

HERTS & ESSEX SITE INVESTIGATIONS

'THE OLD POST OFFICE', WELLPOND GREEN,
STANDON, WARE, HERTS, SG11 1NJ

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GEOTECHNICAL ASSESSMENTS – ENVIRONMENTAL ASSESSMENTS - DESKTOP STUDY – CONTAMINATED LAND

2nd December 2019

Our Ref : CSG / 14246

Mead Building Contractors

The 10 Centre
Unit 29
Hearle Way,
Hatfield
AL10 9EW

For the attention of L.Mead Esq.,

Dear Sir,

RE : 1 - 11a Swains Lane, London N6 6QX : Gas Monitoring & Vapour Assessments.

Further to your recent instructions, we have undertaken a site inspection of the above site with the sole purpose of the installation of ground gas a vapour monitoring wells at the above site.

This has been completed at the request of the Local Authority as a result of inadequacies in the validation of the site works given the former use of the site as a Petrol Filling Station. This was further queried as a result of historic complaints from neighbours regarding odours emanating from the site which were presumably from fuels or oils.

In order to consider these risks, we have installed three ground gas and vapour monitoring wells within the site which have been sunk through the upper made ground and into the lower natural London Clay soils.

To date, two monitoring inspections have been completed using a Co2 and Methane monitor and also a Photo Ionisation Detector for VOC pollutants. The monitoring periods have been completed on 18th November 2019 and 29th November 2019 and confirm that very low level gases have been identified as well as normal concentrations of Oxygen. This would suggest that ground gases and vapours are at a low risk within the site based on these two readings.

Based on this information and given that one would generally record elevated readings within the initial records if risk was to be in place as well as lower Oxygen values. As none of these have been recorded, we would suggest that the risks associated with the site will be low, although, the full monitoring should be completed.

I hope the foregoing is sufficient for your requirements, although, please do not hesitate to contact us should you require any additional information.

Yours Faithfully

C.S.Gray, M.Sc
Contract Engineer.

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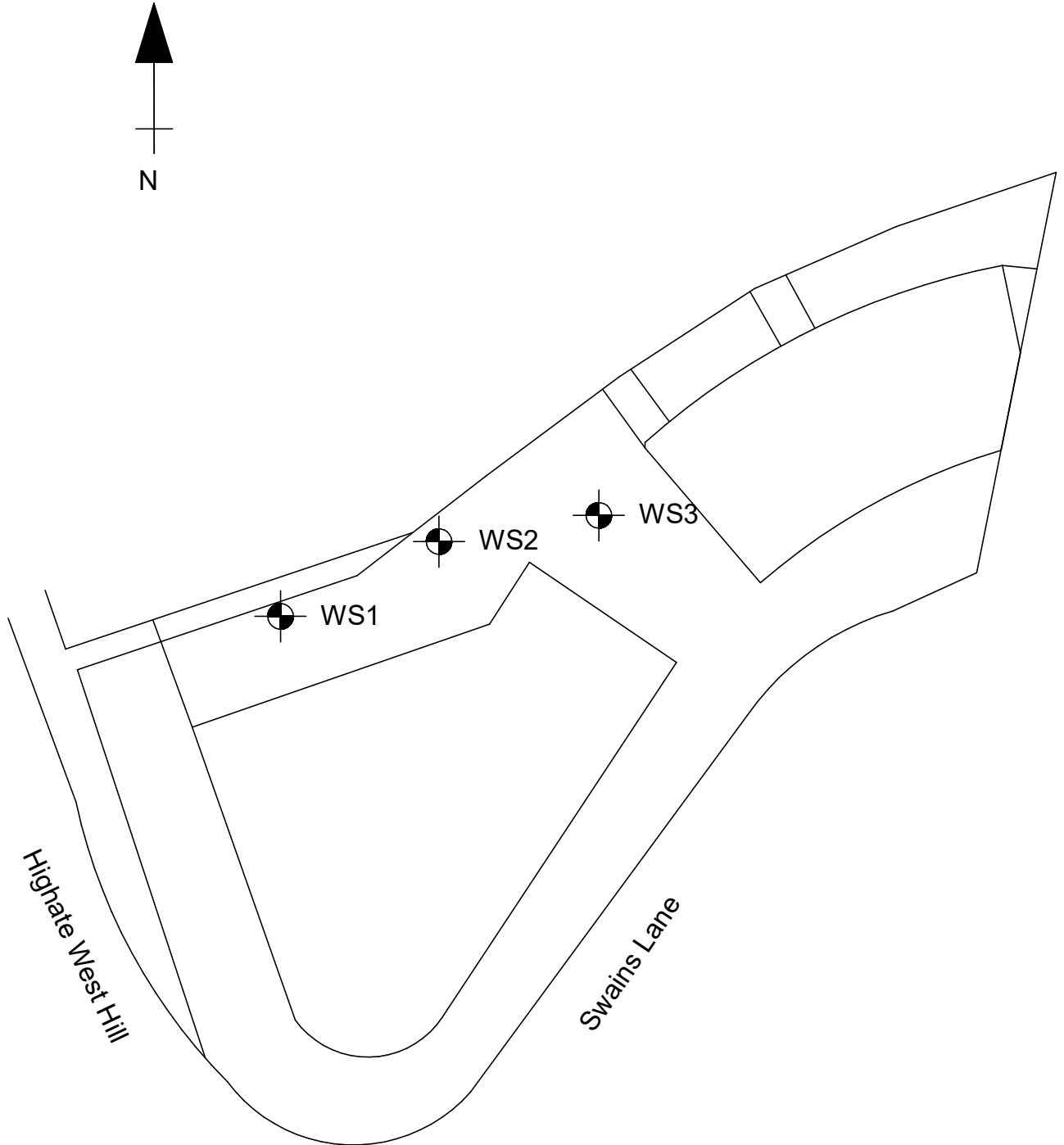
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Appendix No 1
Sheet No 1
Job No 14246
Date Dec 2019

Site at 1 - 11a Swains Lane, London N6 6QX

Proposed Site Plan



Not to Scale
Sketch No. : GAS / 14246 / 01 / 01

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Appendix No 2
Sheet No 1
Job No 14246
Date Dec 2019

1 - 11a Swains Lane, London N6 6QX											
Window Sample One											
Description Of Stratum	Legend	Depth	Thickness (m)	Water Level	Samples			S.P.T N-Value or Vane Strength	VOC's (ppm)	Installations	Casing Depth, (m)
					No	Type	Depth (m)				
Paving over a loose dark brown slightly claybound gravel with occasional brick fragments.		1.10	1.10		1	U	GL - 1.00				
					2	U	1.00 - 2.00				
Firm to stiff light brown, slightly silty CLAY with some grey glaying.		1.90	1.90		3	U	2.00 - 3.00				1.00
Borehole Complete at 3.00 metres											
Remarks											
Scale 1 : 25											
Key : U - Undisturbed Sample (100mm diameter) B - Bulk Sample D - Disturbed Sample W - Water Sample N - SPT N-Value - Water Struck - Water Standing T - Chemical Tub V - Vane Test, (kN.m ²)											

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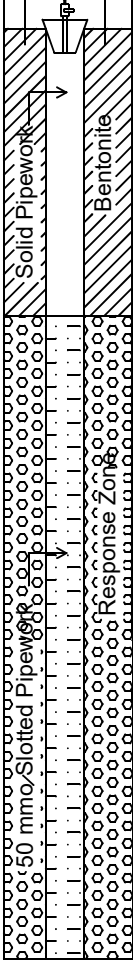
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Appendix No 2
Sheet No 2
Job No 14246
Date Dec 2019

1 - 11a Swains Lane, London N6 6QX

Window Sample Two

Description Of Stratum	Legend	Depth	Thickness (m)	Water Level	Samples			S.P.T N-Value or Vane Strength	VOC's (ppm)	Installations	Casing Depth, (m)
					No	Type	Depth (m)				
Paving over a loose dark brown slightly claybound gravel with occasional brick fragments.		1.00	1.00		1	U	GL - 1.00				
Firm to stiff light brown, slightly silty CLAY with some grey glaying.		2.00	2.00		2	U	1.00-2.00				1.00
		3.00			3	U	2.00 - 3.00				
Borehole Complete at 3.00 metres											

Remarks

Scale 1 : 25

Key : U - Undisturbed Sample (100mm diameter) B - Bulk Sample D - Disturbed Sample W - Water Sample N - SPT N-Value
 ▼ - Water Struck ∇ - Water Standing T - Chemical Tub V - Vane Test, (kN.m²)

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Appendix No 2
Sheet No 3
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Date Dec 2019

1 - 11a Swains Lane, London N6 6QX

Window Sample Three

Description Of Stratum	Legend	Depth	Thickness (m)	Water Level	Samples			S.P.T N-Value or Vane Strength	VOC's (ppm)	Installations	Casing Depth, (m)
					No	Type	Depth (m)				
Paving over a loose dark brown slightly claybound gravel with occasional brick fragments.			1.10		1	U	GL - 1.00				1.00
		1.10		2	U	1.00 - 2.00					
				3	U	2.00 - 2.10					
Borehole Complete at 2.10 metres Obstruction											

Remarks

Scale 1 : 25

Key : U - Undisturbed Sample (100mm diameter) B - Bulk Sample D - Disturbed Sample W - Water Sample N - SPT N-Value
 - Water Struck - Water Standing T - Chemical Tub V - Vane Test, (kN/m²)

Table 1 Gas Monitoring Data Sheet

Site	Site at 1-11a Swains Lane, London N6 6QX						Weather						Cold and cloudy						Operatives			RAC/CSG		
Date	Time	BH ID	Flow Rate				Concentration, (CH ₄)				Concentration, (CO ₂)				Concentration, (O ₂)				Qhg, CH ₄ (Peak) ^{A)}	Qhg, CO ₂ (Peak) ^{A)}	Stratum Screened	Flooded Response Zone (Yes / No)	Barometric Pressure mB	Other Gases, (PID) ppm
			Peak	Steady			Peak	Steady			(Peak) ^{A)}	Steady			Peak	Steady								
				15	30	45		15	30	45		15	30	45		15	30	45						
				secs	Secs	Secs		secs	Secs	Secs		secs	Secs	Secs		secs	Secs	Secs						
18 th November 2019	2.15pm	WS1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	19.8	19.7	19.8	19.8	0.0	0.0	FILL / CLAY	No	1006	0	
		WS2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.3	19.6	19.4	19.6	19.5	0.0	0.0	FILL / CLAY	No	1005	0	
		WS3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	19.4	19.2	19.3	19.4	0.0	0.0	FILL / CLAY	No	1005	0	

Works and table completed in accordance with **BS 8485 : 2015**, (Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings).
Table prepared after Table F2, (Gas Monitoring Data).

Table 2 Gas Monitoring Data Sheet

Site	Site at 1-11a Swains Lane, London N6 6QX						Weather						Cold and cloudy						Operatives			RAC/CSG		
Date	Time	BH ID	Flow Rate				Concentration, (CH ₄)				Concentration, (CO ₂)				Concentration, (O ₂)				Qhg, CH ₄ (Peak) ^{A)}	Qhg, CO ₂ (Peak) ^{A)}	Stratum Screened	Flooded Response Zone (Yes / No)	Barometric Pressure mB	Other Gases, (PID) ppm
			Peak	Steady			Peak	Steady			(Peak) ^{A)}	Steady			Peak	Steady								
				15	30	45		15	30	45		15	30	45		15	30	45						
				secs	Secs	Secs		secs	Secs	Secs		secs	Secs	Secs		secs	Secs	Secs						
29 th November 2019	9.20am	WS1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	19.7	19.5	19.6	19.7	0.0	0.0	FILL / CLAY	No	1002	0	
		WS2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	19.2	19.5	19.4	0.0	0.0	FILL / CLAY	No	1002	0	
		WS3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	19.5	19.6	19.7	0.0	0.0	FILL / CLAY	No	1002	0	

Works and table completed in accordance with **BS 8485 : 2015**, (Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings).
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