Drawing 3750855-LW-222-XX-D-G-22201-C01 in **Appendix B** shows the location of the pits. **Table 2** provides a summary of the soils encountered within the verification inspection pits excavated by LEAP, and photographs of the soils encountered are included in **Appendix C**.

Table 2: Summary of material in verification inspection pits.

Depth (m)	Soil description
0 – 0.2 m	Soft, light brown occasionally gravelly CLAY Gravel was sub-angular to angular of brick and ceramic. .
0.2 – 0.6 m	Firm, dark brown occasionally gravelly sandy CLAY. Sand was medium to coarse. Gravel was sub-angular to angular of flint and brick. .

During excavation of the inspection pits a number of anthropogenic materials including brick, ceramic, and road plannings were observed. The client reported that the subsoil used in these plots was excavated from the footings from Plots 155 to 170 in the south-southeast of the site. A review of the ground conditions encountered in this area during the Eastwood & Partners investigation (BH05, TP17, TP36) indicates natural soils were present comprising topsoil over firm orange and grey silty clay. As such the anthropogenic materials encountered in the subsoil are likely to have been derived from construction debris from the current development becoming entrained within the soils during movement across the site. The client also noted that any significant anthropogenic materials at the surface or at a shallow depth within the

subsoil were removed prior to placement of the topsoil. Photographs evidencing the removal of anthropogenic inclusions can be found in **Appendix C**.

In addition to the inspection pits, the topsoil proposed to be used in Plots 133, 141 and 142 was inspected. Topsoil which had already been placed in the adjacent Plot 134 was observed and comprised dark brown slightly gravelly silty clay. Gravel was subangular of flint. After the site visit completed by LEAP, photographs of the topsoil and subsoil placed in Plots 133, 141 and 142 were subsequently provided by the client following topsoil placement, and these included an inspection pit to check the depth. **Table 3** below summarises the depths of clean cover based on the photographs provided by the Client.

Table 3: Summary of Clean Cover Thicknesses

Plot	Topsoil Thickness (mm)	Clean Cover Thickness (mm)
133	270	600
141	160	630
142	220	600

Fewer anthropogenic fragments were observed in the subsoil in the photographs provided by the client, and no anthropogenic fragments were noted at the surface of the topsoil based on photographs provided following completion of the placement.

It is noted that, whilst depths of required clean cover were stated within the remedial measures set out in the Eastwood and Partners report, no specification for the material to be used as clean cover was provided.

3 No. samples of the subsoil, one from each inspection pit at 0.30 m, and one topsoil sample from Plot 134 were taken and were sent to Chemtech Environmental at Greencroft Industrial Park for analysis.

Photographs are included in **Appendix C**.

5. CHEMICAL ANALYSIS

The topsoil and subsoil samples were tested for the LEAP Standard Soil Suite, comprising heavy metals, asbestos, pH, total organic carbon, and polycyclic aromatic hydrocarbons (PAHs), to evidence that the materials were chemically suitable for use within the proposed setting. The contaminants tested for were chosen based on the previous site uses and previous contamination encountered, along with general contaminants of concern. No specific assessment criteria were provided within the remedial measures, and as such the results were screened against generic assessment criteria (GACs) based on a proposed residential end use where home grown produce is consumed.

contaminant concentrations were found to be below the GACs. **Appendix D** provides a summary of the results along with the GACs used, and **Appendix E** provides the laboratory test certificates.

The topsoil was reported to comprise a manufactured topsoil imported from Eversley Quarry. In addition to the testing undertaken on a sample onsite, a laboratory certificate for testing of the manufactured topsoil

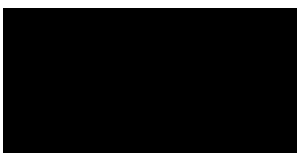
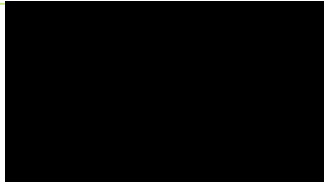
at source was provided by the client, which can also be found in **Appendix E**. The concentrations of contaminants detected were also below the GACs for a residential setting where home grown produce is consumed.

6. CONCLUSIONS

LEAP attended site on 29th January to undertake inspection of the clean cover placed in Plots 133, 141 and 142 and to collect samples to evidence suitability of placement. Based on verification visit undertaken, along with subsequent photographs and certificates provided by the client, it is considered that the thicknesses of clean cover placed in these plots is suitable in line with the remediation requirements of 600 mm clean cover with a minimum 100 mm topsoil. Chemical testing of the soils indicates that both the topsoil and subsoil are suitable for use in the residential gardens.

Please do not hesitate to contact the undersigned if you require any further information.

Yours sincerely

Author:	Technical Review:	QA/QC Check:
		
Archie Mariner Graduate Engineer	Tim Thorpe Principal Lead	Ellie Sanders Senior Administrator

Enclosed:

Appendix A – Service Constraints

Appendix B – Figures and Drawings

Appendix C – Photographs

Appendix D – Assessment Summary Table

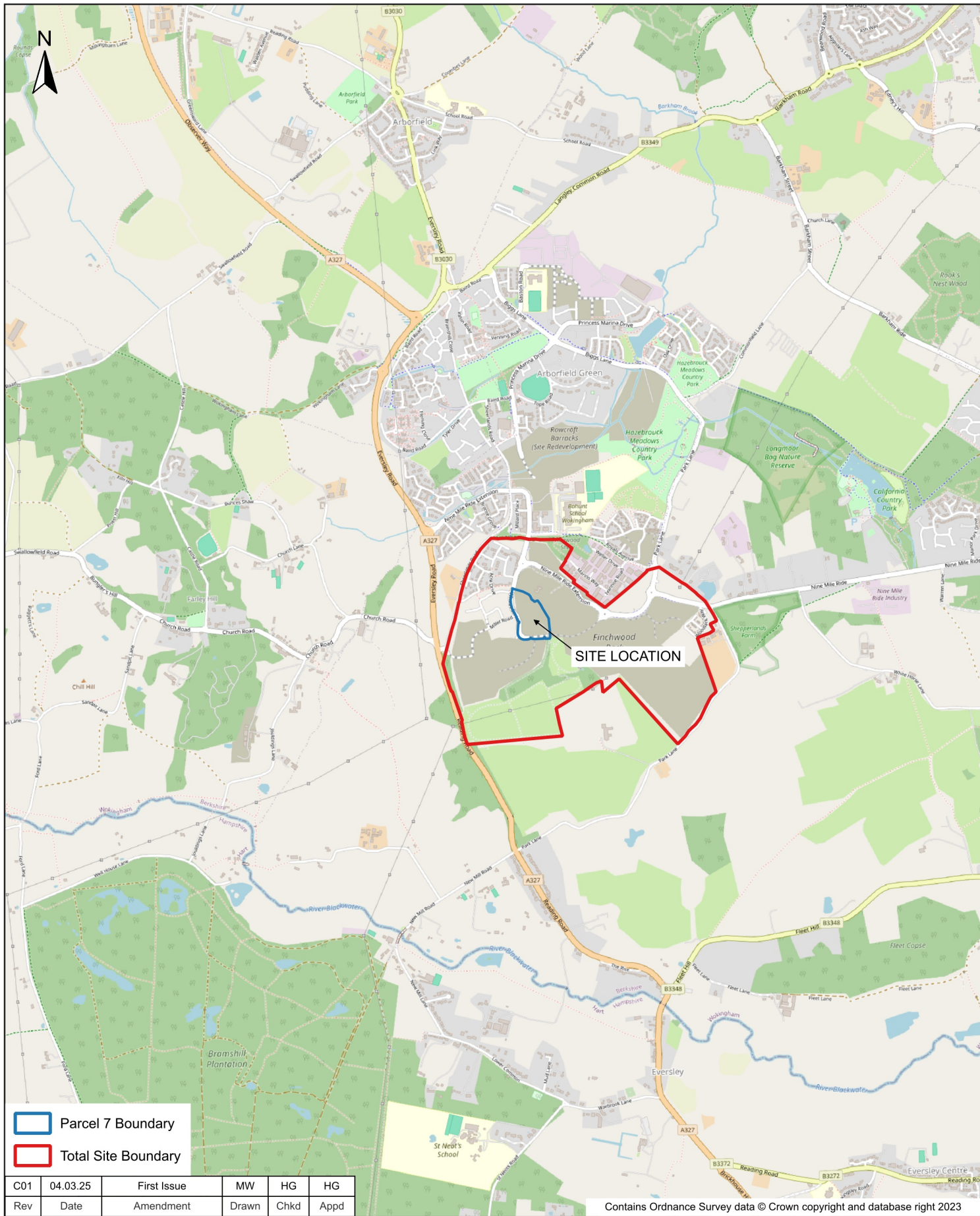
Appendix E – Chemical Laboratory Certificates

APPENDIX A

SERVICE CONSTRAINTS

APPENDIX B

FIGURES AND DRAWINGS



C01	04.03.25	First Issue	MW	HG	HG
Rev	Date	Amendment	Drawn	Chkd	Appd



1 Forest Park Way, Pease Pottage,
West Sussex, RH11 9ZG

Client

Barratts David Wilson Southern Counties

Project Name

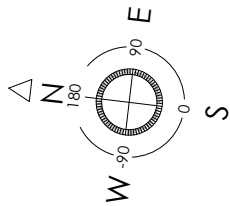
Finchampstead, Verification of Plots 133, 141 and 142

Description

Plot Location Plan

Dimension m	Size A4	Scale 1:25,000	Geolocation 476885, 164507	Project ID 3750855	Drawing no. 11101	Rev C01	File name 3750855-LW-111-XX-D-G-11101-C01
----------------	------------	-------------------	-------------------------------	-----------------------	----------------------	------------	--

JOB CODE: BAR-FIN
POST CODE: RG40 4AL
IN/ON/FLAT: IN-ROOF
PANEL: 400W
INVERTER TYPE: STANDARD
INVERTER LOCATION: LOFT
BATTERY: NO
BLOCK: N/A



B	IN-ROOF PV Site Layout	09/08/23	JM	M
A	Initial PV Site Layout	17/05/2023	JM	M

General Notes:

1. All Dimensions are in mm.
2. All Dimensions in abeyance and subject to confirmation by HBS NE Limited T/A UPOWA following design.
3. Images are for general information only.
4. HBS NE Limited T/A UPOWA reserve the right to revise this drawing in the interests of system development.
5. Inverters are to be located by the loft hatch on fire board in the loft space to minimise D.C cable runs and therefore minimise D.C losses.
6. Refer to manufacturers details for further product information.
7. This drawing layout does not account for any mansafe, plant, penetrations or miscellaneous equipment not shown.
8. It is the clients responsibility to notify HBS NE Limited T/A UPOWA of anything which may restrict the area available to the system or adjacent structures which would shade the system.
9. This drawing remains the intellectual property of HBS NE Limited T/A UPOWA and may be distributed only with permission expressed in writing.

Site Name

Barratt Homes - Finchampstead

Drawing Title:

PV Site Layout - Plots 101 - 200

Drawing No:
BAR-FIN-500

Revised
B

Scale:
NTS

A3

Drawn By / Date:
JM - 09/08/2023

Checked B
MS

Status
DE

Sheet:
001





LEGEND

-  Hand Dug Pit Location
-  Sample Location

Notes:
Base plan provided by the Client
Drawing Ref: 'BAR-FIN-500' PV Site Layout - Plots 101-200

 leap environmental part of RSK Geosciences 1 Forest Park Way, Pease Pottage, West Sussex, RH11 9ZG			Client Barratts David Wilson Southern Counties					<table><tr><td>C01</td><td>04.03.25</td><td>First Issue</td><td>MW</td><td>HG</td><td>HG</td></tr><tr><td>Rev</td><td>Date</td><td>Amendment</td><td>Drawn</td><td>Chkd</td><td>Appd</td></tr></table> 03691215 m 						C01	04.03.25	First Issue	MW	HG	HG	Rev	Date	Amendment	Drawn	Chkd	Appd
			C01	04.03.25	First Issue	MW	HG							HG											
			Rev	Date	Amendment	Drawn	Chkd							Appd											
			Project Name Finchampstead, Verification of Plots 133, 141 and 142																						
Description Sample Location Plan																									
Dimension m	Scale 1:350	Size A3	Project ID 3750855	Drawing no. 22201	Revision C01	File name 3750855-LW-222-XX-D-G-22201-C01																			

