



Our Ref: E22/7944/MD/005

Date: 19 February 2025

FAO Helen Davies

HDavies@Branchwater-Developments.com

Dear Sir,

Re: Proposed development off Moor Lane, Gomersal for Binks Executive Homes

Further to the initial site investigation works, as detailed in report "Geo-Environmental Ground Investigation Report on Proposed Residential Development at Land off Moor Lane, Gomersal Ref E22/7944/R001 dated August 2023", further investigation works were requested by the client.

In particular, trial trenching was to be undertaken to confirm there was no coal likely to be encountered within 1m of existing ground levels, determine the extent of the contamination hotspot and investigate the north western corner of the site which was previously inaccessible due to tree growth. Please find below and attached our findings in relation to these additional investigation works.

1. FIELDWORK

- 1.1 The fieldwork comprised of two trial trenches and an additional trial pit undertaken with an 8 tonne 360 tracked excavator with 600mm bucket. The location of the trial pits and boreholes are indicated on Drawing E19/7491/03/04A.
- 1.2 Materials encountered within the trial pits and trenches were examined and categorised. The trial pit logs are contained within Appendix B at the rear of the report.
- 1.3 Further to the initial investigation the supplementary works were undertaken to determine the following:
 - 1.4.1 Further soil sampling adjacent the contamination hotspot
 - 1.4.2 Further investigate the possibility of a coal outcrop on site by trial trenching.
 - 1.4.3 Additional trial pit in the north west corner of the site.

2. RESULTS OF THE INVESTIGATION

2.1 Additional Contamination Testing

- 2.1.1 Due to the single elevated level of Lead recorded in TP103 near the southern boundary, further samples were taken to the north, east, south and west of the trial pit to determine the extent of the contamination hotspot.
- 2.1.2 All four samples taken proved free from contamination when compared to the tier 1 trigger levels for metals for residential use with plant uptake. This proves the contamination is contained within a relatively small 6x4m area centred on the trial pit.
- 2.1.3 A copy of the chemical analysis results, along with the tier 1 trigger levels for comparison, are attached to the rear of this report.

2.2 Trial Trenching and Trial Pit

- 2.2.1 Trial trenches TT201 and TT202 were undertaken in the vicinity of BH03 and BH04 from the original site investigation works as no coal seams were recorded in BH03, while they were recorded in BH04.
- 2.2.2 The trial trenches proved 0.3m of topsoil overlying firm light brown mottled grey clay to a depth of 1.4-1.5m below existing ground levels. In TT01 this was proved to be underlain by a moderately strong weathered mudstone to a depth of 1.8m below existing ground levels. TT01 was terminated in the mudstone strata while TT01 was terminated in the firm clay strata.
- 2.2.3 In addition to the trial trenching, TP203 was undertaken in the previously inaccessible north western corner of the site. This proved 0.4m of dark grey topsoil overlying 0.6m of soft to firm yellow sandy clay with sandstone flags and cobbles. A firm to stiff yellow clay was encountered beneath this at 1.0m, and extended to the base of the trial pit at 2.1m below existing ground levels.
- 2.2.4 No evidence of a coal seam was encountered in the trial pits or trial trenches.
- 2.2.5 The trial pit logs, along with the trial pit location plan, are attached to the rear of this report.

3. CONCLUSIONS

- 3.1 In the original site investigation works, only the sample of topsoil from TP03 proved an elevated level of Lead. This proves the contamination is contained within a relatively small 6x4m area centred on the trial pit at OS Grid reference SE20773 26774. Based on a 0.3m depth of topsoil, approximately 7.5m³ of topsoil is to be removed from site.
- 3.2 It is recommended that this material is excavated and removed from site to a licensed waste facility. Waste transfer tickets should be retained for inclusion in a remediation validation report.

- 3.3 The additional trial trenching indicated no coal seams were encountered shallower than 1.5m below existing ground levels. Due to the thin and weak nature of the coal seam encountered on site, it is considered likely this peters out before reaching ground level and is unlikely to be encountered at shallower depths. It is therefore considered a low risk to the development of the site.
- 3.4 The additional trial pit undertaken in the north west corner of the site proved similar strata to that encountered in the remainder of the site during the initial site investigation. This does not affect the foundation proposals stated in the aforementioned Site Investigation report for strip/trench fill footings onto the firm clay strata.

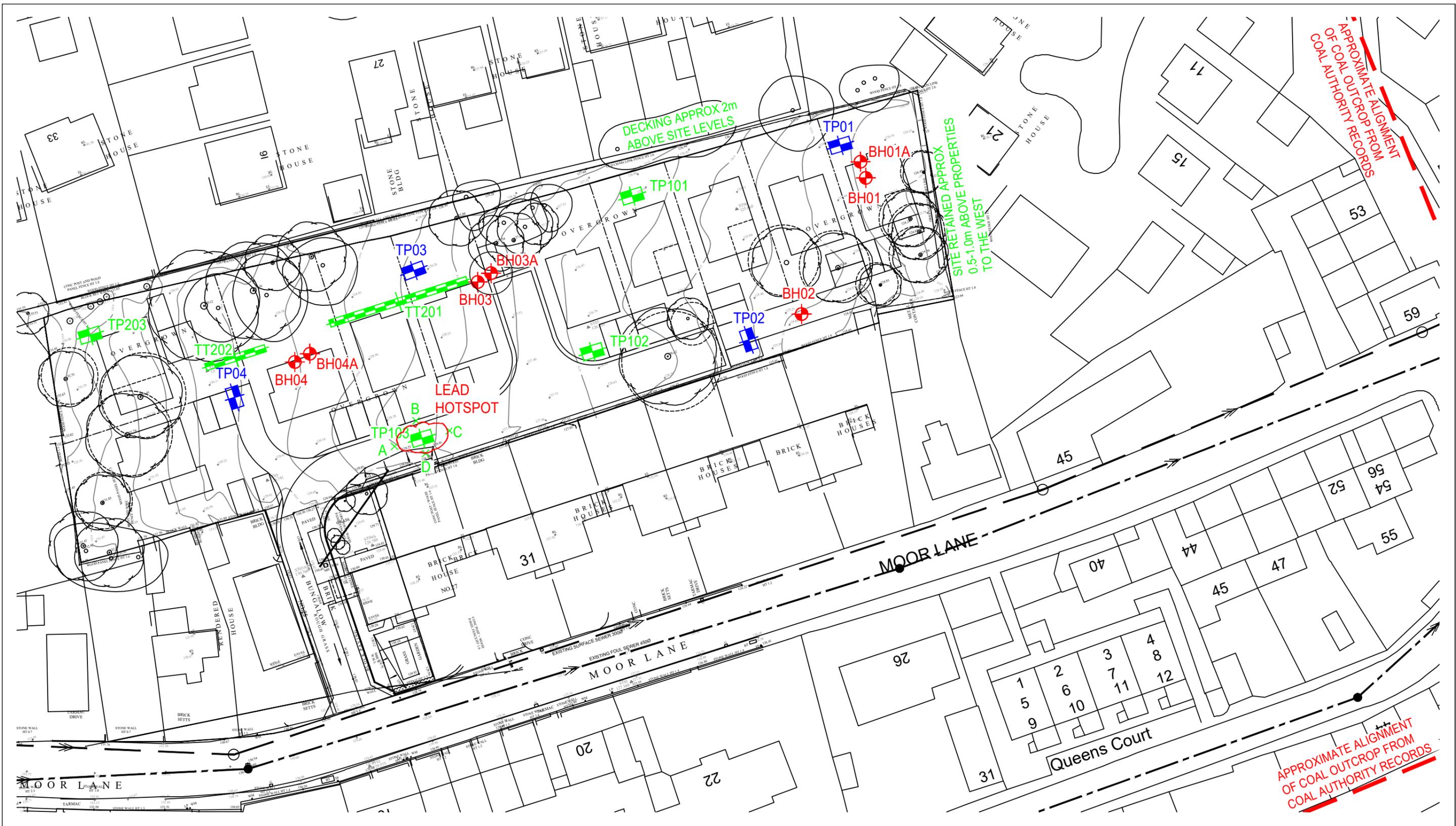
We trust that the above is sufficient for your current requirements, however should you need any further information please do not hesitate to contact me direct.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'M Dean', written in a cursive style.

MICHAEL DEAN

Enclosure.



- SOAKAWAY LOCATION
- TRIAL PIT/TRENCH LOCATION
- BOREHOLE LOCATION
- SAMPLE LOCATION

BOREHOLE LOCATIONS SUBJECT TO CHANGE DEPENDENT ON ACCESS AROUND SITE AND FINDINGS WITHIN BOREHOLES.

Rev B Additional SI details added

19.02.2025 MD



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Client				
Binks Executive Homes				
Project				
Moor Lane, Gomersal				
Detail				
Site Investigation Plan				
Scale	Dwn	Chkd	Date	Dwg No.
1:500@A3	MD		Apr'23	E22/7944/03/02B



TRIAL TRENCH 201

Client :	BINKS EXECUTIVE HOMES	Job No :	7944
Site :	MOOR LANE, GOMERSAL	Date :	28 January 2025

0.0		
	0.3	Rough grass over dark grey topsoil with numerous rootlets
0.5	1.4	Firm light brown mottled grey sandy clay
1.0		
1.5	1.6-1.8	Moderately strong weathered mudstone in a clay matrix
	4.0	
2.0		
2.5		
3.0		
3.5		
4.0		

REMARKS:

Ground water encountered during excavation NO
Sample taken NO
Sides of excavation remained stable YES
Level

NOTES:

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TRIAL TRENCH 202

Client :	BINKS EXECUTIVE HOMES	Job No :	7944
Site :	MOOR LANE, GOMERSAL	Date :	28 January 2025

0.0		
	0.3	Rough grass over dark grey topsoil with numerous rootlets
0.5	1.5	Firm light brown mottled grey sandy clay
1.0		
1.5		
2.0		
2.5		
3.0		
3.5		
4.0		

REMARKS:

Ground water encountered during excavation NO
Sample taken NO
Sides of excavation remained stable YES
Level

NOTES:

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Certificate of Analysis

Certificate Number 25-02298

Issued: 07-Feb-25

Client Haigh Huddleston & Associates Ltd
Firth Buildings
99-101 Leeds Road
Dewsbury
WF12 7BU

Our Reference 25-02298

Client Reference ~ 7944

Order No ~ (not supplied)

Contract Title ~ Moor Lane

Description 4 Soil samples.

Date Received 03-Feb-25

Date Started 03-Feb-25

Date Completed 07-Feb-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Louise Cook
Contracts Manager



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Summary of Chemical Analysis

Soil Samples

Our Ref 25-02298
 Client Ref ~ 7944
 Contract Title ~ Moor Lane

Lab No	2458249	2458250	2458251	2458252
Sample ID ~	A	B	C	D (Mound)
Depth ~	0.10	0.10	0.10	0.10
Other ID ~				
Sample Type ~	SOIL	SOIL	SOIL	SOIL
Sampling Date ~	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Sampling Time ~	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	28	31	24	18
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.7	0.8	0.6	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.4	0.7	0.5
Chromium	DETSC 2301#	0.15	mg/kg	18	18	20	17
Copper	DETSC 2301#	0.2	mg/kg	39	60	65	38
Lead	DETSC 2301#	0.3	mg/kg	76	120	190	84
Mercury	DETSC 2325#	0.05	mg/kg	0.16	0.30	0.28	0.44
Nickel	DETSC 2301#	1	mg/kg	12	23	16	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	87	120	380	160

Information in Support of the Analytical Results

Our Ref 25-02298
 Client Ref ~ 7944
 Contract ~ Moor Lane

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2458249	A 0.10 SOIL	28/01/25	PT 1L		
2458250	B 0.10 SOIL	28/01/25	PT 1L		
2458251	C 0.10 SOIL	28/01/25	PT 1L		
2458252	D (Mound) 0.10 SOIL	28/01/25	PT 1L		

Key: P-Plastic T-Tub
 DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

- ~ Sample details are provided by the client and can affect the validity of the results
- * -not accredited.
- # -MCERTS (accreditation only applies if report carries the MCERTS logo).
- \$ -subcontracted.
- n/s -not supplied.
- I/S -insufficient sample.
- U/S -unsuitable sample.
- t/f -to follow.
- nd -not detected.

End of Report

TIER 1 SOIL GUIDANCE VALUES FOR USE IN DOMESTIC GARDENS
(WITH PLANT UPTAKE)

<u>CONTAMINANT</u>	<u>ICRCL – TTV / DEFRA – SGV</u> <u>MG/KG</u>
Arsenic	37 (4)
Cadmium	22 (4)
Chromium	130 (2)
Lead	200 (4)
Mercury	40 (1,5)
Selenium	250 (1)
Copper	2400 (1)
Nickel	180 (1)
Zinc	3700 (1)
Cyanide (total)	25
Sulphate	0.24% (3)
Sulphide	250
Thiocyanate	50
PAH (Total)	40
TPH (Total)	250
Phenols	280 (1)
PH	6-8
Asbestos	No fibres present

- (1) Copyright Land Quality Management Ltd reproduced with permission; Publication Number S4UL3499. All rights reserved.
- (2) DEFRA CLR SGV's withdrawn used for initial comparison
- (3) BS 8110 1985 Table 6.1
- (4) Category 4 Screening Level
- (5) Unless there is considered to be historical site usage that would result in elemental and methylmercury compounds to be present, the inorganic mercury SGV is used as this is the most prevalent for of mercury present in the natural environment.