Condition 17 – Contaminated Land Verification & Validation Report

Prepared by:

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London SW19 2RR

Revision	2.1
Issue Date	5 February 2026
Prepared by	K Potgieter, MSc Chemistry (applied)
Basis of Preparation	This report has been prepared by a competent environmental planning professional with experience in contaminated land risk assessment, remediation strategy implementation, and planning condition discharge for residential developments. The author has extensive experience in interpreting laboratory soil analysis results against UK Generic Assessment Criteria and in preparing validation reports in accordance with BS10175 and relevant DEFRA and Environment Agency guidance.

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1. Introduction

This Verification and Validation Report has been prepared to support the discharge of Condition 17 relating to land contamination for the approved development at Pulborough, West Sussex. This submission replaces all previous validation material and has been restructured to directly mirror the validation requirements set out in Section 3 of the approved Remediation Method Statement (RMS) dated 28 October 2024, prepared by Dr Richard Wesson.

2. Planning Condition & Approved Documents

Condition 17 requires the submission of a verification report demonstrating that the approved remediation scheme has been implemented and validated. The remediation strategy is set out in the approved Remediation Method Statement (RMS). Supporting laboratory certificates, plans, waste transfer documentation and correspondence are provided separately as appendices.

3. Summary of Remediation Works Undertaken

Remediation works were undertaken in the identified remedial areas associated with historic lead and PAH contamination. The works comprised removal of existing topsoil, excavation of impacted soils to the depths specified in the RMS, off-site disposal of contaminated material, and reinstatement with certified clean imported topsoil.

4. Validation Protocol (RMS §3) – Evidence of Compliance

This section addresses each requirement of RMS Section 3.1 in turn and identifies how compliance has been achieved.

RMS §3.1 Requirement	Evidence of Compliance
Visual validation of excavation depth with photographic evidence	Photographs demonstrate topsoil removal, excavation to the required depths, and exposed formation levels within each remedial area.
Sampling of excavation base to confirm contaminant concentrations below GAC	Base validation samples were collected from each remedial area and analysed by a UKAS/MCERTS accredited laboratory.
Representative capping/topsoil samples at 1 per plot per layer	As the development comprises a single plot with two discrete remedial areas, representative topsoil samples were collected from each reinstated area.

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Waste transfer notes for all removed material	Waste Transfer Notes confirming lawful off-site disposal are provided in the appendices.
Submission of a validation report to the LPA	This document constitutes the required validation report.

5. Photographic Record

A photographic record is provided within this report to demonstrate each stage of the remediation process. Photographs show topsoil stripping, excavation, base exposure, sampling and reinstatement.



Fig 1 Waste skip with contaminated soil



Fig 2.1 Area 1 excavation to 300mm



Fig 2.2 Area 1 sampling

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Fig 2.3 Area 1 New Topsoil



Fig 2.4 Area 1 New Topsoil Sampling



Fig 3.1 Area 2 excavation to 300mm



Fig 3.2 Area 2 sampling



Fig 3.3 Area 2 New Topsoil



Fig 3.4 Area 2 New Topsoil sampling

6. Laboratory Testing – Thresholds & Results

Laboratory testing was undertaken by a UKAS and MCERTS accredited laboratory. Assessment thresholds are derived from Appendix 1 of the RMS. For each sample, the relevant Generic Assessment Criteria (GAC) are summarised alongside the reported results.

All reported concentrations for lead and PAH compounds were below the applicable GACs. Asbestos screening of all soil samples confirmed no detectable asbestos present. No exceedances were identified.

Laboratory Summary Tables (for ease of review)

The following tables summarise the applicable Generic Assessment Criteria (GAC) from Appendix 1 of the approved Remediation Method Statement alongside the reported laboratory results. This summary is provided to assist Environmental Health and Contaminated Land Officers and does not replace the full laboratory certificates, which are provided separately as appendices.

Appendix A – Area 1 Base of Excavation Sample

Determinant	Assessment Criterion (mg/kg)	Assessment Basis	Reported Result (mg/kg)	Compliance
Lead	200	Residential GAC	<50	Compliant

Benzo(a)pyrene	1.0	PAH GAC (2.5% SOM)	<0.1	Compliant
Total PAHs	40	PAH GAC	<5	Compliant
Asbestos	N/A	Qualitative screen	Not Detected	Compliant

Appendix B – Area 2 Base of Excavation Sample

Determinant	Assessment Criterion (mg/kg)	Assessment Basis	Reported Result (mg/kg)	Compliance
Lead	200	Residential GAC	<45	Compliant
Benzo(a)pyrene	1.0	PAH GAC (2.5% SOM)	<0.1	Compliant
Total PAHs	40	PAH GAC	<4	Compliant
Asbestos	N/A	Qualitative screen	Not Detected	Compliant

Appendix C – Area 1 Imported Topsoil Sample

Determinant	Assessment Criterion (mg/kg)	Assessment Basis	Reported Result (mg/kg)	Compliance
Lead	200	Residential GAC	<35	Compliant
Benzo(a)pyrene	1.0	PAH GAC (2.5% SOM)	<0.1	Compliant
Total PAHs	40	PAH GAC	<3	Compliant
Asbestos	N/A	Qualitative screen	Not Detected	Compliant

Appendix D – Area 2 Imported Topsoil Sample

Determinant	Assessment Criterion (mg/kg)	Assessment Basis	Reported Result (mg/kg)	Compliance
Lead	200	Residential GAC	<30	Compliant
Benzo(a)pyrene	1.0	PAH GAC (2.5% SOM)	<0.1	Compliant
Total PAHs	40	PAH GAC	<3	Compliant
Asbestos	N/A	Qualitative screen	Not Detected	Compliant

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7. Data and Information Consistency Review

A cross-check of the remediation method statement, laboratory certificates, plans and waste documentation has been undertaken. No material inconsistencies have been identified that would affect the validity of the remediation or the conclusions of this report.

8. Conclusions and Request for Discharge

The remediation works have been carried out in full accordance with the approved Remediation Method Statement. The validation evidence demonstrates that contaminated soils have been appropriately removed, disposed of, and replaced with certified clean material, and that residual soil conditions meet the required assessment criteria.

It is therefore respectfully requested that the Local Planning Authority confirms that Condition 17 has been satisfactorily discharged.

Environmental Health Officer Statement

This report has been prepared specifically to address the Environmental Health Officer's comments regarding validation methodology. Sampling density reflects the single-plot nature of the development, with representative validation samples collected from each distinct remedial area. All results demonstrate compliance with the adopted residential assessment criteria and confirm that the site is suitable for its intended end use.

Appendices

- Site Plan
- Laboratory Tests
- Waste Transfer Note
- Imported Soil Supplier Certificate
- Remedial Statement

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Red File Projects Ltd

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Attention: Martie De Villiers

CERTIFICATE OF ANALYSIS

Date of report Generation:	01 December 2025
Customer:	Red File Projects Ltd
Sample Delivery Group (SDG):	251122-51
Your Reference:	Ransoms Apartments, Station Road Pulborough RGH20 1GD
Location:	
Report No:	784442
Order Number:	

We received 1 sample on Saturday November 22, 2025 and 1 of these samples were scheduled for analysis which was completed on Monday December 01, 2025. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Justin Keeton
Business Unit Leader - Land

1291

CERTIFICATE OF ANALYSIS

SDG: 251122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
32499515	RCH SOIL	ESS1	0.40 - 0.45	20/11/2025

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG: 251122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			32499515		
Customer Sample Reference			RCH SOIL		
AGS Reference			ES51		
Depth (m)			0.40 - 0.45		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 1	X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 1		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 1			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 1		X	
PAH by GCMS	All	NDPs: 0 Tests: 1		X	
Sample description	All	NDPs: 0 Tests: 1		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 1		X	
VOC MS (S)	All	NDPs: 0 Tests: 1			X

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
32499515	RCH SOIL	0.40 - 0.45	Dark Brown	Sandy Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

CERTIFICATE OF ANALYSIS

SDG: 51122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
***	6:2 FTAB (see appendix)
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	
			Depth (m)	0.40 - 0.45
			Sample Type	Soil/Solid (S)
			Date Sampled	20/11/2025
			Sample Time	15:10:00
			Date Received	22/11/2025
			SDG Ref	251122-51
			Lab Sample No.(s)	32499515
			AGS Reference	ESS1
Moisture Content Ratio (% of as received sample)	%	PM024	20	
Lead	<0.7 mg/kg	TM181	66.3 M	

CERTIFICATE OF ANALYSIS

SDG: 251122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

PAH by GCMS

Results Legend
- # ISO17025 accredited.
- M mCERTS accredited.
- aq Aqueous / settled sample.
- diss.filt Dissolved / filtered sample.
- tot.unfilt Total / unfiltered sample.
- * Subcontracted - refer to subcontractor report for accreditation status.
- ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
- *** 6:2 FTAB (see appendix)
- 1-4♦§@ Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	
				RCH SOIL
			Depth (m)	0.40 - 0.45
			Sample Type	Soil/Solid (S)
			Date Sampled	20/11/2025
			Sample Time	15:10:00
			Date Received	22/11/2025
			SDG Ref	251122-51
			Lab Sample No.(s)	32499515
			AGS Reference	ESS1
Naphthalene-d8 % recovery**	%	TM218	86	
Acenaphthene-d10 % recovery**	%	TM218	83.2	
Phenanthrene-d10 % recovery**	%	TM218	81.9	
Chrysene-d12 % recovery**	%	TM218	80.5	
Perylene-d12 % recovery**	%	TM218	83	
Naphthalene	<9 µg/kg	TM218	<9 M	
Acenaphthylene	<12 µg/kg	TM218	23.5 M	
Acenaphthene	<8 µg/kg	TM218	<8 M	
Fluorene	<10 µg/kg	TM218	<10 M	
Phenanthrene	<15 µg/kg	TM218	127 M	
Anthracene	<16 µg/kg	TM218	25.8 M	
Fluoranthene	<17 µg/kg	TM218	363 M	
Pyrene	<15 µg/kg	TM218	342 M	
Benz(a)anthracene	<14 µg/kg	TM218	169 M	
Chrysene	<10 µg/kg	TM218	213 M	
Benzo(b)fluoranthene	<15 µg/kg	TM218	309 M	
Benzo(k)fluoranthene	<14 µg/kg	TM218	110 M	
Benzo(a)pyrene	<15 µg/kg	TM218	213 M	
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	177 M	
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23 M	
Benzo(g,h,i)perylene	<24 µg/kg	TM218	171 M	
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	2240	

CERTIFICATE OF ANALYSIS

SDG: 51122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
***	6:2 FTAB (see appendix)
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	
			Depth (m)	0.40 - 0.45
			Sample Type	Soil/Solid (S)
			Date Sampled	20/11/2025
			Sample Time	15:10:00
			Date Received	22/11/2025
			SDG Ref	251122-51
			Lab Sample No.(s)	32499515
			AGS Reference	ESS1
GRO Surrogate % recovery**	%	TM089		97.3
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089		<10
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089		<10
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089		<10
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000 #
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414		4340 #
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414		<1000
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		<5000
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414		16600
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089		<10
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089		<10
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089		<10
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000 #
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1900 #
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414		13200 #
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		1330
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414		<1000
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414		16600
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414		16600
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089		<50
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089		<50
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089		<20

CERTIFICATE OF ANALYSIS

SDG: 251122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
***	6:2 FTAB (see appendix)
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	
			RCH SOIL	
			Depth (m)	0.40 - 0.45
			Sample Type	Soil/Solid (S)
			Date Sampled	20/11/2025
			Sample Time	15:10:00
			Date Received	22/11/2025
			SDG Ref	251122-51
			Lab Sample No.(s)	32499515
			AGS Reference	ESS1
Dibromofluoromethane**	%	TM116	105	
Toluene-d8**	%	TM116	93.6	
4-Bromofluorobenzene**	%	TM116	73.1	
Methyl Tertiary Butyl Ether	<0.5 µg/kg	TM116	<0.5 M	
Benzene	<1 µg/kg	TM116	<1 M	
Toluene	<1 µg/kg	TM116	<1 M	
Ethylbenzene	<1 µg/kg	TM116	<1 M	
p/m-Xylene	<2 µg/kg	TM116	<2 #	
o-Xylene	<2 µg/kg	TM116	<2 M	
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02	
Sum of BTEX	<7 µg/kg	TM116	<7	

CERTIFICATE OF ANALYSIS

SDG: 51122-51 **Report Number:** 784442 **Superseded Report:**
Client Ref.: Ransoms **Location:** Pulborough

Asbestos Identification - Solid Samples

Results Legend
ISO17025 accredited.
M *m*CERTS accredited.
* Subcontracted test.
1-5&♦§@ Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	RCH SOILESS1 0.40 - 0.45 SOLID 20/11/2025 00:00:00 22/11/2025 05:00:00 251122-51 32499515 TM048	26/11/2025	Paul Poynton	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Description
PM024	Soil preparation including homogenisation, moisture, screens of soils for Asbestos Containing Material
TM048	Identification of Asbestos in Bulk Material
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	The determination of PAH in soil samples by GC-MS
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).

Test Completion Dates

Lab Sample No(s)	32499515
Customer Sample Ref.	RCH SOIL
AGS Ref.	ESS1
Depth	0.40 - 0.45
Type	Soil/Solid (S)
Asbestos ID in Solid Samples	26-Nov-2025
EPH CWG GC (S)	26-Nov-2025
GRO by GC-FID (S)	27-Nov-2025
Metals in solid samples by OES	28-Nov-2025
PAH by GCMS	01-Dec-2025
Sample description	24-Nov-2025
TPH CWG GC (S)	27-Nov-2025
VOC MS (S)	26-Nov-2025

Appendix

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised.
This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur -
e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests.
We therefore cannot carry out any unfiltered analysis.
The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l.
Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only.
It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

20. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

If during the search of the two ‘pinch’ samples by PLM only 1 or 2 fibres or fibre bundles are seen and identified as asbestos, the term ‘trace asbestos identified’ is reported.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Potentially respirable fibres are identified by using a Phase Contrast Microscope.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.
The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

21. 6:2 FTAB

Recovery of 6:2 FTAB in the quality control samples has been observed to be <50% of the target value. Please note the 6:2 FTAB result is supplied as indicative only.

Waste Pre Treatment Transfer Note
Hoare Construction Group Ltd t/a SCS
Waste
Unit 9, Hangar 3
Waste Carrier License: CBDU231153
VAT No: 812 5667 30

Waste Transfer Note

DELIVERY

Account No. L125

LB WASTE MANAGEMENT LTD
LOVELL HOUSE
ST NICHOLAS STREET
PE30 1LY

SITE ADDRESS

IAN ROBINSON
Ransoms Apartments
STATION ROAD PULBOROUGH
RH20 1AH

SITE CONTACT: IAN ROBINSON
SITE TEL: 07712544367

Ticket No.	20593
Date	03/11/2025
Order Number	324039

Skip Details

Skip Size	2 YARD SKIP	**Area**	Horsham
Waste Type	MIXED C&D	**SIC Code**	38.11
EWC Code	17 09 04	**Time On site:**	07:49
Vehicle Reg	MM23 FNH	**Time Off Site:**	07:50
Driver	DAVE WARD		

Special Instructions

HAULIER	HOARE CONSTRUCTION GROUP LTD T/A SCS WASTE
Waste Carrier Licence No:	CBDU231153
Waste Carrier Signature:	
Print Name:	DAVE WARD
Date:	03/11/2025

An electronic copy of this Waste Transfer Note is available on request.

Warning - Under the Duty of Care Environmental Protection Act 1990, the hirer is responsible for informing the driver of the contents of the skip..

The following wastes should not be put in a skip, unless by prior arrangement
Asbestos, Gas Bottles, Battery, Fridges, Freezers, Aerosols of any kind, Liquid Wastes, containers that have had or are partially full of any of the following; Oil, Paint, Varnishes, Solvents, any other Chemicals, Plasterboard, Fluorescent Tubes, Televisions, Computer Monitors, Tyres, Mattresses.

Should any of these items be found in a skip, Additional charges will be payable.

It is an offence to overload skips or to set fire to materials in the skip.
You are responsible for the container whilst on hire. Any damage caused during this period will be charged to the Hirer. If the skip/container is stolen, replacement costs will be the responsibility of the Hirer. Any unauthorised relocation which results in damage or obstruction of access to our skip will be liable to a surcharge. Hirers ordering vehicles off the public highway do so entirely at their own risk. Our Hire period is 14 days. Waiting times are calculated after 30 minutes and wasted journeys are costed on milage. When requesting our vehicles to leave the public highway, we do not accept any liability for any damage to either private property and/or public access i.e. kerbs. pavements ,manholes etc

Full Terms and Conditions are available on request

For & on behalf of the customer, I have read and accept the Terms and Conditions. I agree to the waste description (EWC) and that the waste transferred is as stated above. I confirm I have fulfilled my duty to apply the waste hierarchy by regulation 12 of the Waste (England and Wales) Regulations 2011.

Print Name: Brooks Hill

Signature: 

BA1

analysis report

TS0620/10 v2.1

Test Date 06/07/2020

Sample received 26/06/2020

ULTIMATE TOPSOIL
YOU'RE IN SAFE HANDS

Client:
George Davis
New ton lodge
Clifton Reynes
Olney
Bucks. MK46 5DS

Sample taken from:
Topsoil
-
-
-
-

concentration mg l^{-1}		
Phosphorus	Potassium	Magnesium
P	**K**	**Mg**
27	129	84

Index		
Phosphorus	Potassium	Magnesium
P	**K**	**Mg**
3	2	2

Total Nitrogen
N %w/w
0.16

pH
6.8

Determinand	Method
pH	potentiometrically BS1377- 3 section 9
Phosphorous (P)	Extracted with Sodium bicarbonate then determined colourimetrically
Potassium (K)	Extracted in ammonium nitrate then flame AAS
Magnesium (Mg)	Extracted in ammonium nitrate then flame AAS
Total Nitrogen (N)	Combustion technique

Comments

Report authorised by:
N. Fahey.
Laboratory manager



Contaminated Land Solutions
Tel: 0117 369 0156
Email: richard@wessonenvironmental.co.ukWeb: www.wessonenvironmental.co.uk

Address: Ransoms, Station Road, Pulborough, West Sussex

Date: 28th October 2024

Planning application reference: DC/22/1059

Remediation Method Statement

1.1 Background

A site investigation was carried out by Wesson Environmental in July 2024. This encountered 2 hotspots where lead was elevated above GAC in the trial pits TP01 and TP05. PAH compounds were also elevated above GAC in the former location.

2 Remedial measures

2.1 Shallow soils

The current data indicates that contamination of site soils is by contaminants that are unlikely to form a vapour phase. Therefore, the risks to future site users will occur where there is potential for contact with site soils or dust generation. This appears to occur in 2 hotspots. Therefore, we propose that soils are excavated in the areas as shown in figure 2. Because the data indicates that a rapid decline in contaminant concentration occurs with depth, it is proposed that removal of 300mm of soil will be sufficient. The excavation and fill should therefore be as follows:

1. Soils must be excavated to a depth that will allow the cover system to be placed as described below. The excavation should be supervised to ensure removal of contaminated soils.
2. The base of the excavated areas should be sampled and tested to ensure that contaminants described above are no longer present.
3. The cover system will comprise a minimum of 300mm depth comprising:
    a. 150mm of topsoil
    b. 200mm of subsoil.
    c. Alternatively, fill comprising of topsoil only is acceptable.

4. All imported subsoils and topsoils should be suitable for proposed use of the site for residential housing. It is recommended that in the case of topsoils that these comply with BS3882:2015. Validation of soils must take place after placement on site (see 3.1). Concentrations of potential contaminants present must be below the guideline values in Appendix 1. The laboratory analysis must also include a screen for asbestos.
5. The base of the excavation should be compacted prior to placement of capping.

3 Validation

3.1 Soils

1. The depth of excavation in the garden areas should be visually validated and photographic evidence produced to show adequate removal of soils has taken place. This should include photographs taken during the excavation.
2. Sampling from the base of the excavation should place to ensure that concentrations of the contaminants of concern (lead and PAH compounds) are below GAC
3. Representative samples of the capping soils shall be collected at a rate of 1 sample per plot following emplacement. If separate topsoil and sub soil is placed, then sampling should be at the rate of 1 sample per plot per layer i.e. 1 sample of topsoil per plot and 1 sample of subsoil per plot. Each sample shall be forwarded to a UKAS and MCERTS accredited laboratory for analysis of the determinands in Appendix 1 plus asbestos screen. Concentrations must be below the concentrations detailed in tables Appendix 1.
4. Waste transfer notes must be obtained for all materials going off site and should be included in the validation report.
5. A validation report shall be produced and submitted to the LPA including details of the above.

4 Discovery strategy

Care should be taken during excavation or working of the site to investigate any soils, which appear by eye or odour to be contaminated or of different character to those analysed. In the event of any discovery of potentially contaminated soils or materials, it should be quarantined and reported to the most senior member of site staff for action. The location, type and quantity must be recorded, and the Local Authority Contaminated Land Officer notified immediately, and approval must be sought prior to implementing any proposed mitigation action.

The discovery strategy must remain on site at all times and must demonstrate a clear allocation of responsibility for reporting and dealing with contamination. A copy of the strategy must be placed on the health & safety notice board and /or displayed in a prominent area where all site staff are able to take note of and consult the document at any time. Any member of the workforce entering the site to undertake any excavation must be made aware of the potential to discover contamination and the discovery strategy.

Dr. Richard Wesson



Wesson Environmental

Appendix 1

List of determinands and relevant guideline values

Table 1. Contaminant thresholds.

Inorganics		
RESIDENTIAL WITH PLANT UPTAKE		
Determinand	GAC	Source
Arsenic	37	LQM/CIEH S4UL
Barium	1300	CLEA
Beryllium	1.7	LQM/CIEH S4UL
Boron (water-soluble)	290	LQM/CIEH S4UL
Cadmium	11	LQM/CIEH S4UL
Chromium	910	LQM/CIEH S4UL
Copper	2400	LQM/CIEH S4UL
Lead	210	C4SL
Mercury	40	LQM/CIEH S4UL
Nickel	180	LQM/CIEH S4UL
Selenium	250	LQM/CIEH S4UL
Vanadium	410	LQM/CIEH S4UL
Zinc	3700	LQM/CIEH S4UL
Asbestos	None	

PAH Compounds				
RESIDENTIAL WITH PLANT UPTAKE				
Determinand	**1% SOM**	**2.5% SOM**	**6% SOM**	**Source**
Acenaphthene	210	510	1100	LQM/CIEH S4UL
Acenaphthylene	170	420	920	LQM/CIEH S4UL
Anthracene	2400	5400	11000	LQM/CIEH S4UL
Benzo(a)Anthracene	7.2	11	13	LQM/CIEH S4UL
Benzo(a)Pyrene	2.2	2.7	3	LQM/CIEH S4UL
Benzo(b/k)fluoranthene	2.6	3.3	3.7	LQM/CIEH S4UL
Benzo(ghi)Perylene	320	340	350	LQM/CIEH S4UL
Benzo(k)fluoranthene	77	93	100	LQM/CIEH S4UL
Chrysene	15	22	27	LQM/CIEH S4UL
Dibenzo(ah)Anthracene	0.24	0.28	0.3	LQM/CIEH S4UL
Fluoranthene	280	560	890	LQM/CIEH S4UL
Fluorene	170	400	860	LQM/CIEH S4UL
Indeno(123-cd)Pyrene	27	36	41	LQM/CIEH S4UL
Naphthalene	2.3	5.6	13	LQM/CIEH S4UL
Phenanthrene	95	220	440	LQM/CIEH S4UL
Pyrene	620	1200	2000	LQM/CIEH S4UL

TPH Compounds				
RESIDENTIAL WITH PLANT UPTAKE				
Determinand	**1% SOM**	**2.5% SOM**	**6% SOM**	**Source**
TPH (C5-C6 aliphatic)	42	78	160	LQM/CIEH S4UL
TPH (C6-C8 aliphatic)	100	230	530	LQM/CIEH S4UL
TPH (C8-C10 aliphatic)	27	65	150	LQM/CIEH S4UL
TPH (C10-C12 aliphatic)	130	330	760	LQM/CIEH S4UL
TPH (C12-C16 aliphatic)	1100	2400	4300	LQM/CIEH S4UL
TPH (C16-C21 aliphatic)	65000	92000	110000	LQM/CIEH S4UL
TPH (C21-C35 aliphatic)	65000	92000	110000	LQM/CIEH S4UL
TPH (C6-C7 aromatic)	70	140	300	LQM/CIEH S4UL
TPH (C7-C8 aromatic)	130	290	660	LQM/CIEH S4UL
TPH (C8-C10 aromatic)	34	83	190	LQM/CIEH S4UL
TPH (C10-C12 aromatic)	74	180	380	LQM/CIEH S4UL
TPH (C12-C16 aromatic)	140	330	660	LQM/CIEH S4UL
TPH (C16-C21 aromatic)	260	540	930	LQM/CIEH S4UL
TPH (C21-C35 aromatic)	1100	1500	1700	LQM/CIEH S4UL

BTEX Compounds				
RESIDENTIAL WITH PLANT UPTAKE				
Determinand	**1% SOM**	**2.5% SOM**	**6% SOM**	Source
Benzene	0.087	0.17	0.37	LQM/CIEH S4UL
EthylBenzene	47	110	260	LQM/CIEH S4UL
M/P Xylene	56	130	310	LQM/CIEH S4UL
O Xylene	60	140	330	LQM/CIEH S4UL
Toluene	130	290	660	LQM/CIEH S4UL

Appendix 2

Figures

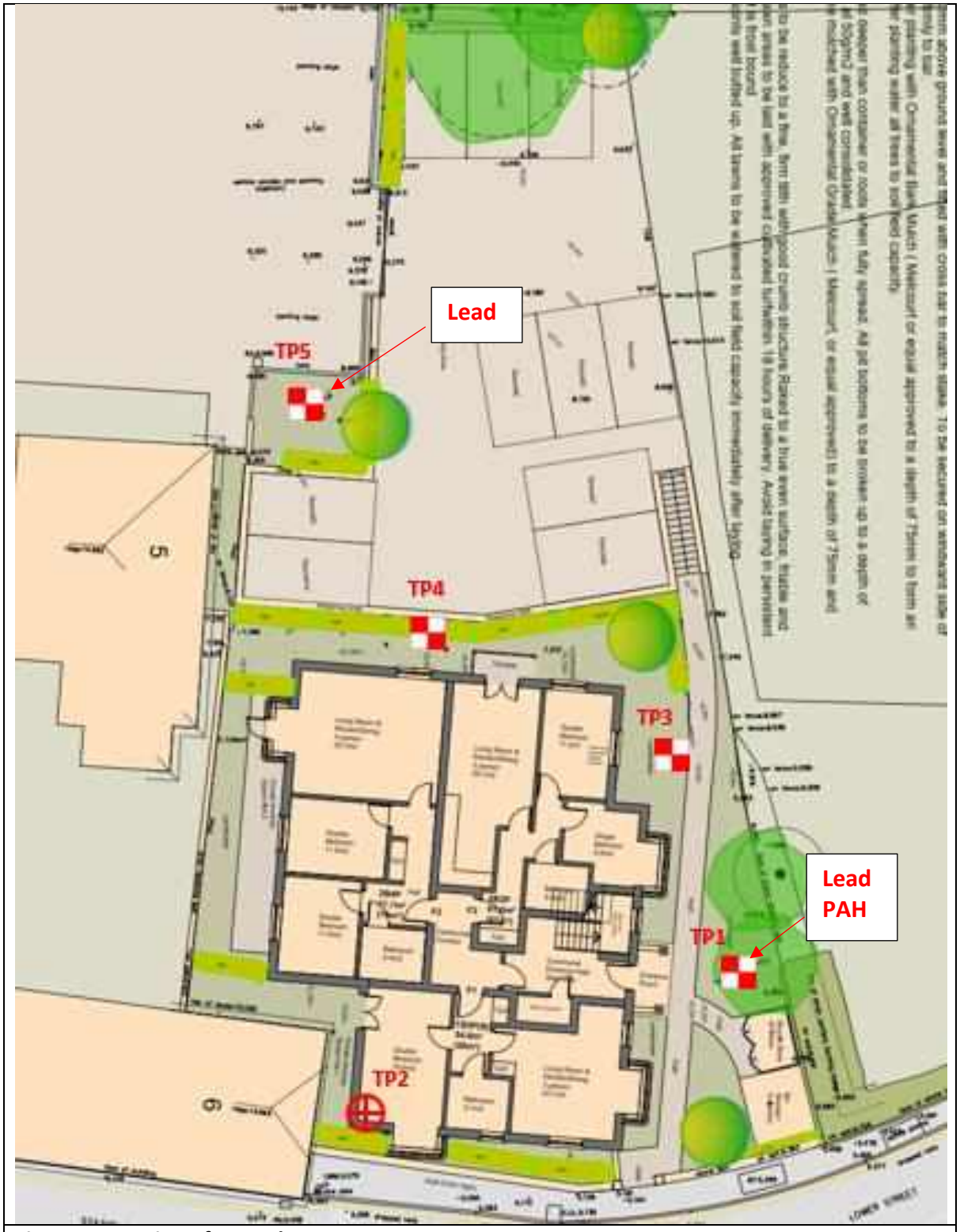


Figure 1. Location of exceedances

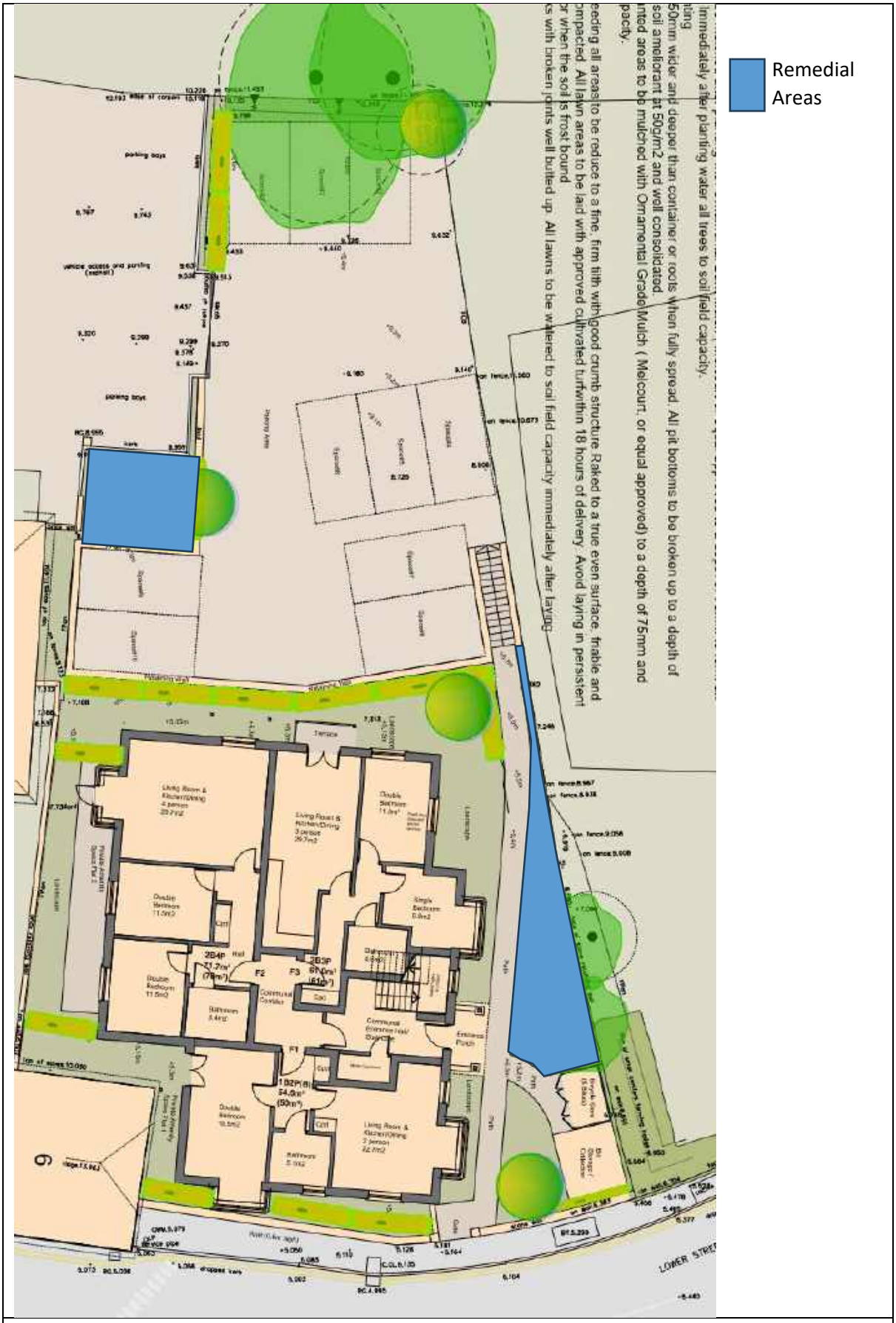


Figure 2. Remedial Areas

Wesson Environmental

Solutions To Your Contaminated Land Issues

Site: Ransoms, Station Road, Pulborough, West Sussex
Application Number: DC/22/1059
Date: 28th October 2024

Thank you for your response to the intrusive investigation that was issued in July 2024. We have issued a remedial method statement separately.

I also note the comment that 'The presence of polyaromatic hydrocarbons in site soils has been confirmed and these can affect plastic water supply pipe work'. Due to the low concentrations present, although raised above GAC and the relatively low water solubility of this group of compounds, we would consider this to be unlikely. Also, this group of compounds have a low mobility once adsorbed onto soils[1] due to their affinity to organic matter. The data indicates that exceedances only occur in a single location – TP01 with exceedances occurring in the case of benzo (a) pyrene, benzo (b) fluoranthene and dibenz (ah) anthracene. These compounds have a solubility of $3.8x10^{-3}$ mg/l ,$1.5x10^{-3}$ mg/l and $6x10^{-4}$ respectively[2]. In all other samples, the concentrations of PAH compounds are eithersubstantially below GAC of not present above LOD indicating that this represents a hotspot in shallow soils. The soils where the exceedance occurred, represented topsoils and it is likely that the possible source would be aerial deposition. Because of the low solubility of these compounds we would consider that leaching into the underlying natural soils to be minimal and therefore unlikely to exceed GAC and therefore unlikely to be present at anything more than marginal concentrations at the typical depth where water pipes are to be laid. We would also consider it unlikely that water supply pipes would coincide with this location with the route being more likely to be from the road to the south. As can be seen from the data from TP2 taken on this part of the site, the shallow and deeper samples indicate PAH compounds are either below or in the case fluoranthene in the shallow sample at LOD.

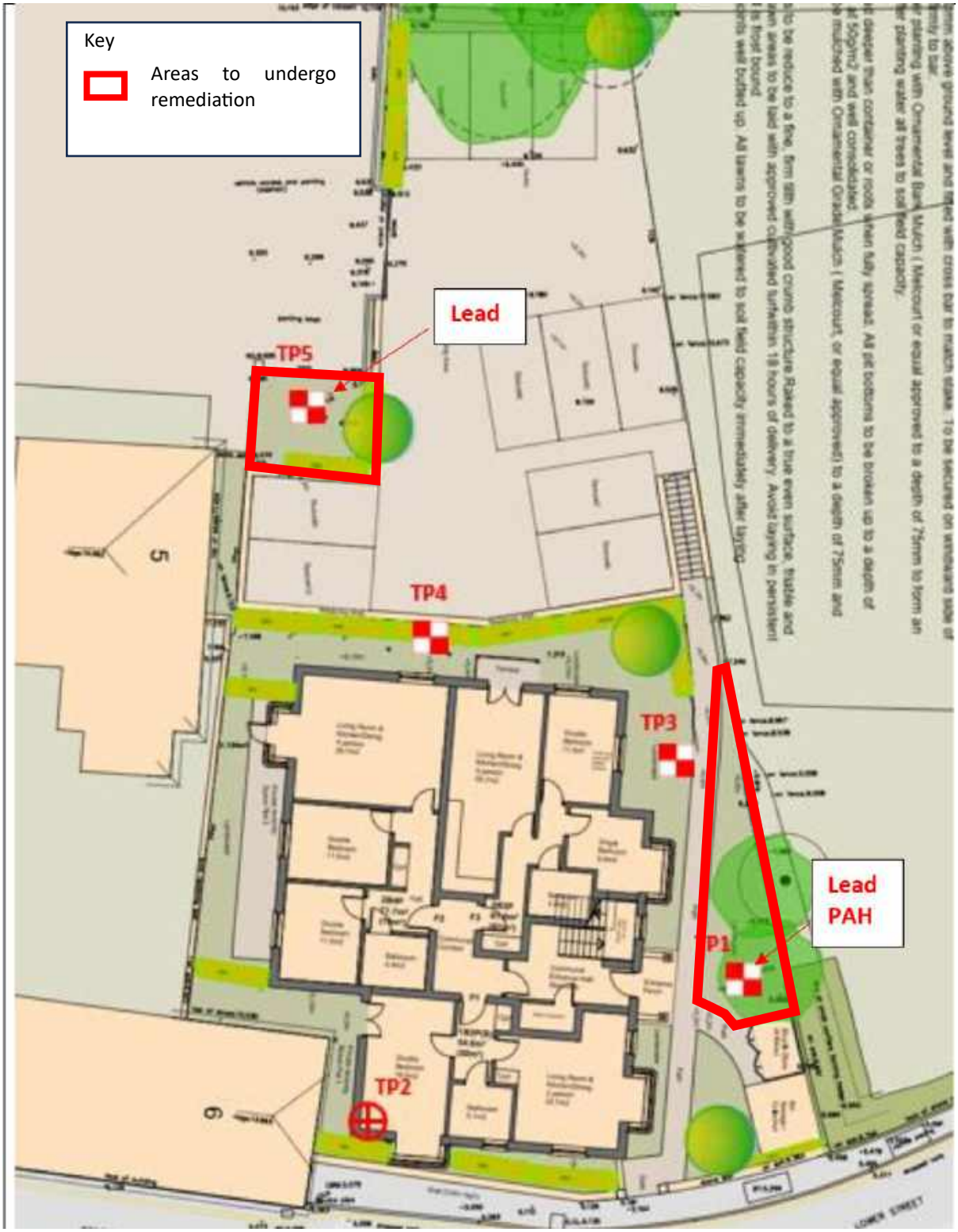
We would also point to the WaterUK guidance[3] . This details the contaminants that should be tested for when selecting water pipes to be laid in a development. This includes SVOC compounds, but crucially excludes PAH compounds because the risk from these is considered to be minimal.

Dr. Richard Wesson

Environmental Consultant.
Wesson Environmental Ltd

1. Choi H, Harrison R, Komulainen H, et al. Polycyclic aromatic hydrocarbons. In: WHO Guidelines for Indoor Air Quality: Selected Pollutants. Geneva: World Health Organization; 2010. 6. Available from: https://www.ncbi.nlm.nih.gov/books/NBK138709/.
2. Nathaniel et al. 2015.The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality press.
3. Water UK and Home Builders Federation. 2014. Contaminated Land Assessment Guidance.

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Email: richard@wessonenvironmental.co.uk Web: www.wessonenvironmental.co.uk
Registered Number: 11936768


Key
Areas to undergo remediation
Lead
TP5
TP4
TP3
TP2
TP1
Lead PAH