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OUR REFERENCE: 3750717 LA Response
DATE: 10/02/2026

Lucas PreFontaine
CALA Homes (South Home Counties) Ltd
54 The Causeway
Staines
Surrey
TW18 3AX
By email

For the attention of: Lucas PreFontaine

RE: RM5 / RM6 North Horsham, Moat Road, Horsham, RH12 4QR – Response to Local Authority Comments

Further to the submission of the combined interpretive report (dated 24 January 2025) for your North Horsham site to the Local Authority (Horsham District Council), they have responded with a number of queries regarding the findings of this report. This report was submitted by CALA Homes to the Horsham District Council to allow for the discharge of Conditions 18 for Planning Permission DC/16/1677 for development parcels RM5 and RM6. This condition specifies that '*b) a site investigation scheme based on (a) to provide information for a detailed assessment of the risk to all receptors that may be affected including those off site.'*

This letter responds to the comments made by the Local Authority on the previous report.

1.1 Introduction

LEAP were instructed by CALA Homes to produce a combined interpretive report for the RM5 and RM6 development parcels at their North Horsham site. The intrusive investigations which LEAP undertook within development parcels RM5 and RM6 were for geotechnical purposes and chemical sampling and subsequent analysis were not with the scope of investigation. At the request of the client as part of a combined interpretative report, LEAP reviewed and summarised the findings of chemical soil testing undertaken previously by third parties, within development parcels RM5 and RM6.

In summary, previous third party investigations had identified limited potential contamination sources across the wider North Horsham Development area, which included parcels RM5 and RM6, and subsequent investigation across the wider development area included, a total of six soil samples taken from across RM5 and RM6 which were subject to chemical laboratory analysis. These samples targeted topsoil, reworked topsoil and natural soils and were assessed against conservative Residential with Home Grown Produce (Resi HGP) generic assessment criteria.

1.2 Council Feedback

On the 15 January 2026 Horsham District Council, provided feedback to CALA Homes on the combined interpretive report LEAP produced for CALA Homes for development phases RM5 and RM5 of their North Horsham site.

The response included the following queries:

a. *From reviewing the RM5 and RM6 Previous SI Plans in Appendix B we note that a large number of locations were advanced across these phases. From reviewing Appendix E we note however that only the log for BH1 has been provided – we request therefore the remaining logs for all the locations in these two phases are provided.*

b. *We note that a summary of the chemical test results are provided in Appendix G and whilst a summary of the data in this format is welcomed so that we can validate this summary data we would be grateful for the original laboratory certificates.*

c. *'We note that six samples were subject to chemical analysis and no elevated levels of contaminants were detected which is welcomed. We appreciate the greenfield use of the site, however given the size of these two phases we are not convinced that six samples provide the LPA with sufficient confidence that no elevated levels of contamination are present on the site and whether the sampling density is in accordance with current technical guidance.'*

1.3 Response to Council's Comments

1.3.1 *Exploratory Hole Logs*

The exploratory holes referred to in the January 2025 report are those completed across all previous investigations which were located within the RM5 and RM6 parcels. The exploratory hole logs for the previous investigations are contained within the previous reports referred to in the report. For ease these logs have been extracted from the previous reports and compiled as an appendix to this letter.

1.3.2 *Chemical Test Results*

The laboratory test certificates for the chemical test results are contained within the previous reports referred to in the report. For ease these logs have been extracted from the previous reports and compiled as an appendix to this letter.

1.3.3 *Sampling Frequency*

Based on the findings of all the reports to date, below we have summarised the rationale for the number of samples collected and tested being sufficient:

- The preliminary conceptual site model (CSM), informed by desk study information and historical mapping, identified **no significant onsite or offsite sources of contamination**. The site's history was identified as previous agricultural use, with the only minor plausible sources of contamination being from the use of agrochemicals and localised hydrocarbon spills from farming machinery. The risk to human health was assessed as **very low** in the CSM.

- During multiple phases of intrusive investigation, only **very limited visual** and **no olfactory evidence of potential contamination was encountered**. Isolated clinker fragments were observed at a single location and occasional wood fragments were noted in several locations. No widespread indicators of contamination were identified.

- Chemical testing undertaken in 2019 on samples of natural soils and topsoil across both RM5, RM6 and the wider development area **did not identify any elevated concentrations of contaminants when assessed against the conservative Residential with Homegrown Produce (Resi HGP) criteria**.

- The limited made ground which was encountered within RM5 and RM6 during the more recent investigations is interpreted to be associated with site-wide landscaping activities reworking topsoil and subsoil already present on site. During the initial intrusive investigations completed in 2019 no made ground was identified across the whole development area, with the exception of localised areas around the Moated House Farm buildings (outside of RM5 and RM6).

  The 2019 chemical testing demonstrated that the soils are chemically suitable for use, with no recorded elevations of metals, hydrocarbons or asbestos detections. There is **no evidence that made ground has been imported from offsite sources** or that it contains materials associated with higher contamination risk. If imported or suspect made ground been identified, further chemical testing would have been undertaken.

1.4 Consideration of Guidance and Limitations

LEAP acknowledges that 6 No. chemical soil samples across a circa 6.9-hectare site does not meet typical sampling densities suggested in British Standard guidance (BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites – Code of Practice), when considered in isolation. However, relevant guidance including LCRM (Land Contamination Risk Management) promotes a risk-based and proportionate approach to site investigation.

In this instance, the very low risk profile established by the desk study, the observations during previous intrusive site investigations, and the previous analytical results were considered sufficient to justify a reduced level of chemical testing, by using a multiple lines of evidence approach. It should be noted that more extensive testing would have been required had any of the following been identified:

- Significant historical contaminative uses onsite or adjacent to the site.

- Widespread and/or deep made ground, visual evidence, or olfactory evidence of contamination during intrusive works; or

- Analytical exceedances against the conservative generic assessment criteria, indicating potential risks to human health or controlled waters.

1.5 Discovery Strategy

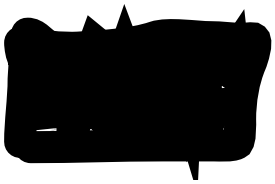
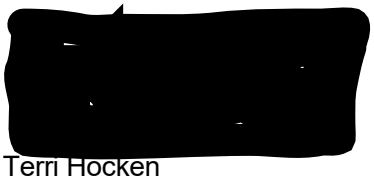
The Stantec 2022 report includes a remediation strategy for the wider site which predominantly comprises a discovery strategy requiring the appropriate management of unidentified sources of contamination.

Working to this strategy means that if any previously unidentified contamination is present across the site then it will be identified and dealt with appropriately as part of the development construction.

2. CONCLUSION

On the basis of the available information, LEAP considers that the chemical testing undertaken to date, when assessed in the context of the site's low-risk historic land-use, the intrusive investigation findings and the proposed discovery strategy to be put in place is proportionate and technically justified. The conclusions presented in the January 2025 (ref: 3750717) combined interpretive report remain valid and appropriate for the purposes of discharging the relevant planning conditions, subject to the local authority's final determination.

Yours faithfully,

Author	Technical Review	QA/QC
		
Javier Zapata	Tim Thorpe	Terri Hocken
Project Engineer	Principal Technical Lead	Administrator

Enclosures:

Appendix A Third-party Exploratory Hole Logs
Appendix B Third-party Chemical Testing Results

APPENDICES

APPENDIX A – THIRD-PARTY EXPLORATORY HOLE LOGS

APPENDIX E

Machine Excavated Trial Pit Records

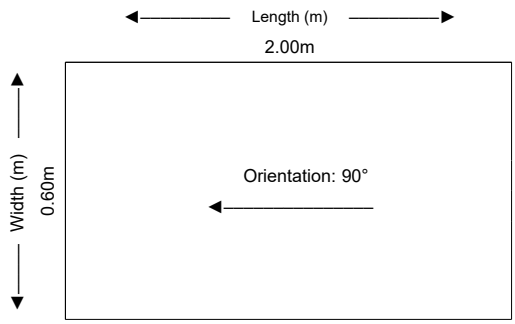
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP201
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	03/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518531.9	134064.6	60.24mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Brown silty sandy CLAY.		
0.10	ES1		59.94	0.30				
0.50	ES2	HV 0.50m, 73kPa				Firm to stiff light grey and orange silty sandy CLAY. [RESIDUAL WEALD CLAY FORMATION]		
				(1.10)				
		HV 1.00m, 95kPa					1	
1.50	B1		58.84	1.40		Light bluish grey and light brown mottled black extremely weak to weak MUDSTONE with occasional thinly laminated clay (<6mm) recovered as sandy fine to coarse angular gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.10)			2	
2.40	B2							
2.50	B3		57.74	2.50		Light brown mottled blue grey and black very weak to moderately weak MUDSTONE. Recovered as sandy fine to coarse angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.80)			3	
3.30	B4		56.94	3.30		Grey brown mottled black and reddish orange weak to moderately weak MUDSTONE with light blueish grey thinly laminated (<6mm) silty clay. Recovered as sandy fine to coarse angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
			56.24	4.00		End of Trial Pit at 4.00m	4	

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

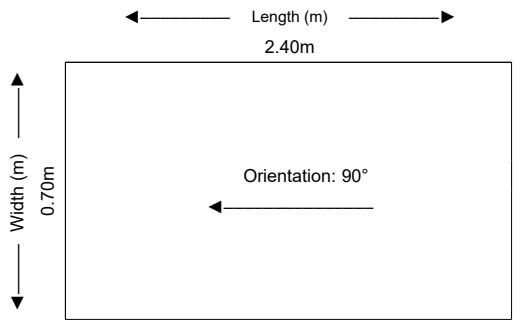
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP202
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518586.7	134237.1	67.15mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny		Termination: Refusal at 3.0mbgl		Stability: Unstable		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.40)		TOP SOIL - Brown slightly gravelly silty sandy CLAY with occasional rootlets <2mm (living).		
			66.75	0.40				
0.50 0.50	B1 ES2	HV 0.50m, 70kPa				Firm light bluish grey mottled dark orangish brown slightly sandy silty CLAY with occasional rootlets <2mm (dead). [RESIDUAL WEALD CLAY FORMATION]		
		HV 1.00m, 60kPa		(1.40)			1	
1.50	D2	HV 1.50m, 62kPa						
			65.35	1.80		Light bluish grey and light brown extremely weak MUDSTONE. Recovered as sandy clayey fine to coarse sub-angular gravel. [DESTRUCTURED WEALD CLAY FORMATION]	2	
				(0.60)				
2.40	B2		64.75	2.40		Light brown mottled blue grey and orange extremely weak to very weak MUDSTONE. Recovered as sandy clayey fine to coarse sub-angular gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.60)				
			64.15	3.00		End of Trial Pit at 3.00m	3	
							4	

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. Ground water encountered at 0.80mbgl (moderate inflow) 3. Soak away test carried out from 1.65mbgl 4. Trial pit unstable, 20mm gravel infill to 0.60mbgl 5. Gravel removed and backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.80			0		Moderate inflow

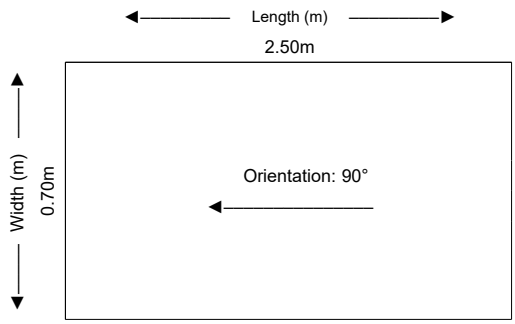
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP203
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518610.8	134148.8	64.12mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny		Termination: Refusal at 3.60mbgl		Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.35)		TOP SOIL - Dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <2mm (living).		
			63.77	0.35				
0.50 0.50	B1 ES2	HV 0.50m, 70kPa				Firm light blueish grey mottled orange and grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium sub-angular weak mudstone. [RESIDUAL WEALD CLAY FORMATION]		
		HV 1.00m, 70kPa					1	
				(1.75)				
1.50	D2	HV 1.50m, 68kPa						
		HV 2.00m, 67kPa					2	
2.10	B2		62.02	2.10		Light bluish grey mottled light brown and black extremely weak to weak MUDSTONE. Recovered as clayey sandy fine to coarse sub-angular gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.20)				
3.10	D3						3	
			60.82	3.30		Dark reddish brown and brownish orange very weak to moderately weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and occasional cobbles. [DESTRUCTURED WEALD CLAY FORMATION]		
3.40	B3			(0.30)				
			60.52	3.60		End of Trial Pit at 3.60m		
							4	

Dimensions:

Final Depth: 3.60m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.60mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

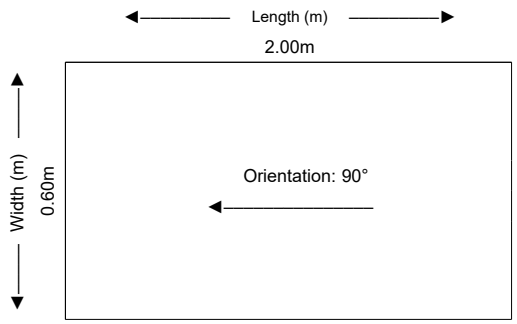
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP204
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518607.6	133981.7	58.15mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Refusal at 3.50mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.50)		TOP SOIL - Brown slightly gravelly silty sandy CLAY with occasional rootlets <2mm (living). Gravel is fine to medium sub-angular to sub-rounded brick.		
		HV 0.50m, 80kPa	57.65	0.50				
0.60 0.60	B1 ES2			(0.90)		Firm to stiff light grey and orange mottled black slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular extremely weak to very weak mudstone. [RESIDUAL WEALD CLAY FORMATION]		
1.40	B2		56.75	1.40				
				(0.40)		Light grey and brownish orange extremely weak MUDSTONE with thinly laminated silty clay (<6mm). Recovered as fine to coarse sub-angular clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
1.80	B3		56.35	1.80				
				(0.80)		Light brown mottled bluish brown extremely weak to very weak MUDSTONE. Recovered as fine to coarse sub-angular sandy gravel and occasional cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
			55.55	2.60				
2.70	B4			(0.90)		Light brown mottled bluish grey and orange weak to moderately weak MUDSTONE. Recovered as sub-angular fine to coarse sub-angular sandy gravel and occasional cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION]		
			54.65	3.50		End of Trial Pit at 3.50m		

1 2 3 4

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. Ground water encountered at 2.20mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.20			0		Slow inflow

endeavour drilling

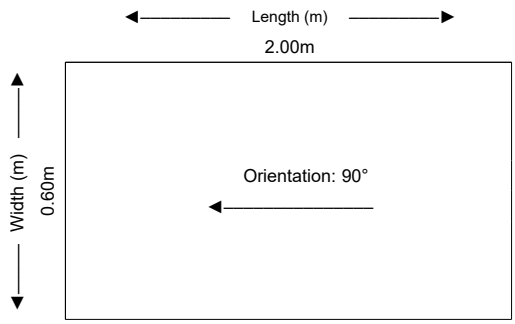
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP205
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518600.7	133613.3	54.31mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.00mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.10	ES1		54.01	0.30				
0.50	B1	HV 0.50m, 71kPa				Firm light brown mottled orange and grey silty sandy CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.90)				
			53.11	1.20				
1.30	B2					Reddish brown mottled grey and black extremely weak MUDSTONE with rare grey thinly (<6mm) laminated grey clay. Recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.90)				
			52.21	2.10				
2.20	B3					Dark reddish brown mottled black and grey extremely weak to very weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
			51.51	2.80				
2.90	B4					Dark brown mottled grey and black moderately weak to medium strong MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
			51.31	3.00		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

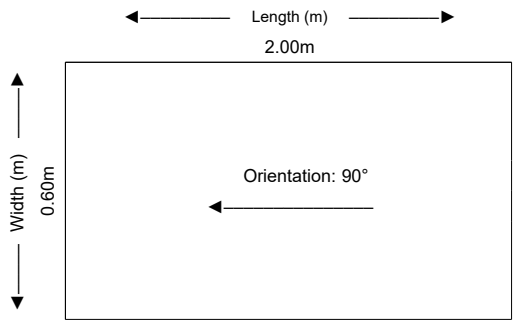
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP206
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	03/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518614.6	134068.1	60.34mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny		Termination: Refusal at 3.30mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <2mm (living).		
			60.04	0.30				
0.50 0.50	B1 ES2	HV 0.50m, 81kPa		(1.10)		Light brown mottled orange and grey silty sandy CLAY with occasional rootlets <2mm (living). [RESIDUAL WEALD CLAY FORMATION]		
			58.94	1.40		Brown mottled orange and black extremely weak to very weak MUDSTONE. Recovered as fine to coarse sub-angular gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
1.70	B2			(0.90)				
			58.04	2.30		Brown mottled orange very weak MUDSTONE with occasional thinly laminated grey clay (<6mm) recovered as fine to coarse sub-angular to angular gravel and occasional cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
2.40	B3			(0.70)				
3.00 3.00	B4 D2		57.34	3.00		Reddish Brown and grey mottled black very weak MUDSTONE recovered as fine to coarse sub-angular to angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.30)				
			57.04	3.30		End of Trial Pit at 3.30m		

1 2 3 4

Dimensions:

Final Depth: 3.30m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.30mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

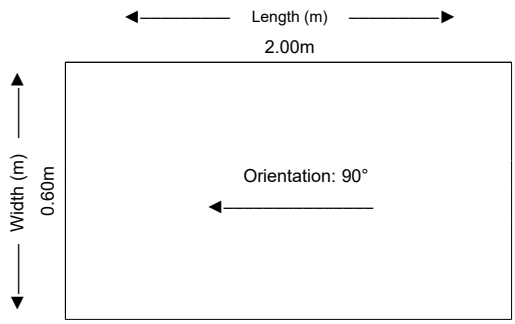
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP207
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	10/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518618.4	133717.2	54.96mOD	13T Excavator	21/02/2020	1:30
Weather: Frequent showers		Termination: Refusal at 3.50mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.20	ES1		54.66	0.30		Firm yellowish brown mottled orange and grey slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.60	B1	HV 0.60m, 62kPa						
0.60	ES2			(0.90)				
			53.76	1.20				
1.30	B2					Reddish brown mottled orange and grey extremely weak MUDSTONE with grey thinly laminated (<6mm) silty clay. Recovered as sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.40)				
2.30	D2							
2.60	B3		52.36	2.60		Light brown mottled orange and brown and black very weak MUDSTONE. Recovered as slightly sandy fine to coarse sub-angular gravel and frequent cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.90)				
3.50	B4		51.46	3.50		End of Trial Pit at 3.50m		

1 2 3 4

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.50mbgl. 2. Ground water encountered at 2.0mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.00			0		Slow inflow

endeavour drilling

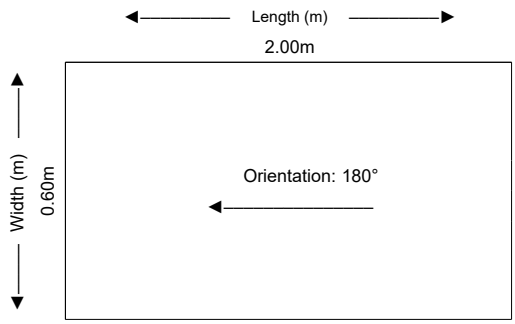
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP208
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	05/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518657.3	133892.0	55.74mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Reached target depth		Stability: Unstable		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Dark brown silty clay with occasional rootlets <2mm (living).		
			55.44	0.30				
0.50 0.50	B1 ES2	HV 0.50m, 120kPa		(0.50)		Very stiff light brown mottled grey and orange silty sandy CLAY with occasional rootlets <2mm (living). (RESIDUAL WEALD CLAY FORMATION)		
			54.94	0.80				
0.90	B2					Brown mottled orange and grey extremely weak MUDSTONE with occasional thinly laminated (<6mm) clay. Recovered as clayey sandy fine to medium gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.00)				
			53.94	1.80				
1.90 2.00	B3 D2			(0.80)		Stiff blue grey mottled orange slightly sandy slightly gravelly CLAY with rare roots <6mm (dead). (DESTRUCTURED WEALD CLAY FORMATION)		
			53.14	2.60				
2.70	B4			(0.40)		Blue grey mottled lightly brown and orange extremely weak to very weak MUDSTONE. Recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
			52.74	3.00				
3.10	B5					Blue grey weak to moderate weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and frequent cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(1.00)				
			51.74	4.00		End of Trial Pit at 4.00m		

1
2
3
4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Ground water encountered at 2.0mbgl (rapid inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.00			0		Rapid inflow

endeavour drilling

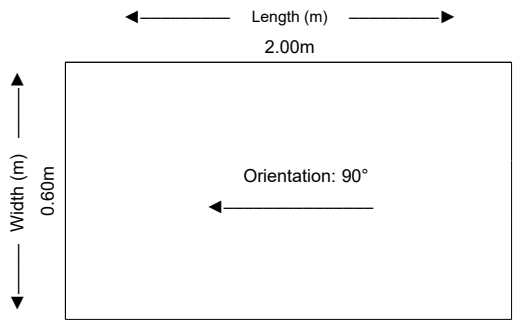
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP210
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	10/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518665.7	133706.3	56.63mOD	13T Excavator	21/02/2020	1:30
Weather: Frequent showers		Termination: Refusal at 3.10mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY		
0.10	ES1		56.33	0.30				
0.50	B1	HV 0.50m, 60kPa				Firm light brown mottled orange and grey slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.80)				
			55.53	1.10				
1.30	B2					Orangish brown mottled grey extremely weak MUDSTONE with occasional grey thinly laminated clay. Recovered as fine to coarse clayey sandy gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.90)				
			54.63	2.00				
2.10	B3					Light greyish brown extremely weak to very weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and with occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.10)				
3.10	B4		53.53	3.10		End of Trial Pit at 3.10m		

1 2 3 4

Dimensions:

Final Depth: 3.10m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.10mbgl. 2. Ground water encountered at 1.20mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.20			0		Slow inflow

endeavour drilling

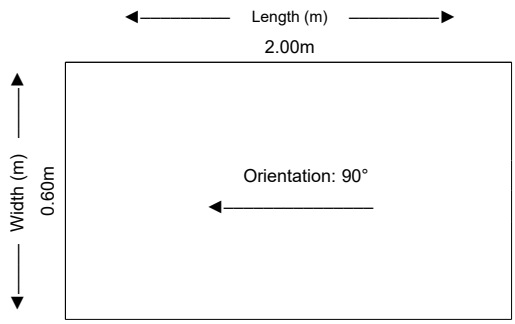
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP211
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	05/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518668.7	134016.1	58.76mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Dark brown silty clay with occasional rootlets <2mm (living).		
			58.46	0.30				
0.50 0.50	B1 ES2	HV 0.50m, 57kPa		(0.70)		Firm brown mottled orange and grey silty sandy CLAY with frequent rootlets<2mm and occasional roots <10mm (living). (RESIDUAL WEALD CLAY FORMATION)		
			57.76	1.00				
1.10	B2					Light brown mottled orange and black extremely weak MUDSTONE with occasional thin lenses of blue grey clay. Recovered as clayey fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.40)				
2.10 2.10	B3 D2							
			56.36	2.40				
2.50	B4					Dark reddish brown mottled black and grey extremely weak to very weak MUDSTONE. Recovered as fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.70)				
			55.66	3.10				
3.20	B5					Blue grey and dark brown very weak to moderate weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.90)				
			54.76	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Ground water encountered at 3.40mbgl (rapid inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.40			0		Slow inflow

endeavour drilling

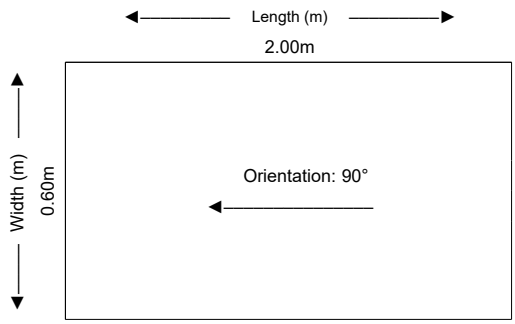
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP212
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518695.6	133563.0	55.96mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.70mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOP SOIL - Dark brown slightly gravelly silty sandy clay. Gravel is fine to coarse sub-angular of flint.		
0.10	ES1		55.76	0.20				
0.50	B1	HV 0.50m, 75kPa				Firm to stiff brown mottled orange and grey slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub-angular of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.80)				
1.00	B2		54.96	1.00		Reddish brown mottled black extremely weak MUDSTONE with rare grey thinly laminated (<6mm) clay. Recovered as sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.50)				
2.00	D2							
2.50	B3		53.46	2.50		Reddish brown mottled black extremely weak MUDSTONE with rare grey thinly laminated (<6mm) clay. Recovered as clayey sandy fine to coarse sub-angular gravel and rare cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.80)				
			52.66	3.30		Grey mottled reddish brown very weak to moderately weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.40)				
3.70	B4		52.26	3.70		End of Trial Pit at 3.70m		

1 2 3 4

Dimensions:

Final Depth: 3.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.70mbgl. 2. Ground water encountered at 2.0mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

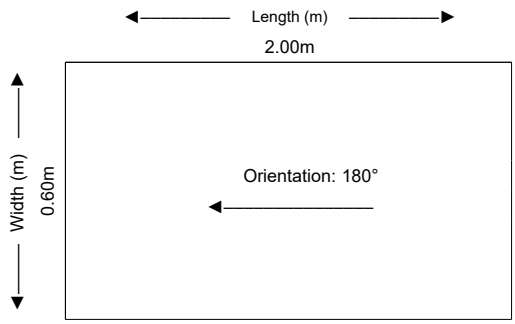
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP213
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	05/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518706.9	133910.4	56.23mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Refusal at 3.50mbgl		Stability: Unstable		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOP SOIL - Dark brown silty CLAY with occasional rootlets <2mm (living).		
0.10	ES1		56.03	0.20				
				(0.40)		Stiff brown mottled orange and grey silty sandy CLAY with frequent rootlets <2mm (living). (RESIDUAL WEALD CLAY DEPOSITS)		
0.50	B1	HV 0.50m, 91kPa						
0.50	ES2		55.63	0.60				
						Brown mottled grey and orange extremely weak MUDSTONE with occasional blue grey thinly laminated (<6mm) clay. Recovered as fine to coarse sub-angular clayey sandy gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
1.00	B2						1	
				(1.20)				
			54.43	1.80				
1.90	B3					Stiff blue grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular mudstone. (DESTRUCTURED WEALD CLAY FORMATION)		
2.00	D2			(0.50)			2	
			53.93	2.30				
						Blue grey mottled lightly brown and orange extremely weak to very weak MUDSTONE. Recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.80)				
2.90	B5						3	
			53.13	3.10				
3.20	B4					Blue grey very weak to moderate weak MUDSTONE. Recovered as fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.40)				
			52.73	3.50				
						End of Trial Pit at 3.50m		
							4	

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.50mbgl. 2. Ground water encountered at 2.30mbgl (rapid inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.30			0		Rapid inflow.

endeavour drilling

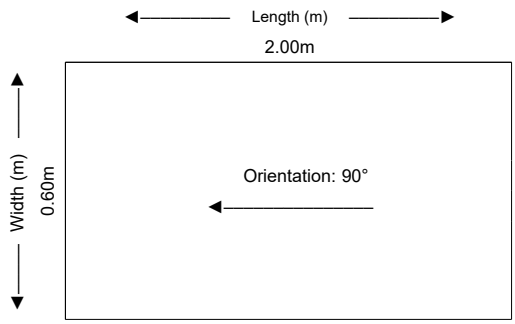
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP214
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518713.4	133636.4	57.06mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.00mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.10	ES1		56.76	0.30				
0.50	B1	HV 0.50m, 80kPa				Stiff light brown slightly silty sandy gravelly CLAY. Gravel is fine to medium of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.70)				
1.10	B2		56.06	1.00		Dark brown mottled grey and dark reddish brown extremely weak MUDSTONE with occasional thinly laminated clay. Recovered as clayey fine to coarse sub-angular gravel and occasional cobbles. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.00)				
2.10	D2		55.06	2.00		Reddish brown mottled black very weak to moderate weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.10)				
3.10	B3		53.96	3.10		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

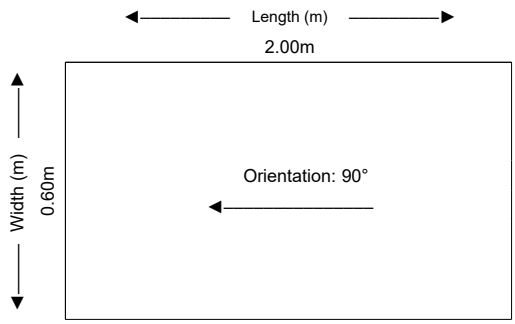
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP215
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	05/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518699.1	134055.2	59.84mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Dark brown silty CLAY with occasional rootlets <2mm (living).		
			59.54	0.30				
0.60 0.60	B1 ES2	HV 0.60m, 69kPa		(0.90)		Firm light brown mottled orange and grey silty sandy slightly gravelly CLAY. Gravel is fine to medium sub-angular of mudstone. (RESIDUAL WEALD CLAY FORMATION)		
			58.64	1.20				
1.30	B2			(0.90)		Light brownish orange mottled grey and black extremely weak MUDSTONE with occasional blue grey thinly laminated clay. Recovered as clayey fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
			57.74	2.10				
2.20	B3			(0.60)		Light brown mottled red and black extremely weak to very weak MUDSTONE. Recovered as fine to coarse sub-angular sandy gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
			57.14	2.70				
2.80	B4			(0.70)		Reddish brown mottled black very weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
			56.44	3.40				
3.50	B5			(0.60)		Blue grey mottled reddish brown extremely weak to very weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
			55.84	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

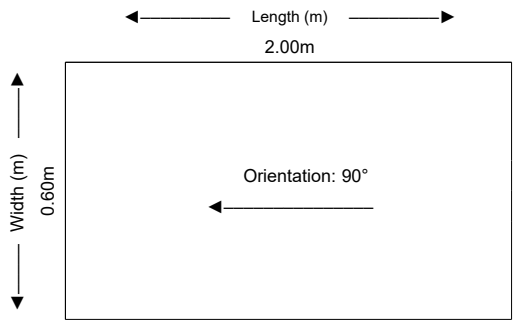
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP216
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	10/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518726.6	133746.9	57.54mOD	13T Excavator	21/02/2020	1:30
Weather: Frequent showers		Termination: Refusal at 3.20mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.40)		TOP SOIL - Dark brown slightly sandy silty CLAY occasional rootlets <2mm and roots <5mm (living)		
0.20	ES1		57.14	0.40				
0.70	B1	HV 0.70m, 81kPa				Stiff yellowish brown mottled black and orange slightly sandy slightly gravelly silty CLAY with occasional rootlets <2mm (living). Gravel is fine to medium sub-angular of mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.70	ES2			(1.00)				
		HV 1.40m, 71kPa	56.14	1.40				
1.50	B2			(0.60)		Firm light grey mottled orange and brown slightly gravelly silty CLAY. Gravel is fine to medium sub-angular of mudstone. (RESIDUAL WEALD CLAY FORMATION)		
2.10	B3		55.54	2.00		Dark reddish brown mottled orange and black extremely weak MUDSTONE with rare grey thinly laminated clay. Recovered as sandy fine to coarse sub-angular gravel and with rare cobbles. (DESTRUCTURED WEALD CLAY FORMATION)		
2.80	D2			(1.00)				
			54.54	3.00		Light brown mottled orange and grey very weak to moderately weak MUDSTONE. Recovered as slightly sandy fine to coarse gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
3.20	B4		54.34	3.20		End of Trial Pit at 3.20m		

1 2 3 4

Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. Ground water encountered at 2.20mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.20			0		Slow inflow

endeavour drilling

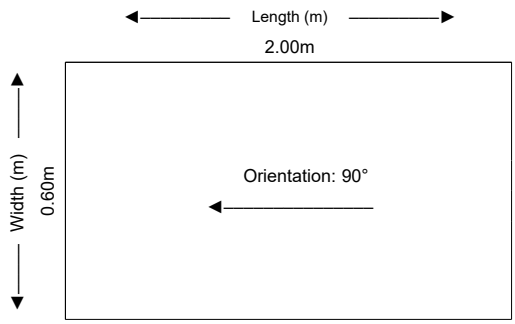
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP217
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	05/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518724.9	134099.8	61.88mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny		Termination: Refusal at 3.50mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.40)		TOP SOIL - Dark brown silty CLAY with occasional rootlets <2mm (living).		
			61.48	0.40				
0.60 0.60	B1 ES2	HV 0.60m, 70kPa		(0.80)		Firm light brown mottled orange and grey slightly gravelly silty sandy CLAY. Gravel if fine to medium of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
			60.68	1.20				
1.30	B2			(1.00)		Reddish brown mottled grey and orange extremely weak MUDSTONE with grey thinly laminated clay. Recovered as fine to coarse sub-angular clayey gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
			59.68	2.20				
2.30	B3			(1.00)		Light grey mottled brown and black very weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
			58.68	3.20				
3.30	B4			(0.30)		Light brownish grey very weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and occasional cobbles and rare boulders. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
			58.38	3.50		End of Trial Pit at 3.50m		

1 2 3 4

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.50mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

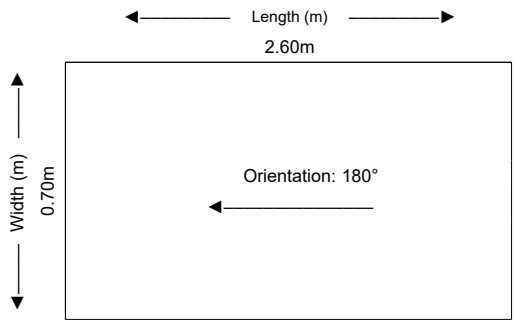
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP218
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	04/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518746.8	133967.4	57.56mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny		Termination: Refusal at 3.7mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
0.10	ES1		57.31	0.25				
0.40	B1					Stiff brownish grey and orange slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION		
0.40	ES2	HV 0.50m, 86kPa		(0.85)				
1.10	B2		56.46	1.10		Light bluish grey and brown mottled black extremely weak MUDSTONE, with frequent thinly laminated (<6mm) silty clay, recovered as clayey sandy gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.90)				
2.10	B3		55.56	2.00		Reddish brown and light brown extremely weak to weak MUDSTONE. Recovered as sandy gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.50)				
3.10	D2							
3.50	B4		54.06	3.50		Blueish grey mottled dark orange weak to moderately weak MUDSTONE. Recovered as sandy gravel and cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
			53.86	3.70		End of Trial Pit at 3.70m		

1 2 3 4

Dimensions:

Final Depth: 3.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.7mbgl. 2. Ground water encountered at 3.5mbgl (moderate inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.50			0		Moderate inflow

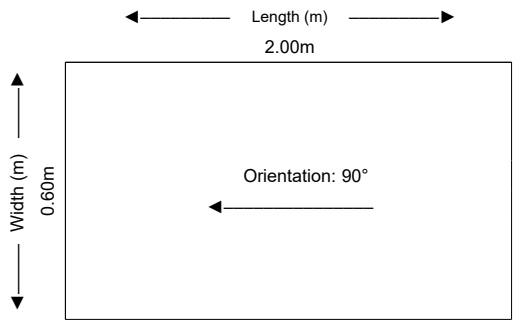
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP219
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518758.8	133594.4	57.31mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.50mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.20	ES1		57.01	0.30				
0.50	B1	HV 0.50m, 65kPa				Firm brown mottled orange and grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium sub-angular extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.70)				
			56.31	1.00				
1.10	B2					Brown mottled orange and dark red extremely weak MUDSTONE with occasional thinly laminated grey clay (<6mm). Recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)	1	
				(1.60)				
2.10	D2						2	
			54.71	2.60				
2.70	B3					Light grey mottled brown very weak to moderately weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and frequent cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.90)			3	
3.50	B4		53.81	3.50		End of Trial Pit at 3.50m		
							4	

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.50mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

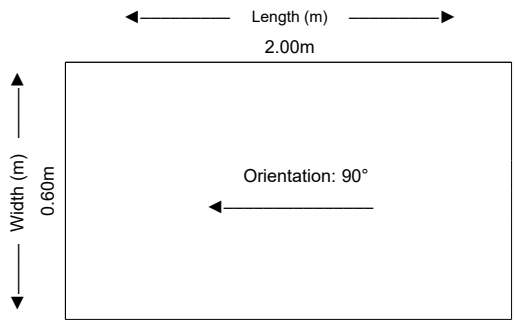
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP220
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	10/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518775.6	133686.4	59.73mOD	13T Excavator	21/02/2020	1:30
Weather: Frequent showers		Termination: Refusal at 2.80mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.20	ES1		59.43	0.30		Stiff light brown and dark reddish grey mottled orange slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to medium of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.60	B1	HV 0.60m, 80kPa						
0.60	ES2			(0.70)				
			58.73	1.00		Dark red mottled brown and black extremely weak MUDSTONE with occasional thinly laminated grey silty clay (<6mm). Recovered as sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
1.10	B2			(0.50)				
			58.23	1.50		Yellowish brown mottled orange and grey extremely weak MUDSTONE with occasional thinly laminated grey silty clay. Recovered as clayey sandy fine to coarse sub-angular gravel and rare cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
1.60	B3			(0.60)				
			57.63	2.10		Light brown mottled black extremely weak to very weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
2.20	B4			(0.70)				
2.80	B5		56.93	2.80		End of Trial Pit at 2.80m		

1 2 3 4

Dimensions:

Final Depth: 2.80m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 2.80mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

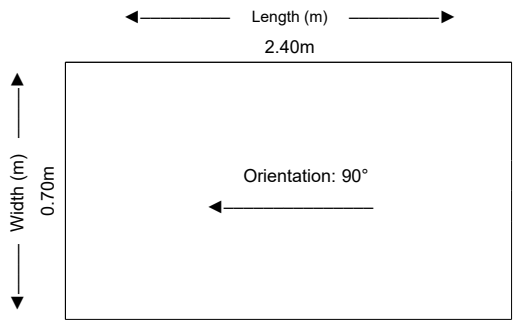
endeavour drilling	Contract Name: P1, Land North of Horsham, West Sussex		Client: Legal and General (Strategic Land North of Horsham) Ltd			Trial Pit ID: TP221
	Contract Number: J4175	Date Started: 04/12/2019	Logged By: RAF	Checked By: MJS	Status: FINAL	Sheet 1 of 1
Trial Pit Log	Easting: 518795.1	Northing: 133989.7	Ground Level: 58.95mOD	Plant Used: 13T Excavator	Date Printed: 21/02/2020	Scale: 1:30
Weather: Sunny		Termination: Refusal at 3.3mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.30)		TOPSOIL - Brown slightly sandy silty CLAY, with occasional rootlets.		
			58.65	0.30				
0.50 0.50	B1 ES2	HV 0.50m, 70kPa				Firm light grey and orange mottled reddish brown slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
				(1.00)				
		HV 1.00m, 66kPa						
1.30	B2		57.65	1.30		Light bluish grey and brownish orange mottled dark brown and black extremely weak MUDSTONE, with frequently thinly laminated silty clay (<6mm). Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.00)				
2.30	B3		56.65	2.30		Light brown mottled dark orange, black and dark brown MUDSTONE, with occasional thinly laminated silty clay (<6mm) of light blue silty clay, recovered as slightly clayey sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
2.80	B4		56.15	2.80		Brownish grey mottled dark brownish orange weak to medium strong MUDSTONE. Recovered as sandy gravelly cobbles with occasional boulders. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
3.30	B5		55.65	3.30		End of Trial Pit at 3.30m		

1 2 3 4

Dimensions:

Final Depth: 3.30m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.30mbgl. 2. No ground water encountered. 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

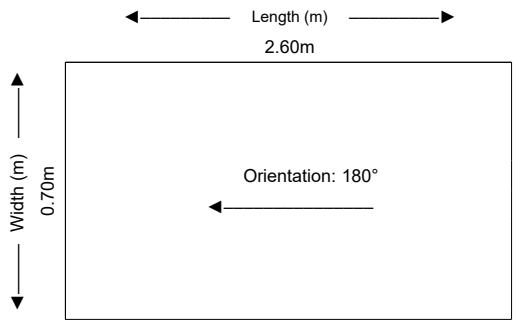
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP222
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	04/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518796.1	133906.3	56.98mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny	Termination: Reached target depth		Stability: Unstable		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
0.10	ES1		56.68	0.30				
0.50	B1	HV 0.50m, 95kPa		(0.80)		Stiff light grey and orange mottled black slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50	ES2							
1.10	B2		55.88	1.10		Greyish blue mottled brown slightly sandy silty CLAY, with frequent thinly laminated extremely weak mudstone (<6mm), and with occasional dead roots <8mm. [RESIDUAL WEALD CLAY FORMATION]		
2.10	D2			(1.60)				
2.70	B3		54.28	2.70		Reddish brown and greyish brown very weak to weak MUDSTONE. Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
2.90	B4		54.18	2.80		Dark bluish grey mottled extremely weak to very weak MUDSTONE. Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
3.90	D3			(1.20)				
			52.98	4.00		End of Trial Pit at 4.00m		

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Ground water encountered at 3.2mbgl (fast inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.20			0		Fast inflow

endeavour drilling

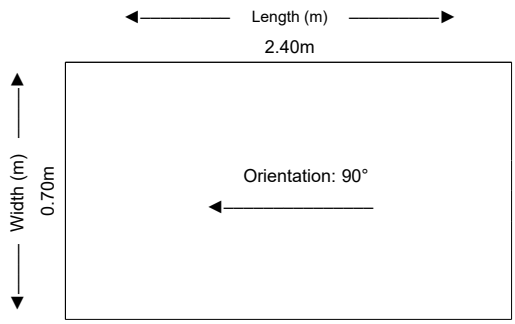
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP223
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	04/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518819.4	134084.4	63.94mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny		Termination: Refusal at 3.2mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
			63.64	0.30				
0.50 0.50	B1 ES2	HV 0.50m, 67kPa		(0.90)		Firm light brownish grey mottled orange slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
1.20	B2		62.74	1.20		Greyish brown and light grey mottled black and dark orange extremely weak to weak MUDSTONE. Recovered as clayey sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(1.00)				
2.20	B3		61.74	2.20		Light brown mottled light bluish grey and brownish orange weak to moderately weak MUDSTONE, Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.60)				
2.80	B4		61.14	2.80		Greyish brown mottled brownish black moderately weak to medium strong MUDSTONE recovered as sandy gravel and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.40)				
			60.74	3.20		End of Trial Pit at 3.20m		

1 2 3 4

Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

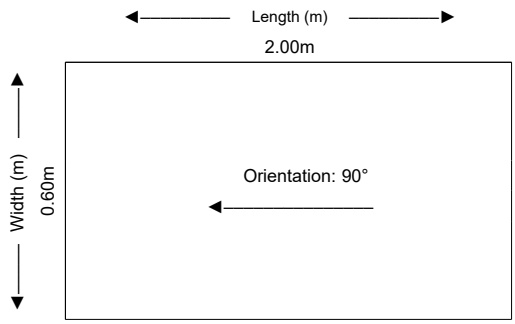
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP224
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518831.6	134037.0	61.64mOD	13T Excavator	21/02/2020	1:30
Weather: Dry/Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.35)		TOP SOIL - Dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <2mm (living).		
0.40 0.40	B1 ES1	HV 0.40m, 81kPa	61.29	0.35		Stiff brown mottled grey and orange silty sandy CLAY. (RESIDUAL WEALD CLAY FORMATION)		
				(0.75)				
1.10	B2		60.54	1.10		Brown mottled orange and grey extremely weathered MUDSTONE with occasional thinly laminated grey silty clay. Recovered as fine to coarse angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.50)				
1.60	B3		60.04	1.60		Dark brown and black mottled orange very weak MUDSTONE. Recovered as fine to coarse angular to sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.00)				
2.70 2.80	D2 B4		59.04	2.60		Reddish brown and light brown very weak to moderate weak MUDSTONE. Recovered as fine to coarse angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.40)				
3.80	D3							
			57.64	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

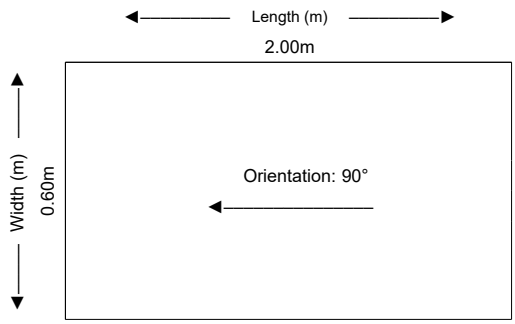
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP225
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518838.9	133596.0	57.84mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.40mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOP SOIL - Dark brown slightly sandy silty CLAY.		
0.20	ES1		57.54	0.30		Firm light brown mottled grey and orange slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub-angular of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.60	B1	HV 0.60m, 69kPa		(0.50)				
0.60	ES2		57.04	0.80		Light brown mottled orange and grey extremely weak MUDSTONE with rare thinly laminated grey clay (<6mm) recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
0.90	B2			(1.40)				
2.00	D2							
2.30	B3		55.64	2.20		Light grey mottled brown and orange very weak to moderately weak MUDSTONE with rare thin laminations of grey clay. Recovered as sandy fine to coarse sub-angular gravel and rare cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.20)				
3.30	B4		54.44	3.40		End of Trial Pit at 3.40m		

1 2 3 4

Dimensions:

Final Depth: 3.40m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.40mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

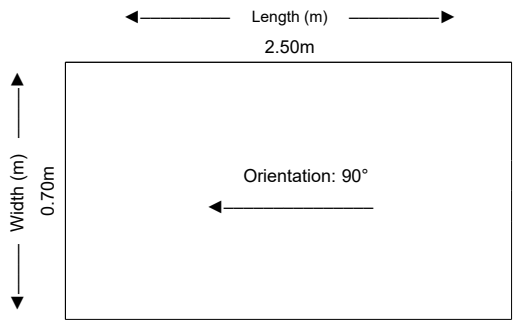
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP226
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	03/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518852.0	134129.5	57.26mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10 0.10	D1 ES1			(0.30)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
			56.96	0.30		Firm light brownish grey mottled orangish brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular very weak to weak mudstone. [RESIDUAL WEALD CLAY FORMATION]		
0.50 0.50	B1 ES2	HV 0.50m, 56kPa						
		HV 1.00m, 100kPa				1		
				(1.70)				
1.50	D2	HV 1.50m, 70kPa						
2.00	B2	HV 2.00m, 65kPa	55.26	2.00		Light brownish grey mottled orangish brown extremely weak MUDSTONE, with occasional thinly laminated silty clay (<6mm) [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.50)		2		
2.50	B3	HV 2.50m, 59kPa	54.76	2.50		Bluish grey mottled brown and black very weak to weak MUDSTONE, with occasional thinly laminated silty clay (<6mm). [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.90)		3		
3.40	B4		53.86	3.40		Greyish brown mottled bluish grey and orange very weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.30)				
3.70	B5		53.56	3.70		Light brown mottled reddish brown and black moderately weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.40)		4		
			53.16	4.10		End of Trial Pit at 4.10m		

Dimensions:

Final Depth: 4.10m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.10mbgl. 2. Ground water encountered at 2.80mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.80			0		Slow inflow

endeavour drilling

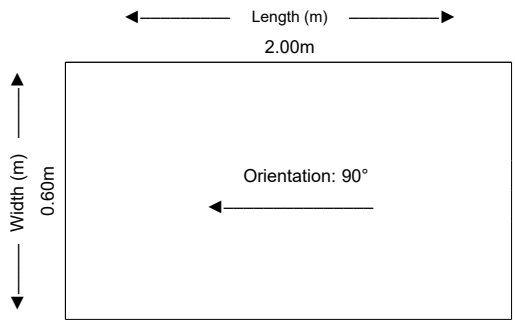
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP227
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	06/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518851.7	133665.4	60.29mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast/Occasional showers		Termination: Refusal at 3.20mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10	D1			(0.30)		TOP SOIL - Brown slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to medium of brick.		
0.10	ES1		59.99	0.30				
0.50	B1	HV 0.50m, 70kPa		(0.50)		Firm reddish brown mottled orange slightly sandy slightly gravelly CLAY with occasional rootlets <2mm (living). Gravel is fine to medium subangular of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2		59.49	0.80				
0.90	B2			(0.30)		Yellowish brown mottled orange and grey slightly silty slightly sandy gravelly CLAY with occasional rootlets <2mm (living). Gravel is fine to coarse sub-angular of extremely weak mudstone. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
1.10	B3		59.19	1.10		Reddish brown and yellow very weak to moderate weak MUDSTONE. Recovered as fine to coarse sub-angular sandy gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
1.90	B4		58.49	1.80		Reddish brown and yellow very weak medium weak MUDSTONE. Recovered as fine to coarse sub-angular sandy gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.40)				
3.10	B5		57.09	3.20		End of Trial Pit at 3.20m		

1 2 3 4

Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

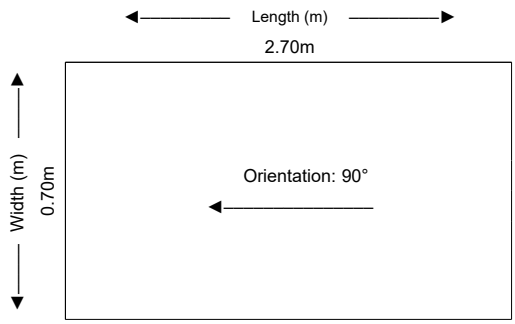
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP228
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	03/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518868.7	134202.3	68.90mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny		Termination: Refusal at 3.7mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.35)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
			68.55	0.35				
0.50 0.50	B1 ES2	HV 0.50m, 57kPa		(0.85)		Firm light grey mottled brownish orange and black slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular very weak to weak of mudstone. [RESIDUAL WEALD CLAY FORMATION]		
1.20	B2		67.70	1.20		Light bluish grey extremely weak to very weak MUDSTONE, with occasional thinly laminated silty clay. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.90)				
2.10	B3		66.80	2.10		Light brown mottled reddish brown and blackish brown weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.90)				
3.00	B4		65.90	3.00		Bluish grey mottled dark brownish orange extremely weak to very weak MUDSTONE. Recovered as clayey sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
3.50	B5		65.40	3.50		Greyish brown mottled reddish brown and blackish brown weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
			65.20	3.70		End of Trial Pit at 3.70m		

1 2 3 4

Dimensions:

Final Depth: 3.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.70mbgl. 2. Ground water encountered at 2.20mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.20			0		Slow inflow

endeavour drilling

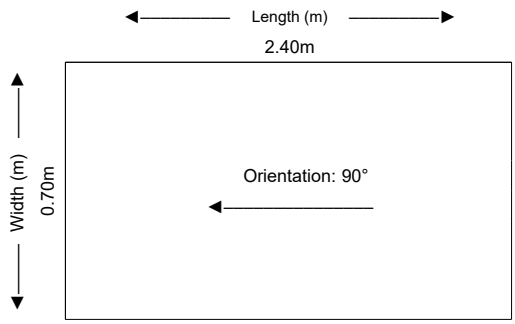
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP229
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	03/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518861.0	134271.7	70.67mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny		Termination: Reached target depth		Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOPSOIL - Dark brown silty sandy CLAY, with occasional rootlets.		
			70.37	0.30		Firm light grey and orange slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50 0.50	B1 ES2	HV 0.50m, 60kPa		(0.90)				
			69.47	1.20		Brownish orange mottled light grey and reddish brown extremely weak MUDSTONE, with occasional thinly laminated silty clay. Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
1.30	B2			(1.10)				
2.30	B3		68.37	2.30		Orangish brown mottled grey and reddish brown extremely weak to weak MUDSTONE. Recovered as sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.30)				
			68.07	2.60		Light brown and grey mottled reddish brown and bluish grey extremely weak to very weak MUDSTONE, with occasional thin laminations of silty clay. Recovered as clayey sandy gravel. [DISTINCTLY WEALD CLAY FORMATION]		
2.70	B4			(1.40)				
3.70	D2							
			66.67	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. No ground water encountered. 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

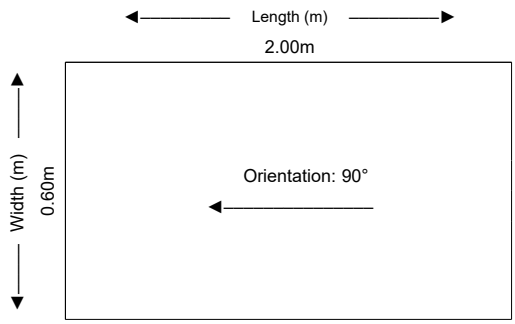
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP230
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518871.0	133902.7	58.27mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.70mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.40)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.50 0.50	B1 ES2	HV 0.50m, 83kPa	57.87	0.40		Stiff light brownish orange and light grey silty slightly sandy CLAY. (RESIDUAL WEALD CLAY FORMATION)		
		HV 1.00m, 89kPa		(1.20)				
1.60	B2		56.67	1.60		Brown orange mottled light brownish grey extremely weak MUDSTONE with thinly laminated (<6mm) silty clay. Recovered as sandy clay sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.90)				
2.50	B3		55.77	2.50		Light bluish grey and brownish orange extremely weak to weak MUDSTONE with rare thinly laminated (<6mm) silty clay. Recovered as sandy clayey sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.50)				
3.00	B4		55.27	3.00		Reddish brown and brownish orange mottled light brown and blue grey very weak to moderately weak MUDSTONE. Recovered as sandy sub-angular gravel and cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.40)				
3.40	B5		54.87	3.40		Blue grey mottled red brown and orange weak to medium strong MUDSTONE. Recovered as sandy sub-angular gravel and cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(0.30)				
			54.57	3.70		End of Trial Pit at 3.70m		

1 2 3 4

Dimensions:

Final Depth: 3.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.70mbgl. 2. Ground water encountered at 3.40mbgl (moderate inflow). 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.40			0		Moderate inflow.

endeavour drilling

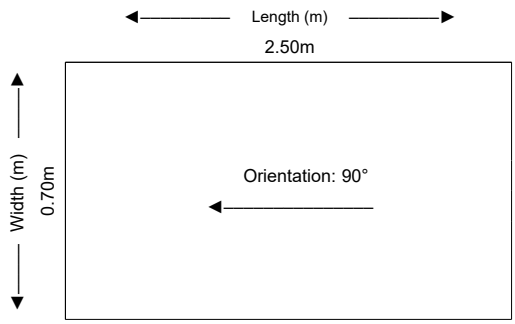
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP231
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518903.6	133920.8	59.10mOD	13T Excavator	21/02/2020	1:30
Weather: Showers	Termination: Refusal at 3.80mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.40)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.20	ES1		58.70	0.40				
		HV 0.50m, 90kPa				Stiff light brownish orange and light grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular of very weak mudstone. (RESIDUAL)		
0.60	B1							
0.60	ES2							
		HV 1.00m, 90kPa		(1.20)				
			57.50	1.60				
1.70	B2					Brownish orange mottled light grey extremely weak MUDSTONE with frequent thin laminations of silty clay. Recovered as sandy clayey sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.30)				
2.70	D2							
			56.20	2.90				
3.00	B3					Reddish brown and brownish orange mottled light brown and blue grey very weak to medium weak MUDSTONE with frequent thin laminations of silty clay. Recovered as sandy sub-angular gravel and cobbles. (DISTINCTLY WEATHERED)		
				(0.90)				
			55.30	3.80		End of Trial Pit at 3.80m		

1 2 3 4

Dimensions:

Final Depth: 3.80m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.80mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

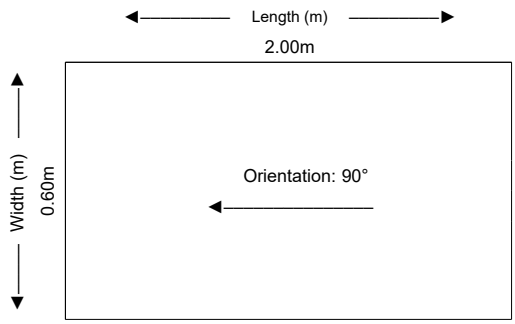
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP232
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518906.6	134108.3	67.55mOD	14T Excavator	21/02/2020	1:30
Weather:	Termination: Refusal at 3.20mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOP SOIL - Dark brown slightly sandy slightly gravelly silty clay with occasional rootlets <2mm (living). Gravel is fine to coarse sub-angular to sub-rounded of brick and clinker.		
0.10	ES1		67.35	0.20				
		HV 0.40m, 78kPa				Stiff light brown mottled orange and grey slightly sandy slightly gravelly CLAY. Gravel is fine to medium of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	B1							
0.50	ES2			(1.30)				
							1	
1.50	B2		66.05	1.50		Brown mottled grey and orange extremely weak to very weak MUDSTONE with occasional thinly laminated of grey silty clay (<6mm). Recovered as fine to coarse angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.30)				
			65.75	1.80		Brown mottled dark brown and orange and black very weak to weak MUDSTONE. Recovered as fine to coarse angular to sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
2.00	B3						2	
				(1.00)				
			64.75	2.80		Dark grey and brown mottled orange and blue grey very weak to weak MUDSTONE with occasional thinly laminated blue grey silty clay. Recovered as fine to coarse angular to sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
3.00	B4			(0.40)			3	
3.20	B5		64.35	3.20		End of Trial Pit at 3.20m		
							4	

Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

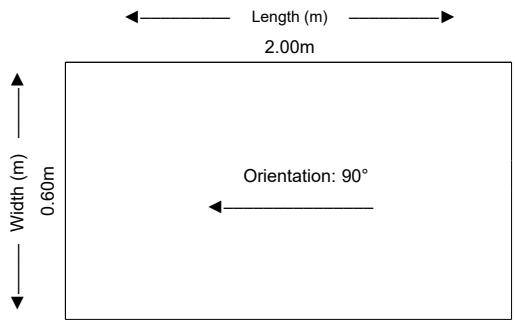
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP233
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518911.9	133856.4	57.97mOD	13T Excavator	21/02/2020	1:30
Weather:	Termination: Trial pit abandoned due to suspected land drain.			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1		57.72	0.25		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.50 0.50	B1 ES2		57.47	0.50		Light brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular weak mudstone. (RESIDUAL WEALD CLAY FORMATION) *...at 0.40mbgl possible water pipe.* End of Trial Pit at 0.50m		

Dimensions:

Final Depth: 0.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 0.50mbgl. 2. Ground water encountered at 0.40mbgl. Trial Pit was abandoned due to rapid inflow. 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.40			0		Rapid inflow

endeavour drilling

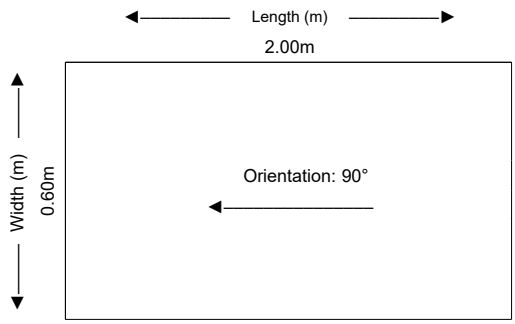
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP234
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	09/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518907.7	133612.0	57.89mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast		Termination: Refusal at 3.0mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Dark brown slightly sandy CLAY.		
0.10	ES1		57.59	0.30				
0.50	ES2	HV 0.60m, 67kPa		(0.70)		Firm light brown mottled orange and grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium sub-angular mudstone. (RESIDUAL WEALD CLAY FORMATION)		
1.10	B1		56.89	1.00		Light brown mottled orange and grey and black extremely weak MUDSTONE with occasional thinly laminated grey clay (<6mm). Recovered as sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.70)				
1.80	B2		56.19	1.70		Dark brown mottled black extremely weak to very weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.60)				
2.40	B3		55.59	2.30		Light brown mottled grey extremely weak to moderately weak MUDSTONE. Recovered as sandy fine to coarse sub-angular gravel and rare cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
			54.89	3.00		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

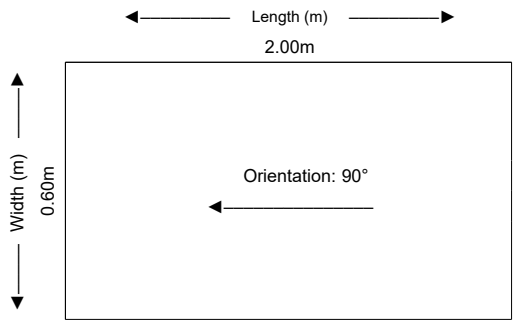
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP235
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518920.6	134067.0	64.46mOD	13T Excavator	21/02/2020	1:30
Weather:	Termination: Refusal at 3.80mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10	D1			(0.30)		TOP SOIL - Dark brown slightly sandy slightly gravelly silty CLAY, with occasional rootlets <2mm (living).		
0.10	ES1		64.17	0.30				
		HV 0.40m, 79kPa				Stiff light brown mottled orange and grey slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50	B1			(0.50)				
0.50	ES2							
0.80	B2	HV 0.80m, 77kPa	63.66	0.80		Stiff brownish orange mottled grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
				(0.90)				
1.80	B3		62.76	1.70		Orangish brown mottled grey extremely weak MUDSTONE with occasional thinly laminated blue grey silty clay (<6mm) recovered as fine to coarse angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.05)				
2.80	B4		61.72	2.75		Dark reddish brown mottled orange very weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.35)				
			61.36	3.10		Dark reddish brown mottled black and orange weak to moderately weak MUDSTONE. Recovered as fine to coarse angular gravel and occasional cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
3.70	B5		60.66	3.80		End of Trial Pit at 3.80m		

1 2 3 4

Dimensions:

Final Depth: 3.80m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.80mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

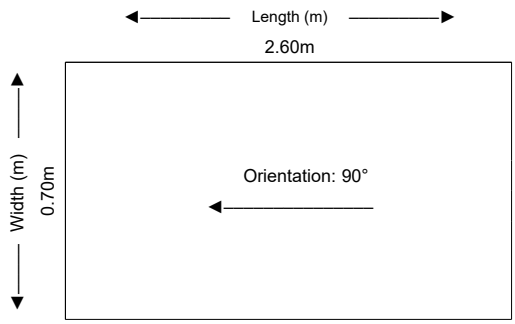
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP236
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	02/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518947.9	134161.0	68.51mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny		Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10	D1					TOPSOIL - Brown slightly gravelly silty sandy CLAY. Gravel is fine to medium subangular of brick.		
0.10	ES1			(0.40)				
			68.11	0.40		Firm brownish orange and light brownish grey slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50	B1	HV 0.50m, 58kPa						
0.50	ES2			(0.60)				
1.00	B2	HV 1.00m, 69kPa	67.51	1.00		Firm brownish orange and light grey silty CLAY, with frequent thinly laminated extremely weak mudstone (<6mm). [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.80)				
1.80	B3		66.71	1.80		Light bluish grey mottled brown extremely weak MUDSTONE. Recovered as slightly clayey sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.70)				
2.50	B4		66.01	2.50		Light brown mottled dark brownish orange and light grey extremely weak to weak MUDSTONE, with occasional dead rootlets. Recovered as clayey sandy gravel and rare cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(1.30)				
3.50	D2							
3.80	B5		64.71	3.80		Brownish grey mottled reddish brown moderately weak MUDSTONE. Recovered as sandy gravel and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
			64.51	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. No ground water encountered. 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

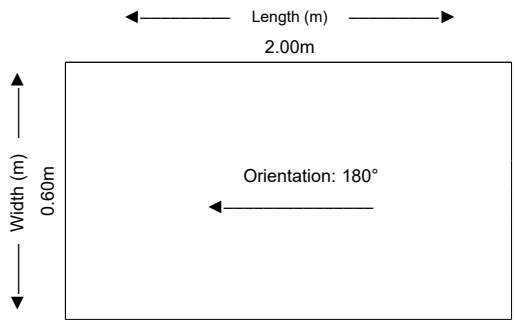
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP237
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	06/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518956.1	133691.6	60.29mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast/Occasional showers	Termination: Refusal at 3.70mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1			(0.30)		TOP SOIL - Brown slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to medium of brick.		
0.10	ES1		59.99	0.30				
0.50	B1	HV 0.50m, 70kPa				Firm yellowish brown slightly sandy slightly gravelly CLAY. Gravel if fine to medium sub-angular of extremely weak mudstone. (RESIDUAL WEALD CLAY FORMATION)	▼	
0.50	ES2			(1.10)				
			58.89	1.40				
1.50	B2					Reddish brown mottled black very weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and rare cobbles. (DESTURCTURED WEALD CLAY FORMATION)		
				(0.80)				
			58.09	2.20				
2.70	B3					Yellowish brown mottled black and brown weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular sandy gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.50)				
3.40	B4							
			56.59	3.70		End of Trial Pit at 3.70m		

1 2 3 4

Dimensions:

Final Depth: 3.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.70mbgl. 2. Ground water encountered at 0.50mbgl (moderate inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.50			0		Moderate inflow

endeavour drilling

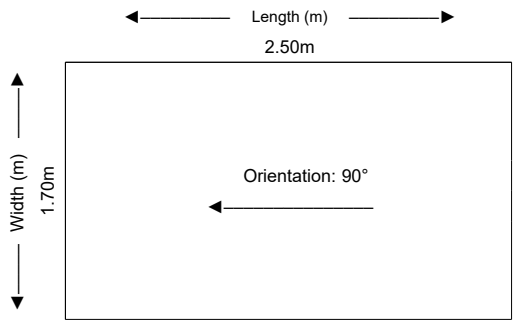
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP238
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	29/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518959.6	134235.7	70.79mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Reached target depth		Stability: Stable		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
			70.49	0.30		Firm light bluish grey mottled orangish brown slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50 0.50	B1 ES2	HV 0.50m, 58kPa		(0.60)				
0.90	B2	HV 1.00m, 70kPa	69.89	0.90		Light bluish grey and orangish brown extremely weak MUDSTONE with frequent thinly laminated silty clay (<6mm). (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.40)				
1.90	D2							
2.30	B3		68.49	2.30		Light brown mottled blackish brown and dark orange and light bluish grey very weak to moderately weak MUDSTONE. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.70)				
			67.79	3.00		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.00mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

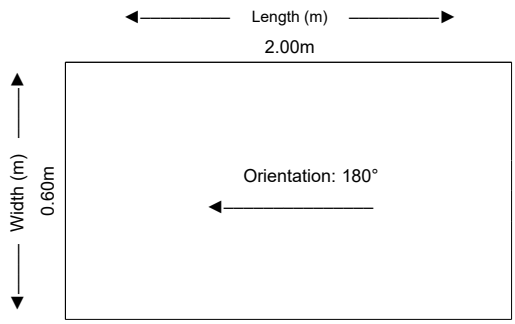
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP239
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518965.2	133960.3	60.91mOD	13T Excavator	21/02/2020	1:30
Weather: Showers	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.15	D1			(0.30)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.15	ES1		60.61	0.30				
0.50	B1	HV 0.50m, 60kPa				Firm light brownish orange and light grey slightly gravelly silty sandy CLAY. Gravel is fine to coarse angular very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(0.80)				
		HV 1.00m, 65kPa						1
			59.81	1.10				
1.20	B2					Firm light bluish grey silty CLAY with frequent thickly laminated (6-20mm) extremely week mudstone. (RESIDUAL WEALD CLAY FORMATION)		
				(1.00)				
								2
			58.81	2.10				
2.20	B3					Light greyish brown mottled blue grey and black very weak to moderately weak MUDSTONE. Recovered as sandy clayey sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.10)				
								3
3.20	B4		57.71	3.20		Reddish brown and light brown mottled blue grey and black very weak to medium strong MUDSTONE. recovered as sandy sub-angular gravel and cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.80)				
			56.91	4.00		End of Trial Pit at 4.00m		4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Ground water encountered at 1.80mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.80			0		Slow inflow

endeavour drilling

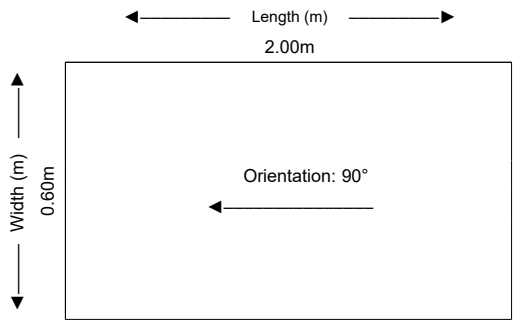
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP240
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	26/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518998.2	133773.2	59.84mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 3.0mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D3			(0.30)		TOP SOIL - Light brown sandy CLAY with frequent rootlets <2mm (living).		
0.10	ES1		59.54	0.30				
0.40	B1					Firm to stiff light grey mottled brownish orange slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.40	ES2	HV 0.50m, 73kPa		(0.80)				
1.10	B2		58.74	1.10		Brownish red mottled light bluish grey and black extremely weak to moderately weak MUDSTONE with frequent thin to thick (<20mm) laminations of silty clay. Recovered as clayey sandy fine to coarse subangular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
2.00	D2			(1.90)				
3.00	D3		56.84	3.00		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

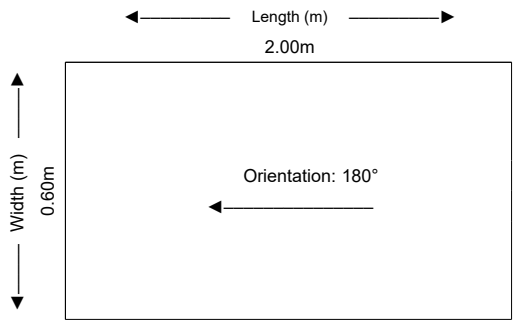
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP241
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	06/12/2019	JJW	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518972.0	133645.8	58.42mOD	13T Excavator	21/02/2020	1:30
Weather: Overcast/Occasional showers		Termination: Refusal at 3.50mbgl		Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOP SOIL - Brown slightly silty slightly sandy slightly gravelly CLAY. Gravel is fine to medium of brick.		
			58.12	0.30				
0.50	ES2	HV 0.50m, 65kPa		(0.70)		Light brown mottled orange and grey slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
			57.42	1.00				
1.20	B1					Firm light brown mottled orange and grey extremely weak MUDSTONE. with occasional thinly laminated grey clay (<6mm). Recovered as clayey sandy gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.70)				
2.30	D2							
			55.72	2.70				
2.90	B2					Light yellowish brown mottled black very weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular gravel with occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.80)				
			54.92	3.50		End of Trial Pit at 3.50m		

1 2 3 4

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.50mbgl. 2. Ground water encountered at 1.70mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.70			0		Slow inflow

endeavour drilling

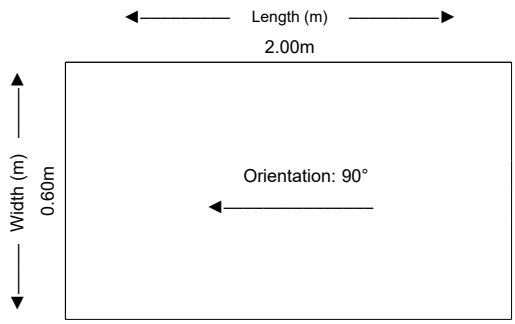
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP242
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	518995.9	133875.7	59.42mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 2.80mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.10	ES1			(0.35)				
			59.07	0.35		Firm light grey and orange silty sandy CLAY. (RESIDUAL WEALD CLAY DEPOSITS)		
0.50	B1	HV 0.50m, 63kPa						
0.50	ES2			(0.75)				
1.10	B2		58.32	1.10		Light bluish grey and orange extremely weak to very weak MUDSTONE with frequent thin laminations (<6mm) of silty clay. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.30)				
2.10	D2							
2.40	B3		57.02	2.40		Light greyish brown mottled dark blackish brown and orange very weak to moderately weak mudstone. Recovered as sandy clayey fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.40)				
			56.62	2.80		End of Trial Pit at 2.80m		

1 2 3 4

Dimensions:

Final Depth: 2.80m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 2.80mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

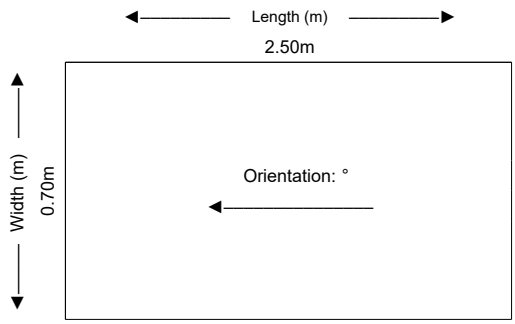
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP243
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519033.2	134053.3	63.88mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.4mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
0.20	ES1		63.58	0.30		Firm light grey and orange slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50	B1	HV 0.50m, 55kPa						
0.50	ES2							
		HV 1.00m, 80kPa						
				(1.70)				
1.50	D2	HV 1.50m, 77kPa						
2.00	B2		61.88	2.00		Light bluish grey and orange extremely weak MUDSTONE, with frequent thinly laminated silty clay (<6mm). Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.30)				
2.30	B3		61.58	2.30		Light brown mottled light bluish grey extremely weak to very weak MUDSTONE, with frequent thinly laminated silty clay. (<6mm) Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.60)				
			60.98	2.90				
3.00	B4					Light brown mottled blackish brown weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
			60.48	3.40		End of Trial Pit at 3.40m		

1 2 3 4

Dimensions:

Final Depth: 3.40m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.4mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

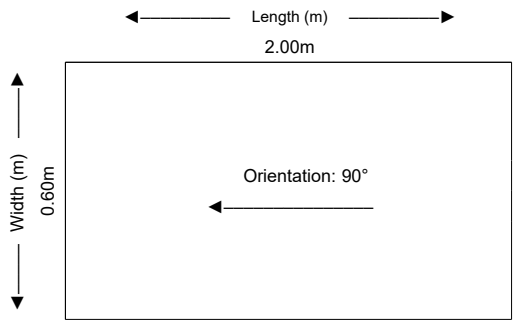
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP244
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	26/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519038.6	133524.6	53.07mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 3.0mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.30	D1			(0.40)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.30	ES1		52.67	0.40				
0.50	B1	HV 0.50m, 80kPa				Stiff light grey mottled brownish orange slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2							
		HV 1.00m, 92kPa		(1.40)				
1.50	D2							
1.80	B2		51.27	1.80		Light grey mottled brownish orange silty CLAY with frequent thinly laminated (<6mm) extremely weak to very weak mudstone. Recovered as clayey sandy gravel (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.70)				
2.50	B3		50.57	2.50		Dark reddish brown mottled light grey extremely weak to medium strong MUDSTONE. Recovered as slightly sandy clayey sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(0.50)				
			50.07	3.00		End of Trial Pit at 3.00m		

1 2 3 4

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. Ground water encountered at 2.5mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.50			0		Slow inflow

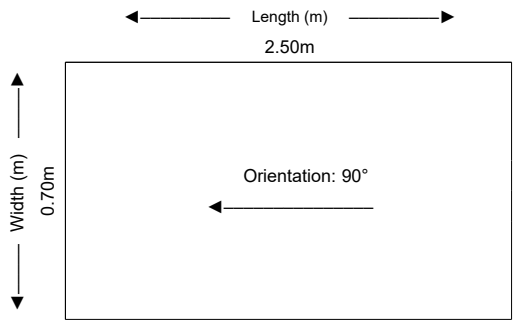
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP245
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519044.8	134150.6	67.32mOD	13T Excavator	21/02/2020	1:30
Weather:	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10	D1		67.07	0.25		TOPSOIL - Dark brown slightly gravelly silty sandy CLAY, with occasional rootlets. Gravel is fine to coarse subangular to subrounded of mudstone, flint and chalk.		
0.10	ES1							
0.40	B1			(0.45)		Firm dark orangish brown slightly gravelly silty sandy CLAY. Gravel is fine to coarse subangular to subrounded of mudstone. [REWORKED WEALD CLAY FORMATION]		
0.40	ES2	HV 0.50m, 65kPa	66.62	0.70				
0.80	B2					Firm dark brownish grey mottled blackish brown and reddish brown slightly gravelly silty sandy CLAY. Gravel is fine to coarse subangular to subrounded of mudstone and chalk. [REWORKED WEALD CLAY FORMATION]		
		HV 1.00m, 110kPa				1		
		HV 1.50m, 70kPa		(1.80)				
1.80	D2							
		HV 2.00m, 60kPa				2		
2.50	B3	HV 2.50m, 50kPa	64.82	2.50		Soft to firm light bluish grey and orange slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular of very weak mudstone. Recovered as clay. [RESIDUAL WEALD CLAY FORMATION]		
				(0.50)				
		HV 3.00m, 50kPa	64.32	3.00		3		
3.10	B4					Light bluish grey mottled orange and brownish orange extremely weak to very weak MUDSTONE, with frequent thinly laminated silty clay (<6mm). Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.70)				
3.70	B5		63.62	3.70		Bluish grey mottled brownish orange extremely weak to weak MUDSTONE. Recovered as sandy clayey gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.40)		4		
			63.22	4.10		End of Trial Pit at 4.10m		

Dimensions:

Final Depth: 4.10m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.1mbgl. 2. No groundwater encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

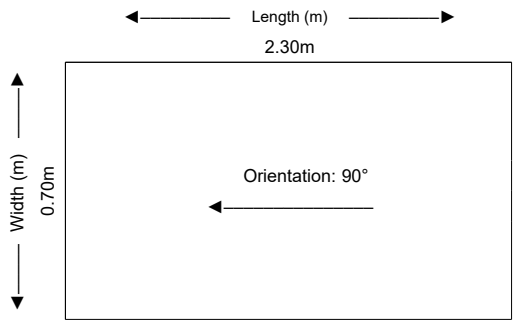
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP246
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/12/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519052.2	133988.9	62.88mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.6mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.40)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
0.20	ES1		62.48	0.40				
		HV 0.50m, 70kPa				Firm to stiff light bluish grey and orange slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular of very weak MUDSTONE. [RESIDUAL WEALD CLAY FORMATION]		
0.60	B1							
0.60	ES2			(0.80)				
1.20	B2		61.68	1.20		Light bluish grey and brownish orange mottled blackish brown extremely weak to very weak MUDSTONE, with occasional thinly laminated silty clay (<6mm). Recovered as clayey sandy gravel. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
1.70	B3		61.18	1.70		Light bluish grey mottled blackish brown and brownish orange extremely weak to weak MUDSTONE. Recovered as clayey sandy gravel. [DISTINCTLY WEATHERED]		
				(0.90)				
			60.28	2.60				
2.70	B4					Light brown mottled brownish orange and blackish brown weak to moderately strong MUDSTONE. Recovered as sandy gravely and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.70)				
			59.58	3.30				
3.40	B5			(0.30)		Light brown mottled dark reddish brown weak to medium strong MUDSTONE. Recovered as slightly sandy slightly gravelly cobbles and boulders. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
			59.28	3.60		End of Trial Pit at 3.60m		

1 2 3 4

Dimensions:

Final Depth: 3.60m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.4mbgl. 2. Groundwater encountered at 2.5mbgl (Moderate inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.50			0		Moderate inflow

endeavour drilling

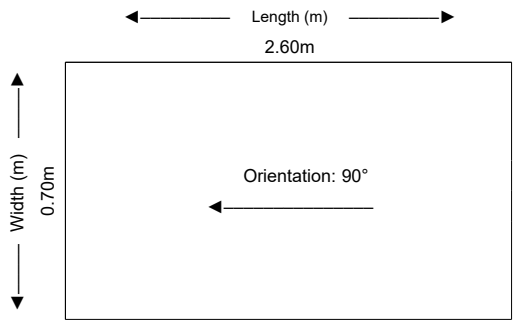
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP247
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519056.2	134224.9	70.36mOD	13T Excavator	21/02/2020	1:30
Weather: Showers	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.30)		TOPSOIL - Dark brown slightly gravelly silty sandy CLAY. Gravel is fine to coarse subangular to subrounded of mudstone.		
0.20	ES1		70.06	0.30				
0.50	B1	HV 0.50m, 60kPa				Firm greyish brown mottled orange slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50	ES2			(0.90)				
1.20	B2		69.16	1.20		Light brown and bluish grey extremely weak to very weak MUDSTONE, with occasional thinly laminated silty clay (<6mm). [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.10)				
2.30	B3		68.06	2.30		Light bluish grey and light brownish orange mottled blackish brown extremely weak to moderately weak MUDSTONE. Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.20)				
3.30	D2							
3.50	B4		66.86	3.50		Dark brownish grey mottled reddish brown and orange moderately weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [PARTIALLY WEATHERED WEALD CLAY FORMATION]		
				(0.50)				
			66.36	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Groundwater encountered at 0.3mbgl (Slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.30			0		Slow inflow

endeavour drilling

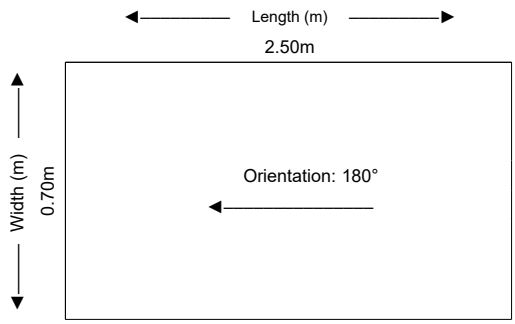
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP248
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	27/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519071.4	133937.3	61.83mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.6mbgl			Stability: Good	

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.40)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.20	ES1		61.43	0.40				
		HV 0.50m, 60kPa				Stiff light brownish orange and light grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.60	B1							
0.60	ES2			(0.80)				
		HV 1.00m, 70kPa						
1.20	B2		60.63	1.20		Firm light brownish orange and light grey silty CLAY with frequent thickly laminated (6-20mm) very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
		HV 1.50m, 73kPa		(0.60)				
1.90	B3		60.03	1.80		Light greyish brown mottled light blueish grey and blackish brown extremely weak to weak MUDSTONE. Recovered as clayey slightly sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.80)				
2.60	B4		59.23	2.60		Bluish grey and light brown mottled blackish brown medium strong MUDSTONE. Recovered as sandy gravel and cobble (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(1.00)				
3.60	D2		58.23	3.60		End of Trial Pit at 3.60m		

1
2
3
4

Dimensions:

Final Depth: 3.60m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.60mbgl. 2. Ground water encountered at 0.65mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.65			0		Slow inflow

endeavour drilling

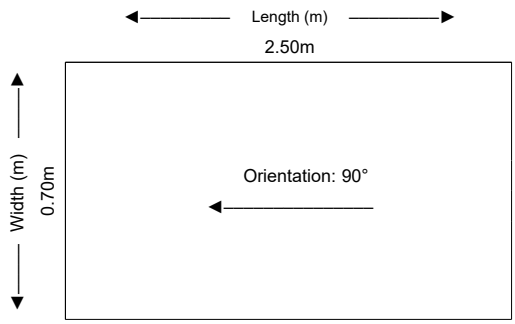
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP249
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519092.3	134046.8	64.65mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.4mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.35)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
			64.30	0.35				
0.50 0.50	B1 ES2	HV 0.50m, 79kPa		(0.85)		Firm to stiff light bluish grey and orange slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular of very weak mudstone. [RESIDUAL WEALD CLAY FORMATION]		
1.20	B2		63.45	1.20		Light bluish grey and brownish orange extremely weak MUDSTONE, with frequent thinly laminated silty clay (<6mm) Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.90)				
2.10	B3		62.55	2.10		Light brown mottled dark brown and orange and light bluish grey extremely weak to moderately weak MUDSTONE. Recovered as clayey sandy gravel [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.30)				
2.40	B4		62.25	2.40		Light greyish brown mottled blackish brown and reddish brown very weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED WEALD CLAY FORMATION]		
				(1.00)				
			61.25	3.40		End of Trial Pit at 3.40m		

1 2 3 4

Dimensions:

Final Depth: 3.40m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.4mbgl. 2. Groundwater encountered at 0.35mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.35			0		Moderate inflow

endeavour drilling

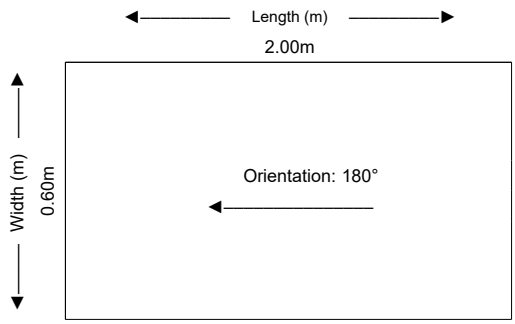
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP250
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	26/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519090.3	133616.4	54.77mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 3.2mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.20	D1			(0.30)		TOP SOIL - Brown silty sandy CLAY with occasional rootlets <2mm (living).		
0.20	ES1		54.47	0.30				
0.50	B1	HV 0.50m, 88kPa				Stiff light grey mottled brownish orange slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(1.40)				
1.50	D2							
			53.07	1.70				
1.80	B2					Light bluish grey mottled brownish orange silty CLAY with frequent thinly laminated (<6mm) extremely weak to very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
				(0.50)				
2.20	B3		52.57	2.20				
						Dark reddish brown mottled light greyish brown extremely weak to medium weak MUDSTONE. Recovered as slightly sandy clayey gravel and cobbles. (DISTINCTLY WEATHERED)		
				(1.00)				
3.20	D3		51.57	3.20				
						End of Trial Pit at 3.20m		

1 2 3 4

Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. No ground water encountered 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

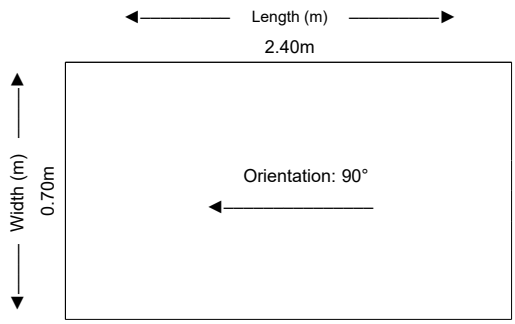
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP251
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	28/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519113.4	134138.3	67.44mOD	13T Excavator	21/02/2020	1:30
Weather: Showers		Termination: Refusal at 3.50mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10 0.10	D1 ES1			(0.30)		TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
			67.14	0.30		Firm to stiff light bluish grey and orange slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subangular of very weak mudstone. [RESIDUAL WEALD CLAY FORMATION]		
0.50 0.50	B1 ES2	HV 0.50m, 75kPa		(0.70)				
1.00	B2	HV 1.00m, 120kPa	66.44	1.00		Stiff light bluish grey and brownish orange silty CLAY, with frequent thinly laminated extremely weak mudstone (<6mm). [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.90)				
1.90	B3		65.54	1.90		Brownish orange mottled dark brown and light bluish grey extremely weak to weak MUDSTONE, with occasional thinly laminated silty clay. Recovered as clayey sandy fine to coarse subangular gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.60)				
2.50	B4		64.94	2.50		Brownish grey mottled blackish brown, reddish brown and orange extremely weak to medium strong MUDSTONE. Recovered as sandy gravel and cobbles. [DISTINCTLY WEATHERED]		
				(1.00)				
3.50	D2		63.94	3.50		End of Trial Pit at 3.50m		

1 2 3 4

Dimensions:

Final Depth: 3.50m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.5mbgl. 2. Groundwater encountered at 1.0mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.00			0		Slow inflow

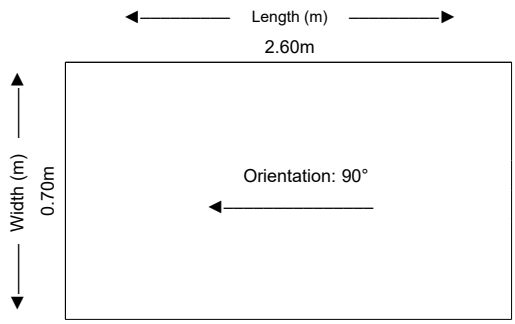
endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP252
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	29/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519108.8	134232.9	71.67mOD	13T Excavator	21/02/2020	1:30
Weather: Sunny	Termination: Reached target depth		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.10	D1					TOPSOIL - Brown silty sandy CLAY, with occasional rootlets.		
0.10	ES1			(0.35)				
			71.32	0.35		Stiff light bluish grey and brownish orange slightly sandy silty CLAY. [RESIDUAL WEALD CLAY FORMATION]		
0.50	B1	HV 0.50m, 83kPa						
0.50	ES2			(0.95)				
		HV 1.00m, 86kPa					1	
1.20	B2							
			70.37	1.30		Light brown and light brownish grey extremely weak MUDSTONE, with frequent thinly laminated silty clay (<6mm). Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(1.10)				
2.20	D2						2	
			69.27	2.40				
2.50	B3					Light brown mottled reddish brown and bluish grey extremely weak to moderately weak MUDSTONE. Recovered as clayey sandy gravel. [DESTRUCTURED WEALD CLAY FORMATION]		
				(0.60)				
			68.67	3.00		End of Trial Pit at 3.00m	3	
							4	

Dimensions:

Final Depth: 3.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.0mbgl. 2. No ground water encountered. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

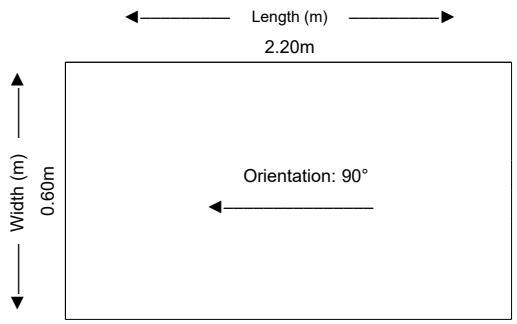
endeavour drilling

Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP253
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	26/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519126.3	133573.9	52.98mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 3.10mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.15	D1			(0.30)		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.15	ES1		52.68	0.30				
0.40	ES2					Firm to stiff light grey mottled brownish orange slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.50	B1	HV 0.50m, 80kPa						
				(1.00)				
		HV 1.00m, 76kPa					1	
1.30	B2		51.68	1.30		Stiff light grey mottled dark brownish orange slightly sandy silty CLAY with frequent thinly laminated (<6mm) mudstone. Recovered as very clayey silty gravel. (RESIDUAL WEALD CLAY FORMATION)		
				(0.30)				
1.60	B3		51.38	1.60		Light bluish grey mottled dark brownish orange extremely weak to very weak MUDSTONE. Recovered as clayey fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.10)			2	
2.60	D2							
2.70	B4		50.28	2.70		Bluish grey mottled dark brownish orange very weak to moderately weak MUDSTONE. Recovered as sandy clayey fine to coarse gravel and cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(0.40)			3	
			49.88	3.10		End of Trial Pit at 3.10m		
							4	

Dimensions:

Final Depth: 3.10m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.10mbgl. 2. Ground water encountered at 0.75mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.75			0		Slow inflow

endeavour drilling

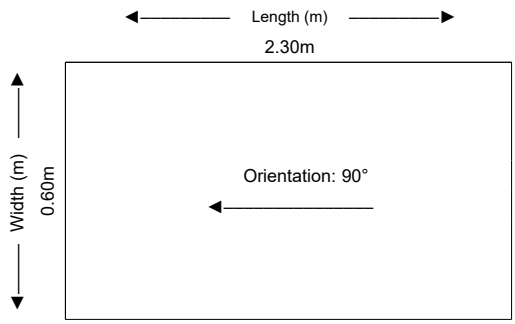
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP254
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	26/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519174.7	133637.4	53.09mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Reached target depth.		Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	D1			(0.40)		TOP SOIL - Brown silty sandy CLAY with occasional rootlets <2mm (living).		
0.20	ES1		52.69	0.40				
0.50	B1	HV 0.50m, 110kPa				Stiff light brownish grey mottled dark orange sandy slightly gravelly silty CLAY. Gravel is fine to coarse sub-angular very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.50	ES2			(1.10)				
1.50	B2		51.59	1.50		Stiff light bluish grey mottled orangish brown silty CLAY with frequent thinly (<6mm) to thickly (6-20mm) laminated slightly sandy silt with rare dead roots <4mm (dead). (RESIDUAL WEALT CLAY FORMATION)		
				(1.10)				
2.50	D2		50.49	2.60		Reddish brown mottled bluish grey and brown extremely weak to weak MUDSTONE with frequent thinly laminated (<6mm) silty clay. Recovered as silty clayey fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
2.70	B3			(0.50)				
3.10	B4		49.99	3.10		Bluish grey mottled orangish brown very weak to moderately weak MUDSTONE. Recovered as fine to coarse sub-angular gravel and cobbles. (PARTIALLY WEATHERED WEALD CLAY FORMATION)		
				(0.90)				
			49.09	4.00		End of Trial Pit at 4.00m		

1 2 3 4

Dimensions:

Final Depth: 4.00m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 4.0mbgl. 2. Ground water encountered at 2.70mbgl (moderate inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.70			0		Moderate inflow

endeavour drilling

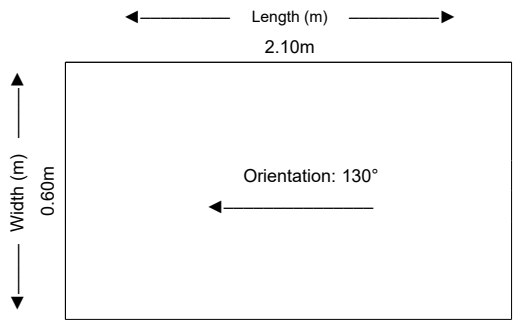
Contract Name:			Client:		Trial Pit ID:
P1, Land North of Horsham, West Sussex			Legal and General (Strategic Land North of Horsham) Ltd		TP255
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	25/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519224.1	133701.5	55.90mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 2.60mbgl		Stability: Good		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.20	ES1			(0.30)		TOP SOIL - Brown silty sandy CLAY with occasional rootlets <2mm (living).		
			55.60	0.30				
0.40	B1					Firm light orangish brown mottled light grey slightly sandy silty CLAY. (RESIDUAL WEALD CLAY FORMATION)		
0.40	ES2	HV 0.50m, 71kPa						
				(1.00)				
1.30	B2		54.60	1.30		Light bluish grey mottled brownish orange very weak to moderately weak MUDSTONE with frequent thinly laminated (<6mm) sandy clay. Recovered as clayey fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(1.10)				
2.30	D1							
			53.50	2.40				
2.50	B3					Dark brownish black mottled dark orangish brown weak to moderately weak MUDSTONE. Recovered as clayey sandy fine to coarse sub-angular gravel. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
			53.30	2.60		End of Trial Pit at 2.60m		

1 2 3 4

Dimensions:

Final Depth: 2.60m



Inclination: 90°

General Remarks:

1. Trial pit machine excavated to 2.60mbgl. 2. Ground water encountered at 1.30mbgl (moderate inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.30			0		Moderate inflow

endeavour drilling

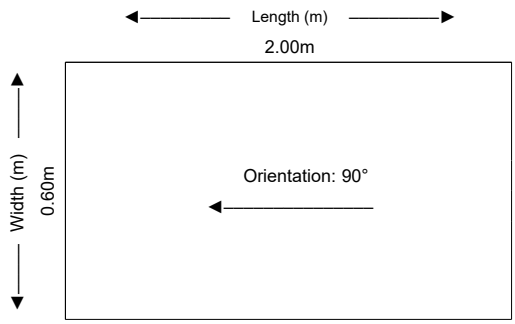
Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP256
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	25/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519327.1	133713.4	54.12mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 2.70mbgl		Stability:		

Samples & In Situ Testing			Strata Details					
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description	Water	Backfill
0.10	ES1		53.87	0.25		TOP SOIL - Brown silty sandy clay with occasional rootlets <2mm (living).		
0.30	B1							
0.30	ES2	HV 0.50m, 52kPa		(0.45)		Firm light orangish brown and light grey slightly gravelly silty sandy CLAY. Gravel is fine to coarse sub-angular very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
0.80	B2		53.42	0.70		Dark brownish black and dark orange very weak MUDSTONE with thinly laminated (<6mm) silty clay. Recovered as slightly sandy slightly clayey fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.80)				
1.60	B3		52.62	1.50		Dark reddish brown mottled brown weak to moderately weak MUDSTONE with frequent thinly to thickly (<20mm) laminated sandy clay. Recovered as slightly sandy slightly clayey fine to coarse sub-angular gravel and occasional cobbles. (DISTINCTLY WEATHERED WEALD CLAY FORMATION)		
				(1.20)				
2.60	D1		51.42	2.70		End of Trial Pit at 2.70m		

1 2 3 4

Dimensions:

Final Depth: 2.70m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 2.70mbgl. 2. No groundwater encountered. 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

endeavour drilling

Contract Name:		Client:			Trial Pit ID:
P1, Land North of Horsham, West Sussex		Legal and General (Strategic Land North of Horsham) Ltd			TP257
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
J4175	25/11/2019	RAF	MJS	FINAL	
Trial Pit Log	Easting:	Northing:	Ground Level:	Plant Used:	Date Printed:	Scale:
	519388.1	133732.2	54.37mOD	8T Excavator	21/02/2020	1:30
Weather: Rain	Termination: Refusal at 3.20mbgl			Stability: Good		

Samples & In Situ Testing			Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description		
0.20	ES1			(0.35)		TOP SOIL - Brown slightly gravelly silty sandy CLAY. Gravel is fine to coarse sub-angular to sub-rounded of brick.		
0.40	ES2	HV 0.50m, 110kPa	54.02	0.35		Stiff orangish brown mottled light grey slightly gravelly silty sandy CLAY. Gravel is fine to coarse sub-angular very weak mudstone. (RESIDUAL WEALD CLAY FORMATION)		
				(0.75)				
			53.27	1.10				
1.20	B2					Dark brownish black and dark orange very weak MUDSTONE frequently thinly to thickly (<20mm) laminated sandy clay. Recovered as slightly clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
1.40	B1			(0.70)				
1.80	B3		52.57	1.80		Stiff light bluish grey mottled orangish brown silty CLAY with occasional roots <5mm (dead) and with occasional thinly laminated (<6mm) extremely weak mudstone. Recovered as slightly sandy slightly gravelly clay. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.50)				
2.30	B4		52.07	2.30		Light bluish grey and dark brownish orange weak MUDSTONE frequently thinly to thickly (<20mm) laminated silty clay. Recovered as clayey sandy fine to coarse sub-angular gravel. (DESTRUCTURED WEALD CLAY FORMATION)		
				(0.90)				
			51.17	3.20		End of Trial Pit at 3.20m		

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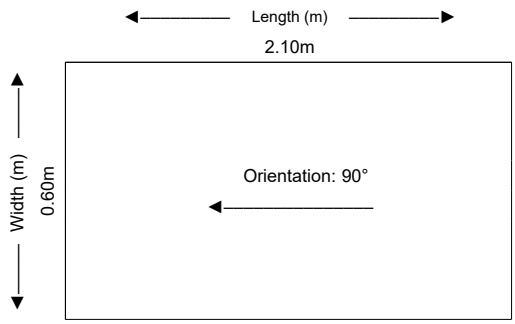
Dimensions:

Final Depth: 3.20m



Inclination: °

General Remarks:

1. Trial pit machine excavated to 3.20mbgl. 2. Ground water encountered at 0.40mbgl (slow inflow) 3. Backfilled with arisings on completion.

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
0.40			0		Slow inflow

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Trial Pit Log

Trialpit No
TP01
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518823 - 133666 Level: 60.11	Date 21/05/2024
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.50	0.6 × 2	Scale 1:25
Client:	CALA Homes Southern Counties			Logged IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20	59.91		Brown sandy gravelly silt REWORKED TOPSOIL. Gravel is fine to coarse angular to subangular of flint. Sand is fine to medium.
				0.25	59.86		Dark brown very gravelly silt MADE GROUND. Gravel is fine to coarse angular to subangular of brick, concrete and occasional canvas bag fragments.
			HVP=70				Firm orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
							with a band of mudstone gravels at 1.0m
							with mudstone gravels becoming more common from 1.4m
				1.50	58.61		End of pit at 1.50 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP02
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518714 - 133665 Level: 57.83	Date 21/05/2024
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.30	0.6 × 2	Scale 1:25
Client:	CALA Homes Southern Counties			Logged IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30	57.53		Brown sandy gravelly silt TOPSOIL with common rootlets. Gravel is fine to coarse angular to subangular of flint. Sand is fine to medium.
			HVP=60				Firm orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
			HVP=85				*with mudstone gravels becoming more common from 1.1m*
				1.30	56.53		End of pit at 1.30 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP03
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518628 - 133673 Level: 55.53	Date 21/05/2024
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 2.00	0.6 × 2	Scale 1:25
Client:	CALA Homes Southern Counties			Logged IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30	55.23		Brown slightly sandy slightly gravelly silt REWORKED TOPSOIL. Gravel is fine to coarse angular to subrounded of flint. Sand is fine to medium.
							Greyish brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subangular of flint, brick, concrete and blacktop with occasional wood fragments and rare canvas bags.
				1.20	54.33		Orangish brown and grey mottled clay MADE GROUND with occaisional gravels of fine to coarse angular to subagular of brick.
			HVP=75	1.30	54.23		Firm orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
							with mudstone gravels becoming more common from 1.5m
				2.00	53.53		End of pit at 2.00 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP04
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518629 - 133734 Level: 55.56
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.30	0.6 × 2
Client:	CALA Homes Southern Counties		

Date: 21/05/2024
Scale: 1:25
Logged: IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.20	55.36		Brown slightly sandy slightly gravelly silt REWORKED TOPSOIL. Gravel is fine to coarse angular to subrounded of flint. Sand is fine to medium.
				0.30	55.26		Greyish brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subangular of flint, brick, concrete and blacktop with occasional wood fragments and rare canvas bags.
			HVP=100				Stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
							Hand Penetrometer UCS at 1.0m = 540kPa
							with mudstone gravels becoming more common from 1.1m
				1.30	54.26		End of pit at 1.30 m

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Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP05
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518660 - 133806 Level: 56.30
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 2.20	0.6 × 2
Client:	CALA Homes Southern Counties		

Date: 21/05/2024
Scale: 1:25
Logged: IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.40	55.90		Brown slightly sandy slightly gravelly silt REWORKED TOPSOIL. Gravel is fine to coarse angular to subrounded of flint. Sand is fine to medium.
				1.50	54.80		Dark brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subangular of brick, concrete, blacktop and occasional platic pipe and wood with an organic odour.
▼			HVP=45	2.20	54.10		Firm orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
							End of pit at 2.20 m

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Remarks: Slow seepage at 2.0m. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP06
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518695 - 133945 Level: 57.55
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.70	0.6 × 2
Client:	CALA Homes Southern Counties		

Date: 21/05/2024
Scale: 1:25
Logged: IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							Dark brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subangular of brick, concrete, blacktop and occasional platic pipe and wood with an organic odour. *recovered as silt in the top 0.15m*
			HVP=115	0.60	56.95		Firm to stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
			HVP=85				
			HVP=100				
				1.70	55.85		End of pit at 1.70 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP07
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518713 - 134007 Level: 59.09
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.50	0.6 × 2
Client:	CALA Homes Southern Counties		

Date: 21/05/2024
Scale: 1:25
Logged: IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							Dark brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subangular of brick, concrete, blacktop and occasional canvas bag fragments. *recovered as silt in the top 0.15m*
			HVP=90	0.80	58.29		Firm to stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
			HVP=90	1.50	57.59		End of pit at 1.50 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Trial Pit Log

Trialpit No
TP08
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518778 - 133958 Level: 58.08
Location:	North Horsham, Mowbray Estate, RH12 4QR	Dimensions (m): Depth 1.50	0.6 × 2
Client:	CALA Homes Southern Counties		

Date: 21/05/2024
Scale: 1:25
Logged: IA

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
							Blackish brown sandy gravelly clay MADE GROUND. Gravel is fine to coarse angular to subrounded of brick, flint and blacktop and occasional ceramic tile, plastic and wood with an organic odour. *recovered as silt in the top 0.15m*
			HVP=110	0.70	57.38		Stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
			HVP=110	1.50	56.58		End of pit at 1.50 m

Remarks: Trial pit remained dry. Backfilled with arisings.

Stability: Stable

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Borehole Log

Borehole No.
WS01
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518789 - 133889	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level: 56.59	Scale 1:20
Client:	CALA Homes Southern Counties		Dates: 20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.25	56.34		Brown slightly sandy clay TOPSOIL with occasional rootlets. Sand is fine to medium.
								Stiff to very stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
								Hand Penetrometer UCS at 0.4m = 300kPa
		1.00		N=21 (2,4/3,4,6,8)				*Hand Penetrometer UCS at 1.0m = 270kPa*
								between 1.1m and 1.4m mudstone gravels becoming more common
								Hand Penetrometer UCS at 1.2m = 320kPa
								Hand Penetrometer UCS at 1.5m = 600kPa+
		2.00		N=13 (1,3/2,4,3,4)	2.00	54.59		End of borehole at 2.00 m

Remarks
Borehole remained stable and remained dry on completion. Standpipe 50mm diameter wellscreen installed to 2.0m, top 1.0m plain with bentonite seal and remainder slotted with gravel surround. Completed with gas tap and upstanding cover. Windowless rig energy ratio is 79.16%.

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Borehole Log

Borehole No.
WS02
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518720 - 133891	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level: 56.33	Scale 1:20
Client:	CALA Homes Southern Counties		Dates: 20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		1.00		N=14 (1,2/2,4,4,4)				Brown slightly sandy gravelly clay MADE GROUND. Gravel is fine to medium angular to subrounded of brick, flint, concrete and clinker. Occasional greyish black staining with an organic odour. Sand is fine to medium. *recovered as silt in the top 0.2m*
					1.20	55.13		Very stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone. *Hand Penetrometer UCS at 1.5m = 520kPa*
		2.00		N=24 (1,3/3,5,6,10)	2.00	54.33		End of borehole at 2.00 m

Remarks
Borehole remained stable and remained dry on completion. Standpipe 50mm diameter wellscreen installed to 1.0m, top 0.5m plain with bentonite seal and remainder slotted with gravel surround. Completed with gas tap and upstanding cover. Windowless rig energy ratio is 79.16%.

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Borehole Log

Borehole No.
WS03
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518717 - 133801	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level: 55.97	Scale 1:20
Client:	CALA Homes Southern Counties		Dates: 20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20	55.77		Brown slightly sandy clay TOPSOIL with occasional rootlets. Sand is fine to medium.
								Stiff to extremely weak rock orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone. Occasional reddish brown mottling.
		1.00		N=16 (1,2/2,4,5,5)				*below 1.0m mudstone gravels becoming more common*
								Hand Penetrometer UCat 1.25m = 370kPa
								too fissule below 1.4m to complete a hand penetrometer
		2.00		N=58 (8,9/12,10,20,16)	2.00	53.97		End of borehole at 2.00 m

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Remarks
Borehole remained stable and remained dry on completion.

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Borehole Log

Borehole No.
WS04
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518691 - 133715	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level: 57.65	Scale 1:20
Client:	CALA Homes Southern Counties		Dates: 20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.30	57.35		Brown gravelly silt MADE GROUND. Gravel is fine to course angular to subangular of flint, brick, concrete, occasional clinker and rare tile fragments.
		1.00		N=12 (1,2/1,3,4,4)				Stiff to extremely weak rock orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone.
								Hand Penetrometer UCS at 0.9m = 330kPa
								Hand Penetrometer UCS at 1.2m = 470kPa
								Hand Penetrometer UCS at 1.5m = 600kPa+
								with common mudstone gravels below 1.6m
								with a band of mustone between 1.6m and 1.65m
		2.00		N=68 (4,8/14,18,20,16)	2.00	55.65		End of borehole at 2.00 m

Remarks
Borehole remained stable and remained dry on completion. Standpipe 50mm diameter wellscreen installed to 2.0m, top 1.0m plain with bentonite seal and remainder slotted with gravel surround. Completed with gas tap and upstanding cover. Windowless rig energy ratio is 79.16%.

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Borehole Log

Borehole No.
WS05
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords: 518754 - 133723	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level: 58.59	Scale 1:20
Client:	CALA Homes Southern Counties		Dates: 20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.25	58.34		Brown slightly sandy silt TOPSOIL with occasional rootlets. Sand is fine to medium.
								Very stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone. Occasional reddish brown mottling.
		1.00		N=18 (1,1/3,3,5,7)				*Hand Penetrometer UCS at 0.9m = 180kPa*
								with fissile recovery between 1.0m and 1.4m
					1.40	57.19		Extremely weak MUDSTONE recovered as light brown, greyish black and orangish brown fine to coarse angular to subangular gravels. Occasional black staining.
		2.00		64 (2,0/64 for 225mm)	2.00	56.59		End of borehole at 2.00 m

Remarks
Borehole remained stable and remained dry on completion.

AGS

Leap Environmental Ltd
The Atrium, Curtis Road
Dorking, Surrey RH4 1XA
Tel: 01306 646510
www.leapenvironmental.com

Borehole Log

Borehole No.
WS06
Sheet 1 of 1

Project Name:	Area 5, 6 and 11 - Additional Investigation and Preliminary GRA	Project No. LP3655	Co-ords:	518827 - 133713	Hole Type WS
Location:	North Horsham, Mowbray Estate, RH12 4QR		Level:	59.41	Scale 1:20
Client:	CALA Homes Southern Counties		Dates:	20/05/2024 - 20/05/2024	Logged By IA

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.40	59.01		Brown to orangish brown gravelly clay MADE GROUND. Gravel is fine to medium rounded to subrounded of pea shingle.
		1.00		N=55 (3,3/6,10,18,21)				Very stiff orangish brown and grey mottled CLAY with occasional fine to medium subangular gravels of mudstone. *with fissile recovery from 1.0m*
					1.15	58.26		Extremely weak MUDSTONE recovered as light brown, greyish black and orangish brown fine to coarse angular to subangular gravels. Occasional black staining.
		1.60		N=38 (9,11/9,8,8,13)	1.60	57.81		End of borehole at 1.60 m

1
2
3
4

Remarks
Borehole remained stable and remained dry on completion. Standpipe 50mm diameter wellscreen installed to 1.6m, top 0.5m plain with bentonite seal and remainder slotted with gravel surround. Completed with gas tap and upstanding cover. Windowless rig energy ratio is 79.16%.

AGS

APPENDIX B – THIRD-PARTY CHEMICAL TESTING RESULTS

APPENDIX K

Chemical Analysis Results

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	31 December 2019
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191203-105
Your Reference:	J4175
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	535816

This report has been revised and directly supersedes 535459 in its entirety.

We received 22 samples on Tuesday December 03, 2019 and 7 of these samples were scheduled for analysis which was completed on Tuesday December 31, 2019. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21282346	BH207	E1	0.30	29/11/2019
21282347	BH207	E2	0.80	29/11/2019
21282348	TP202	E1	0.10	29/11/2019
21282349	TP202	E2	0.50	29/11/2019
21282350	TP203	E1	0.10	29/11/2019
21282351	TP203	E2	0.50	29/11/2019
21282352	TP238	E1	0.10	29/11/2019
21282353	TP238	E2	0.50	29/11/2019
21282355	TP252	E1	0.10	29/11/2019
21282356	TP252	E2	0.50	29/11/2019
21282342	WS201	E1	0.50	29/11/2019
21282343	WS201	E2	1.00	29/11/2019
21282357	WS206	E1	0.26	28/11/2019
21282358	WS206	E2	1.20	28/11/2019
21282361	WS202A	E1	0.30	28/11/2019
21282362	WS202A	E2	0.90	28/11/2019
21282340	WS204A	E1	0.45	29/11/2019
21282341	WS204A	E2	1.00	29/11/2019
21282359	WS205A	E1	0.17	28/11/2019
21282360	WS205A	E2	1.10	28/11/2019
21282344	WS207A	E1	0.35	29/11/2019
21282345	WS207A	E2	0.90	29/11/2019

Maximum Sample/Coolbox Temperature (°C) : **7.8**

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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

| | | | | |

| 21282360 | | |

Validated

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Rd	**Order Number:**		**Superseded Report:**	535459

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)	21282348			21282352			21282343			21282357			21282361			21282340			21282360
Customer Sample Reference	TP202			TP238			WS201			WS206			WS202A			WS204A			WS205A
AGS Reference	E1			E1			E2			E1			E1			E1			E2
Depth (m)	0.10			0.10			1.00			0.26			0.30			0.45			1.10
Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
VOC MS (S)	All	NDPs: 0 Tests: 7			X			X			X			X			X			X	

21282360	WS205A	E2	1.10	60g VOC (ALE215)	S		x
				250g Amber Jar (ALE210)	S		

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
21282348	TP202	0.10	Light Brown	Clay	None	None
21282352	TP238	0.10	Light Brown	Clay Loam	Stones	Vegetation
21282343	WS201	1.00	Red	Silty Clay Loam	Stones	None
21282357	WS206	0.26	Dark Brown	Sandy Loam	Stones	Brick
21282361	WS202A	0.30	Light Brown	Clay	None	None
21282340	WS204A	0.45	Dark Brown	Loamy Sand	Stones	Brick
21282360	WS205A	1.10	Light Brown	Sandy Clay Loam	Stones	None

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.

Validated

CERTIFICATE OF ANALYSIS

SDG: 191203-105 **Client Reference:** J4175 **Report Number:** 535816
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:** 535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	TP202	TP238	WS201	WS206	WS202A	WS204A
Customer Sample Ref.			TP202	TP238	WS201	WS206	WS202A	WS204A
Depth (m)			0.10	0.10	1.00	0.26	0.30	0.45
Sample Type			Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Date Sampled			29/11/2019	29/11/2019	29/11/2019	28/11/2019	28/11/2019	29/11/2019
Sample Time			.	.	.	.	.	.
Date Received			03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019
SDG Ref			191203-105	191203-105	191203-105	191203-105	191203-105	191203-105
Lab Sample No.(s)			21282348	21282352	21282343	21282357	21282361	21282340
AGS Reference			E1	E1	E2	E1	E1	E1
Moisture Content Ratio (% of as received sample)	%	PM024	21	22	19	14	17	12
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB	<0.01	<0.01				
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB	<0.01	<0.01				
2,4-D*	<0.01 mg/kg	SUB	<0.01	<0.01				
2,4-DB*	<0.01 mg/kg	SUB	<0.01	<0.01				
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB	<0.01	<0.01				
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB	<0.01	<0.01				
Acifluorfen*	<0.01 mg/kg	SUB	<0.01	<0.01				
Bentazone*	<0.01 mg/kg	SUB	<0.01	<0.01				
Bromoxynil*	<0.01 mg/kg	SUB	<0.01	<0.01				
Dicamba*	<0.01 mg/kg	SUB	<0.01	<0.01				
Diclofop*	<0.01 mg/kg	SUB	<0.01	<0.01				
Dinoseb*	<0.01 mg/kg	SUB	<0.01	<0.01				
DNOC*	<0.01 mg/kg	SUB	<0.01	<0.01				
Fluroxypyr*	<0.01 mg/kg	SUB	<0.01	<0.01				
Ioxynil*	<0.01 mg/kg	SUB	<0.01	<0.01				
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB	<0.01	<0.01				
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB	<0.01	<0.01				
Mecoprop (MCPP)*	<0.01 mg/kg	SUB	<0.01	<0.01				
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB	<0.01	<0.01				
Triclopyr*	<0.01 mg/kg	SUB	<0.01	<0.01				
Triclosan*	<0.01 mg/kg	SUB	<0.01	<0.01				
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M	<0.01 M	<0.01 @ M	<0.01 @ M	<0.01 @ M	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M	<0.01 M	<0.01 @ M	<0.01 @ M	<0.01 @ M	<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M	<0.015 M	<0.015 @ M	<0.015 @ M	<0.015 @ M	<0.015 @ M
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)	<0.01 M	<0.01 M	<0.01 @ M	<0.01 @ M	<0.01 @ M	<0.01 @ M
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)	<0.015 M	<0.015 M	<0.015 @ M	<0.015 @ M	<0.015 @ M	<0.015 @ M
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)	<0.06 M	<0.06 M	<0.06 @ M	<0.06 @ M	<0.06 @ M	<0.06 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132	2.84 #	3.22 #	<0.35 #	3.84 #	1.06 #	1.07 #
pH	1 pH Units	TM133	8.01 M	8.08 M	5.28 M	8.1 M	8.15 M	8.74 M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Arsenic	<0.6 mg/kg	TM181	10.8 M	8.4 M	11.2 M	8.87 M	8.66 M	11.9 M
Cadmium	<0.02 mg/kg	TM181	0.688 M	0.447 M	0.547 M	0.269 M	0.44 M	0.411 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238	WS201	WS206	WS202A	WS204A
			Depth (m)	0.10	0.10	1.00	0.26	0.30	0.45
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/11/2019	29/11/2019	29/11/2019	28/11/2019	28/11/2019	29/11/2019
			Sample Time	.	.	.	.	.	.
			Date Received	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019
			SDG Ref	191203-105	191203-105	191203-105	191203-105	191203-105	191203-105
			Lab Sample No.(s)	21282348	21282352	21282343	21282357	21282361	21282340
			AGS Reference	E1	E1	E2	E1	E1	E1
Chromium	<0.9 mg/kg	TM181		19.9 M	13.6 M	30.3 M	15.5 M	17.4 M	15.8 M
Copper	<1.4 mg/kg	TM181		23.7 M	28.8 M	34.2 M	11.6 M	13.8 M	18 M
Lead	<0.7 mg/kg	TM181		41.5 M	37 M	21.1 M	153 M	23.9 M	84 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	0.946 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		19.1 M	20.1 M	27.4 M	11.6 M	16.9 M	14.6 M
Selenium	<1 mg/kg	TM181		1.17 #	1.15 #	<1 #	<1 #	1.09 #	<1 #
Zinc	<1.9 mg/kg	TM181		78.9 M	67.3 M	41.7 M	105 M	66.3 M	141 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0168 M	0.0143 M	0.0271 M	0.425 M	0.0309 M	0.109 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

		Customer Sample Ref.	WS205A
		Depth (m)	1.10
		Sample Type	Soil/Solid (S)
		Date Sampled	28/11/2019
		Sample Time	.
		Date Received	03/12/2019
		SDG Ref	191203-105
		Lab Sample No.(s)	21282360
		AGS Reference	E2
Component	**LOD/Units**	**Method**	
Moisture Content Ratio (% of as received sample)	%	PM024	14
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 @ M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 @ M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 @ M
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)	<0.01 @ M
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)	<0.015 @ M
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)	<0.06 @ M
Soil Organic Matter (SOM)	<0.35 %	TM132	<0.35 #
pH	1 pH Units	TM133	6.12 M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #
Arsenic	<0.6 mg/kg	TM181	5.62 M
Cadmium	<0.02 mg/kg	TM181	<0.02 M
Chromium	<0.9 mg/kg	TM181	14.8 M
Copper	<1.4 mg/kg	TM181	12.3 M
Lead	<0.7 mg/kg	TM181	12.8 M
Mercury	<0.14 mg/kg	TM181	<0.14 M
Nickel	<0.2 mg/kg	TM181	13.7 M
Selenium	<1 mg/kg	TM181	<1 #
Zinc	<1.9 mg/kg	TM181	43.2 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0343 M

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238				
			Depth (m)	0.10	0.10				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	29/11/2019	29/11/2019				
			Sample Time	.	.				
			Date Received	03/12/2019	03/12/2019				
			SDG Ref	191203-105	191203-105				
			Lab Sample No.(s)	21282348	21282352				
			AGS Reference	E1	E1				
Dichlorvos	<50 µg/kg	TM073		<50	<50				
Mevinphos	<50 µg/kg	TM073		<50	<100				
Tecnazene	<50 µg/kg	TM073		<50	<50				
Hexachlorobenzene	<50 µg/kg	TM073		<50	<50				
Trifluralin	<50 µg/kg	TM073		<50	<100				
Phorate	<50 µg/kg	TM073		<50	<50				
alpha-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Quintozene (PCNB)	<50 µg/kg	TM073		<50	<50				
Diazinon	<50 µg/kg	TM073		<50	<50				
Triallate	<50 µg/kg	TM073		<50	<50				
Etrimphos	<50 µg/kg	TM073		<50	<50				
gamma-Hexachlorocyclohexane (HCH / Lindane)	<50 µg/kg	TM073		<50	<50				
Disulfoton	<50 µg/kg	TM073		<50	<50				
Propetamphos	<50 µg/kg	TM073		<50	<50				
Heptachlor	<50 µg/kg	TM073		<50	<50				
Chlorpyriphos methyl	<50 µg/kg	TM073		<50	<50				
Dimethoate	<50 µg/kg	TM073		<50	<50				
Aldrin	<50 µg/kg	TM073		<50	<50				
Chlorothalonil	<50 µg/kg	TM073		<50	<100				
Pirimiphos-methyl	<50 µg/kg	TM073		<50	<50				
Telodrin	<50 µg/kg	TM073		<50	<50				
beta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Chlorpyriphos	<50 µg/kg	TM073		<50	<50				
Methyl parathion	<50 µg/kg	TM073		<100	<100				
Isodrin	<50 µg/kg	TM073		<50	<50				
delta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Malathion	<50 µg/kg	TM073		<100	<100				
Fenthion	<50 µg/kg	TM073		<50	<50				
Fenitrothion	<50 µg/kg	TM073		<100	<100				
Heptachlor epoxide	<50 µg/kg	TM073		<50	<50				
Triadimefon	<50 µg/kg	TM073		<100	<100				
Pendimethalin	<50 µg/kg	TM073		<50	<100				
Parathion	<50 µg/kg	TM073		<50	<100				

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238				
			Depth (m)	0.10	0.10				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	29/11/2019	29/11/2019				
			Sample Time	-	-				
			Date Received	03/12/2019	03/12/2019				
			SDG Ref	191203-105	191203-105				
			Lab Sample No.(s)	21282348	21282352				
			AGS Reference	E1	E1				
o,p-DDE	<50 µg/kg	TM073		<50	<50				
Chlorfenvinphos	<50 µg/kg	TM073		<50	<100				
Endosulphan I	<50 µg/kg	TM073		<50	<50				
Trans-chlordane	<50 µg/kg	TM073		<50	<50				
cis-Chlordane	<50 µg/kg	TM073		<50	<50				
p,p-DDE	<50 µg/kg	TM073		<50	<50				
Dieldrin	<50 µg/kg	TM073		<50	<50				
o,p'-DDD (TDE)	<50 µg/kg	TM073		<50	<50				
Endrin	<50 µg/kg	TM073		<50	<50				
o,p-DDT	<50 µg/kg	TM073		<50	<50				
p,p-TDE (DDD)	<50 µg/kg	TM073		<50	<50				
Ethion	<50 µg/kg	TM073		<100	<100				
Endosulphan II	<50 µg/kg	TM073		<50	<50				
p,p-DDT	<50 µg/kg	TM073		<50	<50				
Carbophenothion	<50 µg/kg	TM073		<50	<50				
o,p-Methoxychlor	<50 µg/kg	TM073		<50	<50				
Triazophos	<50 µg/kg	TM073		<50	<50				
p,p-Methoxychlor	<50 µg/kg	TM073		<50	<50				
Endosulphan sulphate	<50 µg/kg	TM073		<50	<50				
Permethrin I	<50 µg/kg	TM073		<100	<100				
Phosalone	<50 µg/kg	TM073		<50	<50				
Permethrin II	<50 µg/kg	TM073		<100	<100				
Azinphos-methyl	<50 µg/kg	TM073		<50	<50				
Azinphos-ethyl	<50 µg/kg	TM073		<50	<50				

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238	WS201	WS206	WS202A	WS204A
			Depth (m)	0.10	0.10	1.00	0.26	0.30	0.45
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/11/2019	29/11/2019	29/11/2019	28/11/2019	28/11/2019	29/11/2019
			Sample Time	.	.	.	.	.	.
			Date Received	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019
			SDG Ref	191203-105	191203-105	191203-105	191203-105	191203-105	191203-105
			Lab Sample No.(s)	21282348	21282352	21282343	21282357	21282361	21282340
			AGS Reference	E1	E1	E2	E1	E1	E1
Naphthalene-d8 % recovery**	%	TM218		93.5	90	87.8	93.3	96.1	9.66
Acenaphthene-d10 % recovery**	%	TM218		93.7	91.2	86.8	84.1	94.3	9.42
Phenanthrene-d10 % recovery**	%	TM218		93.2	89.4	86.3	92.6	98.6	9.36
Chrysene-d12 % recovery**	%	TM218		71.3	70.9	75.5	75.6	85.5	7.54
Perylene-d12 % recovery**	%	TM218		73.7	71.3	70	83.9	90.5	8.21
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 M	507 @ M	<9 @ M	<9 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	1220 @ M	<12 @ M	32.8 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	6110 @ M	<8 @ M	19.4 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	7380 @ M	<10 @ M	21.1 M
Phenanthrene	<15 µg/kg	TM218		23.1 M	<15 M	<15 M	47000 @ M	<15 @ M	322 M
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 M	15800 @ M	<16 @ M	94.3 M
Fluoranthene	<17 µg/kg	TM218		61 M	<17 M	<17 M	83000 @ M	25.8 @ M	698 M
Pyrene	<15 µg/kg	TM218		49.6 M	<15 M	<15 M	69400 @ M	29.4 @ M	672 M
Benz(a)anthracene	<14 µg/kg	TM218		25.4 M	<14 M	<14 M	30700 @ M	<14 @ M	346 M
Chrysene	<10 µg/kg	TM218		22.4 M	<10 M	<10 M	26200 @ M	19.8 @ M	351 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		34 M	<15 M	<15 M	35800 @ M	38.3 @ M	572 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	12100 @ M	<14 @ M	180 M
Benzo(a)pyrene	<15 µg/kg	TM218		24.4 M	<15 M	<15 M	27900 @ M	<15 @ M	417 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 M	18100 @ M	<18 @ M	334 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	2370 @ M	<23 @ M	43.3 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 M	15300 @ M	<24 @ M	291 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		240	<118	<118	399000	<118	4400

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			WS205A	1.10	Soil/Solid (S)	28/11/2019	.	03/12/2019	191203-105	21282360	E2
Naphthalene-d8 % recovery**	%	TM218	95								
Acenaphthene-d10 % recovery**	%	TM218	93.8								
Phenanthrene-d10 % recovery**	%	TM218	91.5								
Chrysene-d12 % recovery**	%	TM218	72.3								
Perylene-d12 % recovery**	%	TM218	74.3								
Naphthalene	<9 µg/kg	TM218	<9 @ M								
Acenaphthylene	<12 µg/kg	TM218	<12 @ M								
Acenaphthene	<8 µg/kg	TM218	<8 @ M								
Fluorene	<10 µg/kg	TM218	<10 @ M								
Phenanthrene	<15 µg/kg	TM218	<15 @ M								
Anthracene	<16 µg/kg	TM218	<16 @ M								
Fluoranthene	<17 µg/kg	TM218	<17 @ M								
Pyrene	<15 µg/kg	TM218	<15 @ M								
Benz(a)anthracene	<14 µg/kg	TM218	<14 @ M								
Chrysene	<10 µg/kg	TM218	<10 @ M								
Benzo(b)fluoranthene	<15 µg/kg	TM218	18 @ M								
Benzo(k)fluoranthene	<14 µg/kg	TM218	<14 @ M								
Benzo(a)pyrene	<15 µg/kg	TM218	<15 @ M								
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	<18 @ M								
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23 @ M								
Benzo(g,h,i)perylene	<24 µg/kg	TM218	<24 @ M								
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	<118								

Validated

CERTIFICATE OF ANALYSIS

SDG: 191203-105 **Client Reference:** J4175 **Report Number:** 535816
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:** 535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238	WS201	WS206	WS202A	WS204A
			Depth (m)	0.10	0.10	1.00	0.26	0.30	0.45
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/11/2019	29/11/2019	29/11/2019	28/11/2019	28/11/2019	29/11/2019
			Sample Time	.	.	.	.	.	.
			Date Received	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019
			SDG Ref	191203-105	191203-105	191203-105	191203-105	191203-105	191203-105
			Lab Sample No.(s)	21282348	21282352	21282343	21282357	21282361	21282340
			AGS Reference	E1	E1	E2	E1	E1	E1
GRO Surrogate % recovery**	%	TM089		92.6 @	100 @	96.5 @	98.2 @	97.1 @	77.1 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 @	<10 @	<10 @	10.5 @	<10 @	<10 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 @	<10 @	<10 @	10.5 @	<10 @	<10 @
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	7520	<1000	2310
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1880	<1000	5140	<1000	8070
Aliphatics >C21-C35	<1000 µg/kg	TM414		7220	21200	<1000	6510	<1000	30900
Aliphatics >C35-C44	<1000 µg/kg	TM414		1480	1960	<1000	4040	<1000	2690
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		8790	25000	<5000	23800	<5000	44600
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		11700	31900	<10000	1060000	<10000	667000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 @	<10 @	<10 @	<10 @	<10 @	<10 @
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	1150	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	21800	<1000	8390
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	265000	<1000	108000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1550	5410	<1000	659000	<1000	313000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	90700	<1000	193000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	17400	<1000	34900
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	6850	<5000	1040000	<5000	622000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	31900	<10000	1060000	<10000	667000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 @	<50 @	<50 @	<50 @	<50 @	<50 @
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 @	<50 @	<50 @	<50 @	<50 @	<50 @
GRO >C5-C10	<20 µg/kg	TM089		<20 @	<20 @	<20 @	<20 @	<20 @	<20 @

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. WS205A	
			Depth (m)	1.10
			Sample Type	Soil/Solid (S)
			Date Sampled	28/11/2019
			Sample Time	.
			Date Received	03/12/2019
			SDG Ref	191203-105
			Lab Sample No.(s)	21282360
			AGS Reference	E2
GRO Surrogate % recovery**	%	TM089	104	@
Aliphatics >C5-C6	<10 µg/kg	TM089	<10	@
Aliphatics >C6-C8	<10 µg/kg	TM089	<10	@
Aliphatics >C8-C10	<10 µg/kg	TM089	<10	@
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000	
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000	
Aliphatics >C16-C21	<1000 µg/kg	TM414	<1000	
Aliphatics >C21-C35	<1000 µg/kg	TM414	<1000	
Aliphatics >C35-C44	<1000 µg/kg	TM414	<1000	
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	<5000	
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	<10000	
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10	@
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10	@
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10	@
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000	
Aromatics > EC12-EC16	<1000 µg/kg	TM414	<1000	
Aromatics > EC16-EC21	<1000 µg/kg	TM414	<1000	
Aromatics > EC21-EC35	<1000 µg/kg	TM414	<1000	
Aromatics >EC35-EC44	<1000 µg/kg	TM414	<1000	
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000	
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	<5000	
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	<10000	
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50	@
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50	@
GRO >C5-C10	<20 µg/kg	TM089	<20	@

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

Triazine Herbicides (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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238				
			Depth (m)	0.10	0.10				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	29/11/2019	29/11/2019				
			Sample Time	.	.				
			Date Received	03/12/2019	03/12/2019				
			SDG Ref	191203-105	191203-105				
			Lab Sample No.(s)	21282348	21282352				
			AGS Reference	E1	E1				
Atrazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Prometryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Propazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Simazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbuthylazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbutryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Trietazine*	<0.02 mg/kg	SUB		<0.02	<0.02				

Validated

CERTIFICATE OF ANALYSIS

SDG: 191203-105 **Client Reference:** J4175 **Report Number:** 535816
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:** 535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP202	TP238	WS201	WS206	WS202A	WS204A
			Depth (m)	0.10	0.10	1.00	0.26	0.30	0.45
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/11/2019	29/11/2019	29/11/2019	28/11/2019	28/11/2019	29/11/2019
			Sample Time	.	.	.	.	.	.
			Date Received	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019	03/12/2019
			SDG Ref	191203-105	191203-105	191203-105	191203-105	191203-105	191203-105
			Lab Sample No.(s)	21282348	21282352	21282343	21282357	21282361	21282340
			AGS Reference	E1	E1	E2	E1	E1	E1
Dibromofluoromethane**	%	TM116		102	115	104	114 @	115 @	109 @
Toluene-d8**	%	TM116		89.4	90.2	97.5	83.3 @	97.8 @	96.6 @
4-Bromofluorobenzene**	%	TM116		77.6	76.9	97.8	71.1 @	94.7 @	94.2 @
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 @ M	<10 @ M	<200 @ M
Benzene	<9 µg/kg	TM116		<9 M	<9 M	<9 M	<9 @ M	<9 @ M	<180 @ M
Toluene	<7 µg/kg	TM116		<7 M	<7 M	<7 M	<7 @ M	<7 @ M	<140 @ M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M	<4 M	<4 @ M	<4 @ M	<80 @ M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #	<10 #	<10 @ #	<10 @ #	<200 @ #
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 @ M	<10 @ M	<200 @ M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.02	<0.02 @	<0.02 @	<0.4 @
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<40	<40 @	<40 @	<800 @

Validated

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Customer Sample Ref.	WS205A							
Depth (m)	1.10							
Sample Type	Soil/Solid (S)							
Date Sampled	28/11/2019							
Sample Time	.							
Date Received	03/12/2019							
SDG Ref	191203-105							
Lab Sample No.(s)	21282360							
AGS Reference	E2							
Component	**LOD/Units**	**Method**						
Dibromofluoromethane**	%	TM116	103 @					
Toluene-d8**	%	TM116	97.7 @					
4-Bromofluorobenzene**	%	TM116	98.7 @					
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<10 @ M					
Benzene	<9 µg/kg	TM116	<9 @ M					
Toluene	<7 µg/kg	TM116	<7 @ M					
Ethylbenzene	<4 µg/kg	TM116	<4 @ M					
p/m-Xylene	<10 µg/kg	TM116	<10 @ #					
o-Xylene	<10 µg/kg	TM116	<10 @ M					
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02 @					
Sum of BTEX	<40 µg/kg	TM116	<40 @					

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

Cust. Sample Ref. / Depth (m) / Sample Type / Date Sampled / Date Receieved / SDG / Original Sample / Method Number	Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
TP202E1 / 0.10 / SOLID / 29/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282348 / TM048	12/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
TP238E1 / 0.10 / SOLID / 29/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282352 / TM048	16/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
WS201E2 / 1.00 / SOLID / 29/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282343 / TM048	12/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
WS206E1 / 0.26 / SOLID / 28/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282357 / TM048	16/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
WS202AE1 / 0.30 / SOLID / 28/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282361 / TM048	16/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
WS204AE1 / 0.45 / SOLID / 29/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282340 / TM048	12/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
WS205AE2 / 1.10 / SOLID / 28/11/2019 00:00:00 / 03/12/2019 06:00:00 / 191203-105 / 21282360 / TM048	16/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM073	MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A	Determination of organochlorine and organophosphorous pesticides by GCMS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191203-105	**Client Reference:**	J4175	**Report Number:**	535816
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535459

Test Completion Dates

Lab Sample No(s)	21282348	21282352	21282343	21282357	21282361	21282340	21282360
Customer Sample Ref.	TP202	TP238	WS201	WS206	WS202A	WS204A	WS205A
AGS Ref.	E1	E1	E2	E1	E1	E1	E2
Depth	0.10	0.10	1.00	0.26	0.30	0.45	1.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Acid herbicides*	31-Dec-2019	31-Dec-2019					
Anions by Kone (soil)	17-Dec-2019	16-Dec-2019	16-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
Asbestos ID in Solid Samples	12-Dec-2019	16-Dec-2019	12-Dec-2019	16-Dec-2019	16-Dec-2019	12-Dec-2019	16-Dec-2019
EPH CWG GC (S)	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019
GRO by GC-FID (S)	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019
Hexavalent Chromium (s)	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019
Metals in solid samples by OES	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019
OC OP Pesticides and Triazine Herb	17-Dec-2019	17-Dec-2019					
PAH by GCMS	17-Dec-2019	17-Dec-2019	13-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
pH	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
Phenols by HPLC (S)	13-Dec-2019	13-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
Sample description	11-Dec-2019	11-Dec-2019	11-Dec-2019	11-Dec-2019	11-Dec-2019	11-Dec-2019	11-Dec-2019
Total Organic Carbon	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	17-Dec-2019	16-Dec-2019	16-Dec-2019
TPH CWG GC (S)	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019
Triazine Herbicides (S)*	27-Dec-2019	27-Dec-2019					
VOC MS (S)	12-Dec-2019	12-Dec-2019	12-Dec-2019	12-Dec-2019	12-Dec-2019		12-Dec-2019

Certificate of Analysis

Report No.:	**19-89359-1**
Issue No.:	**1**
Date of Issue	**24/12/2019**
Customer Details:	ALS Life Sciences Limited, Unit7-8, Hawarden Business Park, Manor Road, Hawarden, Deeside, Flintshire, CH5 3US
Customer Contact:	Carrie Foster
Customer Order No.:	191203-105
Customer Reference:	191203-105
Quotation Reference:	191111/01
Description:	2 soil samples
Date Received:	12/12/2019
Date Started:	18/12/2019
Date Completed:	20/12/2019
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: **Matthew Hicks[illegible]n, Laboratory Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400

Results Summary

Report No.: 19-89359-1

Customer Reference: 191203-105

Customer Order No: 191203-105

Customer Sample No	**21335532**	**21334469**
Customer Sample ID	TP202	TP238
RPS Sample No	424320	424321
Sample Type	**SOIL**	**SOIL**
Sample Depth (m)	0.1m	0.1m
Sampling Date	29/11/2019	29/11/2019

Determinand	CAS No	Codes	SOP	Units	RL		
atrazine	1912-24-9	N	in house	mg/kg	0.02	< 0.02	< 0.02
prometryn	7287-19-6	N	346	mg/kg	0.02	< 0.02	< 0.02
propazine	139-40-2	N	346	mg/kg	0.02	< 0.02	< 0.02
simazine	122-34-9	N	346	mg/kg	0.02	< 0.02	< 0.02
terbuthylazine	5915-41-3	N	346	mg/kg	0.02	< 0.02	< 0.02
terbutryn	886-50-0	N	346	mg/kg	0.02	< 0.02	< 0.02
trietazine	1912-26-1	N	346	mg/kg	0.02	< 0.02	< 0.02

Deviating Samples

Report No.: 19-89359-1

Customer Reference: 191203-105

Customer Order No: 191203-105

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
424320	21335532		29/11/2019	100ml clear glass bottle	No	
424321	21334469		29/11/2019	100ml clear glass bottle	No	

Key Code	Description
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
F	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
N	Not Accredited Test
O	Marine Management Organisation (MMO) Validated
S	Subcontracted to approved laboratory
US	Subcontracted to approved laboratory UKAS Accredited for the test
MS	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SI	Subcontracted to internal RPS Group laboratory
USI	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
MSI	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

CERTIFICATE OF ANALYSIS

Work Order	: **PR19D6396**	Issue Date	: 30-Dec-2019
Customer	: **ALS Life Sciences Ltd**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: ALS Hawarden Reporting	Contact	: Client Service
Address	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside United Kingdom	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: euhdnsubconresults@ALSGlobal.com	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: 191203-105	Page	: 1 of 2
Order number	: ----	Date Samples Received	: 12-Dec-2019
		Quote number	: PR2018ALSAL-GB0004 (CZ-256-18-0022)
Site	: ----	Date of test	: 18-Dec-2019 - 30-Dec-2019
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák	[redacted]	Environmental Business Unit Manager

L 1163

Analytical Results

Sub-Matrix: SOIL	Client sample ID	21334895 TP202		21334440 TP238		----	
	Laboratory sample ID	PR19D6396-001		PR19D6396-002		----	
	Client sampling date / time	11-Dec-2019 00:00		11-Dec-2019 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Physical Parameters									
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	71.9	± 6.0%	71.2	± 6.0%	----	----
Pesticides									
2.4.5-T	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4.5-TP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-D	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-DB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-DP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
4-CPP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Bentazone	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Dinoseb	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Fluroxypyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPA	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Acifluorfen	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Bromoxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
DNOC	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Dicamba	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Diclofop	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Ioxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Propoxycarbazone-sodium	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Triclopyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Triclosan	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.
Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

Brief Method Summaries

Analytical Methods	Method Descriptions
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-PESLMSA1	CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.

A `*` symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
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Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 December 2019
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191205-120
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	534746

We received 10 samples on Thursday December 05, 2019 and 2 of these samples were scheduled for analysis which was completed on Thursday December 19, 2019. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21298389	TP201		0.10	03/12/2019
21298390	TP201		0.50	03/12/2019
21298387	TP204		0.10	03/12/2019
21298388	TP204		0.60	03/12/2019
21298395	TP226		0.10	03/12/2019
21298396	TP226		0.50	03/12/2019
21298393	TP228		0.10	03/12/2019
21298394	TP228		0.50	03/12/2019
21298391	TP229		0.10	03/12/2019
21298392	TP229		0.50	03/12/2019

Maximum Sample/Coolbox Temperature (°C) : **1.8**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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)			21298387			21298394		
Customer Sample Reference			TP204			TP228		
AGS Reference								
Depth (m)			0.10			0.50		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 2		X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 2	X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 2		X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 2			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 2		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 2		X			X	
PAH by GCMS	All	NDPs: 0 Tests: 2		X			X	
pH	All	NDPs: 0 Tests: 2		X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 2		X			X	
Sample description	All	NDPs: 0 Tests: 2		X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 2		X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 2		X			X	
VOC MS (S)	All	NDPs: 0 Tests: 2			X			X

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
21298387	TP204	0.10	Light Brown	Loamy Sand	Vegetation	None
21298394	TP228	0.50	Light Brown	Sandy Clay Loam	Stones	None

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:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP228				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	03/12/2019	03/12/2019				
			Sample Time	.	.				
			Date Received	05/12/2019	05/12/2019				
			SDG Ref	191205-120	191205-120				
			Lab Sample No.(s)	21298387	21298394				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	17				
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 @ M				
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 @ M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 @ M				
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 @ M				
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 @ M				
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 M	<0.06 @ M				
Soil Organic Matter (SOM)	<0.35 %	TM132		2.97 #	0.557 #				
pH	1 pH Units	TM133		7.66 M	7.14 M				
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #				
Arsenic	<0.6 mg/kg	TM181		11.5 M	11 M				
Cadmium	<0.02 mg/kg	TM181		0.168 M	0.292 M				
Chromium	<0.9 mg/kg	TM181		20.6 M	<9 M				
Copper	<1.4 mg/kg	TM181		24.2 M	31 M				
Lead	<0.7 mg/kg	TM181		39.6 M	26 M				
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M				
Nickel	<0.2 mg/kg	TM181		21.3 M	30.8 M				
Selenium	<1 mg/kg	TM181		1.75 #	<10 #				
Zinc	<1.9 mg/kg	TM181		83.4 M	93.8 M				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0176 M	0.054 M				

Validated

CERTIFICATE OF ANALYSIS

SDG: 191205-120 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 534746
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP228				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	03/12/2019	03/12/2019				
			Sample Time	.	.				
			Date Received	05/12/2019	05/12/2019				
			SDG Ref	191205-120	191205-120				
			Lab Sample No.(s)	21298387	21298394				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		105	109				
Acenaphthene-d10 % recovery**	%	TM218		106	108				
Phenanthrene-d10 % recovery**	%	TM218		101	102				
Chrysene-d12 % recovery**	%	TM218		93.6	87.1				
Perylene-d12 % recovery**	%	TM218		94.4	86.1				
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M				
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M				
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M				
Fluorene	<10 µg/kg	TM218		<10 M	<10 M				
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M				
Anthracene	<16 µg/kg	TM218		<16 M	<16 M				
Fluoranthene	<17 µg/kg	TM218		52.5 M	<17 M				
Pyrene	<15 µg/kg	TM218		45.5 M	<15 M				
Benz(a)anthracene	<14 µg/kg	TM218		18.6 M	<14 M				
Chrysene	<10 µg/kg	TM218		22.7 M	<10 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		28.9 M	<15 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M				
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		168	<118				

Validated

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP228				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	03/12/2019	03/12/2019				
			Sample Time	.	.				
			Date Received	05/12/2019	05/12/2019				
			SDG Ref	191205-120	191205-120				
			Lab Sample No.(s)	21298387	21298394				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		98.3	103				
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10				
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10				
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10				
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C21-C35	<1000 µg/kg	TM414		2900	<1000				
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000				
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000				
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	<10000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10				
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10				
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1640	<1000				
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000				
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	<5000				
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000				
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50				
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50				
GRO >C5-C10	<20 µg/kg	TM089		<20	<20				

Validated

CERTIFICATE OF ANALYSIS

SDG: 191205-120 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 534746
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP204	TP228				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	03/12/2019	03/12/2019				
			Sample Time	.	.				
			Date Received	05/12/2019	05/12/2019				
			SDG Ref	191205-120	191205-120				
			Lab Sample No.(s)	21298387	21298394				
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	102				
Toluene-d8**	%	TM116		90.4	98.9				
4-Bromofluorobenzene**	%	TM116		76.3	99.7				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M				
Benzene	<9 µg/kg	TM116		<9 M	<9 M				
Toluene	<7 µg/kg	TM116		<7 M	<7 M				
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M				
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #				
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M				
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02				
Sum of BTEX	<40 µg/kg	TM116		<40	<40				

Validated

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP204 0.10 SOLID 03/12/2019 00:00:00 05/12/2019 06:00:00 191205-120 21298387 TM048	17/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP228 0.50 SOLID 03/12/2019 00:00:00 05/12/2019 06:00:00 191205-120 21298394 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191205-120	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534746
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	21298387	21298394
Customer Sample Ref.	TP204	TP228
AGS Ref.		
Depth	0.10	0.50
Type	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	18-Dec-2019	18-Dec-2019
Asbestos ID in Solid Samples	17-Dec-2019	17-Dec-2019
EPH CWG GC (S)	18-Dec-2019	18-Dec-2019
GRO by GC-FID (S)	17-Dec-2019	17-Dec-2019
Hexavalent Chromium (s)	17-Dec-2019	17-Dec-2019
Metals in solid samples by OES	17-Dec-2019	18-Dec-2019
PAH by GCMS	18-Dec-2019	18-Dec-2019
pH	19-Dec-2019	19-Dec-2019
Phenols by HPLC (S)	17-Dec-2019	19-Dec-2019
Sample description	13-Dec-2019	13-Dec-2019
Total Organic Carbon	18-Dec-2019	18-Dec-2019
TPH CWG GC (S)	18-Dec-2019	18-Dec-2019
VOC MS (S)	17-Dec-2019	17-Dec-2019

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

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Manor Road (off Manor Lane)
Hawarden
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CH5 3US
Tel: (01244) 528700
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Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	20 December 2019
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191205-121
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	534952

We received 10 samples on Thursday December 05, 2019 and 3 of these samples were scheduled for analysis which was completed on Friday December 20, 2019. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21298458	TP206		0.10	03/12/2019
21298457	TP206		0.50	03/12/2019
21298455	TP224		0.10	02/12/2019
21298456	TP224		0.40	02/12/2019
21298451	TP232		0.10	02/12/2019
21298452	TP232		0.50	02/12/2019
21298453	TP235		0.10	02/12/2019
21298454	TP235		0.50	02/12/2019
21298449	TP236		0.10	02/12/2019
21298450	TP236		0.50	02/12/2019

Maximum Sample/Coolbox Temperature (°C) : **1.8**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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)			21298457			21298456			21298451	
Customer Sample Reference			TP206			TP224			TP232	
AGS Reference										
Depth (m)			0.50			0.40			0.10	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 3		X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 3	X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 3		X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 3			X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 3		X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 3		X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 3		X			X			X	
pH	All	NDPs: 0 Tests: 3		X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 3		X			X			X	
Sample description	All	NDPs: 0 Tests: 3		X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 3		X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 3		X			X			X	
VOC MS (S)	All	NDPs: 0 Tests: 3			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
21298457	TP206	0.50	Light Brown	Loamy Sand	None	None
21298456	TP224	0.40	Light Brown	Sandy Loam	Vegetation	N/A
21298451	TP232	0.10	Light Brown	Loamy Sand	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.

Validated

CERTIFICATE OF ANALYSIS

SDG: 191205-121 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 534952
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP206	TP224	TP232			
			Depth (m)	0.50	0.40	0.10			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	03/12/2019	02/12/2019	02/12/2019			
			Sample Time	.	.	.			
			Date Received	05/12/2019	05/12/2019	05/12/2019			
			SDG Ref	191205-121	191205-121	191205-121			
			Lab Sample No.(s)	21298457	21298456	21298451			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	21	25			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M	<0.01 @ M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M	<0.01 @ M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 @ M	<0.015 @ M	<0.015 @ M			
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 @ M	<0.01 @ M	<0.01 @ M			
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 @ M	<0.015 @ M	<0.015 @ M			
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 @ M	<0.06 @ M	<0.06 @ M			
Soil Organic Matter (SOM)	<0.35 %	TM132		0.571 #	0.717 #	3.57 #			
pH	1 pH Units	TM133		7.83 M	8.25 M	8.12 M			
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #			
Arsenic	<0.6 mg/kg	TM181		9.31 M	6.38 M	13.7 M			
Cadmium	<0.02 mg/kg	TM181		0.0823 M	<0.02 M	0.61 M			
Chromium	<0.9 mg/kg	TM181		29 M	23.3 M	19.6 M			
Copper	<1.4 mg/kg	TM181		19.7 M	16.1 M	32.5 M			
Lead	<0.7 mg/kg	TM181		18.1 M	15.6 M	43.8 M			
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<1.4 M			
Nickel	<0.2 mg/kg	TM181		24.3 M	19.4 M	31.3 M			
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<10 #			
Zinc	<1.9 mg/kg	TM181		66.8 M	56.3 M	101 M			
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0162 M	0.0132 M	0.0063 M			

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP206	TP224	TP232			
			Depth (m)	0.50	0.40	0.10			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	03/12/2019	02/12/2019	02/12/2019			
			Sample Time	.	.	.			
			Date Received	05/12/2019	05/12/2019	05/12/2019			
			SDG Ref	191205-121	191205-121	191205-121			
			Lab Sample No.(s)	21298457	21298456	21298451			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		107	106	89.5			
Acenaphthene-d10 % recovery**	%	TM218		105	106	88.4			
Phenanthrene-d10 % recovery**	%	TM218		99.3	102	92.8			
Chrysene-d12 % recovery**	%	TM218		84.5	92.5	85.5			
Perylene-d12 % recovery**	%	TM218		83.7	95.6	87.5			
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 @ M			
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 @ M			
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 @ M			
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 @ M			
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M	<15 @ M			
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 @ M			
Fluoranthene	<17 µg/kg	TM218		<17 M	24.7 M	<17 @ M			
Pyrene	<15 µg/kg	TM218		<15 M	22 M	<15 @ M			
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	<14 M	<14 @ M			
Chrysene	<10 µg/kg	TM218		<10 M	<10 M	<10 @ M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	<15 M	<15 @ M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 @ M			
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M	<15 @ M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 @ M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 @ M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 @ M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	<118			

Validated

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP206	TP224	TP232			
			Depth (m)	0.50	0.40	0.10			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	03/12/2019	02/12/2019	02/12/2019			
			Sample Time	.	.	.			
			Date Received	05/12/2019	05/12/2019	05/12/2019			
			SDG Ref	191205-121	191205-121	191205-121			
			Lab Sample No.(s)	21298457	21298456	21298451			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		88	100 @	94.1 @			
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	2600			
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	1600	19900			
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	1120			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	23600			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	<10000	30600			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 @	<10 @			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	<1000	5670			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	<5000	6970			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	30600			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 @	<50 @			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 @	<50 @			
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 @	<20 @			

Validated

CERTIFICATE OF ANALYSIS

SDG: 191205-121 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 534952
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP206	TP224	TP232			
			Depth (m)	0.50	0.40	0.10			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	03/12/2019	02/12/2019	02/12/2019			
			Sample Time	.	.	.			
			Date Received	05/12/2019	05/12/2019	05/12/2019			
			SDG Ref	191205-121	191205-121	191205-121			
			Lab Sample No.(s)	21298457	21298456	21298451			
			AGS Reference						
Dibromofluoromethane**	%	TM116		109	99.8 @	103 @			
Toluene-d8**	%	TM116		99.7	98.9 @	87.3 @			
4-Bromofluorobenzene**	%	TM116		99.5	96.8 @	74.2 @			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 @ M	<10 @ M			
Benzene	<9 µg/kg	TM116		<9 M	<9 @ M	<9 @ M			
Toluene	<7 µg/kg	TM116		<7 M	<7 @ M	<7 @ M			
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 @ M	<4 @ M			
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 @ #	<10 @ #			
o-Xylene	<10 µg/kg	TM116		<10 M	<10 @ M	<10 @ M			
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02 @	<0.02 @			
Sum of BTEX	<40 µg/kg	TM116		<40	<40 @	<40 @			

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&✦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP206 0.50 SOLID 03/12/2019 00:00:00 05/12/2019 06:00:00 191205-121 21298457 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP224 0.40 SOLID 02/12/2019 00:00:00 05/12/2019 06:00:00 191205-121 21298456 TM048	17/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP232 0.10 SOLID 02/12/2019 00:00:00 05/12/2019 06:00:00 191205-121 21298451 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191205-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	534952
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	21298457	21298456	21298451
Customer Sample Ref.	TP206	TP224	TP232
AGS Ref.			
Depth	0.50	0.40	0.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	18-Dec-2019	18-Dec-2019	18-Dec-2019
Asbestos ID in Solid Samples	17-Dec-2019	17-Dec-2019	17-Dec-2019
EPH CWG GC (S)	20-Dec-2019	18-Dec-2019	18-Dec-2019
GRO by GC-FID (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019
Hexavalent Chromium (s)	19-Dec-2019	16-Dec-2019	16-Dec-2019
Metals in solid samples by OES	18-Dec-2019	17-Dec-2019	18-Dec-2019
PAH by GCMS	18-Dec-2019	18-Dec-2019	17-Dec-2019
pH	19-Dec-2019	19-Dec-2019	19-Dec-2019
Phenols by HPLC (S)	18-Dec-2019	18-Dec-2019	18-Dec-2019
Sample description	13-Dec-2019	13-Dec-2019	13-Dec-2019
Total Organic Carbon	18-Dec-2019	18-Dec-2019	18-Dec-2019
TPH CWG GC (S)	20-Dec-2019	18-Dec-2019	18-Dec-2019
VOC MS (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
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Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	06 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191207-93
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	536308

This report has been revised and directly supersedes 535928 in its entirety.

We received 18 samples on Saturday December 07, 2019 and 4 of these samples were scheduled for analysis which was completed on Monday January 06, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21314561	TP208		0.10 - 0.10	05/12/2019
21314563	TP208		0.50 - 0.50	05/12/2019
21314564	TP211		0.10 - 0.10	05/12/2019
21314565	TP211		0.50 - 0.50	05/12/2019
21314559	TP213		0.10 - 0.10	05/12/2019
21314560	TP213		0.50 - 0.50	05/12/2019
21314566	TP215		0.10 - 0.10	05/12/2019
21314567	TP215		0.60 - 0.60	05/12/2019
21314568	TP217		0.10 - 0.10	05/12/2019
21314569	TP217		0.60 - 0.60	05/12/2019
21314576	TP218		0.10 - 0.10	04/12/2019
21314577	TP218		0.40 - 0.40	04/12/2019
21314570	TP221		0.10 - 0.10	04/12/2019
21314571	TP221		0.50 - 0.50	04/12/2019
21314572	TP222		0.10 - 0.10	04/12/2019
21314573	TP222		0.50 - 0.50	04/12/2019
21314574	TP223		0.10 - 0.10	04/12/2019
21314575	TP223		0.50 - 0.50	04/12/2019

Maximum Sample/Coolbox Temperature (°C) :

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

6.4

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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)				21314565			21314559			21314568			21314573
Customer Sample Reference				TP211			TP213			TP217			TP222
AGS Reference													
Depth (m)				0.50 - 0.50			0.10 - 0.10			0.10 - 0.10			0.50 - 0.50
Container				1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type				S	S	S	S	S	S	S	S	S	S	S	S
Acid herbicides*	All	NDPs: 0 Tests: 1						X							
Anions by Kone (soil)	All	NDPs: 0 Tests: 4			X			X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4		X			X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 4			X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4				X			X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 4			X			X			X			X	
OC OP Pesticides and Triazine Herb	All	NDPs: 0 Tests: 1						X							
PAH by GCMS	All	NDPs: 0 Tests: 4			X			X			X			X	
pH	All	NDPs: 0 Tests: 4			X			X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 4			X			X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 4			X			X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 4			X			X			X			X	
Triazine Herbicides (S)*	All	NDPs: 0 Tests: 1						X							

Validated

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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)			21314565			21314559			21314568			21314573
Customer Sample Reference			TP211			TP213			TP217			TP222
AGS Reference												
Depth (m)			0.50 - 0.50			0.10 - 0.10			0.10 - 0.10			0.50 - 0.50
Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type	S	S	S	S	S	S	S	S	S	S	S	S
VOC MS (S) / All / NDPs: 0 Tests: 4			X			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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
21314565	TP211	0.50 - 0.50	Dark Brown	Loamy Sand	None	None
21314559	TP213	0.10 - 0.10	Light Brown	Silt Loam	None	None
21314568	TP217	0.10 - 0.10	Dark Brown	Loamy Sand	None	None
21314573	TP222	0.50 - 0.50	Light Brown	Loamy Sand	None	None

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:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP211	TP213	TP217	TP222		
			Depth (m)	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50		
			Sample Type	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
			Date Sampled	05/12/2019	05/12/2019	05/12/2019	04/12/2019		
			Sample Time	.	.	.	.		
			Date Received	07/12/2019	07/12/2019	07/12/2019	07/12/2019		
			SDG Ref	191207-93	191207-93	191207-93	191207-93		
			Lab Sample No.(s)	21314565	21314559	21314568	21314573		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	19	22	18		
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB			<0.01				
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB			<0.01				
2,4-D*	<0.01 mg/kg	SUB			<0.01				
2,4-DB*	<0.01 mg/kg	SUB			<0.01				
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB			<0.01				
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB			<0.01				
Acifluorfen*	<0.01 mg/kg	SUB			<0.01				
Bentazone*	<0.01 mg/kg	SUB			<0.01				
Bromoxynil*	<0.01 mg/kg	SUB			<0.01				
Dicamba*	<0.01 mg/kg	SUB			<0.01				
Diclofop*	<0.01 mg/kg	SUB			<0.01				
Dinoseb*	<0.01 mg/kg	SUB			<0.01				
DNOC*	<0.01 mg/kg	SUB			<0.01				
Fluroxypyr*	<0.01 mg/kg	SUB			<0.01				
Ioxynil*	<0.01 mg/kg	SUB			<0.01				
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB			<0.01				
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB			<0.01				
Mecoprop (MCPP)*	<0.01 mg/kg	SUB			<0.01				
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB			<0.01				
Triclopyr*	<0.01 mg/kg	SUB			<0.01				
Triclosan*	<0.01 mg/kg	SUB			<0.01				
Phenol	<0.01 mg/kg	TM062 (S)		<0.01	<0.01	<0.01	<0.01		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01	<0.01	<0.01	<0.01		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015	<0.015	<0.015	<0.015		
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01	<0.01	<0.01	<0.01		
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015	<0.015	<0.015	<0.015		
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06	<0.06	<0.06	<0.06		
Soil Organic Matter (SOM)	<0.35 %	TM132		0.686	2.17	3.1	<0.35		
pH	1 pH Units	TM133		7.63	7.56	7.2	5.45		
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6	<0.6	<0.6	<0.6		
Arsenic	<0.6 mg/kg	TM181		11.5	12	13.1	10.1		
Cadmium	<0.02 mg/kg	TM181		<0.02	0.0782	0.317	<0.02		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP211	TP213	TP217	TP222		
			Depth (m)	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50		
			Sample Type	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
			Date Sampled	05/12/2019	05/12/2019	05/12/2019	04/12/2019		
			Sample Time	-	-	-	-		
			Date Received	07/12/2019	07/12/2019	07/12/2019	07/12/2019		
			SDG Ref	191207-93	191207-93	191207-93	191207-93		
			Lab Sample No.(s)	21314565	21314559	21314568	21314573		
			AGS Reference						
Chromium	<0.9 mg/kg	TM181		23.6	19	19.2	25.9		
Copper	<1.4 mg/kg	TM181		18.1	20.4	25	18.4		
Lead	<0.7 mg/kg	TM181		16.2	32.7	63.8	20.8		
Mercury	<0.14 mg/kg	TM181		<0.14	<0.14	<0.14	<0.14		
Nickel	<0.2 mg/kg	TM181		22.3	19.4	24.4	23.6		
Selenium	<1 mg/kg	TM181		<1	<1	2.11	<1		
Zinc	<1.9 mg/kg	TM181		66.8	70.5	89.5	60.3		
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0297	0.0126	0.0189	0.0401		

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP213	0.10 - 0.10	Unspecified Solid (UNS)	05/12/2019	.	07/12/2019	191207-93	21314559	
Dichlorvos	<50 µg/kg	TM073	<50								
Mevinphos	<50 µg/kg	TM073	<50								
Tecnazene	<50 µg/kg	TM073	<50								
Hexachlorobenzene	<50 µg/kg	TM073	<50								
Trifluralin	<50 µg/kg	TM073	<50								
Phorate	<50 µg/kg	TM073	<50								
alpha-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073	<50								
Quintozene (PCNB)	<50 µg/kg	TM073	<50								
Diazinon	<50 µg/kg	TM073	<50								
Triallate	<50 µg/kg	TM073	<50								
Etrimphos	<50 µg/kg	TM073	<50								
gamma-Hexachlorocyclohexane (HCH / Lindane)	<50 µg/kg	TM073	<50								
Disulfoton	<50 µg/kg	TM073	<50								
Propetamphos	<50 µg/kg	TM073	<50								
Heptachlor	<50 µg/kg	TM073	<50								
Chlorpyriphos methyl	<50 µg/kg	TM073	<50								
Dimethoate	<50 µg/kg	TM073	<50								
Aldrin	<50 µg/kg	TM073	<50								
Chlorothalonil	<50 µg/kg	TM073	<50								
Pirimiphos-methyl	<50 µg/kg	TM073	<50								
Telodrin	<50 µg/kg	TM073	<50								
beta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073	<50								
Chlorpyriphos	<50 µg/kg	TM073	<50								
Methyl parathion	<50 µg/kg	TM073	<50								
Isodrin	<50 µg/kg	TM073	<50								
delta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073	<50								
Malathion	<50 µg/kg	TM073	<50								
Fenthion	<50 µg/kg	TM073	<50								
Fenitrothion	<50 µg/kg	TM073	<50								
Heptachlor epoxide	<50 µg/kg	TM073	<50								
Triadimefon	<50 µg/kg	TM073	<50								
Pendimethalin	<50 µg/kg	TM073	<50								
Parathion	<50 µg/kg	TM073	<50								

CERTIFICATE OF ANALYSIS

SDG: 191207-93 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 536308
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:** 535928

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Customer Sample Ref.	TP213
Depth (m)	0.10 - 0.10
Sample Type	Unspecified Solid (UNS)
Date Sampled	05/12/2019
Sample Time	-
Date Received	07/12/2019
SDG Ref	191207-93
Lab Sample No.(s)	21314559
AGS Reference	

Component	LOD/Units	Method	
o,p-DDE	<50 µg/kg	TM073	<50
Chlorfenvinphos	<50 µg/kg	TM073	<50
Endosulphan I	<50 µg/kg	TM073	<50
Trans-chlordane	<50 µg/kg	TM073	<50
cis-Chlordane	<50 µg/kg	TM073	<50
p,p-DDE	<50 µg/kg	TM073	<50
Dieldrin	<50 µg/kg	TM073	<50
o,p'-DDD (TDE)	<50 µg/kg	TM073	<50
Endrin	<50 µg/kg	TM073	<50
o,p-DDT	<50 µg/kg	TM073	<50
p,p-TDE (DDD)	<50 µg/kg	TM073	<50
Ethion	<50 µg/kg	TM073	<50
Endosulphan II	<50 µg/kg	TM073	<50
p,p-DDT	<50 µg/kg	TM073	<50
Carbophenothion	<50 µg/kg	TM073	<50
o,p-Methoxychlor	<50 µg/kg	TM073	<50
Triazophos	<50 µg/kg	TM073	<50
p,p-Methoxychlor	<50 µg/kg	TM073	<50
Endosulphan sulphate	<50 µg/kg	TM073	<50
Permethrin I	<50 µg/kg	TM073	<50
Phosalone	<50 µg/kg	TM073	<50
Permethrin II	<50 µg/kg	TM073	<50
Azinphos-methyl	<50 µg/kg	TM073	<50
Azinphos-ethyl	<50 µg/kg	TM073	<50

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP211	TP213	TP217	TP222		
			Depth (m)	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50		
			Sample Type	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
			Date Sampled	05/12/2019	05/12/2019	05/12/2019	04/12/2019		
			Sample Time	.	.	.	.		
			Date Received	07/12/2019	07/12/2019	07/12/2019	07/12/2019		
			SDG Ref	191207-93	191207-93	191207-93	191207-93		
			Lab Sample No.(s)	21314565	21314559	21314568	21314573		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90	86.2	94.9	86.5		
Acenaphthene-d10 % recovery**	%	TM218		90.2	84.1	92.5	87.5		
Phenanthrene-d10 % recovery**	%	TM218		91.9	87.4	96.1	87.8		
Chrysene-d12 % recovery**	%	TM218		86.4	83.5	90	81.7		
Perylene-d12 % recovery**	%	TM218		84.7	80.2	91.3	73.4		
Naphthalene	<9 µg/kg	TM218		<9	<9	<9	<9		
Acenaphthylene	<12 µg/kg	TM218		<12	<12	<12	<12		
Acenaphthene	<8 µg/kg	TM218		<8	<8	<8	<8		
Fluorene	<10 µg/kg	TM218		<10	<10	<10	<10		
Phenanthrene	<15 µg/kg	TM218		<15	<15	<15	<15		
Anthracene	<16 µg/kg	TM218		<16	<16	<16	<16		
Fluoranthene	<17 µg/kg	TM218		<17	<17	39	<17		
Pyrene	<15 µg/kg	TM218		<15	<15	32	<15		
Benz(a)anthracene	<14 µg/kg	TM218		<14	<14	<14	<14		
Chrysene	<10 µg/kg	TM218		<10	<10	16	<10		
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15	<15	<15	<15		
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14	<14	<14	<14		
Benzo(a)pyrene	<15 µg/kg	TM218		<15	<15	<15	<15		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18	<18	<18	<18		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23	<23	<23	<23		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24	<24	<24	<24		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	<118	<118		

CERTIFICATE OF ANALYSIS

SDG: 191207-93 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 536308
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:** 535928

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP211	TP213	TP217	TP222		
			Depth (m)	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50		
			Sample Type	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
			Date Sampled	05/12/2019	05/12/2019	05/12/2019	04/12/2019		
			Sample Time	.	.	.	.		
			Date Received	07/12/2019	07/12/2019	07/12/2019	07/12/2019		
			SDG Ref	191207-93	191207-93	191207-93	191207-93		
			Lab Sample No.(s)	21314565	21314559	21314568	21314573		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		105	103	71.1	100		
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	2420	10500	<1000		
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	11200	<5000		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	<10000	14900	<10000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	<1000	2250	<1000		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	<5000	<5000	<5000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	11200	<10000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50		
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20		

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

Triazine Herbicides (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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP213	0.10 - 0.10	Unspecified Solid (UNS)	05/12/2019	.	07/12/2019	191207-93	21314559	
Atrazine*	<0.02 mg/kg	SUB	<0.02								
Prometryne*	<0.02 mg/kg	SUB	<0.02								
Propazine*	<0.02 mg/kg	SUB	<0.02								
Simazine*	<0.02 mg/kg	SUB	<0.02								
Terbuthylazine*	<0.02 mg/kg	SUB	<0.02								
Terbutryne*	<0.02 mg/kg	SUB	<0.02								
Trietazine*	<0.02 mg/kg	SUB	<0.02								

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP211	TP213	TP217	TP222		
			Depth (m)	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50		
			Sample Type	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
			Date Sampled	05/12/2019	05/12/2019	05/12/2019	04/12/2019		
			Sample Time	.	.	.	.		
			Date Received	07/12/2019	07/12/2019	07/12/2019	07/12/2019		
			SDG Ref	191207-93	191207-93	191207-93	191207-93		
			Lab Sample No.(s)	21314565	21314559	21314568	21314573		
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	106	114	105		
Toluene-d8**	%	TM116		97.8	92.4	88.6	96.1		
4-Bromofluorobenzene**	%	TM116		94.4	75	73.6	85.5		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10	<10	<10	<10		
Benzene	<9 µg/kg	TM116		<9	<9	<9	<9		
Toluene	<7 µg/kg	TM116		<7	<7	<7	<7		
Ethylbenzene	<4 µg/kg	TM116		<4	<4	<4	<4		
p/m-Xylene	<10 µg/kg	TM116		<10	<10	<10	<10		
o-Xylene	<10 µg/kg	TM116		<10	<10	<10	<10		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.02	<0.02		
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<40	<40		

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP211 0.50 - 0.50 MISC_SOLID 05/12/2019 00:00:00 07/12/2019 06:00:00 191207-93 21314565 TM048	19/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP213 0.10 - 0.10 MISC_SOLID 05/12/2019 00:00:00 07/12/2019 06:00:00 191207-93 21314559 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP217 0.10 - 0.10 MISC_SOLID 05/12/2019 00:00:00 07/12/2019 06:00:00 191207-93 21314568 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP222 0.50 - 0.50 MISC_SOLID 04/12/2019 00:00:00 07/12/2019 06:00:00 191207-93 21314573 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM073	MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A	Determination of organochlorine and organophosphorous pesticides by GCMS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191207-93	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536308
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535928

Test Completion Dates

Lab Sample No(s)	21314565	21314559	21314568	21314573
Customer Sample Ref.	TP211	TP213	TP217	TP222
AGS Ref.				
Depth	0.50 - 0.50	0.10 - 0.10	0.10 - 0.10	0.50 - 0.50
Type	Unspecified So	Unspecified So	Unspecified So	Unspecified So
Acid herbicides*		31-Dec-2019		
Anions by Kone (soil)	18-Dec-2019	20-Dec-2019	20-Dec-2019	18-Dec-2019
Asbestos ID in Solid Samples	19-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
EPH CWG GC (S)	21-Dec-2019	20-Dec-2019	21-Dec-2019	20-Dec-2019
GRO by GC-FID (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
Hexavalent Chromium (s)	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019
Metals in solid samples by OES	18-Dec-2019	17-Dec-2019	18-Dec-2019	18-Dec-2019
OC OP Pesticides and Triazine Herb		23-Dec-2019		
PAH by GCMS	18-Dec-2019	18-Dec-2019	17-Dec-2019	18-Dec-2019
pH	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019
Phenols by HPLC (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019
Sample description	15-Dec-2019	15-Dec-2019	15-Dec-2019	15-Dec-2019
Total Organic Carbon	19-Dec-2019	18-Dec-2019	19-Dec-2019	18-Dec-2019
TPH CWG GC (S)	21-Dec-2019	20-Dec-2019	21-Dec-2019	20-Dec-2019
Triazine Herbicides (S)*		06-Jan-2020		
VOC MS (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019	17-Dec-2019

CERTIFICATE OF ANALYSIS

Work Order	: **PR19D9995**	Issue Date	: 31-Dec-2019
Customer	: **ALS Life Sciences Ltd**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: ALS Hawarden Reporting	Contact	: Client Service
Address	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside United Kingdom	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: euhdnsubconresults@ALSGlobal.com	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: 191207-93	Page	: 1 of 2
Order number	: 191207-93	Date Samples Received	: 16-Dec-2019
		Quote number	: PR2018ALSAL-GB0004 (CZ-256-18-0022)
Site	: ----	Date of test	: 23-Dec-2019 - 31-Dec-2019
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák	[redacted]	Environmental Business Unit Manager

Analytical Results

Sub-Matrix: **SOLID**			Client sample ID	**21374263 TP213**		----		----	
			Laboratory sample ID	*PR19D9995-001*		----		----	
			Client sampling date / time	05-Dec-2019 00:00		----		----	
Parameter	*Method*	*LOR*	*Unit*	**Result**	**MU**	**Result**	**MU**	**Result**	**MU**
Physical Parameters									
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	**79.0**	± 6.0%	----	----	----	----
Pesticides									
2.4.5-T	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
2.4.5-TP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
2.4-D	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
2.4-DB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
2.4-DP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
4-CPP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Bentazone	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Dinoseb	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Fluroxypyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
MCPA	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
MCPB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
MCPP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Acifluorfen	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Bromoxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
DNOC	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Dicamba	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Diclofop	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Ioxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Propoxycarbazone-sodium	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Triclopyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----
Triclosan	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	----	----	----	----

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.
Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

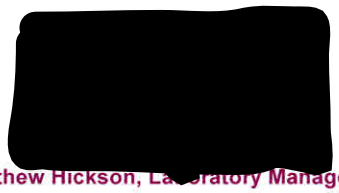
Brief Method Summaries

Analytical Methods	*Method Descriptions*
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-PESLMSA1	CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.

A `*` symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.

Certificate of Analysis

Report No.:	**19-89493-1**
Issue No.:	**1**
Date of Issue	**03/01/2020**
Customer Details:	ALS Life Sciences Limited, Unit7-8, Hawarden Business Park, Manor Road, Hawarden, Deeside, Flintshire, CH5 3US
Customer Contact:	Carrie Foster
Customer Order No.:	191207-93
Customer Reference:	191207-93
Quotation Reference:	191111/01
Description:	1 soil sample
Date Received:	17/12/2019
Date Started:	18/12/2019
Date Completed:	20/12/2019
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: **Matthew Hickson, Laboratory Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400

Results Summary

Report No.: 19-89493-1

Customer Reference: 191207-93

Customer Order No: 191207-93

Customer Sample No	**21374271**
Customer Sample ID	TP213
RPS Sample No	424813
Sample Type	**SOIL**
Sample Depth (m)	0.10
Sampling Date	05/12/2019

Determinand	CAS No	Codes	SOP	Units	RL	
atrazine	1912-24-9	N	in house	mg/kg	0.02	< 0.02
prometryn	7287-19-6	N	346	mg/kg	0.02	< 0.02
propazine	139-40-2	N	346	mg/kg	0.02	< 0.02
simazine	122-34-9	N	346	mg/kg	0.02	< 0.02
terbuthylazine	5915-41-3	N	346	mg/kg	0.02	< 0.02
terbutryn	886-50-0	N	346	mg/kg	0.02	< 0.02
trietazine	1912-26-1	N	346	mg/kg	0.02	< 0.02

Deviating Samples

Report No.: 19-89493-1

Customer Reference: 191207-93

Customer Order No: 191207-93

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
424813	21374271		05/12/2019	100ml clear glass bottle	No	

Key Code	Description
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
F	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
N	Not Accredited Test
O	Marine Management Organisation (MMO) Validated
S	Subcontracted to approved laboratory
US	Subcontracted to approved laboratory UKAS Accredited for the test
MS	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SI	Subcontracted to internal RPS Group laboratory
USI	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
MSI	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	06 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191211-121
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	536309

This report has been revised and directly supersedes 535817 in its entirety.

We received 18 samples on Wednesday December 11, 2019 and 7 of these samples were scheduled for analysis which was completed on Monday January 06, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21340555	TP205		0.10	09/12/2019
21340556	TP205		0.50	09/12/2019
21340553	TP212		0.10	09/12/2019
21340554	TP212		0.50	09/12/2019
21340558	TP214		0.10	09/12/2019
21340559	TP214		0.50	09/12/2019
21340551	TP219		0.20	09/12/2019
21340552	TP219		0.50	09/12/2019
21340549	TP225		0.20	09/12/2019
21340550	TP225		0.60	09/12/2019
21340540	TP227		0.10	06/12/2019
21340541	TP227		0.50	06/12/2019
21340547	TP234		0.10	09/12/2019
21340548	TP234		0.50	09/12/2019
21340542	TP237		0.10	06/12/2019
21340544	TP237		0.50	06/12/2019
21340545	TP241		0.10	06/12/2019
21340546	TP241		0.50	06/12/2019

Maximum Sample/Coolbox Temperature (°C) : **5.6**

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Rd	**Order Number:**		**Superseded Report:**	535817

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

| | | | | |

21340545					
TP241					
0.10					
250g Amber Jar (ALE210)	S	60g VOC (ALE215)	S		
X					
X					
		X			
X					
X					
X					
X					
X					
X					
X					
X					

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Rd	**Order Number:**		**Superseded Report:**	535817

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)	21340555			21340554			21340559			21340549			21340540			21340544			21340545			
Customer Sample Reference	TP205			TP212			TP214			TP225			TP227			TP237			TP241			
AGS Reference																							
Depth (m)	0.10			0.50			0.50			0.20			0.10			0.50			0.10			
Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)				
Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S				
VOC MS (S)	All	NDPs: 0 Tests: 7			X			X			X			X			X			X			

21340545	TP241		0.10	60g VOC (ALE215)	S
				250g Amber Jar (ALE210)	S
				X	

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
21340555	TP205	0.10	Dark Brown	Silt Loam	None	None
21340554	TP212	0.50	Light Brown	Loamy Sand	None	None
21340559	TP214	0.50	Light Brown	Loamy Sand	None	None
21340549	TP225	0.20	Dark Brown	Clay Loam	None	None
21340540	TP227	0.10	Dark Brown	Clay Loam	Stones	Vegetation
21340544	TP237	0.50	Light Brown	Clay Loam	None	N/A
21340545	TP241	0.10	Light Brown	Loamy Sand	Vegetation	None

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:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237
			Depth (m)	0.10	0.50	0.50	0.20	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/12/2019	09/12/2019	09/12/2019	09/12/2019	06/12/2019	06/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019
			SDG Ref	191211-121	191211-121	191211-121	191211-121	191211-121	191211-121
			Lab Sample No.(s)	21340555	21340554	21340559	21340549	21340540	21340544
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		29	22	20	22	24	20
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB		<0.01					<0.01
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB		<0.01					<0.01
2,4-D*	<0.01 mg/kg	SUB		<0.01					<0.01
2,4-DB*	<0.01 mg/kg	SUB		<0.01					<0.01
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB		<0.01					<0.01
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB		<0.01					<0.01
Acifluorfen*	<0.01 mg/kg	SUB		<0.01					<0.01
Bentazone*	<0.01 mg/kg	SUB		<0.01					<0.01
Bromoxynil*	<0.01 mg/kg	SUB		<0.01					<0.01
Dicamba*	<0.01 mg/kg	SUB		<0.01					<0.01
Diclofop*	<0.01 mg/kg	SUB		<0.01					<0.01
Dinoseb*	<0.01 mg/kg	SUB		<0.01					<0.01
DNOC*	<0.01 mg/kg	SUB		<0.01					<0.01
Fluroxypyr*	<0.01 mg/kg	SUB		<0.01					<0.01
Ioxynil*	<0.01 mg/kg	SUB		<0.01					<0.01
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB		<0.01					<0.01
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB		<0.01					<0.01
Mecoprop (MCPP)*	<0.01 mg/kg	SUB		<0.01					<0.01
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB		<0.01					<0.01
Triclopyr*	<0.01 mg/kg	SUB		<0.01					<0.01
Triclosan*	<0.01 mg/kg	SUB		<0.01					<0.01
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0132 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0128 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 M	<0.06 M	<0.06 M	<0.06 M	<0.06 M	<0.06 M
Soil Organic Matter (SOM)	<0.35 %	TM132		3.4 #	0.503 #	<0.35 #	2.38 #	4.14 #	0.383 #
pH	1 pH Units	TM133		6.75 M	6.87 M	8.11 M	6.94 M	7.7 M	7.5 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #	<0.6 #
Arsenic	<0.6 mg/kg	TM181		7.01 M	7.82 M	7.33 M	9.27 M	14.8 M	10.2 M
Cadmium	<0.02 mg/kg	TM181		0.086 M	<0.02 M	<0.02 M	0.165 M	0.383 M	<0.02 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237
			Depth (m)	0.10	0.50	0.50	0.20	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/12/2019	09/12/2019	09/12/2019	09/12/2019	06/12/2019	06/12/2019
			Sample Time	-	-	-	-	-	-
			Date Received	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019
			SDG Ref	191211-121	191211-121	191211-121	191211-121	191211-121	191211-121
			Lab Sample No.(s)	21340555	21340554	21340559	21340549	21340540	21340544
			AGS Reference						
Chromium	<0.9 mg/kg	TM181		17.7 M	40 M	26.2 M	24.6 M	18 M	25.6 M
Copper	<1.4 mg/kg	TM181		13.4 M	34 M	21.9 M	21.2 M	53.7 M	17.2 M
Lead	<0.7 mg/kg	TM181		30.4 M	22.8 M	15.3 M	31.7 M	50.5 M	16.3 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		14.4 M	27.6 M	23 M	26.2 M	21.9 M	16.4 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	1.65 #	<1 #
Zinc	<1.9 mg/kg	TM181		70.8 M	55.4 M	57.2 M	86.2 M	162 M	46.2 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0221 M	0.0452 M	0.0187 M	0.021 M	0.0367 M	0.0381 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	**LOD/Units**	**Method**	
Customer Sample Ref.			TP241
Depth (m)			0.10
Sample Type			Soil/Solid (S)
Date Sampled			06/12/2019
Sample Time			.
Date Received			11/12/2019
SDG Ref			191211-121
Lab Sample No.(s)			21340545
AGS Reference			
Moisture Content Ratio (% of as received sample)	%	PM024	25
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)	<0.01 M
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)	<0.015 M
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)	<0.06 M
Soil Organic Matter (SOM)	<0.35 %	TM132	3.12 #
pH	1 pH Units	TM133	6.74 M
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #
Arsenic	<0.6 mg/kg	TM181	10.4 M
Cadmium	<0.02 mg/kg	TM181	0.193 M
Chromium	<0.9 mg/kg	TM181	18.9 M
Copper	<1.4 mg/kg	TM181	18.8 M
Lead	<0.7 mg/kg	TM181	30.7 M
Mercury	<0.14 mg/kg	TM181	<0.14 M
Nickel	<0.2 mg/kg	TM181	20 M
Selenium	<1 mg/kg	TM181	<1 #
Zinc	<1.9 mg/kg	TM181	77.8 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0217 M

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP237				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	09/12/2019	06/12/2019				
			Sample Time	.	.				
			Date Received	11/12/2019	11/12/2019				
			SDG Ref	191211-121	191211-121				
			Lab Sample No.(s)	21340555	21340544				
			AGS Reference						
Dichlorvos	<50 µg/kg	TM073		<50	<50				
Mevinphos	<50 µg/kg	TM073		<50	<50				
Tecnazene	<50 µg/kg	TM073		<50	<50				
Hexachlorobenzene	<50 µg/kg	TM073		<50	<50				
Trifluralin	<50 µg/kg	TM073		<50	<50				
Phorate	<50 µg/kg	TM073		<50	<50				
alpha-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Quintozene (PCNB)	<50 µg/kg	TM073		<50	<50				
Diazinon	<50 µg/kg	TM073		<50	<50				
Triallate	<50 µg/kg	TM073		<50	<50				
Etrimphos	<50 µg/kg	TM073		<50	<50				
gamma-Hexachlorocyclohexane (HCH / Lindane)	<50 µg/kg	TM073		<50	<50				
Disulfoton	<50 µg/kg	TM073		<50	<50				
Propetamphos	<50 µg/kg	TM073		<50	<50				
Heptachlor	<50 µg/kg	TM073		<50	<50				
Chlorpyriphos methyl	<50 µg/kg	TM073		<50	<50				
Dimethoate	<50 µg/kg	TM073		<50	<50				
Aldrin	<50 µg/kg	TM073		<50	<50				
Chlorothalonil	<50 µg/kg	TM073		<50	<50				
Pirimiphos-methyl	<50 µg/kg	TM073		<50	<50				
Telodrin	<50 µg/kg	TM073		<50	<50				
beta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Chlorpyriphos	<50 µg/kg	TM073		<50	<50				
Methyl parathion	<50 µg/kg	TM073		<50	<50				
Isodrin	<50 µg/kg	TM073		<50	<50				
delta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50				
Malathion	<50 µg/kg	TM073		<50	<50				
Fenthion	<50 µg/kg	TM073		<50	<50				
Fenitrothion	<50 µg/kg	TM073		<50	<50				
Heptachlor epoxide	<50 µg/kg	TM073		<50	<50				
Triadimefon	<50 µg/kg	TM073		<50	<50				
Pendimethalin	<50 µg/kg	TM073		<50	<50				
Parathion	<50 µg/kg	TM073		<50	<50				

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP237				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	09/12/2019	06/12/2019				
			Sample Time	-	-				
			Date Received	11/12/2019	11/12/2019				
			SDG Ref	191211-121	191211-121				
			Lab Sample No.(s)	21340555	21340544				
			AGS Reference						
o,p-DDE	<50 µg/kg	TM073		<50	<50				
Chlorfenvinphos	<50 µg/kg	TM073		<50	<50				
Endosulphan I	<50 µg/kg	TM073		<50	<50				
Trans-chlordane	<50 µg/kg	TM073		<50	<50				
cis-Chlordane	<50 µg/kg	TM073		<50	<50				
p,p-DDE	<50 µg/kg	TM073		<50	<50				
Dieldrin	<50 µg/kg	TM073		<50	<50				
o,p'-DDD (TDE)	<50 µg/kg	TM073		<50	<50				
Endrin	<50 µg/kg	TM073		<50	<50				
o,p-DDT	<50 µg/kg	TM073		<50	<50				
p,p-TDE (DDD)	<50 µg/kg	TM073		<50	<50				
Ethion	<50 µg/kg	TM073		<50	<50				
Endosulphan II	<50 µg/kg	TM073		<50	<50				
p,p-DDT	<50 µg/kg	TM073		<50	<50				
Carbophenothion	<50 µg/kg	TM073		<50	<50				
o,p-Methoxychlor	<50 µg/kg	TM073		<50	<50				
Triazophos	<50 µg/kg	TM073		<50	<50				
p,p-Methoxychlor	<50 µg/kg	TM073		<50	<50				
Endosulphan sulphate	<50 µg/kg	TM073		<50	<50				
Permethrin I	<50 µg/kg	TM073		<50	<50				
Phosalone	<50 µg/kg	TM073		<50	<50				
Permethrin II	<50 µg/kg	TM073		<50	<50				
Azinphos-methyl	<50 µg/kg	TM073		<50	<50				
Azinphos-ethyl	<50 µg/kg	TM073		<50	<50				

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237
			Depth (m)	0.10	0.50	0.50	0.20	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/12/2019	09/12/2019	09/12/2019	09/12/2019	06/12/2019	06/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019
			SDG Ref	191211-121	191211-121	191211-121	191211-121	191211-121	191211-121
			Lab Sample No.(s)	21340555	21340554	21340559	21340549	21340540	21340544
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		102	107	95.3	90.5	86	105
Acenaphthene-d10 % recovery**	%	TM218		101	106	92.8	89.4	84.2	105
Phenanthrene-d10 % recovery**	%	TM218		95.4	99.9	95.1	89.6	85.1	103
Chrysene-d12 % recovery**	%	TM218		83	87.7	86	86.5	74.8	91.9
Perylene-d12 % recovery**	%	TM218		82.9	86.2	88	89.3	72.6	92.5
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 M	<9 M	<9 M	26.7 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M	<10 M	<10 M
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M	<15 M	<15 M
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 M	<16 M	<16 M	<16 M
Fluoranthene	<17 µg/kg	TM218		27.8 M	<17 M	<17 M	38.5 M	47 M	<17 M
Pyrene	<15 µg/kg	TM218		24.5 M	<15 M	<15 M	34.1 M	39.6 M	<15 M
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M	21.3 M	<14 M
Chrysene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	18.3 M	25.5 M	<10 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	26.2 M	35.9 M	<15 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M	<14 M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M	21.7 M	<15 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 M	<18 M	<18 M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	<23 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 M	<24 M	<24 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	<118	<118	191	<118

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

		Customer Sample Ref.	TP241
		Depth (m)	0.10
		Sample Type	Soil/Solid (S)
		Date Sampled	06/12/2019
		Sample Time	.
		Date Received	11/12/2019
		SDG Ref	191211-121
		Lab Sample No.(s)	21340545
		AGS Reference	
Component	**LOD/Units**	**Method**	
Naphthalene-d8 % recovery**	%	TM218	93.3
Acenaphthene-d10 % recovery**	%	TM218	90.6
Phenanthrene-d10 % recovery**	%	TM218	92
Chrysene-d12 % recovery**	%	TM218	82.7
Perylene-d12 % recovery**	%	TM218	82.9
Naphthalene	<9 µg/kg	TM218	<9 M
Acenaphthylene	<12 µg/kg	TM218	<12 M
Acenaphthene	<8 µg/kg	TM218	<8 M
Fluorene	<10 µg/kg	TM218	<10 M
Phenanthrene	<15 µg/kg	TM218	44.7 M
Anthracene	<16 µg/kg	TM218	<16 M
Fluoranthene	<17 µg/kg	TM218	137 M
Pyrene	<15 µg/kg	TM218	105 M
Benz(a)anthracene	<14 µg/kg	TM218	73.2 M
Chrysene	<10 µg/kg	TM218	73.7 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	114 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	48.8 M
Benzo(a)pyrene	<15 µg/kg	TM218	67.6 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	49.9 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	52.3 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	766

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237
			Depth (m)	0.10	0.50	0.50	0.20	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/12/2019	09/12/2019	09/12/2019	09/12/2019	06/12/2019	06/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019
			SDG Ref	191211-121	191211-121	191211-121	191211-121	191211-121	191211-121
			Lab Sample No.(s)	21340555	21340554	21340559	21340549	21340540	21340544
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		101	102	116	98	90	102
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		2740	<1000	<1000	4480	4830	<1000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	<5000	<5000	5490	<5000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	<10000	<10000	<10000	<10000	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1520	<1000	<1000	2060	3020	<1000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	<5000	<5000	<5000	<5000	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	<10000	<10000	<10000	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP241	0.10	Soil/Solid (S)	06/12/2019	.	11/12/2019	191211-121	21340545	
GRO Surrogate % recovery**	%	TM089	97								
Aliphatics >C5-C6	<10 µg/kg	TM089	<10								
Aliphatics >C6-C8	<10 µg/kg	TM089	<10								
Aliphatics >C8-C10	<10 µg/kg	TM089	<10								
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000								
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000								
Aliphatics >C16-C21	<1000 µg/kg	TM414	<1000								
Aliphatics >C21-C35	<1000 µg/kg	TM414	4130								
Aliphatics >C35-C44	<1000 µg/kg	TM414	<1000								
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	<5000								
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	<10000								
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10								
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10								
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10								
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000								
Aromatics > EC12-EC16	<1000 µg/kg	TM414	<1000								
Aromatics > EC16-EC21	<1000 µg/kg	TM414	<1000								
Aromatics > EC21-EC35	<1000 µg/kg	TM414	2220								
Aromatics >EC35-EC44	<1000 µg/kg	TM414	<1000								
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000								
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	<5000								
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	<10000								
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50								
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50								
GRO >C5-C10	<20 µg/kg	TM089	<20								

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

Triazine Herbicides (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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP237				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	09/12/2019	06/12/2019				
			Sample Time	.	.				
			Date Received	11/12/2019	11/12/2019				
			SDG Ref	191211-121	191211-121				
			Lab Sample No.(s)	21340555	21340544				
			AGS Reference						
Atrazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Prometryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Propazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Simazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbuthylazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbutryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Trietazine*	<0.02 mg/kg	SUB		<0.02	<0.02				

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237
			Depth (m)	0.10	0.50	0.50	0.20	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	09/12/2019	09/12/2019	09/12/2019	09/12/2019	06/12/2019	06/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019	11/12/2019
			SDG Ref	191211-121	191211-121	191211-121	191211-121	191211-121	191211-121
			Lab Sample No.(s)	21340555	21340554	21340559	21340549	21340540	21340544
			AGS Reference						
Dibromofluoromethane**	%	TM116		103	101	103	107	103	106
Toluene-d8**	%	TM116		94.2	97.6	96.8	92.2	89.6	97.2
4-Bromofluorobenzene**	%	TM116		78.5	94.1	93.2	80	74.2	96
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 M	<10 M	<10 M
Benzene	<9 µg/kg	TM116		<9 M	<9 M	<9 M	<9 M	<9 M	<9 M
Toluene	<7 µg/kg	TM116		<7 M	<7 M	<7 M	<7 M	<7 M	<7 M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M	<4 M	<4 M	<4 M	<4 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 M	<10 M	<10 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<40	<40	<40	<40

Validated

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

		Customer Sample Ref.	TP241
		Depth (m)	0.10
		Sample Type	Soil/Solid (S)
		Date Sampled	06/12/2019
		Sample Time	.
		Date Received	11/12/2019
		SDG Ref	191211-121
		Lab Sample No.(s)	21340545
		AGS Reference	
Component	**LOD/Units**	**Method**	
Dibromofluoromethane**	%	TM116	101
Toluene-d8**	%	TM116	95.4
4-Bromofluorobenzene**	%	TM116	80.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<10 M
Benzene	<9 µg/kg	TM116	<9 M
Toluene	<7 µg/kg	TM116	<7 M
Ethylbenzene	<4 µg/kg	TM116	<4 M
p/m-Xylene	<10 µg/kg	TM116	<10 #
o-Xylene	<10 µg/kg	TM116	<10 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02
Sum of BTEX	<40 µg/kg	TM116	<40

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP205 0.10 SOLID 09/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340555 TM048	17/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP212 0.50 SOLID 09/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340554 TM048	18/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP214 0.50 SOLID 09/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340559 TM048	17/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP225 0.20 SOLID 09/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340549 TM048	17/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP227 0.10 SOLID 06/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340540 TM048	18/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP237 0.50 SOLID 06/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340544 TM048	17/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP241 0.10 SOLID 06/12/2019 00:00:00 11/12/2019 06:00:00 191211-121 21340545 TM048	17/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM073	MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A	Determination of organochlorine and organophosphorous pesticides by GCMS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191211-121	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536309
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	535817

Test Completion Dates

Lab Sample No(s)	21340555	21340554	21340559	21340549	21340540	21340544	21340545
Customer Sample Ref.	TP205	TP212	TP214	TP225	TP227	TP237	TP241
AGS Ref.							
Depth	0.10	0.50	0.50	0.20	0.10	0.50	0.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Acid herbicides*	31-Dec-2019					31-Dec-2019	
Anions by Kone (soil)	20-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019
Asbestos ID in Solid Samples	17-Dec-2019	18-Dec-2019	17-Dec-2019	17-Dec-2019	18-Dec-2019	17-Dec-2019	17-Dec-2019
EPH CWG GC (S)	20-Dec-2019	20-Dec-2019	20-Dec-2019	20-Dec-2019	20-Dec-2019	18-Dec-2019	18-Dec-2019
GRO by GC-FID (S)	17-Dec-2019	17-Dec-2019	17-Dec-2019	16-Dec-2019	16-Dec-2019	17-Dec-2019	17-Dec-2019
Hexavalent Chromium (s)	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019	17-Dec-2019	17-Dec-2019
Metals in solid samples by OES	17-Dec-2019	18-Dec-2019	18-Dec-2019	17-Dec-2019	17-Dec-2019	18-Dec-2019	18-Dec-2019
OC OP Pesticides and Triazine Herb	23-Dec-2019					23-Dec-2019	
PAH by GCMS	18-Dec-2019	18-Dec-2019	17-Dec-2019	19-Dec-2019	17-Dec-2019	18-Dec-2019	17-Dec-2019
pH	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019	19-Dec-2019
Phenols by HPLC (S)	18-Dec-2019	18-Dec-2019	18-Dec-2019	17-Dec-2019	17-Dec-2019	18-Dec-2019	18-Dec-2019
Sample description	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019	13-Dec-2019
Total Organic Carbon	18-Dec-2019	18-Dec-2019	18-Dec-2019	19-Dec-2019	18-Dec-2019	18-Dec-2019	18-Dec-2019
TPH CWG GC (S)	20-Dec-2019	20-Dec-2019	20-Dec-2019	20-Dec-2019	20-Dec-2019	18-Dec-2019	18-Dec-2019
Triazine Herbicides (S)*	06-Jan-2020					06-Jan-2020	
VOC MS (S)	16-Dec-2019	17-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019	16-Dec-2019

CERTIFICATE OF ANALYSIS

Work Order	: **PR19E0037**	Issue Date	: 30-Dec-2019
Customer	: **ALS Life Sciences Ltd**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: ALS Hawarden Reporting	Contact	: Client Service
Address	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside United Kingdom	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: euhdnsubconresults@ALSGlobal.com	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: 191211-121	Page	: 1 of 2
Order number	: ----	Date Samples Received	: 17-Dec-2019
		Quote number	: PR2018ALSAL-GB0004 (CZ-256-18-0022)
Site	: ----	Date of test	: 23-Dec-2019 - 30-Dec-2019
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák	[redacted]	Environmental Business Unit Manager

Analytical Results

Sub-Matrix: SOIL			Client sample ID	21356370		21356218		----	
			Laboratory sample ID	PR19E0037-001		PR19E0037-002		----	
			Client sampling date / time	09-Dec-2019 00:00		06-Dec-2019 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Physical Parameters									
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	**71.6**	± 6.0%	**79.5**	± 6.0%	----	----
Pesticides									
2.4.5-T	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4.5-TP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-D	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-DB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
2.4-DP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
4-CPP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Bentazone	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Dinoseb	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Fluroxypyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPA	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
MCPP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Acifluorfen	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Bromoxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
DNOC	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Dicamba	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Diclofop	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
loxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Propoxycarbazone-sodium	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Triclopyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Triclosan	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.
Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

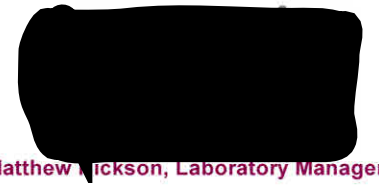
Brief Method Summaries

Analytical Methods	Method Descriptions
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-PESLMSA1	CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.

A `*` symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.

Certificate of Analysis

Report No.:	**19-89495-1**
Issue No.:	**1**
Date of Issue	**03/01/2020**
Customer Details:	ALS Life Sciences Limited, Unit7-8, Hawarden Business Park, Manor Road, Hawarden, Deeside, Flintshire, CH5 3US
Customer Contact:	Carrie Foster
Customer Order No.:	191211-121
Customer Reference:	191211-121
Quotation Reference:	191111/01
Description:	2 soil samples
Date Received:	17/12/2019
Date Started:	18/12/2019
Date Completed:	20/12/2019
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: **Matthew Hickson, Laboratory Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400

Results Summary

Report No.: 19-89495-1

Customer Reference: 191211-121

Customer Order No: 191211-121

Customer Sample No	**21356405**	**21356237**
Customer Sample ID	TP205	TP237
RPS Sample No	424815	424816
Sample Type	**SOIL**	**SOIL**
Sample Depth (m)	0.1	0.5
Sampling Date	09/12/2019	06/12/2019

Determinand	CAS No	Codes	SOP	Units	RL		
atrazine	1912-24-9	N	in house	mg/kg	0.02	< 0.02	< 0.02
prometryn	7287-19-6	N	346	mg/kg	0.02	< 0.02	< 0.02
propazine	139-40-2	N	346	mg/kg	0.02	< 0.02	< 0.02
simazine	122-34-9	N	346	mg/kg	0.02	< 0.02	< 0.02
terbuthylazine	5915-41-3	N	346	mg/kg	0.02	< 0.02	< 0.02
terbutryn	886-50-0	N	346	mg/kg	0.02	< 0.02	< 0.02
trietazine	1912-26-1	N	346	mg/kg	0.02	< 0.02	< 0.02

Deviating Samples

Report No.: 19-89495-1

Customer Reference: 191211-121

Customer Order No: 191211-121

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
424815	21356405		09/12/2019	250ml amber glass jar	No	
424816	21356237		06/12/2019	100ml clear glass bottle	No	

Key Code	Description
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
F	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
N	Not Accredited Test
O	Marine Management Organisation (MMO) Validated
S	Subcontracted to approved laboratory
US	Subcontracted to approved laboratory UKAS Accredited for the test
MS	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SI	Subcontracted to internal RPS Group laboratory
USI	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
MSI	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

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Deeside
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Tel: (01244) 528700
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Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	03 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191213-100
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	536099

We received 8 samples on Friday December 13, 2019 and 1 of these samples were scheduled for analysis which was completed on Friday January 03, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21360015	TP207		0.20 - 0.20	10/12/2019
21360016	TP207		0.60 - 0.60	10/12/2019
21360008	TP210		0.10 - 0.10	10/12/2019
21360009	TP210		0.50 - 0.50	10/12/2019
21360006	TP216		0.20 - 0.20	10/12/2019
21360007	TP216		0.70 - 0.70	10/12/2019
21360010	TP220		0.20 - 0.20	10/12/2019
21360011	TP220		0.60 - 0.60	10/12/2019

Maximum Sample/Coolbox Temperature (°C) : **5.6**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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)			21360015		
Customer Sample Reference			TP207		
AGS Reference					
Depth (m)			0.20 - 0.20		
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 1		X	
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
Hexavalent Chromium (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	
pH	All	NDPs: 0 Tests: 1		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 1		X	
Sample description	All	NDPs: 0 Tests: 1		X	
Total Organic Carbon	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

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
21360015	TP207	0.20 - 0.20	Light Brown	Loamy Sand	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.

Validated

CERTIFICATE OF ANALYSIS

SDG: 191213-100 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 536099
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP207	0.20 - 0.20	Soil/Solid (S)	10/12/2019	.	13/12/2019	191213-100	21360015	
Moisture Content Ratio (% of as received sample)	%	PM024	20								
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M								
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M								
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M								
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)	<0.01 M								
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)	<0.015 M								
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)	<0.06 M								
Soil Organic Matter (SOM)	<0.35 %	TM132	2.38 #								
pH	1 pH Units	TM133	7.38 M								
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 #								
Arsenic	<0.6 mg/kg	TM181	9.91 M								
Cadmium	<0.02 mg/kg	TM181	0.563 M								
Chromium	<0.9 mg/kg	TM181	15.8 M								
Copper	<1.4 mg/kg	TM181	15.2 M								
Lead	<0.7 mg/kg	TM181	31.6 M								
Mercury	<0.14 mg/kg	TM181	<0.14 M								
Nickel	<0.2 mg/kg	TM181	21.1 M								
Selenium	<1 mg/kg	TM181	2.12 #								
Zinc	<1.9 mg/kg	TM181	68.6 M								
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0112 M								

Validated

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP207	0.20 - 0.20	Soil/Solid (S)	10/12/2019	.	13/12/2019	191213-100	21360015	
Naphthalene-d8 % recovery**	%	TM218	94.6								
Acenaphthene-d10 % recovery**	%	TM218	99.3								
Phenanthrene-d10 % recovery**	%	TM218	98.5								
Chrysene-d12 % recovery**	%	TM218	85.3								
Perylene-d12 % recovery**	%	TM218	80.6								
Naphthalene	<9 µg/kg	TM218	<9 M								
Acenaphthylene	<12 µg/kg	TM218	<12 M								
Acenaphthene	<8 µg/kg	TM218	<8 M								
Fluorene	<10 µg/kg	TM218	<10 M								
Phenanthrene	<15 µg/kg	TM218	<15 M								
Anthracene	<16 µg/kg	TM218	<16 M								
Fluoranthene	<17 µg/kg	TM218	33 M								
Pyrene	<15 µg/kg	TM218	29.4 M								
Benz(a)anthracene	<14 µg/kg	TM218	<14 M								
Chrysene	<10 µg/kg	TM218	<10 M								
Benzo(b)fluoranthene	<15 µg/kg	TM218	<15 M								
Benzo(k)fluoranthene	<14 µg/kg	TM218	<14 M								
Benzo(a)pyrene	<15 µg/kg	TM218	<15 M								
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	<18 M								
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23 M								
Benzo(g,h,i)perylene	<24 µg/kg	TM218	<24 M								
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	<118								

Validated

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP207	0.20 - 0.20	Soil/Solid (S)	10/12/2019	.	13/12/2019	191213-100	21360015	
GRO Surrogate % recovery**	%	TM089	91.4								
Aliphatics >C5-C6	<10 µg/kg	TM089	<10								
Aliphatics >C6-C8	<10 µg/kg	TM089	<10								
Aliphatics >C8-C10	<10 µg/kg	TM089	<10								
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000								
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000								
Aliphatics >C16-C21	<1000 µg/kg	TM414	<1000								
Aliphatics >C21-C35	<1000 µg/kg	TM414	2220								
Aliphatics >C35-C44	<1000 µg/kg	TM414	<1000								
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	<5000								
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	<10000								
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10								
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10								
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10								
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000								
Aromatics > EC12-EC16	<1000 µg/kg	TM414	<1000								
Aromatics > EC16-EC21	<1000 µg/kg	TM414	<1000								
Aromatics > EC21-EC35	<1000 µg/kg	TM414	3730								
Aromatics >EC35-EC44	<1000 µg/kg	TM414	<1000								
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000								
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	5050								
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	<10000								
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50								
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50								
GRO >C5-C10	<20 µg/kg	TM089	<20								

Validated

CERTIFICATE OF ANALYSIS

SDG: 191213-100 **Client Reference:** J4175 Stantec/ L & G **Report Number:** 536099
Location: Moathouse Farm, Rusper Ro **Order Number:** **Superseded Report:**

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			TP207	0.20 - 0.20	Soil/Solid (S)	10/12/2019	.	13/12/2019	191213-100	21360015	
Dibromofluoromethane**	%	TM116	113								
Toluene-d8**	%	TM116	91.1								
4-Bromofluorobenzene**	%	TM116	72.7								
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<10 M								
Benzene	<9 µg/kg	TM116	<9 M								
Toluene	<7 µg/kg	TM116	<7 M								
Ethylbenzene	<4 µg/kg	TM116	<4 M								
p/m-Xylene	<10 µg/kg	TM116	<10 #								
o-Xylene	<10 µg/kg	TM116	<10 M								
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.02								
Sum of BTEX	<40 µg/kg	TM116	<40								

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref.	TP207	23/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.20 - 0.20										
Sample Type	SOLID										
Date Sampled	10/12/2019 00:00:00										
Date Receieved	13/12/2019 06:00:00										
SDG	191213-100										
Original Sample	21360015										
Method Number	TM048										

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191213-100	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	536099
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	21360015
Customer Sample Ref.	TP207
AGS Ref.	
Depth	0.20 - 0.20
Type	Soil/Solid (S)
Anions by Kone (soil)	27-Dec-2019
Asbestos ID in Solid Samples	23-Dec-2019
EPH CWG GC (S)	03-Jan-2020
GRO by GC-FID (S)	20-Dec-2019
Hexavalent Chromium (s)	27-Dec-2019
Metals in solid samples by OES	27-Dec-2019
PAH by GCMS	23-Dec-2019
pH	27-Dec-2019
Phenols by HPLC (S)	23-Dec-2019
Sample description	19-Dec-2019
Total Organic Carbon	23-Dec-2019
TPH CWG GC (S)	03-Jan-2020
VOC MS (S)	20-Dec-2019

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

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Deeside
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Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	16 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191220-96
Your Reference:	J4175
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	537504

This report has been revised and directly supersedes 536738 in its entirety.

We received 6 samples on Friday December 20, 2019 and 4 of these samples were scheduled for analysis which was completed on Thursday January 16, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21418337	HP101	E1	0.10	17/12/2019
21418338	HP101	E2	0.50	17/12/2019
21418339	HP102	E1	0.10	17/12/2019
21418341	HP102	E2	0.50	17/12/2019
21418342	HP103	E1	0.10	17/12/2019
21418344	HP103	E2	0.50	17/12/2019

Maximum Sample/Coolbox Temperature (°C) : **10**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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)			21418337			21418341			21418342			21418344	
Customer Sample Reference			HP101			HP102			HP103			HP103	
AGS Reference			E1			E2			E1			E2	
Depth (m)			0.10			0.50			0.10			0.50	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S
Acid herbicides*	All	NDPs: 0 Tests: 2		X									X	
Anions by Kone (soil)	All	NDPs: 0 Tests: 4		X			X			X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4	X			X			X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4			X			X			X			X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 4		X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 4		X			X			X			X	
OC OP Pesticides and Triazine Herb	All	NDPs: 0 Tests: 2		X									X	
PAH by GCMS	All	NDPs: 0 Tests: 4		X			X			X			X	
pH	All	NDPs: 0 Tests: 4		X			X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
Sample description	All	NDPs: 0 Tests: 4		X			X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 4		X			X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 4		X			X			X			X	
Triazine Herbicides (S)*	All	NDPs: 0 Tests: 2		X									X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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)			21418337			21418341			21418342			21418344
Customer Sample Reference			HP101			HP102			HP103			HP103
AGS Reference			E1			E2			E1			E2
Depth (m)			0.10			0.50			0.10			0.50
Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type	S	S	S	S	S	S	S	S	S	S	S	S
VOC MS (S) / All / NDPs: 0 Tests: 4			X			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
21418337	HP101	0.10	Dark Brown	Sandy Loam	Stones	Vegetation
21418341	HP102	0.50	Dark Brown	Clay	Stones	Vegetation
21418342	HP103	0.10	Dark Brown	Sandy Loam	Stones	Vegetation
21418344	HP103	0.50	Dark Brown	Clay 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:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP102	HP103	HP103		
			Depth (m)	0.10	0.50	0.10	0.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	17/12/2019	17/12/2019	17/12/2019	17/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-96	191220-96	191220-96	191220-96		
			Lab Sample No.(s)	21418337	21418341	21418342	21418344		
			AGS Reference	E1	E2	E1	E2		
Moisture Content Ratio (% of as received sample)	%	PM024		25	24	25	20		
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB		<0.01			<0.01		
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB		<0.01			<0.01		
2,4-D*	<0.01 mg/kg	SUB		<0.01			<0.01		
2,4-DB*	<0.01 mg/kg	SUB		<0.01			<0.01		
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB		<0.01			<0.01		
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB		<0.01			<0.01		
Acifluorfen*	<0.01 mg/kg	SUB		<0.01			<0.01		
Bentazone*	<0.01 mg/kg	SUB		<0.01			<0.01		
Bromoxynil*	<0.01 mg/kg	SUB		<0.01			<0.01		
Dicamba*	<0.01 mg/kg	SUB		<0.01			<0.01		
Diclofop*	<0.01 mg/kg	SUB		<0.01			<0.01		
Dinoseb*	<0.01 mg/kg	SUB		<0.01			<0.01		
DNOC*	<0.01 mg/kg	SUB		<0.01			<0.01		
Fluroxypyr*	<0.01 mg/kg	SUB		<0.01			<0.01		
Ioxynil*	<0.01 mg/kg	SUB		<0.01			<0.01		
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB		<0.01			<0.01		
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB		<0.01			<0.01		
Mecoprop (MCPP)*	<0.01 mg/kg	SUB		<0.01			<0.01		
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB		<0.01			<0.01		
Triclopyr*	<0.01 mg/kg	SUB		<0.01			<0.01		
Triclosan*	<0.01 mg/kg	SUB		<0.01			<0.01		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 M	<0.06 M	<0.06 M	<0.06 M		
Soil Organic Matter (SOM)	<0.35 %	TM132		2.79 #	2.62 #	2.95 #	0.84 #		
pH	1 pH Units	TM133		7.81 M	7.76 M	8.04 M	8.05 M		
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6 #	<0.6 #	<0.6 #	<0.6 #		
Arsenic	<0.6 mg/kg	TM181		14.9 M	13 M	10 M	6.4 M		
Cadmium	<0.02 mg/kg	TM181		0.241 M	0.554 M	0.322 M	0.0436 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP102	HP103	HP103		
			Depth (m)	0.10	0.50	0.10	0.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	17/12/2019	17/12/2019	17/12/2019	17/12/2019		
			Sample Time	-	-	-	-		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-96	191220-96	191220-96	191220-96		
			Lab Sample No.(s)	21418337	21418341	21418342	21418344		
			AGS Reference	E1	E2	E1	E2		
Chromium	<0.9 mg/kg	TM181		16.5 M	19.4 M	19.5 M	24.2 M		
Copper	<1.4 mg/kg	TM181		29.5 M	33.3 M	30.3 M	19.1 M		
Lead	<0.7 mg/kg	TM181		37.4 M	37.4 M	34.2 M	20.3 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M	<0.14 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		26 M	30 M	21.8 M	27.6 M		
Selenium	<1 mg/kg	TM181		1.71 #	<10 #	1.29 #	<1 #		
Zinc	<1.9 mg/kg	TM181		88.9 M	90.8 M	87.1 M	75.5 M		
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0195 M	0.0291 M	0.0112 M	0.0165 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP103
			Depth (m)	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/12/2019	17/12/2019
			Sample Time	.	.
			Date Received	20/12/2019	20/12/2019
			SDG Ref	191220-96	191220-96
			Lab Sample No.(s)	21418337	21418344
			AGS Reference	E1	E2
Dichlorvos	<50 µg/kg	TM073		<50	<50
Mevinphos	<50 µg/kg	TM073		<50	<50
Tecnazene	<50 µg/kg	TM073		<50	<50
Hexachlorobenzene	<50 µg/kg	TM073		<50	<50
Trifluralin	<50 µg/kg	TM073		<50	<50
Phorate	<50 µg/kg	TM073		<50	<50
alpha-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50
Quintozene (PCNB)	<50 µg/kg	TM073		<50	<50
Diazinon	<50 µg/kg	TM073		<50	<50
Triallate	<50 µg/kg	TM073		<50	<50
Etrimphos	<50 µg/kg	TM073		<50	<50
gamma-Hexachlorocyclohexane (HCH / Lindane)	<50 µg/kg	TM073		<50	<50
Disulfoton	<50 µg/kg	TM073		<50	<50
Propetamphos	<50 µg/kg	TM073		<50	<50
Heptachlor	<50 µg/kg	TM073		<50	<50
Chlorpyriphos methyl	<50 µg/kg	TM073		<50	<50
Dimethoate	<50 µg/kg	TM073		<50	<50
Aldrin	<50 µg/kg	TM073		<50	<50
Chlorothalonil	<50 µg/kg	TM073		<50	<50
Pirimiphos-methyl	<50 µg/kg	TM073		<50	<50
Telodrin	<50 µg/kg	TM073		<50	<50
beta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50
Chlorpyriphos	<50 µg/kg	TM073		<50	<50
Methyl parathion	<50 µg/kg	TM073		<50	<50
Isodrin	<50 µg/kg	TM073		<50	<50
delta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50
Malathion	<50 µg/kg	TM073		<50	<50
Fenthion	<50 µg/kg	TM073		<50	<50
Fenitrothion	<50 µg/kg	TM073		<50	<50
Heptachlor epoxide	<50 µg/kg	TM073		<50	<50
Triadimefon	<50 µg/kg	TM073		<50	<50
Pendimethalin	<50 µg/kg	TM073		<50	<50
Parathion	<50 µg/kg	TM073		<50	<50

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP103
			Depth (m)	0.10	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/12/2019	17/12/2019
			Sample Time	-	-
			Date Received	20/12/2019	20/12/2019
			SDG Ref	191220-96	191220-96
			Lab Sample No.(s)	21418337	21418344
			AGS Reference	E1	E2
o,p-DDE	<50 µg/kg	TM073		<50	<50
Chlorfenvinphos	<50 µg/kg	TM073		<50	<50
Endosulphan I	<50 µg/kg	TM073		<50	<50
Trans-chlordane	<50 µg/kg	TM073		<50	<50
cis-Chlordane	<50 µg/kg	TM073		<50	<50
p,p-DDE	<50 µg/kg	TM073		<50	<50
Dieldrin	<50 µg/kg	TM073		<50	<50
o,p'-DDD (TDE)	<50 µg/kg	TM073		<50	<50
Endrin	<50 µg/kg	TM073		<50	<50
o,p-DDT	<50 µg/kg	TM073		<50	<50
p,p-TDE (DDD)	<50 µg/kg	TM073		<50	<50
Ethion	<50 µg/kg	TM073		<50	<50
Endosulphan II	<50 µg/kg	TM073		<50	<50
p,p-DDT	<50 µg/kg	TM073		<50	<50
Carbophenothion	<50 µg/kg	TM073		<50	<50
o,p-Methoxychlor	<50 µg/kg	TM073		<50	<50
Triazophos	<50 µg/kg	TM073		<50	<50
p,p-Methoxychlor	<50 µg/kg	TM073		<50	<50
Endosulphan sulphate	<50 µg/kg	TM073		<50	<50
Permethrin I	<50 µg/kg	TM073		<50	<50
Phosalone	<50 µg/kg	TM073		<50	<50
Permethrin II	<50 µg/kg	TM073		<50	<50
Azinphos-methyl	<50 µg/kg	TM073		<50	<50
Azinphos-ethyl	<50 µg/kg	TM073		<50	<50

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP102	HP103	HP103		
			Depth (m)	0.10	0.50	0.10	0.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	17/12/2019	17/12/2019	17/12/2019	17/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-96	191220-96	191220-96	191220-96		
			Lab Sample No.(s)	21418337	21418341	21418342	21418344		
			AGS Reference	E1	E2	E1	E2		
Naphthalene-d8 % recovery**	%	TM218		86.9	83.8	92.2	91.5		
Acenaphthene-d10 % recovery**	%	TM218		82.7	81	89.6	89.7		
Phenanthrene-d10 % recovery**	%	TM218		84.1	86.5	91.2	94.7		
Chrysene-d12 % recovery**	%	TM218		70.6	77.4	75.5	82.7		
Perylene-d12 % recovery**	%	TM218		74.2	74.5	73.6	77.7		
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 M	<9 M		
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	<12 M		
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M		
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M		
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M		
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 M	<16 M		
Fluoranthene	<17 µg/kg	TM218		<17 M	31.4 M	23 M	<17 M		
Pyrene	<15 µg/kg	TM218		<15 M	26.4 M	<15 M	<15 M		
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M		
Chrysene	<10 µg/kg	TM218		<10 M	17.2 M	<10 M	<10 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	26.9 M	<15 M	<15 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M		
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 M	<18 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	<23 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 M	<24 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	<118	<118		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP102	HP103	HP103		
			Depth (m)	0.10	0.50	0.10	0.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	17/12/2019	17/12/2019	17/12/2019	17/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-96	191220-96	191220-96	191220-96		
			Lab Sample No.(s)	21418337	21418341	21418342	21418344		
			AGS Reference	E1	E2	E1	E2		
GRO Surrogate % recovery**	%	TM089		117	117	91	107		
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C21-C35	<1000 µg/kg	TM414		7710	16000	16100	<1000		
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		8910	17000	16800	<5000		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		15400	23700	24300	<10000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		5020	5710	6310	1790		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		6500	6710	7510	<5000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		15400	23700	24300	<10000		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50		
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

Triazine Herbicides (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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP103				
			Depth (m)	0.10	0.50				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	17/12/2019	17/12/2019				
			Sample Time	.	.				
			Date Received	20/12/2019	20/12/2019				
			SDG Ref	191220-96	191220-96				
			Lab Sample No.(s)	21418337	21418344				
			AGS Reference	E1	E2				
Atrazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Prometryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Propazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Simazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbuthylazine*	<0.02 mg/kg	SUB		<0.02	<0.02				
Terbutryne*	<0.02 mg/kg	SUB		<0.02	<0.02				
Trietazine*	<0.02 mg/kg	SUB		<0.02	<0.02				

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	HP101	HP102	HP103	HP103		
			Depth (m)	0.10	0.50	0.10	0.50		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	17/12/2019	17/12/2019	17/12/2019	17/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-96	191220-96	191220-96	191220-96		
			Lab Sample No.(s)	21418337	21418341	21418342	21418344		
			AGS Reference	E1	E2	E1	E2		
Dibromofluoromethane**	%	TM116		102	105	108 @	105		
Toluene-d8**	%	TM116		93.7	94.3	99.5 @	101		
4-Bromofluorobenzene**	%	TM116		70.7	73.5	92.8 @	94.7		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M	<200 @ M	<10 M		
Benzene	<9 µg/kg	TM116		<9 M	<9 M	<180 @ M	<9 M		
Toluene	<7 µg/kg	TM116		<7 M	<7 M	<140 @ M	<7 M		
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M	<80 @ M	<4 M		
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #	<200 @ #	<10 #		
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M	<200 @ M	<10 M		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.4 @	<0.02		
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<800 @	<40		

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	HP101E1 0.10 SOLID 17/12/2019 00:00:00 20/12/2019 06:00:00 191220-96 21418337 TM048	30/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	HP102E2 0.50 SOLID 17/12/2019 00:00:00 20/12/2019 06:00:00 191220-96 21418341 TM048	30/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	HP103E1 0.10 SOLID 17/12/2019 00:00:00 20/12/2019 06:00:00 191220-96 21418342 TM048	30/12/2019	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	HP103E2 0.50 SOLID 17/12/2019 00:00:00 20/12/2019 06:00:00 191220-96 21418344 TM048	30/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM073	MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A	Determination of organochlorine and organophosphorous pesticides by GCMS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191220-96	**Client Reference:**	J4175	**Report Number:**	537504
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13459AP	**Superseded Report:**	536738

Test Completion Dates

Lab Sample No(s)	21418337	21418341	21418342	21418344
Customer Sample Ref.	HP101	HP102	HP103	HP103
AGS Ref.	E1	E2	E1	E2
Depth	0.10	0.50	0.10	0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Acid herbicides*	08-Jan-2020			08-Jan-2020
Anions by Kone (soil)	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019
Asbestos ID in Solid Samples	30-Dec-2019	30-Dec-2019	30-Dec-2019	30-Dec-2019
EPH CWG GC (S)	04-Jan-2020	04-Jan-2020	06-Jan-2020	04-Jan-2020
GRO by GC-FID (S)	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019
Hexavalent Chromium (s)	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019
Metals in solid samples by OES	03-Jan-2020	06-Jan-2020	03-Jan-2020	02-Jan-2020
OC OP Pesticides and Triazine Herb	31-Dec-2019			31-Dec-2019
PAH by GCMS	02-Jan-2020	02-Jan-2020	02-Jan-2020	02-Jan-2020
pH	02-Jan-2020	02-Jan-2020	02-Jan-2020	02-Jan-2020
Phenols by HPLC (S)	27-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019
Sample description	23-Dec-2019	23-Dec-2019	23-Dec-2019	23-Dec-2019
Total Organic Carbon	02-Jan-2020	02-Jan-2020	02-Jan-2020	02-Jan-2020
TPH CWG GC (S)	04-Jan-2020	04-Jan-2020	06-Jan-2020	04-Jan-2020
Triazine Herbicides (S)*	16-Jan-2020			16-Jan-2020
VOC MS (S)	30-Dec-2019	30-Dec-2019	31-Dec-2019	30-Dec-2019

CERTIFICATE OF ANALYSIS

Work Order	: **PR2000312**	Issue Date	: 08-Jan-2020
Customer	: **ALS Life Sciences Ltd**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: ALS Hawarden Reporting	Contact	: Client Service
Address	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside United Kingdom	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: euhdnsubconresults@ALSGlobal.com	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: 191220-96	Page	: 1 of 2
Order number	: 191220-96	Date Samples Received	: 03-Jan-2020
		Quote number	: PR2018ALSAL-GB0004 (CZ-256-18-0022)
Site	: ----	Date of test	: 03-Jan-2020 - 08-Jan-2020
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák	[redacted]	Environmental Business Unit Manager

L 1163

Analytical Results

Sub-Matrix: SOIL	Client sample ID	21426777 HP101		21427087 HP103		----	
	Laboratory sample ID	PR2000312-001		PR2000312-002		----	
	Client sampling date / time	03-Jan-2020 00:00		03-Jan-2020 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Physical Parameters									
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	**75.5**	± 6.0%	**79.5**	± 6.0%	**----**	----
Pesticides									
2.4.5-T	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
2.4.5-TP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
2.4-D	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
2.4-DB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
2.4-DP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
4-CPP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Bentazone	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Dinoseb	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Fluroxypyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
MCPA	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
MCPB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
MCPP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Acifluorfen	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Bromoxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
DNOC	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Dicamba	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Diclofop	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Ioxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Propoxycarbazone-sodium	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Triclopyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----
Triclosan	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	**----**	----

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.
Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

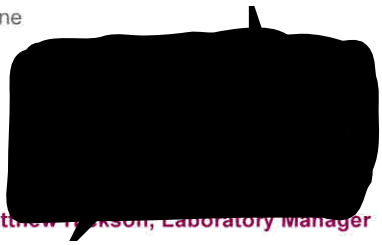
Brief Method Summaries

Analytical Methods	Method Descriptions
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-PESLMSA1	CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.

A `*` symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.

Certificate of Analysis

Report No.:	**20-89677-1**
Issue No.:	**1**
Date of Issue	**16/01/2020**
Customer Details:	ALS Life Sciences Limited, Unit7-8, Hawarden Business Park, Manor Road, Hawarden, Deeside, Flintshire, CH5 3US
Customer Contact:	Carrie Foster
Customer Order No.:	191220-96
Customer Reference:	191220-96
Quotation Reference:	191111/01
Description:	2 soil samples
Date Received:	03/01/2020
Date Started:	09/01/2020
Date Completed:	10/01/2020
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: **Matthew [illegible], Laboratory Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400

Results Summary

Report No.: 20-89677-1

Customer Reference: 191220-96

Customer Order No: 191220-96

Customer Sample No	**21426778**	**21427092**
Customer Sample ID	HP101	HP103
RPS Sample No	425459	425460
Sample Type	**SOIL**	**SOIL**
Sample Depth (m)	0.1	0.5
Sampling Date	17/12/2019	17/12/2019

Determinand	CAS No	Codes	SOP	Units	RL		
atrazine	1912-24-9	N	in house	mg/kg	0.02	< 0.02	< 0.02
prometryn	7287-19-6	N	346	mg/kg	0.02	< 0.02	< 0.02
propazine	139-40-2	N	346	mg/kg	0.02	< 0.02	< 0.02
simazine	122-34-9	N	346	mg/kg	0.02	< 0.02	< 0.02
terbuthylazine	5915-41-3	N	346	mg/kg	0.02	< 0.02	< 0.02
terbutryn	886-50-0	N	346	mg/kg	0.02	< 0.02	< 0.02
trietazine	1912-26-1	N	346	mg/kg	0.02	< 0.02	< 0.02

Deviating Samples

Report No.: 20-89677-1

Customer Reference: 191220-96

Customer Order No: 191220-96

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
425459	21426778		17/12/2019	100ml clear glass bottle	No	
425460	21427092		17/12/2019	100ml clear glass bottle	No	

Key Code	Description
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
F	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
N	Not Accredited Test
O	Marine Management Organisation (MMO) Validated
S	Subcontracted to approved laboratory
US	Subcontracted to approved laboratory UKAS Accredited for the test
MS	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SI	Subcontracted to internal RPS Group laboratory
USI	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
MSI	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	08 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	191220-100
Your Reference:	J4175
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	536737

This report has been revised and directly supersedes 536648 in its entirety.

We received 10 samples on Friday December 20, 2019 and 10 of these samples were scheduled for analysis which was completed on Wednesday January 08, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21418585	TP230	E2	0.50	18/12/2019
21418584	TP240	E1	0.10	18/12/2019
21418587	TP242	E1	0.10	18/12/2019
21418574	TP244	E1	0.30	18/12/2019
21418589	TP248	E2	0.60	18/12/2019
21418576	TP250	E2	0.50	18/12/2019
21418583	TP254	E1	0.20	18/12/2019
21418578	TP255	E2	0.40	18/12/2019
21418580	TP256	E2	0.30	18/12/2019
21418581	TP257	E1	0.20	18/12/2019

Maximum Sample/Coolbox Temperature (°C) : 10

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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)			21418585			21418584			21418587			21418574			21418589			21418576		21418583
Customer Sample Reference			TP230			TP240			TP242			TP244			TP248			TP250		TP254
AGS Reference			E2			E1			E1			E1			E2			E2		E1
Depth (m)			0.50			0.10			0.10			0.30			0.60			0.50		0.20
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Acid herbicides*	All	NDPs: 0 Tests: 3								X			X								
Anions by Kone (soil)	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	X			X			X			X			X			X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 10			X			X			X			X			X			X	
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
OC OP Pesticides and Triazine Herb	All	NDPs: 0 Tests: 3								X			X								
PAH by GCMS	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 10		X			X			X			X			X			X		
Triazine Herbicides (S)*	All	NDPs: 0 Tests: 3								X			X								

21418581	TP257	E1	0.20	60g VOC (ALE215)	S						x											
				250g Amber Jar (ALE210)	S	x	x		x		x	x	x	x	x	x	x	x	x	x	x	x
				1kg TUB with Handle (ALE260)	S			x															
21418580	TP256	E2	0.30	60g VOC (ALE215)	S					x												
				250g Amber Jar (ALE210)	S		x		x		x	x		x	x	x	x	x	x	x		
				1kg TUB with Handle (ALE260)	S			x															
21418578	TP255	E2	0.40	60g VOC (ALE215)	S					x												
				250g Amber Jar (ALE210)	S		x		x		x	x		x	x	x	x	x	x	x		
				1kg TUB with Handle (ALE260)	S			x															
21418583	TP254	E1	0.20	60g VOC (ALE215)	S					x												
				250g Amber Jar (ALE210)	S		x		x		x	x		x	x	x	x	x	x	x		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13458AP	**Superseded Report:**	536648

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)	21418585			21418584			21418587			21418574			21418589			21418576			21418583	
Customer Sample Reference	TP230			TP240			TP242			TP244			TP248			TP250			TP254	
AGS Reference	E2			E1			E1			E1			E2			E2			E1	
Depth (m)	0.50			0.10			0.10			0.30			0.60			0.50			0.20	
Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	
Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
VOC MS (S)			X			X			X			X			X			X		

All — NDPs: 0, Tests: 10

21418581	TP257	E1	0.20	60g VOC (ALE215)	S		X		
				250g Amber Jar (ALE210)	S				
				1kg TUB with Handle (ALE260)	S				
21418580	TP256	E2	0.30	60g VOC (ALE215)	S		X		
				250g Amber Jar (ALE210)	S				
				1kg TUB with Handle (ALE260)	S				
21418578	TP255	E2	0.40	60g VOC (ALE215)	S		X		
				250g Amber Jar (ALE210)	S				
				1kg TUB with Handle (ALE260)	S				
21418583	TP254	E1	0.20	60g VOC (ALE215)	S		X		
				250g Amber Jar (ALE210)	S				

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
21418585	TP230	0.50	Light Brown	Silt Loam	Stones	Vegetation
21418584	TP240	0.10	Light Brown	Loamy Sand	Vegetation	None
21418587	TP242	0.10	Light Brown	Silt Loam	Stones	Vegetation
21418574	TP244	0.30	Light Brown	Silt Loam	Stones	Vegetation
21418589	TP248	0.60	Light Brown	Silt Loam	Stones	Vegetation
21418576	TP250	0.50	Light Brown	Clay	None	None
21418583	TP254	0.20	Light Brown	Loamy Sand	Stones	Vegetation
21418578	TP255	0.40	Light Brown	Clay	Vegetation	None
21418580	TP256	0.30	Light Brown	Clay Loam	Stones	None
21418581	TP257	0.20	Light Brown	Loamy Sand	Vegetation	Stones

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.

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250
			Depth (m)	0.50	0.10	0.10	0.30	0.60	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019
			SDG Ref	191220-100	191220-100	191220-100	191220-100	191220-100	191220-100
			Lab Sample No.(s)	21418585	21418584	21418587	21418574	21418589	21418576
			AGS Reference	E2	E1	E1	E1	E2	E2
Moisture Content Ratio (% of as received sample)	%	PM024		22	27	23	23	21	20
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB				<0.01	<0.01		
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB				<0.01	<0.01		
2,4-D*	<0.01 mg/kg	SUB				<0.01	<0.01		
2,4-DB*	<0.01 mg/kg	SUB				<0.01	<0.01		
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB				<0.01	<0.01		
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB				<0.01	<0.01		
Acifluorfen*	<0.01 mg/kg	SUB				<0.01	<0.01		
Bentazone*	<0.01 mg/kg	SUB				<0.01	<0.01		
Bromoxynil*	<0.01 mg/kg	SUB				<0.01	<0.01		
Dicamba*	<0.01 mg/kg	SUB				<0.01	<0.01		
Diclofop*	<0.01 mg/kg	SUB				<0.01	<0.01		
Dinoseb*	<0.01 mg/kg	SUB				<0.01	<0.01		
DNOC*	<0.01 mg/kg	SUB				<0.01	<0.01		
Fluroxypyr*	<0.01 mg/kg	SUB				<0.01	<0.01		
Ioxynil*	<0.01 mg/kg	SUB				<0.01	<0.01		
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB				<0.01	<0.01		
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB				<0.01	<0.01		
Mecoprop (MCPP)*	<0.01 mg/kg	SUB				<0.01	<0.01		
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB				<0.01	<0.01		
Triclopyr*	<0.01 mg/kg	SUB				<0.01	<0.01		
Triclosan*	<0.01 mg/kg	SUB				<0.01	<0.01		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 M	<0.06 M	<0.06 M	<0.06 M	<0.06 M	<0.06 M
Soil Organic Matter (SOM)	<0.35 %	TM132		0.693 #	3.78 #	2.62 #	2.74 #	0.707 #	0.452 #
pH	1 pH Units	TM133		7.6 M	7.07 M	7.77 M	7.93 M	7.45 M	7.85 M
Chromium, Hexavalent	<0.6 mg/kg	TM151		<3 #	<3 #	<0.6 #	<3 #	<0.6 #	<3 #
Arsenic	<0.6 mg/kg	TM181		14.9 M	12.4 M	15.8 M	9.49 M	12.3 M	6.02 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.369 M	0.49 M	0.349 M	0.264 M	0.144 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250
			Depth (m)	0.50	0.10	0.10	0.30	0.60	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019
			Sample Time	-	-	-	-	-	-
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019
			SDG Ref	191220-100	191220-100	191220-100	191220-100	191220-100	191220-100
			Lab Sample No.(s)	21418585	21418584	21418587	21418574	21418589	21418576
			AGS Reference	E2	E1	E1	E1	E2	E2
Chromium	<0.9 mg/kg	TM181		29.9 M	21.4 M	19.3 M	17.7 M	19.1 M	21.7 M
Copper	<1.4 mg/kg	TM181		23.4 M	19.5 M	16.6 M	23.7 M	23.7 M	14.2 M
Lead	<0.7 mg/kg	TM181		24.5 M	42.5 M	34.3 M	49.2 M	19.9 M	44.9 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<0.14 M	<0.14 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		24.3 M	16.6 M	21.6 M	14.4 M	25.9 M	17.5 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	1.59 #	<1 #	2.01 #	<1 #
Zinc	<1.9 mg/kg	TM181		87.7 M	77.2 M	88.7 M	69.9 M	57.1 M	53.7 M
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0178 M	<0.004 M	0.0128 M	0.0118 M	0.0122 M	0.0249 M

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP254	TP255	TP256	TP257		
			Depth (m)	0.20	0.40	0.30	0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-100	191220-100	191220-100	191220-100		
			Lab Sample No.(s)	21418583	21418578	21418580	21418581		
			AGS Reference	E1	E2	E2	E1		
Moisture Content Ratio (% of as received sample)	%	PM024		23	22	25	27		
2,4,5-Trichlorophenol (2,4,5-T)*	<0.01 mg/kg	SUB					<0.01		
2,4,5-TP (Fenoprop)*	<0.01 mg/kg	SUB					<0.01		
2,4-D*	<0.01 mg/kg	SUB					<0.01		
2,4-DB*	<0.01 mg/kg	SUB					<0.01		
2,4-Dichloroprop (2,4 DP)*	<0.01 mg/kg	SUB					<0.01		
4-Chlorophenoxyacetic acid (4-CPA)*	<0.01 mg/kg	SUB					<0.01		
Acifluorfen*	<0.01 mg/kg	SUB					<0.01		
Bentazone*	<0.01 mg/kg	SUB					<0.01		
Bromoxynil*	<0.01 mg/kg	SUB					<0.01		
Dicamba*	<0.01 mg/kg	SUB					<0.01		
Diclofop*	<0.01 mg/kg	SUB					<0.01		
Dinoseb*	<0.01 mg/kg	SUB					<0.01		
DNOC*	<0.01 mg/kg	SUB					<0.01		
Fluroxypyr*	<0.01 mg/kg	SUB					<0.01		
Ioxynil*	<0.01 mg/kg	SUB					<0.01		
2-methyl-4-Chlorophenoxyacetic acid (MCPA)*	<0.01 mg/kg	SUB					<0.01		
4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*	<0.01 mg/kg	SUB					<0.01		
Mecoprop (MCPP)*	<0.01 mg/kg	SUB					<0.01		
Propoxycarbazone-sodium*	<0.01 mg/kg	SUB					<0.01		
Triclopyr*	<0.01 mg/kg	SUB					<0.01		
Triclosan*	<0.01 mg/kg	SUB					<0.01		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0136 M		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
2,3,5-Trimethylphenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
2-Isopropylphenol	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Phenols, Total Detected 5 speciated	<0.06 mg/kg	TM062 (S)		<0.06 M	<0.06 M	<0.06 M	<0.06 M		
Soil Organic Matter (SOM)	<0.35 %	TM132		2.29 #	1.05 #	2.76 #	2.4 #		
pH	1 pH Units	TM133		6.68 M	8.06 M	7.84 M	7.99 M		
Chromium, Hexavalent	<0.6 mg/kg	TM151		<3 #	<0.6 #	<3 #	<3 #		
Arsenic	<0.6 mg/kg	TM181		12.2 M	9.49 M	9.97 M	11.2 M		
Cadmium	<0.02 mg/kg	TM181		0.501 M	0.19 M	0.393 M	0.335 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP254	TP255	TP256	TP257		
			Depth (m)	0.20	0.40	0.30	0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019		
			Sample Time	-	-	-	-		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-100	191220-100	191220-100	191220-100		
			Lab Sample No.(s)	21418583	21418578	21418580	21418581		
			AGS Reference	E1	E2	E2	E1		
Chromium	<0.9 mg/kg	TM181		18.1 M	17 M	23.6 M	26.3 M		
Copper	<1.4 mg/kg	TM181		19.4 M	11.3 M	25.7 M	26.6 M		
Lead	<0.7 mg/kg	TM181		45.5 M	24.9 M	35.6 M	45.3 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		21.4 M	12.3 M	17.3 M	16.6 M		
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #		
Zinc	<1.9 mg/kg	TM181		77.5 M	49.1 M	67.5 M	70 M		
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0306 M	0.012 M	0.0046 M	0.0061 M		

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP242	TP244	TP257			
			Depth (m)	0.10	0.30	0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	18/12/2019	18/12/2019	18/12/2019			
			Sample Time	.	.	.			
			Date Received	20/12/2019	20/12/2019	20/12/2019			
			SDG Ref	191220-100	191220-100	191220-100			
			Lab Sample No.(s)	21418587	21418574	21418581			
			AGS Reference	E1	E1	E1			
Dichlorvos	<50 µg/kg	TM073		<50	<50	<50			
Mevinphos	<50 µg/kg	TM073		<50	<50	<50			
Tecnazene	<50 µg/kg	TM073		<50	<50	<50			
Hexachlorobenzene	<50 µg/kg	TM073		<50	<50	<50			
Trifluralin	<50 µg/kg	TM073		<50	<50	<50			
Phorate	<50 µg/kg	TM073		<50	<50	<50			
alpha-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50	<50			
Quintozene (PCNB)	<50 µg/kg	TM073		<50	<50	<50			
Diazinon	<50 µg/kg	TM073		<50	<50	<50			
Triallate	<50 µg/kg	TM073		<50	<50	<50			
Etrimphos	<50 µg/kg	TM073		<50	<50	<50			
gamma-Hexachlorocyclohexane (HCH / Lindane)	<50 µg/kg	TM073		<50	<50	<50			
Disulfoton	<50 µg/kg	TM073		<50	<50	<50			
Propetamphos	<50 µg/kg	TM073		<50	<50	<50			
Heptachlor	<50 µg/kg	TM073		<50	<50	<50			
Chlorpyriphos methyl	<50 µg/kg	TM073		<50	<50	<50			
Dimethoate	<50 µg/kg	TM073		<50	<50	<50			
Aldrin	<50 µg/kg	TM073		<50	<50	<50			
Chlorothalonil	<50 µg/kg	TM073		<50	<50	<50			
Pirimiphos-methyl	<50 µg/kg	TM073		<50	<50	<50			
Telodrin	<50 µg/kg	TM073		<50	<50	<50			
beta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50	<50			
Chlorpyriphos	<50 µg/kg	TM073		<50	<50	<50			
Methyl parathion	<50 µg/kg	TM073		<50	<50	<50			
Isodrin	<50 µg/kg	TM073		<50	<50	<50			
delta-Hexachlorocyclohexane (HCH)	<50 µg/kg	TM073		<50	<50	<50			
Malathion	<50 µg/kg	TM073		<50	<50	<50			
Fenthion	<50 µg/kg	TM073		<50	<50	<50			
Fenitrothion	<50 µg/kg	TM073		<50	<50	<50			
Heptachlor epoxide	<50 µg/kg	TM073		<50	<50	<50			
Triadimefon	<50 µg/kg	TM073		<50	<50	<50			
Pendimethalin	<50 µg/kg	TM073		<50	<50	<50			
Parathion	<50 µg/kg	TM073		<50	<50	<50			

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13458AP	**Superseded Report:**	536648

OC OP Pesticides and Triazine Herb

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP242	TP244	TP257			
			Depth (m)	0.10	0.30	0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	18/12/2019	18/12/2019	18/12/2019			
			Sample Time	-	-	-			
			Date Received	20/12/2019	20/12/2019	20/12/2019			
			SDG Ref	191220-100	191220-100	191220-100			
			Lab Sample No.(s)	21418587	21418574	21418581			
			AGS Reference	E1	E1	E1			
o,p-DDE	<50 µg/kg	TM073		<50	<50	<50			
Chlorfenvinphos	<50 µg/kg	TM073		<50	<50	<50			
Endosulphan I	<50 µg/kg	TM073		<50	<50	<50			
Trans-chlordane	<50 µg/kg	TM073		<50	<50	<50			
cis-Chlordane	<50 µg/kg	TM073		<50	<50	<50			
p,p-DDE	<50 µg/kg	TM073		<50	<50	<50			
Dieldrin	<50 µg/kg	TM073		<50	<50	<50			
o,p'-DDD (TDE)	<50 µg/kg	TM073		<50	<50	<50			
Endrin	<50 µg/kg	TM073		<50	<50	<50			
o,p-DDT	<50 µg/kg	TM073		<50	<50	<50			
p,p-TDE (DDD)	<50 µg/kg	TM073		<50	<50	<50			
Ethion	<50 µg/kg	TM073		<50	<50	<50			
Endosulphan II	<50 µg/kg	TM073		<50	<50	<50			
p,p-DDT	<50 µg/kg	TM073		<50	<50	<50			
Carbophenothion	<50 µg/kg	TM073		<50	<50	<50			
o,p-Methoxychlor	<50 µg/kg	TM073		<50	<50	<50			
Triazophos	<50 µg/kg	TM073		<50	<50	<50			
p,p-Methoxychlor	<50 µg/kg	TM073		<50	<50	<50			
Endosulphan sulphate	<50 µg/kg	TM073		<50	<50	<50			
Permethrin I	<50 µg/kg	TM073		<50	<50	<50			
Phosalone	<50 µg/kg	TM073		<50	<50	<50			
Permethrin II	<50 µg/kg	TM073		<50	<50	<50			
Azinphos-methyl	<50 µg/kg	TM073		<50	<50	<50			
Azinphos-ethyl	<50 µg/kg	TM073		<50	<50	<50			

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250
			Depth (m)	0.50	0.10	0.10	0.30	0.60	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019
			SDG Ref	191220-100	191220-100	191220-100	191220-100	191220-100	191220-100
			Lab Sample No.(s)	21418585	21418584	21418587	21418574	21418589	21418576
			AGS Reference	E2	E1	E1	E1	E2	E2
Naphthalene-d8 % recovery**	%	TM218		84.1	100	95.7	97.2	86.9	70.7
Acenaphthene-d10 % recovery**	%	TM218		91.5	93.6	101	88.2	92.4	71.3
Phenanthrene-d10 % recovery**	%	TM218		98.5	88.3	108	82.8	95.6	76
Chrysene-d12 % recovery**	%	TM218		80.4	84.6	94.4	72.1	81.3	70.7
Perylene-d12 % recovery**	%	TM218		78.7	87.3	83.7	71.5	76.5	71.4
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 M	<9 M	<9 M	<9 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M	<10 M	<10 M
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M	20 M	31.3 M	<15 M	<15 M
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 M	<16 M	<16 M	<16 M
Fluoranthene	<17 µg/kg	TM218		<17 M	39.5 M	58 M	76.7 M	<17 M	<17 M
Pyrene	<15 µg/kg	TM218		<15 M	33.2 M	45.9 M	62.3 M	<15 M	<15 M
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	<14 M	24.7 M	32.9 M	<14 M	<14 M
Chrysene	<10 µg/kg	TM218		<10 M	24.1 M	25.1 M	34.8 M	<10 M	<10 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 M	30.5 M	31.1 M	55 M	<15 M	<15 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M	<14 M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	34 M	<15 M	<15 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 M	<18 M	<18 M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	<23 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 M	<24 M	<24 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	127	205	327	<118	<118

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP254	TP255	TP256	TP257		
			Depth (m)	0.20	0.40	0.30	0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-100	191220-100	191220-100	191220-100		
			Lab Sample No.(s)	21418583	21418578	21418580	21418581		
			AGS Reference	E1	E2	E2	E1		
Naphthalene-d8 % recovery**	%	TM218		96.8	98.5	58	81.2		
Acenaphthene-d10 % recovery**	%	TM218		91.9	92.3	65	86.7		
Phenanthrene-d10 % recovery**	%	TM218		86.5	88.5	61.3	91.7		
Chrysene-d12 % recovery**	%	TM218		88.6	80.4	42.2	77.9		
Perylene-d12 % recovery**	%	TM218		71.1	84.2	40.1	71.5		
Naphthalene	<9 µg/kg	TM218		<9 M	<9 M	<9 M	<9 M		
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	<12 M		
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M		
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M		
Phenanthrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M		
Anthracene	<16 µg/kg	TM218		<16 M	<16 M	<16 M	<16 M		
Fluoranthene	<17 µg/kg	TM218		31.9 M	<17 M	<17 M	<17 M		
Pyrene	<15 µg/kg	TM218		26.9 M	<15 M	<15 M	<15 M		
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M		
Chrysene	<10 µg/kg	TM218		15.5 M	<10 M	<10 M	<10 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		23.5 M	<15 M	<15 M	<15 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	<14 M	<14 M	<14 M		
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	<15 M	<15 M	<15 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	<18 M	<18 M	<18 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	<23 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	<24 M	<24 M	<24 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	<118	<118		

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250
			Depth (m)	0.50	0.10	0.10	0.30	0.60	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019
			SDG Ref	191220-100	191220-100	191220-100	191220-100	191220-100	191220-100
			Lab Sample No.(s)	21418585	21418584	21418587	21418574	21418589	21418576
			AGS Reference	E2	E1	E1	E1	E2	E2
GRO Surrogate % recovery**	%	TM089		95	99.3	95	97	103	98
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	2420	<1000	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	4170	1790	17600	<1000	<1000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	<5000	20800	<5000	<5000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	11800	<10000	29500	<10000	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1590	4880	4870	7570	1560	1890
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	2070	<1000	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	6950	5870	8660	<5000	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	<10000	29500	<10000	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP254	TP255	TP256	TP257		
			Depth (m)	0.20	0.40	0.30	0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-100	191220-100	191220-100	191220-100		
			Lab Sample No.(s)	21418583	21418578	21418580	21418581		
			AGS Reference	E1	E2	E2	E1		
GRO Surrogate % recovery**	%	TM089		87.5	98	97.5	99.4		
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	1030		
Aliphatics >C21-C35	<1000 µg/kg	TM414		1340	1330	8730	14700		
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1200		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	8920	16900		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	<10000	15000	27900		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		3070	4380	5020	9030		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1150		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	5470	6110	11000		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	<10000	15000	27900		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50		
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20		

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13458AP	**Superseded Report:**	536648

Triazine Herbicides (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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP242	TP244	TP257			
			Depth (m)	0.10	0.30	0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	18/12/2019	18/12/2019	18/12/2019			
			Sample Time	.	.	.			
			Date Received	20/12/2019	20/12/2019	20/12/2019			
			SDG Ref	191220-100	191220-100	191220-100			
			Lab Sample No.(s)	21418587	21418574	21418581			
			AGS Reference	E1	E1	E1			
Atrazine*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Prometryne*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Propazine*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Simazine*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Terbuthylazine*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Terbutryne*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			
Trietazine*	<0.02 mg/kg	SUB		<0.02	<0.02	<0.02			

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250
			Depth (m)	0.50	0.10	0.10	0.30	0.60	0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019
			Sample Time	.	.	.	.	.	.
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019
			SDG Ref	191220-100	191220-100	191220-100	191220-100	191220-100	191220-100
			Lab Sample No.(s)	21418585	21418584	21418587	21418574	21418589	21418576
			AGS Reference	E2	E1	E1	E1	E2	E2
Dibromofluoromethane**	%	TM116		108	113	105	114	113	109
Toluene-d8**	%	TM116		97.8	98	91.4	96.7	98.8	98.9
4-Bromofluorobenzene**	%	TM116		89.5	89.1	72.2	87.8	94.2	96.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<100 M	<10 M	<100 M	<10 M	<10 M
Benzene	<9 µg/kg	TM116		<9 M	<90 M	<9 M	<90 M	<9 M	<9 M
Toluene	<7 µg/kg	TM116		<7 M	<70 M	<7 M	<70 M	<7 M	<7 M
Ethylbenzene	<4 µg/kg	TM116		<4 M	<40 M	<4 M	<40 M	<4 M	<4 M
p/m-Xylene	<10 µg/kg	TM116		<10 #	<100 #	<10 #	<100 #	<10 #	<10 #
o-Xylene	<10 µg/kg	TM116		<10 M	<100 M	<10 M	<100 M	<10 M	<10 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.2	<0.02	<0.2	<0.02	<0.02
Sum of BTEX	<40 µg/kg	TM116		<40	<400	<40	<400	<40	<40

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP254	TP255	TP256	TP257		
			Depth (m)	0.20	0.40	0.30	0.20		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019		
			Sample Time	.	.	.	.		
			Date Received	20/12/2019	20/12/2019	20/12/2019	20/12/2019		
			SDG Ref	191220-100	191220-100	191220-100	191220-100		
			Lab Sample No.(s)	21418583	21418578	21418580	21418581		
			AGS Reference	E1	E2	E2	E1		
Dibromofluoromethane**	%	TM116		110	120	122	108		
Toluene-d8**	%	TM116		95.1	97.2	92.9	91.2		
4-Bromofluorobenzene**	%	TM116		76.3	87.3	74.9	70.5		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 M		
Benzene	<9 µg/kg	TM116		<9 M	<9 M	<9 M	<9 M		
Toluene	<7 µg/kg	TM116		<7 M	<7 M	<7 M	<7 M		
Ethylbenzene	<4 µg/kg	TM116		<4 M	<4 M	<4 M	<4 M		
p/m-Xylene	<10 µg/kg	TM116		<10 #	<10 #	<10 #	<10 #		
o-Xylene	<10 µg/kg	TM116		<10 M	<10 M	<10 M	<10 M		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.02	<0.02	<0.02	<0.02		
Sum of BTEX	<40 µg/kg	TM116		<40	<40	<40	<40		

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP230E2 0.50 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418585 TM048	30/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP240E1 0.10 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418584 TM048	30/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP242E1 0.10 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418587 TM048	30/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP244E1 0.30 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418574 TM048	24/12/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP248E2 0.60 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418589 TM048	30/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP250E2 0.50 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418576 TM048	24/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP254E1 0.20 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418583 TM048	30/12/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP255E2 0.40 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418578 TM048	24/12/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP
Report Number:	536737		
Superseded Report:	536648		

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP256E2 0.30 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418580 TM048	27/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP257E1 0.20 SOLID 18/12/2019 00:00:00 20/12/2019 06:00:00 191220-100 21418581 TM048	30/12/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM073	MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A	Determination of organochlorine and organophosphorous pesticides by GCMS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM243		Mixed Anions In Soils By Kone
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	191220-100	**Client Reference:**	J4175	**Report Number:**	536737
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13458AP	**Superseded Report:**	536648

Test Completion Dates

Lab Sample No(s)	21418585	21418584	21418587	21418574	21418589	21418576	21418583	21418578	21418580	21418581
Customer Sample Ref.	TP230	TP240	TP242	TP244	TP248	TP250	TP254	TP255	TP256	TP257
AGS Ref.	E2	E1	E1	E1	E2	E2	E1	E2	E2	E1
Depth	0.50	0.10	0.10	0.30	0.60	0.50	0.20	0.40	0.30	0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Acid herbicides*			08-Jan-2020	08-Jan-2020						08-Jan-2020
Anions by Kone (soil)	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019	31-Dec-2019	30-Dec-2019	30-Dec-2019	31-Dec-2019	30-Dec-2019
Asbestos ID in Solid Samples	30-Dec-2019	30-Dec-2019	30-Dec-2019	24-Dec-2019	30-Dec-2019	24-Dec-2019	30-Dec-2019	24-Dec-2019	27-Dec-2019	30-Dec-2019
EPH CWG GC (S)	02-Jan-2020	04-Jan-2020	04-Jan-2020	06-Jan-2020	02-Jan-2020	06-Jan-2020	04-Jan-2020	06-Jan-2020	06-Jan-2020	02-Jan-2020
GRO by GC-FID (S)	27-Dec-2019	24-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	24-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019
Hexavalent Chromium (s)	03-Jan-2020	03-Jan-2020	27-Dec-2019	03-Jan-2020	27-Dec-2019	03-Jan-2020	03-Jan-2020	27-Dec-2019	03-Jan-2020	03-Jan-2020
Metals in solid samples by OES	02-Jan-2020	31-Dec-2019	02-Jan-2020	31-Dec-2019	31-Dec-2019	31-Dec-2019	02-Jan-2020	31-Dec-2019	02-Jan-2020	02-Jan-2020
OC OP Pesticides and Triazine Herb			31-Dec-2019	31-Dec-2019						31-Dec-2019
PAH by GCMS	30-Dec-2019	31-Dec-2019	30-Dec-2019	31-Dec-2019	30-Dec-2019	27-Dec-2019	31-Dec-2019	31-Dec-2019	02-Jan-2020	30-Dec-2019
pH	29-Dec-2019	29-Dec-2019	29-Dec-2019	30-Dec-2019	29-Dec-2019	30-Dec-2019	29-Dec-2019	30-Dec-2019	30-Dec-2019	29-Dec-2019
Phenols by HPLC (S)	27-Dec-2019	27-Dec-2019	30-Dec-2019	30-Dec-2019	27-Dec-2019	30-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	30-Dec-2019
Sample description	21-Dec-2019	20-Dec-2019	21-Dec-2019	21-Dec-2019	21-Dec-2019	21-Dec-2019	20-Dec-2019	21-Dec-2019	21-Dec-2019	21-Dec-2019
Total Organic Carbon	31-Dec-2019	30-Dec-2019	30-Dec-2019	30-Dec-2019	30-Dec-2019	30-Dec-2019	31-Dec-2019	30-Dec-2019	30-Dec-2019	30-Dec-2019
TPH CWG GC (S)	02-Jan-2020	04-Jan-2020	04-Jan-2020	06-Jan-2020	02-Jan-2020	06-Jan-2020	04-Jan-2020	06-Jan-2020	06-Jan-2020	02-Jan-2020
Triazine Herbicides (S)*			08-Jan-2020	08-Jan-2020						08-Jan-2020
VOC MS (S)	27-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019	24-Dec-2019	27-Dec-2019	27-Dec-2019	27-Dec-2019

Certificate of Analysis

Report No.:	**19-89627-2**
Issue No.:	**2**
Date of Issue	**07/01/2020**
Customer Details:	ALS Life Sciences Limited, Unit7-8, Hawarden Business Park, Manor Road, Hawarden, Deeside, Flintshire, CH5 3US
Customer Contact:	Carrie Foster
Customer Order No.:	191220-100
Customer Reference:	191220-100
Quotation Reference:	191111/01
Description:	3 soil samples
Date Received:	24/12/2019
Date Started:	02/01/2020
Date Completed:	03/01/2020
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	This report replaces issue 1 in its entirety

[redacted]

Approved By: **Matthew Hickson, Laboratory Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.

Results Summary

Report No.: 19-89627-2

Customer Reference: 191220-100

Customer Order No: 191220-100

Customer Sample No	**21420164**	**21420091**	**21419978**
Customer Sample ID	TP242	TP244	TP257
RPS Sample No	425186	425187	425188
Sample Type	**SOIL**	**SOIL**	**SOIL**
Sample Depth (m)	0.1m	0.3m	0.2m
Sampling Date	18/12/2019	18/12/2019	18/12/2019

Determinand	CAS No	Codes	SOP	Units	RL			
atrazine	1912-24-9	N	in house	mg/kg	0.02	< 0.02	< 0.02	< 0.02
prometryn	7287-19-6	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02
propazine	139-40-2	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02
simazine	122-34-9	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02
terbuthylazine	5915-41-3	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02
terbutryn	886-50-0	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02
trietazine	1912-26-1	N	346	mg/kg	0.02	< 0.02	< 0.02	< 0.02

Deviating Samples

Report No.: 19-89627-2

Customer Reference: 191220-100

Customer Order No: 191220-100

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
425186	21420164		18/12/2019	100ml clear glass bottle	No	
425187	21420091		18/12/2019	100ml clear glass bottle	No	
425188	21419978		18/12/2019	100ml clear glass bottle	No	

Key Code	Description
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
F	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
N	Not Accredited Test
O	Marine Management Organisation (MMO) Validated
S	Subcontracted to approved laboratory
US	Subcontracted to approved laboratory UKAS Accredited for the test
MS	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SI	Subcontracted to internal RPS Group laboratory
USI	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
MSI	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

CERTIFICATE OF ANALYSIS

Work Order	: **PR2000308**	Issue Date	: 08-Jan-2020
Customer	: **ALS Life Sciences Ltd**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: ALS Hawarden Reporting	Contact	: Client Service
Address	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside United Kingdom	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: euhdnsubconresults@ALSGlobal.com	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: 191220-100	Page	: 1 of 2
Order number	: 191220-100	Date Samples Received	: 03-Jan-2020
		Quote number	: PR2018ALSAL-GB0004 (CZ-256-18-0022)
Site	: ----	Date of test	: 03-Jan-2020 - 08-Jan-2020
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák	[redacted]	Environmental Business Unit Manager

Analytical Results

Sub-Matrix: SOIL	Client sample ID	21420154 TP242		21420085 TP244		21419966 TP257	
	Laboratory sample ID	PR2000308-001		PR2000308-002		PR2000308-003	
	Client sampling date / time	18-Dec-2019 00:00		18-Dec-2019 00:00		18-Dec-2019 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Physical Parameters									
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	**75.2**	± 6.0%	**76.3**	± 6.0%	**73.0**	± 6.0%
Pesticides									
2.4.5-T	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
2.4.5-TP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
2.4-D	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
2.4-DB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
2.4-DP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
4-CPP	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Bentazone	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Dinoseb	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Fluroxypyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
MCPA	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
MCPB	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
MCPP (isomers)	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Acifluorfen	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Bromoxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
DNOC	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Dicamba	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Diclofop	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Ioxynil	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Propoxycarbazone-sodium	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Triclopyr	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Triclosan	S-PESLMSA1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.
Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

Brief Method Summaries

Analytical Methods	Method Descriptions
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-PESLMSA1	CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.

A `*` symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	28 January 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	200118-47
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	538707

We received 16 samples on Saturday January 18, 2020 and 11 of these samples were scheduled for analysis which was completed on Tuesday January 28, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21512438	BH201			17/01/2020
21512439	BH203			17/01/2020
21512440	BH204			17/01/2020
21512441	BH205			17/01/2020
21512442	BH206			17/01/2020
21512443	BH208			17/01/2020
21512452	RIVER SAMPLE 1			17/01/2020
21512453	RIVER SAMPLE 2			17/01/2020
21512454	RIVER SAMPLE 3			17/01/2020
21512455	RIVER SAMPLE 4			17/01/2020
21512444	WS201			17/01/2020
21512449	WS206			17/01/2020
21512445	WS202A			17/01/2020
21512446	WS204A			17/01/2020
21512447	WS205A			17/01/2020
21512451	WS207A			17/01/2020

Maximum Sample/Coolbox Temperature (°C) : **8.2**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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)			21512440		21512441		21512443		21512452		21512453		21512454		21512455		21512449	21512445	21512446	21512447
Customer Sample Reference			BH204		BH205		BH208		RIVER SAMPLE 1		RIVER SAMPLE 2		RIVER SAMPLE 3		RIVER SAMPLE 4		WS206	WS202A	WS204A	WS205A
AGS Reference																				
Depth (m)																				
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	500ml Plastic (ALE208)	500ml Plastic (ALE208)	500ml Plastic (ALE208)	500ml Plastic (ALE208)
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 11		X		X		X		X		X		X		X	X	X	X	X
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 11		X		X		X		X		X		X		X	X	X	X	X
Pesticides (Suite I) by GCMS	All	NDPs: 1 Tests: 6	N		X		X		X		X		X		X					
Pesticides (Suite II) by GCMS	All	NDPs: 1 Tests: 6	N		X		X		X		X		X		X					
Pesticides (Suite III) by GCMS	All	NDPs: 1 Tests: 6	N		X		X		X		X		X		X					
pH Value	All	NDPs: 0 Tests: 11		X		X		X		X		X		X		X	X	X	X	X

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		362	134	90	90	95	<2
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.821	0.383	0.33	0.238	0.232	1.5
pH	<1 pH Units	TM256		7.57	7.04	6.66	7.39	7.5	2.53
Trifluralin	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
alpha-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
gamma-HCH (Lindane)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
Aldrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
beta-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Isodrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDE	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
trans-Chlordane	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
cis-Chlordane	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
p,p'-DDE	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
o,p'-DDT	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
p,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.02 µg/l	TM343			<0.02	<0.02	<0.02	<0.02	<0.02
p,p'-DDT	<0.01 µg/l	TM343			<0.01	<0.04	<0.01	<0.04	<0.04
o,p'-Methoxychlor	<0.01 µg/l	TM343			<0.01	<0.03	<0.01	<0.03	<0.03
p,p'-Methoxychlor	<0.01 µg/l	TM343			<0.02	<0.08	<0.02	<0.08	<0.08
Endosulphan Sulphate	<0.02 µg/l	TM343			<0.02	<0.02	<0.02	<0.02	<0.02
Permethrin I	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
Permethrin II	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Dichlorvos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlobenil	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Mevinphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Tecnazene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Phorate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Diazinon	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Triallate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Atrazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Simazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Disulfoton	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Propetamphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Dimethoate	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Chlorpyriphos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Methyl Parathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Malathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Fenthion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Fenitrothion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Triadimefon	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Pendimethalin	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Parathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Chlorfenvinphos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
trans-Chlordane	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
cis-Chlordane	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Ethion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Carbophenothion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Triazophos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Phosalone	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Azinphos methyl	<0.02 µg/l	TM344		<0.06	<0.06	<0.06	<0.06	<0.06	

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Azinphos ethyl	<0.02 µg/l	TM344		<0.04	<0.02	<0.04	<0.04	<0.04	
Etridiazole	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Pentachlorobenzene	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Tributylphosphate	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Quintozene (PCNB)	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Omethoate	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propyzamide	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Alachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Prometryn	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Telodrin	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Terbutryn	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Chlorothalonil	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Etrimphos	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Metazachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Cyanazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Trietazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Coumaphos	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Phosphamidon I	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Phosphamidon II	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512455	21512449	21512445	21512446	21512447
			AGS Reference					
Alkalinity, Total as CaCO3	<2 mg/l	TM043		70	307	240	168	210
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.239	1.11	0.433	2.1	0.274
pH	<1 pH Units	TM256		7.67	6.55	8.21	6.41	5.93
Trifluralin	<0.01 µg/l	TM343		<0.02				
alpha-HCH	<0.01 µg/l	TM343		<0.01				
gamma-HCH (Lindane)	<0.01 µg/l	TM343		<0.01				
Heptachlor	<0.01 µg/l	TM343		<0.02				
Aldrin	<0.01 µg/l	TM343		<0.01				
beta-HCH	<0.01 µg/l	TM343		<0.01				
Isodrin	<0.01 µg/l	TM343		<0.01				
delta-HCH	<0.01 µg/l	TM343		<0.01				
Heptachlor epoxide	<0.01 µg/l	TM343		<0.01				
o,p'-DDE	<0.01 µg/l	TM343		<0.01				
Endosulphan I	<0.01 µg/l	TM343		<0.01				
trans-Chlordane	<0.01 µg/l	TM343		<0.01				
cis-Chlordane	<0.01 µg/l	TM343		<0.01				
p,p'-DDE	<0.01 µg/l	TM343		<0.01				
Dieldrin	<0.01 µg/l	TM343		<0.01				
o,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01				
Endrin	<0.01 µg/l	TM343		<0.02				
o,p'-DDT	<0.01 µg/l	TM343		<0.02				
p,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01				
Endosulphan II	<0.02 µg/l	TM343		<0.02				
p,p'-DDT	<0.01 µg/l	TM343		<0.04				
o,p'-Methoxychlor	<0.01 µg/l	TM343		<0.03				
p,p'-Methoxychlor	<0.01 µg/l	TM343		<0.08				
Endosulphan Sulphate	<0.02 µg/l	TM343		<0.02				
Permethrin I	<0.01 µg/l	TM343		<0.02				
Permethrin II	<0.01 µg/l	TM343		<0.01				
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				
Hexachlorobutadiene	<0.01 µg/l	TM344		<0.01				
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512455	21512449	21512445	21512446	21512447
			AGS Reference					
Dichlorvos	<0.01 µg/l	TM344		<0.01				
Dichlobenil	<0.01 µg/l	TM344		<0.01				
Mevinphos	<0.01 µg/l	TM344		<0.01				
Tecnazene	<0.01 µg/l	TM344		<0.01				
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01				
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01				
Phorate	<0.01 µg/l	TM344		<0.01				
Diazinon	<0.01 µg/l	TM344		<0.01				
Triallate	<0.01 µg/l	TM344		<0.01				
Atrazine	<0.01 µg/l	TM344		<0.01				
Simazine	<0.01 µg/l	TM344		<0.01				
Disulfoton	<0.01 µg/l	TM344		<0.01				
Propetamphos	<0.01 µg/l	TM344		<0.01				
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.02				
Dimethoate	<0.01 µg/l	TM344		<0.02				
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.02				
Chlorpyriphos	<0.01 µg/l	TM344		<0.02				
Methyl Parathion	<0.01 µg/l	TM344		<0.02				
Malathion	<0.01 µg/l	TM344		<0.02				
Fenthion	<0.01 µg/l	TM344		<0.02				
Fenitrothion	<0.01 µg/l	TM344		<0.02				
Triadimefon	<0.01 µg/l	TM344		<0.02				
Pendimethalin	<0.01 µg/l	TM344		<0.02				
Parathion	<0.01 µg/l	TM344		<0.02				
Chlorfenvinphos	<0.01 µg/l	TM344		<0.02				
trans-Chlordane	<0.01 µg/l	TM344		<0.02				
cis-Chlordane	<0.01 µg/l	TM344		<0.02				
Ethion	<0.01 µg/l	TM344		<0.02				
Carbophenothion	<0.01 µg/l	TM344		<0.02				
Triazophos	<0.01 µg/l	TM344		<0.02				
Phosalone	<0.01 µg/l	TM344		<0.02				
Azinphos methyl	<0.02 µg/l	TM344		<0.06				

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			RIVER SAMPLE 4	.	Ground Water (GW)	17/01/2020	.	18/01/2020	200118-47	21512455	
			WS206	.	Ground Water (GW)	17/01/2020	.	18/01/2020	200118-47	21512449	
			WS202A	.	Ground Water (GW)	17/01/2020	.	18/01/2020	200118-47	21512445	
			WS204A	.	Ground Water (GW)	17/01/2020	.	18/01/2020	200118-47	21512446	
			WS205A	.	Ground Water (GW)	17/01/2020	.	18/01/2020	200118-47	21512447	
Azinphos ethyl	<0.02 µg/l	TM344	<0.04								
Etridiazole	<0.01 µg/l	TM345	<0.01								
Pentachlorobenzene	<0.01 µg/l	TM345	<0.01								
Tributylphosphate	<0.01 µg/l	TM345	<0.01								
Propachlor	<0.01 µg/l	TM345	<0.01								
Quintozene (PCNB)	<0.01 µg/l	TM345	<0.01								
Omethoate	<0.01 µg/l	TM345	<0.01								
Propazine	<0.01 µg/l	TM345	<0.01								
Propyzamide	<0.01 µg/l	TM345	<0.01								
Alachlor	<0.01 µg/l	TM345	<0.01								
Prometryn	<0.01 µg/l	TM345	<0.01								
Telodrin	<0.01 µg/l	TM345	<0.01								
Terbutryn	<0.01 µg/l	TM345	<0.01								
Chlorothalonil	<0.01 µg/l	TM345	<0.01								
Etrimphos	<0.01 µg/l	TM345	<0.01								
Metazachlor	<0.01 µg/l	TM345	<0.01								
Cyanazine	<0.01 µg/l	TM345	<0.01								
Trietazine	<0.01 µg/l	TM345	<0.01								
Coumaphos	<0.01 µg/l	TM345	<0.01								
Phosphamidon I	<0.01 µg/l	TM345	<0.01								
Phosphamidon II	<0.01 µg/l	TM345	<0.01								

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Notification of NDPs (No determination possible)

Date Received : 18/01/2020 11:37:06

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
21512440	BH204		Pesticides (Suite I) by GCMS	Sample unsuitable for extraction
21512440	BH204		Pesticides (Suite II) by GCMS	Sample unsuitable for extraction
21512440	BH204		Pesticides (Suite III) by GCMS	Sample unsuitable for extraction

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM343	EPA 8270D - Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of Selected Pesticides (Suite I) in Liquids by GCMS
TM344	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite II) by GCMS
TM345	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite III) by GCMS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	538707
Location:	Moathouse Farm, Rusper Ro	**Order Number:**		**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	21512440	21512441	21512443	21512452	21512453	21512454	21512455	21512449	21512445	21512446
Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3	RIVER SAMPLE 4	WS206	WS202A	WS204A
AGS Ref.										
Depth										
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	23-Jan-2020	23-Jan-2020	24-Jan-2020	21-Jan-2020	21-Jan-2020	21-Jan-2020	21-Jan-2020	23-Jan-2020	21-Jan-2020	23-Jan-2020
Conductivity (at 20 deg.C)	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020
Pesticides (Suite I) by GCMS		28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020			
Pesticides (Suite II) by GCMS		27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020			
Pesticides (Suite III) by GCMS		27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020			
pH Value	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020

Lab Sample No(s)	21512447
Customer Sample Ref.	WS205A
AGS Ref.	
Depth	
Type	Ground Water
Alkalinity as CaCO3	24-Jan-2020
Conductivity (at 20 deg.C)	24-Jan-2020
pH Value	23-Jan-2020

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	13 February 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	200118-47
Your Reference:	J4175 Stantec/ L & G
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	541129

This report has been revised and directly supersedes 538707 in its entirety.

We received 16 samples on Saturday January 18, 2020 and 11 of these samples were scheduled for analysis which was completed on Thursday February 13, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

[redacted]

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21512438	BH201			17/01/2020
21512439	BH203			17/01/2020
21512440	BH204			17/01/2020
21512441	BH205			17/01/2020
21512442	BH206			17/01/2020
21512443	BH208			17/01/2020
21512452	RIVER SAMPLE 1			17/01/2020
21512453	RIVER SAMPLE 2			17/01/2020
21512454	RIVER SAMPLE 3			17/01/2020
21512455	RIVER SAMPLE 4			17/01/2020
21512444	WS201			17/01/2020
21512449	WS206			17/01/2020
21512445	WS202A			17/01/2020
21512446	WS204A			17/01/2020
21512447	WS205A			17/01/2020
21512451	WS207A			17/01/2020

Maximum Sample/Coolbox Temperature (°C) : **8.2**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13519AP	**Superseded Report:**	538707

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)			21512440		21512441			21512443		21512452		21512453		21512454		21512455		21512449				
Customer Sample Reference			BH204		BH205			BH208		RIVER SAMPLE 1		RIVER SAMPLE 2		RIVER SAMPLE 3		RIVER SAMPLE 4		WS206				
AGS Reference																						
Depth (m)																						
Container			0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	
Sample Type			GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	
Alkalinity as CaCO3	All	NDPs: 0 Tests: 11		X		X			X		X			X		X			X			
Ammonium Low	All	NDPs: 0 Tests: 11		X			X		X			X		X			X			X		
Anions by Kone (w)	All	NDPs: 0 Tests: 11		X		X			X		X			X		X			X			
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 11		X		X			X		X			X		X			X			
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 11	X		X			X		X			X		X			X				X
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 11		X		X			X		X			X		X			X			
Pesticides (Suite I) by GCMS	All	NDPs: 1 Tests: 6	N		X			X		X			X		X			X				
Pesticides (Suite II) by GCMS	All	NDPs: 1 Tests: 6	N		X			X		X			X		X			X				
Pesticides (Suite III) by GCMS	All	NDPs: 1 Tests: 6	N		X			X		X			X		X			X				
pH Value	All	NDPs: 0 Tests: 11		X		X			X		X			X		X			X			

| 21512447 | | |

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13519AP	**Superseded Report:**	538707

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		362	134	90	90	95	<2
Carbon, Organic (diss.filt)	<3 mg/l	TM090		5.23	4.69	<3	8.4	8.74	10
Ammoniacal Nitrogen as N (low level)	<0.01 mg/l	TM099		0.0927 2 #	0.097 #	0.0609 2 #	0.0488 #	0.0423 2 #	0.0876 #
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.821	0.383	0.33	0.238	0.232	1.5
Sulphate	<2 mg/l	TM184		138 #	34.1 #	28.5 #	16.3 #	11.7 #	311 #
Chloride	<2 mg/l	TM184		111 #	24 #	33.3 #	16.2 #	15.5 #	16.2 #
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03 @ #	<0.03 @ #	<0.03 @ #	<0.03 @ #	<0.03 @ #	<0.03 @ #
pH	<1 pH Units	TM256		7.57	7.04	6.66	7.39	7.5	2.53
Trifluralin	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
alpha-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
gamma-HCH (Lindane)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
Aldrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
beta-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Isodrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDE	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
trans-Chlordane	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
cis-Chlordane	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
p,p'-DDE	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
o,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
o,p'-DDT	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02
p,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.02 µg/l	TM343			<0.02	<0.02	<0.02	<0.02	<0.02
p,p'-DDT	<0.01 µg/l	TM343			<0.01	<0.04	<0.01	<0.04	<0.04
o,p'-Methoxychlor	<0.01 µg/l	TM343			<0.01	<0.03	<0.01	<0.03	<0.03
p,p'-Methoxychlor	<0.01 µg/l	TM343			<0.02	<0.08	<0.02	<0.08	<0.08
Endosulphan Sulphate	<0.02 µg/l	TM343			<0.02	<0.02	<0.02	<0.02	<0.02
Permethrin I	<0.01 µg/l	TM343			<0.01	<0.02	<0.01	<0.02	<0.02

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Permethrin II	<0.01 µg/l	TM343		<0.01	<0.01	<0.01	<0.01	<0.01	
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Hexachlorobutadiene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlorvos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlobenil	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Mevinphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Tecnazene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Phorate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Diazinon	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Triallate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Atrazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Simazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Disulfoton	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Propetamphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Dimethoate	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Chlorpyriphos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Methyl Parathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Malathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Fenthion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Fenitrothion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Triadimefon	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Pendimethalin	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Parathion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Chlorfenvinphos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
trans-Chlordane	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
cis-Chlordane	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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**	% 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
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1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512440	21512441	21512443	21512452	21512453	21512454
			AGS Reference						
Ethion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Carbophenothion	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Triazophos	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Phosalone	<0.01 µg/l	TM344		<0.02	<0.02	<0.02	<0.02	<0.02	
Azinphos methyl	<0.02 µg/l	TM344		<0.06	<0.06	<0.06	<0.06	<0.06	
Azinphos ethyl	<0.02 µg/l	TM344		<0.04	<0.02	<0.04	<0.04	<0.04	
Etridiazole	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Pentachlorobenzene	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Tributylphosphate	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Quintozene (PCNB)	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Omethoate	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Propyzamide	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Alachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Prometryn	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Telodrin	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Terbutryn	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Chlorothalonil	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Etrimphos	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Metazachlor	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Cyanazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Trietazine	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Coumaphos	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Phosphamidon I	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	
Phosphamidon II	<0.01 µg/l	TM345		<0.02	<0.05	<0.01	<0.01	<0.01	

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512455	21512449	21512445	21512446	21512447
			AGS Reference					
Alkalinity, Total as CaCO3	<2 mg/l	TM043		70	307	240	168	210
Carbon, Organic (diss.filt)	<3 mg/l	TM090		8.62	9.26	7.43	33.9	6.63
Ammoniacal Nitrogen as N (low level)	<0.01 mg/l	TM099		0.181 #	<0.01 #	0.216 #	1.44 #	0.116 #
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.239	1.11	0.433	2.1	0.274
Sulphate	<2 mg/l	TM184		19.8 #	218 #	22.6 #	1010 #	63.6 #
Chloride	<2 mg/l	TM184		22.8 #	113 #	16.9 #	120 #	33 #
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03 @ #	<0.03 @ #	<0.03 @ #	<0.03 @ #	<0.03 @ #
pH	<1 pH Units	TM256		7.67	6.55	8.21	6.41	5.93
Trifluralin	<0.01 µg/l	TM343		<0.02				
alpha-HCH	<0.01 µg/l	TM343		<0.01				
gamma-HCH (Lindane)	<0.01 µg/l	TM343		<0.01				
Heptachlor	<0.01 µg/l	TM343		<0.02				
Aldrin	<0.01 µg/l	TM343		<0.01				
beta-HCH	<0.01 µg/l	TM343		<0.01				
Isodrin	<0.01 µg/l	TM343		<0.01				
delta-HCH	<0.01 µg/l	TM343		<0.01				
Heptachlor epoxide	<0.01 µg/l	TM343		<0.01				
o,p'-DDE	<0.01 µg/l	TM343		<0.01				
Endosulphan I	<0.01 µg/l	TM343		<0.01				
trans-Chlordane	<0.01 µg/l	TM343		<0.01				
cis-Chlordane	<0.01 µg/l	TM343		<0.01				
p,p'-DDE	<0.01 µg/l	TM343		<0.01				
Dieldrin	<0.01 µg/l	TM343		<0.01				
o,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01				
Endrin	<0.01 µg/l	TM343		<0.02				
o,p'-DDT	<0.01 µg/l	TM343		<0.02				
p,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01				
Endosulphan II	<0.02 µg/l	TM343		<0.02				
p,p'-DDT	<0.01 µg/l	TM343		<0.04				
o,p'-Methoxychlor	<0.01 µg/l	TM343		<0.03				
p,p'-Methoxychlor	<0.01 µg/l	TM343		<0.08				
Endosulphan Sulphate	<0.02 µg/l	TM343		<0.02				
Permethrin I	<0.01 µg/l	TM343		<0.02				

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
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*	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512455	21512449	21512445	21512446	21512447
			AGS Reference					
Permethrin II	<0.01 µg/l	TM343		<0.01				
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				
Hexachlorobutadiene	<0.01 µg/l	TM344		<0.01				
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344		<0.01				
Dichlorvos	<0.01 µg/l	TM344		<0.01				
Dichlobenil	<0.01 µg/l	TM344		<0.01				
Mevinphos	<0.01 µg/l	TM344		<0.01				
Tecnazene	<0.01 µg/l	TM344		<0.01				
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01				
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01				
Phorate	<0.01 µg/l	TM344		<0.01				
Diazinon	<0.01 µg/l	TM344		<0.01				
Triallate	<0.01 µg/l	TM344		<0.01				
Atrazine	<0.01 µg/l	TM344		<0.01				
Simazine	<0.01 µg/l	TM344		<0.01				
Disulfoton	<0.01 µg/l	TM344		<0.01				
Propetamphos	<0.01 µg/l	TM344		<0.01				
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.02				
Dimethoate	<0.01 µg/l	TM344		<0.02				
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.02				
Chlorpyriphos	<0.01 µg/l	TM344		<0.02				
Methyl Parathion	<0.01 µg/l	TM344		<0.02				
Malathion	<0.01 µg/l	TM344		<0.02				
Fenthion	<0.01 µg/l	TM344		<0.02				
Fenitrothion	<0.01 µg/l	TM344		<0.02				
Triadimefon	<0.01 µg/l	TM344		<0.02				
Pendimethalin	<0.01 µg/l	TM344		<0.02				
Parathion	<0.01 µg/l	TM344		<0.02				
Chlorfenvinphos	<0.01 µg/l	TM344		<0.02				
trans-Chlordane	<0.01 µg/l	TM344		<0.02				
cis-Chlordane	<0.01 µg/l	TM344		<0.02				

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/01/2020	17/01/2020	17/01/2020	17/01/2020	17/01/2020
			Sample Time	.	.	.	.	.
			Date Received	18/01/2020	18/01/2020	18/01/2020	18/01/2020	18/01/2020
			SDG Ref	200118-47	200118-47	200118-47	200118-47	200118-47
			Lab Sample No.(s)	21512455	21512449	21512445	21512446	21512447
			AGS Reference					
Ethion	<0.01 µg/l	TM344		<0.02				
Carbophenothion	<0.01 µg/l	TM344		<0.02				
Triazophos	<0.01 µg/l	TM344		<0.02				
Phosalone	<0.01 µg/l	TM344		<0.02				
Azinphos methyl	<0.02 µg/l	TM344		<0.06				
Azinphos ethyl	<0.02 µg/l	TM344		<0.04				
Etridiazole	<0.01 µg/l	TM345		<0.01				
Pentachlorobenzene	<0.01 µg/l	TM345		<0.01				
Tributylphosphate	<0.01 µg/l	TM345		<0.01				
Propachlor	<0.01 µg/l	TM345		<0.01				
Quintozene (PCNB)	<0.01 µg/l	TM345		<0.01				
Omethoate	<0.01 µg/l	TM345		<0.01				
Propazine	<0.01 µg/l	TM345		<0.01				
Propyzamide	<0.01 µg/l	TM345		<0.01				
Alachlor	<0.01 µg/l	TM345		<0.01				
Prometryn	<0.01 µg/l	TM345		<0.01				
Telodrin	<0.01 µg/l	TM345		<0.01				
Terbutryn	<0.01 µg/l	TM345		<0.01				
Chlorothalonil	<0.01 µg/l	TM345		<0.01				
Etrimphos	<0.01 µg/l	TM345		<0.01				
Metazachlor	<0.01 µg/l	TM345		<0.01				
Cyanazine	<0.01 µg/l	TM345		<0.01				
Trietazine	<0.01 µg/l	TM345		<0.01				
Coumaphos	<0.01 µg/l	TM345		<0.01				
Phosphamidon I	<0.01 µg/l	TM345		<0.01				
Phosphamidon II	<0.01 µg/l	TM345		<0.01				

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

Notification of NDPs (No determination possible)

Date Received : 18/01/2020 11:37:06

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
21512440	BH204		Pesticides (Suite I) by GCMS	Sample unsuitable for extraction
21512440	BH204		Pesticides (Suite II) by GCMS	Sample unsuitable for extraction
21512440	BH204		Pesticides (Suite III) by GCMS	Sample unsuitable for extraction

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM343	EPA 8270D - Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of Selected Pesticides (Suite I) in Liquids by GCMS
TM344	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite II) by GCMS
TM345	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite III) by GCMS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

Validated

CERTIFICATE OF ANALYSIS

SDG:	200118-47	**Client Reference:**	J4175 Stantec/ L & G	**Report Number:**	541129
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13519AP	**Superseded Report:**	538707

Test Completion Dates

Lab Sample No(s)	21512440	21512441	21512443	21512452	21512453	21512454	21512455	21512449	21512445	21512446
Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3	RIVER SAMPLE 4	WS206	WS202A	WS204A
AGS Ref.										
Depth										
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	23-Jan-2020	23-Jan-2020	24-Jan-2020	21-Jan-2020	21-Jan-2020	21-Jan-2020	21-Jan-2020	23-Jan-2020	13-Feb-2020	23-Jan-2020
Ammonium Low	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020
Anions by Kone (w)	08-Feb-2020	10-Feb-2020	10-Feb-2020	08-Feb-2020	08-Feb-2020	08-Feb-2020	08-Feb-2020	10-Feb-2020	08-Feb-2020	08-Feb-2020
Conductivity (at 20 deg.C)	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020	24-Jan-2020
Dissolved Organic/Inorganic Carbon	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020	11-Feb-2020
Hexavalent Chromium (w)	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020	10-Feb-2020
Pesticides (Suite I) by GCMS		28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020	28-Jan-2020			
Pesticides (Suite II) by GCMS		27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020			
Pesticides (Suite III) by GCMS		27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020	27-Jan-2020			
pH Value	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020	23-Jan-2020

Lab Sample No(s)	21512447
Customer Sample Ref.	WS205A
AGS Ref.	
Depth	
Type	Ground Water
Alkalinity as CaCO3	24-Jan-2020
Ammonium Low	10-Feb-2020
Anions by Kone (w)	10-Feb-2020
Conductivity (at 20 deg.C)	24-Jan-2020
Dissolved Organic/Inorganic Carbon	11-Feb-2020
Hexavalent Chromium (w)	10-Feb-2020
pH Value	23-Jan-2020

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Endeavour Drilling
Aldgate Tower
2 Leman Street
London
E1 8FA

Attention: Oliver Wendland

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 March 2020
Customer:	Endeavour Drilling
Sample Delivery Group (SDG):	200218-57
Your Reference:	J4175
Location:	Moathouse Farm, Rusper Rd, Horsham
Report No:	544710

This report has been revised and directly supersedes 543037 in its entirety.

We received 11 samples on Tuesday February 18, 2020 and 11 of these samples were scheduled for analysis which was completed on Monday March 09, 2020. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:



Sonia McWhan
Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
21708461	BH204			17/02/2020
21708462	BH205			17/02/2020
21708453	BH208			17/02/2020
21708447	RIVER SAMPLE 1			17/02/2020
21708448	RIVER SAMPLE 2			17/02/2020
21708451	RIVER SAMPLE 3			17/02/2020
21708452	RIVER SAMPLE 4			17/02/2020
21708460	WS206			17/02/2020
21708455	WS202A			17/02/2020
21708456	WS204A			17/02/2020
21708458	WS205A			17/02/2020

Maximum Sample/Coolbox Temperature (°C) : **7.2**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

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)	21708461					21708462					21708453					21708447				
			Customer Sample Reference	BH204					BH205					BH208					RIVER SAMPLE 1				
			AGS Reference																				
			Depth (m)																				
			Container	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)
			Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Alkalinity as CaCO3	All	NDPs: 0 Tests: 11			X					X					X						X		
Ammonium Low	All	NDPs: 0 Tests: 11				X					X					X						X	
Anions by Kone (w)	All	NDPs: 0 Tests: 11			X					X					X						X		
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 11			X					X					X						X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 11			X					X					X						X		
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 11	X					X					X					X					
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11	X					X					X					X					
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 11	X					X					X					X					
GRO by GC-FID (W)	All	NDPs: 0 Tests: 11					X					X					X						
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 11			X					X					X						X		
Mercury Dissolved	All	NDPs: 0 Tests: 11			X					X					X						X		
Mercury Unfiltered	All	NDPs: 0 Tests: 11					X					X					X						X
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 11	X					X					X					X					
pH Value	All	NDPs: 0 Tests: 11			X					X					X						X		
Phenols by HPLC (W)	All	NDPs: 0 Tests: 11				X					X					X						X	

21708460	WS206			Vial (ALE297)	GW									X							
				HNO3 Unfiltered (ALE204)	GW													X			
				H2SO4 (ALE244)	GW		X														X
				500ml Plastic (ALE208)	GW	X		X	X	X					X	X				X	
				0.5l glass bottle (ALE227)	GW						X	X	X						X		
21708452	RIVER SAMPLE 4			Vial (ALE297)	GW									X							
				HNO3 Unfiltered (ALE204)	GW													X			
				H2SO4 (ALE244)	GW		X														X
				500ml Plastic (ALE208)	GW	X		X	X	X					X	X				X	
				0.5l glass bottle (ALE227)	GW						X	X	X						X		
21708451	RIVER SAMPLE 3			Vial (ALE297)	GW									X							
				HNO3 Unfiltered (ALE204)	GW													X			
				H2SO4 (ALE244)	GW		X														X
				500ml Plastic (ALE208)	GW	X		X	X	X					X	X				X	
				0.5l glass bottle (ALE227)	GW						X	X	X						X		
21708448	RIVER SAMPLE 2			Vial (ALE297)	GW									X							
				HNO3 Unfiltered (ALE204)	GW													X			
				H2SO4 (ALE244)	GW		X														X
				500ml Plastic (ALE208)	GW	X		X	X	X					X	X				X	
				0.5l glass bottle (ALE227)	GW						X	X	X						X		
21708447	RIVER SAMPLE 1			Vial (ALE297)	GW									X							

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13555JW	**Superseded Report:**	543037

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)						21708461					21708462					21708453					21708447
Customer Sample Reference						BH204					BH205					BH208					RIVER SAMPLE 1
AGS Reference																					
Depth (m)																					
Container						0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)
Sample Type						GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Total Metals by ICP-MS	All	NDPs: 0 Tests: 11							X					X					X					X
TPH CWG (W)	All	NDPs: 0 Tests: 11				X					X					X					X			

| | | |

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

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

| | | | | |

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13555JW	**Superseded Report:**	543037

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)						21708455					21708456					21708458	
Customer Sample Reference						WS202A					WS204A					WS205A	
AGS Reference																	
Depth (m)																	
Container						0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Unfiltered (ALE204)	Vial (ALE297)
Sample Type						GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Total Metals by ICP-MS	All	NDPs: 0 Tests: 11							X					X					X	
TPH CWG (W)	All	NDPs: 0 Tests: 11				X					X					X				

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708461	21708462	21708453	21708447	21708448	21708451
			AGS Reference						
Alkalinity, Total as CaCO3	<2 mg/l	TM043		305	140	100	84.3	65.1	39
Carbon, Organic (diss.filt)	<3 mg/l	TM090		<3	4.59	<3	8.3	9.07	9.25
Ammoniacal Nitrogen as N (low level)	<0.01 mg/l	TM099		0.0122	0.0931	0.0296	0.0259	0.241	0.0524
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.803	0.334	0.365	0.231	0.161	0.146
Arsenic (diss.filt)	<0.5 µg/l	TM152		0.689 2	<0.5 2	<0.5 2	0.594 2	<0.5 2	<0.5 2
Arsenic (tot.unfilt)	<2 µg/l	TM152		152	13.9	38.8	<2	3.31	2.88
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2	<0.08 2	0.134 2	<0.08 2	<0.08 2	<0.08 2
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		4.7	<3	3.53	<0.5	<0.5	<0.5
Chromium (tot.unfilt)	<3 µg/l	TM152		718	84.4	374	5.66	13.1	11.7
Chromium (diss.filt)	<1 µg/l	TM152		<1 2	<1 2	<1 2	<1 2	<1 2	<1 2
Copper (tot.unfilt)	<1 µg/l	TM152		772	122	401	6.62	14.1	10.5
Lead (tot.unfilt)	<1 µg/l	TM152		663	147	244	3.99	14.4	9.67
Copper (diss.filt)	<0.3 µg/l	TM152		0.475 2	1.36 2	0.72 2	3.09 2	2.75 2	2.94 2
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 2	<0.2 2	<0.2 2	0.512 2	<0.2 2	0.236 2
Nickel (tot.unfilt)	<1 µg/l	TM152		857	156	416	4.47	10.8	9.96
Selenium (tot.unfilt)	<1 µg/l	TM152		22.2	9.77	13.4	<1	<1	<1
Nickel (diss.filt)	<0.4 µg/l	TM152		7.05 2	3.94 2	26.8 2	1.42 2	1.28 2	1.92 2
Selenium (diss.filt)	<1 µg/l	TM152		2.02 2	<1 2	1 2	<1 2	<1 2	<1 2
Zinc (tot.unfilt)	<5 µg/l	TM152		1880	361	890	21	61.8	51.5
Zinc (diss.filt)	<1 µg/l	TM152		1.08 2	1.04 2	4.35 2	2.44 2	1.79 2	2.25 2
Calcium (Dis.Filt)	<0.2 mg/l	TM152		100 2	51.9 2	29 2	41.7 2	22.5 2	17.7 2
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		224	87.3	56	42	26.8	19.6
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2	<0.01 2	<0.01 2	0.0258 2	<0.01 2	0.115 2
Mercury (tot.unfilt)	<0.02 µg/l	TM183		0.182	0.15	0.0726	<0.02	0.0314	0.0269
Sulphate	<2 mg/l	TM184		135	30.3	44.2	14.8	7.8	13.3
Chloride	<2 mg/l	TM184		97.9	23	33	14.1	13.3	16.8
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		7.44	6.93	6.72	7.53	7.44	7.11
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
2,3,5-Trimethylphenol	<0.003 mg/l	TM259		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
2-Isopropylphenol	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708461	21708462	21708453	21708447	21708448	21708451
			AGS Reference						
Phenols, Total Detected 5 speciated	<0.025 mg/l	TM259		<0.025	<0.025	<0.025	<0.025	<0.025	<0.025

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708452	21708460	21708455	21708456	21708458
			AGS Reference					
Alkalinity, Total as CaCO3	<2 mg/l	TM043		41	251	214	134	390
Carbon, Organic (diss.filt)	<3 mg/l	TM090		9.59	14.3	5.5	24.5	9.33
Ammoniacal Nitrogen as N (low level)	<0.01 mg/l	TM099		0.0477	0.302	0.0852	1.25	0.16
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		0.146	0.909	0.386	1.76	0.677
Arsenic (diss.filt)	<0.5 µg/l	TM152		<0.5 2	0.637 2	0.792 2	1.32 2	0.742 2
Arsenic (tot.unfilt)	<2 µg/l	TM152		<2	16.2	10.2	27.8	113
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 2	0.642 2	<0.08 2	1.17 2	<0.08 2
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5	2.2	<0.5	1.6	5.11
Chromium (tot.unfilt)	<3 µg/l	TM152		8	46.5	53.3	95.5	525
Chromium (diss.filt)	<1 µg/l	TM152		<1 2	<1 2	1.06 2	<1 2	<1 2
Copper (tot.unfilt)	<1 µg/l	TM152		9.27	61.2	73.9	89	789
Lead (tot.unfilt)	<1 µg/l	TM152		9.85	65.1	63.9	122	757
Copper (diss.filt)	<0.3 µg/l	TM152		3.11 2	3.84 2	10.5 2	9.13 2	2.3 2
Lead (diss.filt)	<0.2 µg/l	TM152		0.325 2	<0.2 2	<0.2 2	0.35 2	<0.2 2
Nickel (tot.unfilt)	<1 µg/l	TM152		8.96	85.6	46.6	82.4	631
Selenium (tot.unfilt)	<1 µg/l	TM152		<1	3.21	3.18	7.33	31.1
Nickel (diss.filt)	<0.4 µg/l	TM152		2.07 2	35.9 2	2.12 2	25 2	5.84 2
Selenium (diss.filt)	<1 µg/l	TM152		<1 2	<1 2	<1 2	1.92 2	2.2 2
Zinc (tot.unfilt)	<5 µg/l	TM152		43.1	229	192	321	1500
Zinc (diss.filt)	<1 µg/l	TM152		2.09 2	17.8 2	2.81 2	48.6 2	2.7 2
Calcium (Dis.Filt)	<0.2 mg/l	TM152		18.2 2	83.9 2	72.8 2	339 2	56.7 2
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		21.2	79.8	107	335	224
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 2	<0.01 2	<0.01 2	<0.01 2	<0.01 2
Mercury (tot.unfilt)	<0.02 µg/l	TM183		0.0245	0.0503	0.251	0.166	1.25
Sulphate	<2 mg/l	TM184		13.5	145	19.7	919	91.4
Chloride	<2 mg/l	TM184		16.8	97.1	18.1	105	53.4
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		7.22	6.47	7.72	6.31	7.15
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008
2,3,5-Trimethylphenol	<0.003 mg/l	TM259		<0.003	<0.003	<0.003	<0.003	<0.003
2-Isopropylphenol	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13555JW	**Superseded Report:**	543037

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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			RIVER SAMPLE 4	.	Ground Water (GW)	17/02/2020	.	18/02/2020	200218-57	21708452	
			WS206	.	Ground Water (GW)	17/02/2020	.	18/02/2020	200218-57	21708460	
			WS202A	.	Ground Water (GW)	17/02/2020	.	18/02/2020	200218-57	21708455	
			WS204A	.	Ground Water (GW)	17/02/2020	.	18/02/2020	200218-57	21708456	
			WS205A	.	Ground Water (GW)	17/02/2020	.	18/02/2020	200218-57	21708458	
Phenols, Total Detected 5 speciated	<0.025 mg/l	TM259	<0.025								
			<0.025								
			<0.025								
			<0.025								
			<0.025								

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

PAH Spec MS - Aqueous (W)

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708461	21708462	21708453	21708447	21708448	21708451
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.005	<0.005	0.0221	<0.005	<0.005	<0.005
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005	<0.005	0.0326	<0.005	<0.005	<0.005
Fluoranthene (aq)	<0.005 µg/l	TM178		0.141	0.0961	1.17	<0.005	0.0835	0.0148
Anthracene (aq)	<0.005 µg/l	TM178		0.0156	0.00588	0.0887	<0.005	0.00546	<0.005
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0449	0.0209	0.162	<0.005	0.0187	0.00638
Fluorene (aq)	<0.005 µg/l	TM178		<0.005	<0.005	0.0189	<0.005	<0.005	<0.005
Chrysene (aq)	<0.005 µg/l	TM178		0.0898	0.0608	0.547	<0.005	0.0474	<0.005
Pyrene (aq)	<0.005 µg/l	TM178		0.158	0.0974	1.32	<0.005	0.0837	0.014
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.0682	0.0494	0.573	<0.005	0.0312	0.00526
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.139	0.112	1.14	<0.005	0.0869	0.014
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.0568	0.0576	0.582	<0.005	0.0461	0.00586
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.0939	0.0771	0.944	<0.002	0.0673	0.009
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.0147	0.0111	0.111	<0.005	0.00837	<0.005
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.128	0.072	0.655	<0.005	0.0599	<0.005
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0848	0.0554	0.571	<0.005	0.0454	<0.005
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		1.04	0.716	7.93	<0.082	0.584	<0.082

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

PAH Spec MS - Aqueous (W)

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708452	21708460	21708455	21708456	21708458
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		<0.01	0.0318	<0.01	0.782	<0.01
Acenaphthene (aq)	<0.005 µg/l	TM178		<0.005	0.172	0.0111	0.0148	0.0414
Acenaphthylene (aq)	<0.005 µg/l	TM178		<0.005	0.374	<0.005	0.00692	0.0402
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0876	7.41	0.577	0.0241	2.61
Anthracene (aq)	<0.005 µg/l	TM178		0.00512	0.581	0.0455	0.00542	0.157
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0203	1.14	0.165	0.0319	0.52
Fluorene (aq)	<0.005 µg/l	TM178		<0.005	0.127	0.0144	0.0216	0.0381
Chrysene (aq)	<0.005 µg/l	TM178		0.0397	3.15	0.339	<0.005	1.8
Pyrene (aq)	<0.005 µg/l	TM178		0.0825	7.36	0.653	0.0266	2.61
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.0256	3.56	0.301	<0.005	1.88
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.0918	8.13	0.735	0.0143	5.87
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.0343	2.81	0.325	0.00592	3.33
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.0591	6.01	0.473	0.0101	4.75
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.00807	0.794	0.0625	<0.005	0.609
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.0504	4.22	0.387	<0.005	4.02
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0462	3.35	0.296	<0.005	3.04
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.551	49.2	4.38	0.944	31.3

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

TPH CWG (W)

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3
			Depth (m)	.	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708461	21708462	21708453	21708447	21708448	21708451
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		99	111	103	100	98	97
GRO >C5-C12	<50 µg/l	TM245		<50	<50	<50	<50	<50	<50
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3	<3	<3	<3	<3	<3
Benzene	<7 µg/l	TM245		<7	<7	<7	<7	<7	<7
Toluene	<4 µg/l	TM245		<4	<4	<4	<4	<4	<4
Ethylbenzene	<5 µg/l	TM245		<5	<5	<5	<5	<5	<5
m,p-Xylene	<8 µg/l	TM245		<8	<8	<8	<8	<8	<8
o-Xylene	<3 µg/l	TM245		<3	<3	<3	<3	<3	<3
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<20	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<20	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<20	52	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<20	52	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<20	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<20	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<20	31	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<20	31	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	83	<10	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<20	52	<10	<10	<10

Validated

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

TPH CWG (W)

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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	RIVER SAMPLE 4	WS206	WS202A	WS204A	WS205A
			Depth (m)	.	.	.	.	.
			Sample Type	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)
			Date Sampled	17/02/2020	17/02/2020	17/02/2020	17/02/2020	17/02/2020
			Sample Time	.	.	.	.	.
			Date Received	18/02/2020	18/02/2020	18/02/2020	18/02/2020	18/02/2020
			SDG Ref	200218-57	200218-57	200218-57	200218-57	200218-57
			Lab Sample No.(s)	21708452	21708460	21708455	21708456	21708458
			AGS Reference					
GRO Surrogate % recovery**	%	TM245		103	97	104	102	100
GRO >C5-C12	<50 µg/l	TM245		<50	<50	<50	<50	<50
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3	<3	<3	<3	<3
Benzene	<7 µg/l	TM245		<7	<7	<7	<7	<7
Toluene	<4 µg/l	TM245		<4	<4	<4	<4	<4
Ethylbenzene	<5 µg/l	TM245		<5	<5	<5	<5	<5
m,p-Xylene	<8 µg/l	TM245		<8	<8	<8	<8	<8
o-Xylene	<3 µg/l	TM245		<3	<3	<3	<3	<3
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	17	<10	<20
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	20	38	<10	<20
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	262	205	42	87
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	282	260	42	87
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	18	<10	<20
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	21	125	<10	<20
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	280	92	<10	101
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	301	235	<10	101
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	583	495	54	188
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	282	243	42	87

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Ro	**Order Number:**	13555JW	**Superseded Report:**	543037

Table of Results - Appendix

Method No	Reference	Description
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	200218-57	**Client Reference:**	J4175	**Report Number:**	544710
Location:	Moathouse Farm, Rusper Rd	**Order Number:**	13555JW	**Superseded Report:**	543037

Test Completion Dates

Lab Sample No(s)	21708461	21708462	21708453	21708447	21708448	21708451	21708452	21708460	21708455	21708456
Customer Sample Ref.	BH204	BH205	BH208	RIVER SAMPLE 1	RIVER SAMPLE 2	RIVER SAMPLE 3	RIVER SAMPLE 4	WS206	WS202A	WS204A
AGS Ref.										
Depth										
Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Alkalinity as CaCO3	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020
Ammonium Low	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020
Anions by Kone (w)	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020
Conductivity (at 20 deg.C)	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	24-Feb-2020	21-Feb-2020	21-Feb-2020	24-Feb-2020	21-Feb-2020	21-Feb-2020
Dissolved Metals by ICP-MS	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	25-Feb-2020
Dissolved Organic/Inorganic Carbon	24-Feb-2020	25-Feb-2020	21-Feb-2020	21-Feb-2020	25-Feb-2020	21-Feb-2020	25-Feb-2020	25-Feb-2020	21-Feb-2020	21-Feb-2020
EPH CWG (Aliphatic) Aqueous GC (W)	27-Feb-2020	28-Feb-2020	03-Mar-2020	27-Feb-2020	28-Feb-2020	27-Feb-2020	28-Feb-2020	03-Mar-2020	29-Feb-2020	03-Mar-2020
EPH CWG (Aromatic) Aqueous GC (W)	27-Feb-2020	28-Feb-2020	03-Mar-2020	27-Feb-2020	28-Feb-2020	27-Feb-2020	28-Feb-2020	03-Mar-2020	29-Feb-2020	03-Mar-2020
GRO by GC-FID (W)	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020
Hexavalent Chromium (w)	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020	21-Feb-2020
Mercury Dissolved	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020	24-Feb-2020
Mercury Unfiltered	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020
PAH Spec MS - Aqueous (W)	25-Feb-2020	26-Feb-2020	25-Feb-2020	26-Feb-2020	26-Feb-2020	25-Feb-2020	26-Feb-2020	25-Feb-2020	26-Feb-2020	25-Feb-2020
pH Value	23-Feb-2020	23-Feb-2020	23-Feb-2020	23-Feb-2020	23-Feb-2020	24-Feb-2020	23-Feb-2020	23-Feb-2020	23-Feb-2020	23-Feb-2020
Phenols by HPLC (W)	24-Feb-2020	25-Feb-2020	25-Feb-2020	25-Feb-2020	24-Feb-2020	25-Feb-2020	24-Feb-2020	25-Feb-2020	24-Feb-2020	25-Feb-2020
Total Metals by ICP-MS	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020	26-Feb-2020
TPH CWG (W)	27-Feb-2020	28-Feb-2020	03-Mar-2020	27-Feb-2020	28-Feb-2020	27-Feb-2020	28-Feb-2020	03-Mar-2020	29-Feb-2020	03-Mar-2020

Lab Sample No(s)	21708458
Customer Sample Ref.	WS205A
AGS Ref.	
Depth	
Type	Ground Water
Alkalinity as CaCO3	25-Feb-2020
Ammonium Low	24-Feb-2020
Anions by Kone (w)	21-Feb-2020
Conductivity (at 20 deg.C)	24-Feb-2020
Dissolved Metals by ICP-MS	24-Feb-2020
Dissolved Organic/Inorganic Carbon	24-Feb-2020
EPH CWG (Aliphatic) Aqueous GC (W)	09-Mar-2020
EPH CWG (Aromatic) Aqueous GC (W)	09-Mar-2020
GRO by GC-FID (W)	24-Feb-2020
Hexavalent Chromium (w)	21-Feb-2020
Mercury Dissolved	24-Feb-2020
Mercury Unfiltered	25-Feb-2020
PAH Spec MS - Aqueous (W)	26-Feb-2020
pH Value	23-Feb-2020
Phenols by HPLC (W)	24-Feb-2020
Total Metals by ICP-MS	26-Feb-2020
TPH CWG (W)	09-Mar-2020

Appendix General

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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.

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Analytical Report Number : 20-79313

Project / Site name:	L&G - LNO Horsham	**Samples received on:**	
Your job number:	J4175	**Samples instructed on:**	23/12/2019
Your order number:		**Analysis completed by:**	10/01/2020
Report Issue Number:	1	**Report issued on:**	10/01/2020
Samples Analysed:	6 soil samples		

[redacted]
Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 20-79313

Project / Site name: L&G - LNO Horsham

Lab Sample Number				1403258	1403259	1403260	1403261	1403262
Sample Reference				BH201	BH201	BH202	BH202	BH203
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.84-2.94	9.86-10.14	12.48-12.58	18.50-18.67	6.80-6.98
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	9.5	6.7	5.0	8.8	7.8
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.0	7.0	7.0	7.7	7.4
Total Sulphate as SO_4	%	0.005	MCERTS	0.023	0.017	0.024	0.018	0.016
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0097	0.032	0.055	0.012	0.027
Total Sulphur	%	0.005	MCERTS	0.009	0.102	0.163	0.020	0.069
Organic Matter	%	0.1	MCERTS	0.4	0.9	1.0	0.7	0.9

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Analytical Report Number: 20-79313

Project / Site name: L&G - LNO Horsham

Lab Sample Number				1403263				
Sample Reference				BH203				
Sample Number				None Supplied				
Depth (m)				10.90-11.02				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	8.5				
Total mass of sample received	kg	0.001	NONE	2.0				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.5				
Total Sulphate as SO_4	%	0.005	MCERTS	0.015				
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.023				
Total Sulphur	%	0.005	MCERTS	0.075				
Organic Matter	%	0.1	MCERTS	1.0				

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Analytical Report Number : 20-79313

Project / Site name: L&G - LNO Horsham

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1403258	BH201	None Supplied	2.84-2.94	Light brown clay.
1403259	BH201	None Supplied	9.86-10.14	Grey clay.
1403260	BH202	None Supplied	12.48-12.58	Grey clay.
1403261	BH202	None Supplied	18.50-18.67	Grey clay and sand.
1403262	BH203	None Supplied	6.80-6.98	Grey clay and sand.
1403263	BH203	None Supplied	10.90-11.02	Grey clay.

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Analytical Report Number : 20-79313

Project / Site name: L&G - LNO Horsham

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH201		S	20-79313	1403258	a			
BH201		S	20-79313	1403259	a			
BH202		S	20-79313	1403260	a			
BH202		S	20-79313	1403261	a			
BH203		S	20-79313	1403262	a			
BH203		S	20-79313	1403263	a			

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

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Analytical Report Number : 20-79314

Project / Site name:	L&G - LNO Horsham	**Samples received on:**	23/12/2019
Your job number:	J4175	**Samples instructed on:**	23/12/2019
Your order number:		**Analysis completed by:**	08/01/2020
Report Issue Number:	1	**Report issued on:**	08/01/2020
Samples Analysed:	4 soil samples		

[redacted]

Katarzyna Lewicka
Head of Reporting Section

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Analytical Report Number: 20-79314

Project / Site name: L&G - LNO Horsham

Lab Sample Number				1403264	1403265	1403266	1403267	
Sample Reference				TP234	TP210	TP224	TP254	
Sample Number				2	4	3	1	
Depth (m)				1.80	3.10	3.90	0.50	
Date Sampled				Deviating	Deviating	Deviating	Deviating	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	13	12	12	19	
Total mass of sample received	kg	0.001	NONE	0.47	0.45	1.3	0.50	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	5.9	5.4	6.0	6.6	
Total Sulphate as SO_4	%	0.005	MCERTS	0.028	0.027	0.023	0.054	
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.021	0.015	0.0098	0.015	
Total Sulphur	%	0.005	MCERTS	0.013	0.009	0.009	0.023	
Organic Matter	%	0.1	MCERTS	< 0.1	0.2	0.1	1.9	

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Analytical Report Number : 20-79314

Project / Site name: L&G - LNO Horsham

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1403264	TP234	2	1.80	Light grey sandy clay with gravel.
1403265	TP210	4	3.10	Light grey gravelly clay.
1403266	TP224	3	3.90	Light grey clay.
1403267	TP254	1	0.50	Grey loam and clay with gravel and vegetation.

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Analytical Report Number : 20-79314

Project / Site name: L&G - LNO Horsham

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
TP210	4	S	20-79314	1403265	a			
TP224	3	S	20-79314	1403266	a			
TP234	2	S	20-79314	1403264	a			
TP254	1	S	20-79314	1403267	a			

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

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Analytical Report Number : 20-80142

Project / Site name:	L&G - LNO Horsham	**Samples received on:**	08/01/2020
Your job number:	J4175	**Samples instructed on:**	08/01/2020
Your order number:		**Analysis completed by:**	20/01/2020
Report Issue Number:	1	**Report issued on:**	20/01/2020
Samples Analysed:	2 soil samples		



Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 20-80142

Project / Site name: L&G - LNO Horsham

Lab Sample Number				1407360	1407361			
Sample Reference				BH207	BH207			
Sample Number				None Supplied	None Supplied			
Depth (m)				6.93-7.12	15.86-16.07			
Date Sampled				Deviating	Deviating			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	6.6	11			
Total mass of sample received	kg	0.001	NONE	0.84	0.67			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.6	8.6			
Total Sulphate as SO_4	%	0.005	MCERTS	0.022	0.014			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.060	0.015			
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	60.3	14.7			
Total Sulphur	%	0.005	MCERTS	0.131	0.011			
Organic Matter	%	0.1	MCERTS	1.0	< 0.1			

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Analytical Report Number : 20-80142

Project / Site name: L&G - LNO Horsham

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1407360	BH207	None Supplied	6.93-7.12	Grey clay.
1407361	BH207	None Supplied	15.86-16.07	Grey clay.

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Analytical Report Number : 20-80142

Project / Site name: L&G - LNO Horsham

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In-house method based on BS1377 Part 2, 1990, Classification tests	L019-UK/PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
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Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH207		S	20-80142	1407360	a			
BH207		S	20-80142	1407361	a			

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature