

Our Ref AMP/14862CO/13/JLJ

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11 December 2018

London Borough of Hackney
Hackney Service Centre
1 Hillman Street
Hackney
London
E8 1DY

For the attention of Mr Steven Pye, Pollution Control Officer

By Email only –
steven.pye@hackney.gov.uk

Dear Steven

**STONE STUDIOS, 80 TO 84 & 88 WALLIS ROAD, HACKNEY WICK E9 5LN
- RADIELLO CARTRIDGE AIR MONITORING FOR VOC & SVOC**

This letter reports the findings of the thirteenth round of ongoing air monitoring around the boundary of the above site by RSA Geotechnics Limited, at the request of Telford Homes PLC. The monitoring covers the period between 22 and 28 November 2018.

1. Introduction

Earlier investigation of the site identified the potential for significant odour/vapour release during development. CFA piling works brought to surface hydrocarbon contaminated soils, as identified within the earlier site investigation. Some odours were reported, and odour/vapour issues were more pronounced during the bulk excavation phase for basement construction for Block A in September 2018. No significant groundworks have been undertaken on site during the monitoring period, with the exception of limited site trials (skip test trial and excavation into the stockpile).

Air monitoring will be maintained for the duration of the groundworks by RSA Geotechnics Limited to assess concentrations of volatile organic compounds at the perimeter of the site during the bulk excavation works and enable the assessment of potential risks to off-site receptors. Radiello 130 passive diffusive sampling tubes have been installed at five locations around the perimeter of the site, to enable measurement of time weighted average concentrations of BTEX, VOC and SVOC, with a sixth monitoring point installed off-site, on the boundary of Mossbourne Academy School. Testing for speciated total petroleum hydrocarbons (TPH) is also undertaken, for two locations on the site boundary (Locations T1 and T2) and one location at the school (Location T3). Monitoring locations are as illustrated on drawing number 14862CO/2.

Key volatile constituents of the contamination at the site were considered to be benzene and naphthalene, and these compounds have been adopted as markers for the initial assessment of contamination.

Initial assessment was undertaken adopting the EH40 Workplace Exposure Limit (WEL) for 8 hour time-weighted average (TWA) exposure for benzene of 1 ppm (3.25 mg/m³). There is no UK WEL screening value for naphthalene, however, the US Occupational Safety and Health Administration (OSHA) sets a Permissible Exposure limit (PEL) of 10 ppm (50 mg/m³) for naphthalene in workplace air (8 hour TWA). The National Institute for Occupational Safety and Health (NIOSH) 'immediately dangerous to life or health' (IDLH) screening value for naphthalene in air is 250 ppm.

A detailed air quality assessment was subsequently undertaken by Peak Environmental Solutions, to determine human health risk based vapour monitoring criteria for adjacent land users, taking into account adjacent and distal commercial, school and residential receptors, for the main earthworks proposed to be undertaken over a period of nominally 10 weeks. The assessment report has been submitted to LLDC, Hackney Council and PHE for review. The screening values determined are summarised in Tables 10 and 11:

Table 10 – Passive Speciated Monitoring Criteria for Human Health Chronic Risks in mg/m³								
Substance	vSAC-P							
	Adjacent	Distal						
	Commercial & Passer-by	Commercial	School	Residential				
Naphthalene	0.16	0.16	0.06	0.08				
Sum TPH	25	25	18	10				
Aliphatic TPH C5-C6	Via Sum TPH	Via Sum TPH	Via Sum TPH	Via Sum TPH				
Aliphatic TPH C6-8								
Aliphatic TPH C8-10								
Aliphatic TPH C10-12								
Aliphatic TPH C12-16								
Aromatic TPH C5-7 (threshold Benzene)								
Aromatic TPH C7-8 (Toluene)	7.4	7.4	1.8	1.3				
Aromatic TPH C8-C10								
Aromatic TPH C10-12								
Aromatic TPH C12-16	0.3	0.3	0.2	0.14				
Sum Methylnaphthalenes								
Benzene					0.19	0.19	0.13	0.09
Toluene								
Ethylbenzene								
Sum Xylenes								
Sum TMB	0.14	0.14	0.04	0.03				

Table 11 – Active Speciated Monitoring Criteria for Human Health Chronic Risks in mg/m³				
Substance	vSAC-A			
	Adjacent	Distal		
	Commercial & Passer-by	Commercial	School	Residential
Naphthalene	0.55	0.55	0.19	0.08
Sum TPH	100	100	60	10
Aliphatic TPH C5-C6	Via Sum TPH	Via Sum TPH	Via Sum TPH	Via Sum TPH
Aliphatic TPH C6-8				
Aliphatic TPH C8-10				
Aliphatic TPH C10-12				
Aliphatic TPH C12-16				
Aromatic TPH C5-7 (threshold Benzene)				
Aromatic TPH C7-8 (Toluene)				
Aromatic TPH C8-C10	35	35	6	1.3
Aromatic TPH C10-12	35	35	6	1.3
Aromatic TPH C12-16				
Sum Methylnaphthalenes	1.5	1.5	0.7	0.14
Benzene	0.9	0.9	0.44	0.09
Toluene	Pragmatic 10	Pragmatic 10	Pragmatic 5	3
Ethylbenzene				
Sum Xylenes				
Sum TMB	0.45	0.45	0.13	0.03

The values in Table 10 are used in the assessment of results from the time-weighted average passive sorbent tube monitoring, while the values in Table 11 are relevant to comparison with active ‘real-time’ sampling using sorbent tubes or other methods.

2. Fieldwork

The thirteenth round of monitoring discussed in this report was undertaken over a six day period between 22 and 28 November 2018. No excavation works were in progress for the duration of the monitoring.

3. Laboratory Analysis

Cross reference between the laboratory test references and the sample locations is given in Table 3.

Table 3 – Laboratory reference and sample location summary	
Location	Laboratory sample reference
V1	N914R
V2	N911R
V3	N913R
V4	N910R
V5	N909R
V6	N916R
T1	N915R
T2	N912R
T3	N917R

The laboratory analysis included suites of both VOCs and SVOCs. The results were calculated as time-weighted average concentrations.

Concentrations of VOCs including benzene, were below the detection limit for the test method, of 1 µg/m³ (equivalent to 0.0003 ppm for benzene).

Concentrations of SVOCs, including naphthalene, were also below the detection limit for the test method of 1 µg/m³ (equivalent to 0.0002 ppm for naphthalene).

The testing included the determination of VOC and SVOC TICs (Tentatively Identified Compounds) for other compounds that may potentially be present within the sample however there are no UK screening values for the majority of these compounds.

It should be noted that the methods of test for VOC and SVOC are significantly different; VOC analysis is undertaken using headspace analysis while the SVOC analysis using a solvent to desorb determinands from the sampling tube prior to analysis. Consequently there may be some variation in concentrations of determinands measured depending on the method of analysis.

The analysis recorded some measurable but low concentrations of SVOC TICs on the site boundary, but only one SVOC TIC at Location 6 on the boundary of the Mossbourne Academy school premises approximately 100 m east of the site. No exposure limits were available for the compounds tentatively identified, with the exception of xylenes which are covered in the VOC analysis, and trimethylbenzene which has its own derived screening value in the assessment. The concentrations were all well below the derived screening values summarised in Table 10.

Testing for speciated total petroleum hydrocarbons (TPH) at the two locations on the site boundary (Locations T1 and T2) and one location at the school (Location T3) recorded all concentrations to be below the detection limit for the test method of 100 µg/m³.

4. Conclusions

Concentrations of VOC, SVOC and BTEX were well below the screening values adopted for assessment, as described in this letter report.

Monitoring will continue for the duration of the earthworks on site and will be reported nominally on a weekly basis.

Should you require any further information or assistance, please do not hesitate to contact us.

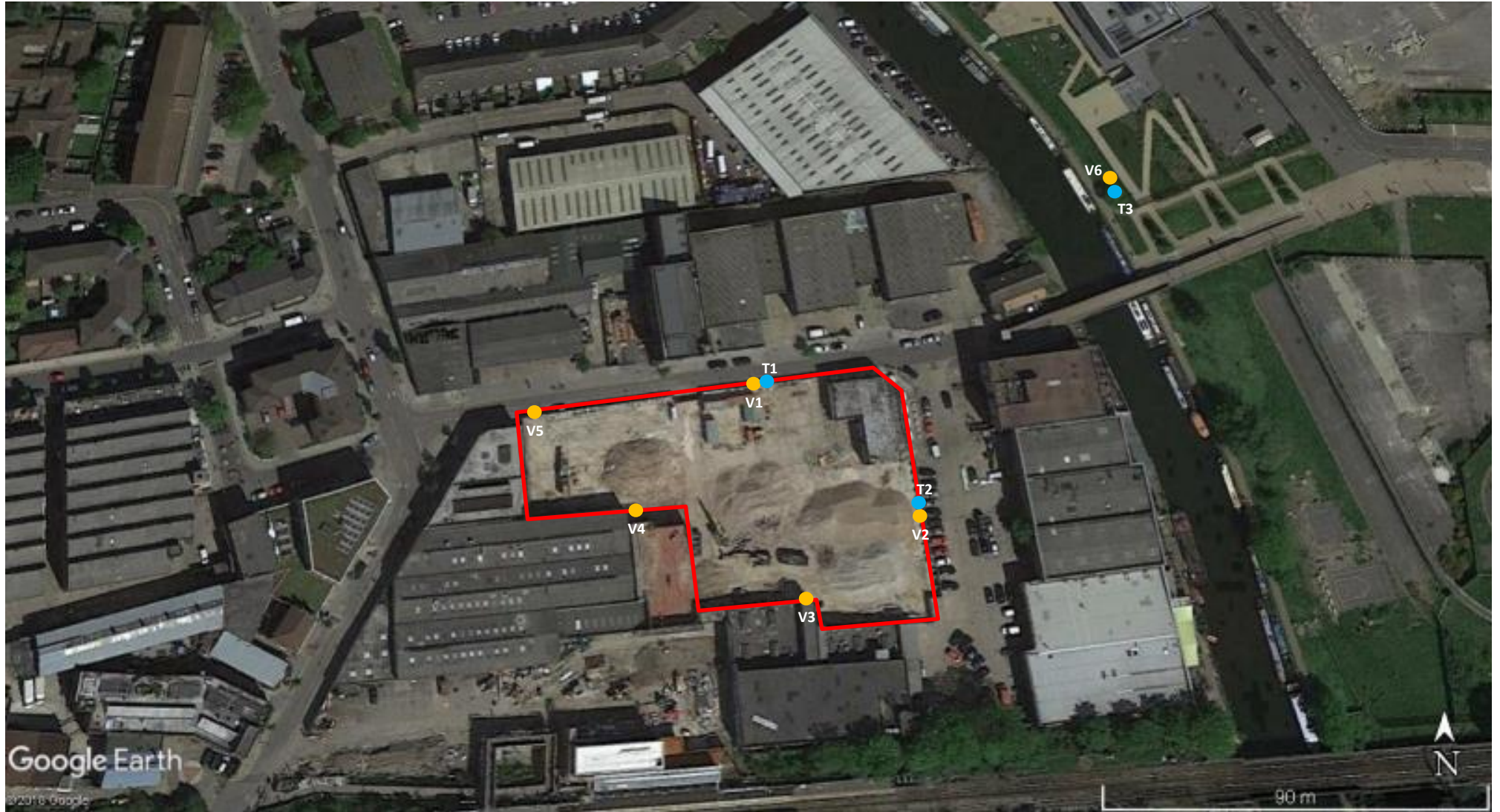
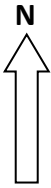
Yours sincerely
 RSA Geotechnics Ltd



Adrian Phillips, FGS
Technical Director

Encs Passive Air Monitoring - Drawing Number 14862CO/2
 Laboratory Test Reports (ELAB, 18-20857 & 57040)

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<p>PASSIVE AIR MONITORING (Based upon Google earth image) 80 - 84 AND 88 WALLIS ROAD, HACKNEY WICK, E9 5LN</p>	<p>NOTE: All locations are approximate Date 19 NOVEMBER 2018</p>
	<p>Scale NOT TO SCALE</p>
<p>RSA GEOTECHNICS LIMITED</p>	<p>Drawing No 14862CO/2 Version A</p>



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 18-20857

Issue: 1

Date of Issue: 10/12/2018

Contact: Adrian Phillips

Customer Details: RSA Geotechnics Ltd
Ashburnham House
1 Maitland Road
Needham Market
Suffolk
IP6 8NZ

Quotation No: Q18-01116

Order No: 14862CO

Customer Reference: 14862CO

Date Received: 04/12/2018

Date Approved: 10/12/2018

Details: Wallis Road Air Monitoring 22 - 28 November 2018

Approved by:

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)



Sample Summary

Report No.: 18-20857

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
159442	N914R RT V1	28/11/2018	04/12/2018		
159443	N911R RT V2	28/11/2018	04/12/2018		
159444	N913R RT V3	28/11/2018	04/12/2018		
159445	N910R RT V4	28/11/2018	04/12/2018		
159446	N909R RT V5	28/11/2018	04/12/2018		
159447	N916R RT V6	28/11/2018	04/12/2018		



Results Summary

Report No.: 18-20857

				ELAB Reference	159442	159443	159444	159445	159446	159447
				Customer Reference	RT V1	RT V2	RT V3	RT V4	RT V5	RT V6
				Sample ID						
				Sample Type	GAS	GAS	GAS	GAS	GAS	GAS
				Sample Location	N914R	N911R	N913R	N910R	N909R	N916R
				Sample Depth (m)						
				Sampling Date	28/11/2018	28/11/2018	28/11/2018	28/11/2018	28/11/2018	28/11/2018
Determinand	Codes	Units	LOD							
VOC										
MTBE	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Heptane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Octane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Nonane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloromethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroetha	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VOC TIC										
Various	N	µg/m3	1	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected



Results Summary

Report No.: 18-20857

				ELAB Reference	159442	159443	159444	159445	159446	159447
				Customer Reference	RT V1	RT V2	RT V3	RT V4	RT V5	RT V6
				Sample ID						
				Sample Type	GAS	GAS	GAS	GAS	GAS	GAS
				Sample Location	N914R	N911R	N913R	N910R	N909R	N916R
				Sample Depth (m)						
				Sampling Date	28/11/2018	28/11/2018	28/11/2018	28/11/2018	28/11/2018	28/11/2018
Determinand	Codes	Units	LOD							
SVOC										
Phenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroethyl)ether	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzyl Alcohol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroisopropyl)ether	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
3 and 4-methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
N-Nitrosodi-n-propylamine	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Nitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Isophorone	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Nitrophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroethoxy)methane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,4-Dichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
3-Chloroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachloro-1,3-butadiene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chloro-3-methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylnaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-Methylnaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,4,5-Trichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-Chloronaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dimethyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-3-dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-6-dinitrotoluene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
3-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-nitrophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibenzofuran	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,5,6-Tetrachlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,4,6-Tetrachlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Diethyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-chloro-4-phenoxybenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fluorene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
4-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dinitro-o-cresol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Diphenylamine	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Azobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1-bromo-4-phenoxybenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Pentachlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Phenanthrene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Anthracene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Carbazole	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibutyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Fluoranthene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Pyrene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Butyl benzyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Bis-2-ethylhexyladipate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Butyl benzyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo(a)anthracene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Chrysene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-ethylhexyl)phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo(b)fluoranthene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo(k)fluoranthene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo(a)pyrene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Indeno(1,2,3-CD)pyrene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibenz(ah)anthracene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo(ghi)perylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
SVOC TIC									
Various	N	µg/m3	1	Y	Y	Y	Y	Y	Y
p-Xylene	N	µg/m3	1	8	11	-	-	-	-
Benzene, 1-ethyl-3-methyl-	N	µg/m3	1	2	-	-	-	-	-
Dodecane	N	µg/m3	1	2	2	5	4	-	-
Tridecane	N	µg/m3	1	-	3	5	-	3	-
Tetradecane	N	µg/m3	1	-	4	7	-	5	3
Benzene, 1,3,5-trimethyl-	N	µg/m3	1	-	-	7	10	-	-
Tridecane, 3-methyl-	N	µg/m3	1	-	-	6	3	-	-
Octacosane	N	µg/m3	1	-	-	-	3	-	-
Cyclopentane, nonyl-	N	µg/m3	1	-	-	-	1	-	-
Tridecane, 3-methyl-	N	µg/m3	1	-	-	-	-	5	-



Method Summary

Report No.: 18-20857

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
VOC - Tubes	N		04/12/2018		GC-MS
SVOC - Tubes	N		04/12/2018	167	GC-MS
VOC - Tubes	N		04/12/2018	181	GC-MS

Tests marked N are not UKAS accredited

Report Information

Report No.: 18-20857

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C)
ELAB are unable to provide an interpretation or opinion on the content of this report.
The results relate only to the items tested
PCB congener results may include any coeluting PCBs
Uncertainty of measurement for the determinands tested are available upon request

Deviation Codes

- a No date of sampling supplied
- b No time of sampling supplied (Waters Only)
- c Sample not received in appropriate containers
- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
All water samples will be retained for 7 days following the date of the test report
Charges may apply to extended sample storage



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THE ENVIRONMENTAL LABORATORY LTD

F.A.O. Adrian Phillips
RSA Geotechnics Ltd
1 Maitland Road
Needham Market
Suffolk, IP6 8NZ

Reporting Date: 10 December 2018

ANALYTICAL REPORT No. 57040

Samples Received By: Laboratory Courier

Sample Receipt Date: 04/12/18

Your Job No: 14862CO

Your Order No: 14862CO

Site Location: Wallis Road Air Monitoring 22 November - 28 November 2018

No Samples Received: 3

Date of Sampling: 28/11/18

This report was written by: Stuart Ballard

Authorised By;

Mike Varley
Technical Manager (BSc, CChem
CSci, FRSC)

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

THE ENVIRONMENTAL LABORATORY LTD

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards On Sea, East Sussex, TN38 9BY

Tel: 01424 718618 Fax: 01424 729911

ANALYTICAL REPORT No. 57040

Location: Wallis Road Air Monitoring 22 November - 28 November 2018



Your Job No: 14862CO
Your Order No: 14862CO
Reporting Date: 10/12/18

F.A.O. Adrian Phillips
RSA Geotechnics Ltd
1 Maitland Road
Needham Market
Suffolk, IP6 8NZ

TPH CWG - Tubes

Characteristic	TUBE	TUBE	TUBE
Date Sampled	28/11/18	28/11/18	28/11/18
TP/BH	N915R - RT T1	N912R - RT T2	N917R - RT T3
Our ref	38269	38270	38271
<u>Aromatic</u>			
>EC ₅ -EC ₇	(µg/m ³)	<100	<100
>EC ₇ -EC ₈	(µg/m ³)	<100	<100
>EC ₈ -EC ₁₀	(µg/m ³)	<100	<100
>EC ₁₀ -EC ₁₂	(µg/m ³)	<100	<100
>EC ₁₂ -EC ₁₆	(µg/m ³)	<100	<100
>EC ₁₆ -EC ₂₁	(µg/m ³)	<100	<100
>EC ₂₁ -EC ₃₅	(µg/m ³)	<100	<100
>EC ₃₅ -EC ₄₀	(µg/m ³)	<100	<100
<u>Aliphatic</u>			
>EC ₅ -EC ₆	(µg/m ³)	<100	<100
>EC ₆ -EC ₈	(µg/m ³)	<100	<100
>EC ₈ -EC ₁₀	(µg/m ³)	<100	<100
>EC ₁₀ -EC ₁₂	(µg/m ³)	<100	<100
>EC ₁₂ -EC ₁₆	(µg/m ³)	<100	<100
>EC ₁₆ -EC ₂₁	(µg/m ³)	<100	<100
>EC ₂₁ -EC ₃₅	(µg/m ³)	<100	<100
>EC ₃₅ -EC ₄₀	(µg/m ³)	<100	<100
TPH (C ₅ - C ₄₀)	(µg/m ³)	<100	<100

All results expressed on dry weight basis

** - MCERTS accredited test

Stuart Ballard



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THE ENVIRONMENTAL LABORATORY LTD

SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number 57040
Your Ref No: 14862CO
Sample Receipt Date: 04/12/18
Reporting Date: 10/12/18

Registered: 04/12/18
Prepared: 05/12/18
Analysis complete: 10/12/18

TEST METHOD SUMMARY

PARAMETER	Analysis Undertaken on	Date Tested	Method Number	Technique
Carbon Banding (TPH CWG)	As submitted sample	04/12/18	214	Gas chromatography

Note:- Documented In-house procedure based on HSG 248 2005

** - MCERTS Accredited test

Determinands not marked with * or ** are not accredited

MCERTS accreditation covers samples which are predominantly sand, clay, loam or combinations of these three soil types

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