

Our Ref AMP/14862CO/16/LMA

ASHBURNHAM HOUSE  
1 MAITLAND ROAD  
LION BARN ESTATE  
NEEDHAM MARKET  
SUFFOLK  
IP6 8NZ

Telephone (01449) 723 723  
Fax (01449) 723 907  
[www.rsa-geotechnics.co.uk](http://www.rsa-geotechnics.co.uk)



3 January 2019

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](mailto: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 sixteenth 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 13 and 19 December 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.

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/m<sup>3</sup>). 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/m<sup>3</sup>) 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:

<b>Table 10 – Passive Speciated Monitoring Criteria for Human Health Chronic Risks in mg/m<sup>3</sup></b>				
<b>Substance</b>	<b>vSAC-P</b>			
	<b>Adjacent</b>	<b>Distal</b>		
	<b>Commercial &amp; Passer-by</b>	<b>Commercial</b>	<b>School</b>	<b>Residential</b>
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)				
Aromatic TPH C8-C10	7.4	7.4	1.8	1.3
Aromatic TPH C10-12	7.4	7.4	1.8	1.3
Aromatic TPH C12-16				
Sum Methylnaphthalenes	0.3	0.3	0.2	0.14
Benzene	0.19	0.19	0.13	0.09
Toluene	Pragmatic 10	Pragmatic 10	4	3
Ethylbenzene				
Sum Xylenes				
Sum TMB	0.14	0.14	0.04	0.03

<b>Table 11 – Active Speciated Monitoring Criteria for Human Health Chronic Risks in mg/m<sup>3</sup></b>				
<b>Substance</b>	<b>vSAC-A</b>			
	<b>Adjacent</b>	<b>Distal</b>		
	<b>Commercial &amp; Passer-by</b>	<b>Commercial</b>	<b>School</b>	<b>Residential</b>
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	1.5	1.5	0.7	0.14
Aromatic TPH C12-16				
Sum Methylnaphthalenes				
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 sixteenth round of monitoring discussed in this report was undertaken over a six day period between 13 and 19 December 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	N241Z
V2	N248Z
V3	N249Z
V4	N244Z
V5	N245Z
V6	N242Z
T1	N246Z
T2	N252Z
T3	N243Z

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/m<sup>3</sup> (equivalent to 0.0003 ppm for benzene).

Concentrations of SVOCs, including naphthalene, were below the detection limit for the test method of 1 µg/m<sup>3</sup> (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 measurable but low concentrations of SVOC TICs at two of the site perimeter locations. Concentrations of 5 µg/m<sup>3</sup> of tetradecane and 5 µg/m<sup>3</sup> of 1-iodo-dodecane were recorded at the school location. Tetradecane was recorded at between 2 and 4 µg/m<sup>3</sup> at two locations on the southern site boundaries, however concentrations were below the detection limit of 1 µg/m<sup>3</sup> at the boundary locations between the site and the school. Concentrations of 1-iodo-dodecane at the site boundary were all below the detection limit of 1 µg/m<sup>3</sup>. Based on the test results the site has not been identified as the source of the low concentrations of compounds recorded at the school location.

The concentrations were well below the screening criteria derived by Peak Environmental and 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/m<sup>3</sup>.

#### 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

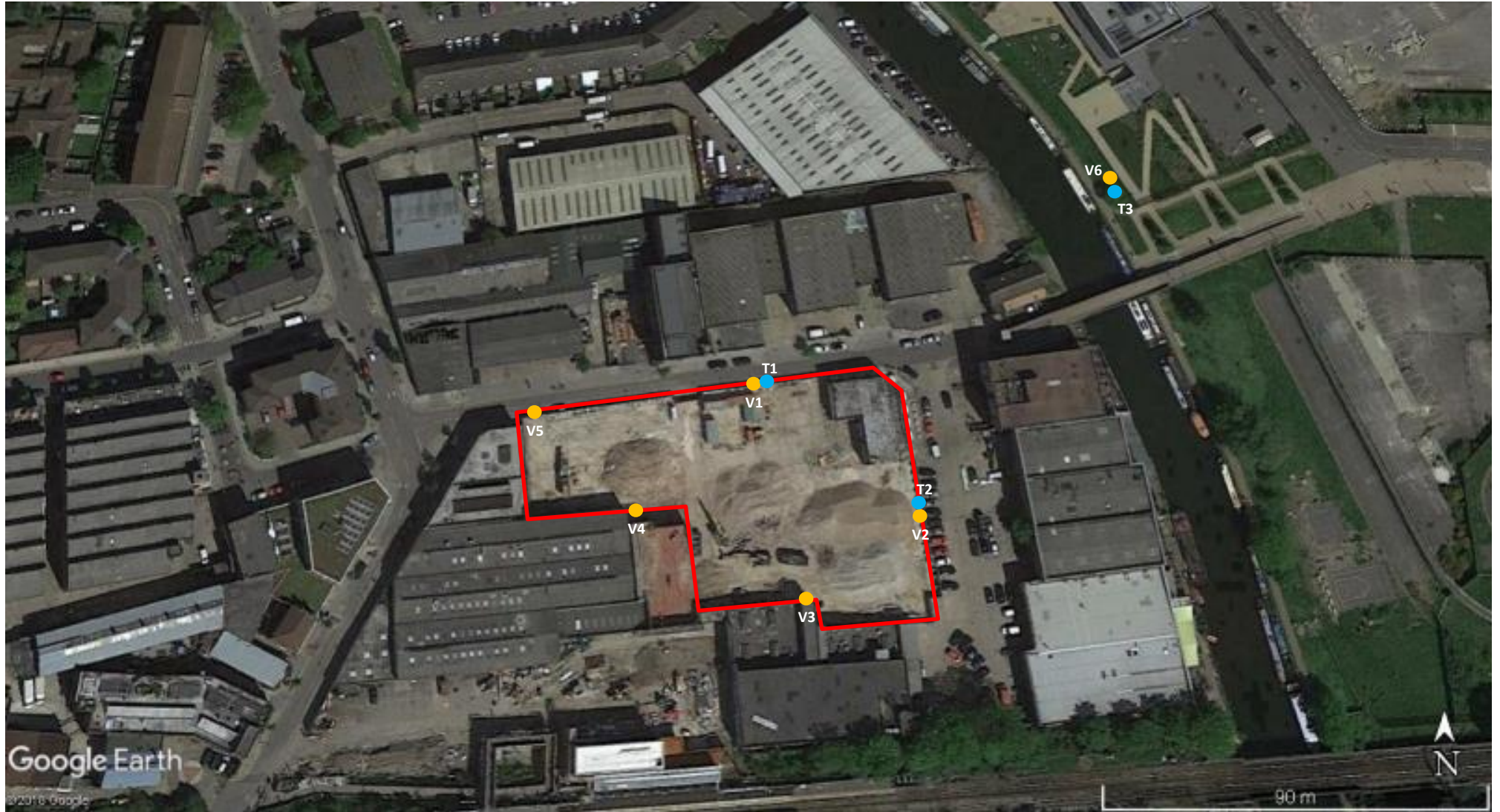
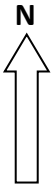


**Adrian Phillips, FGS**  
**Technical Director**

Encs Passive Air Monitoring - Drawing Number 14862CO/2  
Laboratory Test Reports (ELAB, 18-21125 & 57043)

Copy (Email) to: Jason Lumb (Arup) [jason.lumb@arup.com](mailto:jason.lumb@arup.com)  
Jeff Widd (Arup) [jeff.widd@arup.com](mailto:jeff.widd@arup.com)  
Russell Butchers (LLDC) [russellbutchers@londonlegacy.co.uk](mailto:russellbutchers@londonlegacy.co.uk)  
LLDC [lldc@arup.com](mailto:lldc@arup.com)  
Stephen Pedro (Telford Homes) [stephen.pedro@telfordhomes.london](mailto:stephen.pedro@telfordhomes.london)  
Fintan Mooney (Telford Homes) [fintan.mooney@telfordhomes.london](mailto:fintan.mooney@telfordhomes.london)  
Robert Tyler (L B Hackney) [Robert.tyler@hackney.gov.uk](mailto:Robert.tyler@hackney.gov.uk)





Google Earth

©2018 Google

90 m

<p><b>PASSIVE AIR MONITORING</b> (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><b>RSA GEOTECHNICS LIMITED</b></p>	<p>Drawing No 14862CO/2 Version A</p>



Unit A2  
Windmill Road  
Ponswood Industrial Estate  
St Leonards on Sea  
East Sussex  
TN38 9BY  
Telephone: (01424) 718618

[cs@elab-uk.co.uk](mailto:cs@elab-uk.co.uk)  
[info@elab-uk.co.uk](mailto:info@elab-uk.co.uk)

---

THE ENVIRONMENTAL LABORATORY LTD

---

**Analytical Report Number:** 18-21125  
**Issue:** 1  
**Date of Issue:** 02/01/2019  
**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:** 20/12/2018  
**Date Approved:** 02/01/2019  
**Details:** Wallis Road Air Monitoring 13 - 19 Dec 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.: 18-21125

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
161146	N241Z RT V1 - Location 1 VOC	19/12/2018	20/12/2018		
161147	N248Z RT V2 - Location 2 VOC	19/12/2018	20/12/2018		
161148	N249Z RT V3 - Location 3 VOC	19/12/2018	20/12/2018		
161149	N244Z RT V4 - Location 4 VOC	19/12/2018	20/12/2018		
161150	N245Z RT V5 - Location 5 VOC	19/12/2018	20/12/2018		
161151	N242Z RT V6 - Location 6 VOC	19/12/2018	20/12/2018		





## Results Summary

Report No.: 18-21125

ELAB Reference	161146	161147	161148	161149	161150	161151
Customer Reference	RT V1 - Location 1 VOC	RT V2 - Location 2 VOC	RT V3 - Location 3 VOC	RT V4 - Location 4 VOC	RT V5 - Location 5 VOC	RT V6 - Location 6 VOC
Sample ID						
Sample Type	GAS	GAS	GAS	GAS	GAS	GAS
Sample Location	N241Z	N248Z	N249Z	N244Z	N245Z	N242Z
Sample Depth (m)						
Sampling Date	19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018
Determinand	Codes	Units	LOD			
<b>VOC</b>						
MTBE	N	µg/m3	1	< 1	< 1	< 1
Heptane	N	µg/m3	1	< 1	< 1	< 1
Octane	N	µg/m3	1	< 1	< 1	< 1
Nonane	N	µg/m3	1	< 1	< 1	< 1
Benzene	N	µg/m3	1	< 1	< 1	< 1
Toluene	N	µg/m3	1	< 1	< 1	< 1
Ethylbenzene	N	µg/m3	1	< 1	< 1	< 1
m+p-xylene	N	µg/m3	1	< 1	< 1	< 1
o-xylene	N	µg/m3	1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	µg/m3	1	< 1	< 1	< 1
1,1-Dichloroethane	N	µg/m3	1	< 1	< 1	< 1
Chloroform	N	µg/m3	1	< 1	< 1	< 1
Tetrachloromethane	N	µg/m3	1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	µg/m3	1	< 1	< 1	< 1
Trichloroethylene	N	µg/m3	1	< 1	< 1	< 1
Tetrachloroethylene	N	µg/m3	1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	N	µg/m3	1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	N	µg/m3	1	< 1	< 1	< 1
Chlorobenzene	N	µg/m3	1	< 1	< 1	< 1
Bromobenzene	N	µg/m3	1	< 1	< 1	< 1
Bromodichloromethane	N	µg/m3	1	< 1	< 1	< 1
Methylethylbenzene	N	µg/m3	1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1
Trans - 1,2 -dichloroethylene	N	µg/m3	1	< 1	< 1	< 1
2,2-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1
Bromochloromethane	N	µg/m3	1	< 1	< 1	< 1
1,2-Dichloroethane	N	µg/m3	1	< 1	< 1	< 1
Dibromomethane	N	µg/m3	1	< 1	< 1	< 1
1,2-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	µg/m3	1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	µg/m3	1	< 1	< 1	< 1
Dibromochloromethane	N	µg/m3	1	< 1	< 1	< 1
1,3-Dichloropropane	N	µg/m3	1	< 1	< 1	< 1
Dibromoethane	N	µg/m3	1	< 1	< 1	< 1
Styrene	N	µg/m3	1	< 1	< 1	< 1
Propylbenzene	N	µg/m3	1	< 1	< 1	< 1
2-Chlorotoluene	N	µg/m3	1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	µg/m3	1	< 1	< 1	< 1
4-Chlorotoluene	N	µg/m3	1	< 1	< 1	< 1
t-butylbenzene	N	µg/m3	1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	µg/m3	1	< 1	< 1	< 1
1-methylpropylbenzene	N	µg/m3	1	< 1	< 1	< 1
p-cymene	N	µg/m3	1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1
Butylbenzene	N	µg/m3	1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	µg/m3	1	< 1	< 1	< 1
Hexachlorobutadiene	N	µg/m3	1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1
Naphthalene	N	µg/m3	1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1
Bromoform	N	µg/m3	1	< 1	< 1	< 1
<b>VOC TIC</b>						
Various	N	µg/m3	1	None Detected	None Detected	None Detected



## Results Summary

Report No.: 18-21125

ELAB Reference				161146	161147	161148	161149	161150	161151
Customer Reference				RT V1 - Location 1 VOC	RT V2 - Location 2 VOC	RT V3 - Location 3 VOC	RT V4 - Location 4 VOC	RT V5 - Location 5 VOC	RT V6 - Location 6 VOC
Sample ID									
Sample Type				GAS	GAS	GAS	GAS	GAS	GAS
Sample Location				N241Z	N248Z	N249Z	N244Z	N245Z	N242Z
Sample Depth (m)									
Sampling Date				19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018	19/12/2018
Determinand	Codes	Units	LOD						
<b>SVOC</b>									
Phenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Aniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroethyl)ether	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzyl Alcohol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroisopropyl)ether	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
3 and 4-methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
N-Nitrosodi-n-propylamine	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachloroethane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Nitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Isophorone	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Nitrophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Bis(2-chloroethoxy)methane	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,4-Dichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trichlorobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
3-Chloroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachloro-1,3-butadiene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chloro-3-methylphenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylnaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1-Methylnaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,4,5-Trichlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1-Chloronaphthalene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Dimethyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1-3-dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2-6-dinitrotoluene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthylene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dinitrobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
3-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
4-nitrophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibenzofuran	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,5,6-Tetrachlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,4,6-Tetrachlorophenol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Diethyl phthalate	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1-chloro-4-phenoxybenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Fluorene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
4-Nitroaniline	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Dinitro-o-cresol	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Diphenylamine	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Azobenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
1-bromo-4-phenoxybenzene	N	µg/m3	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobenzene	N	µg/m3	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
<b>SVOCTIC</b>									
Various	N	µg/m3	1	None Detected	None Detected	Y	Y	None Detected	Y
Eicosane	N	µg/m3	1	-	-	3	-	-	-
Tetradecane	N	µg/m3	1	-	-	4	2	-	5
Nonadecane, 9-methyl-	N	µg/m3	1	-	-	-	5	-	-
Dodecane, 1-ido-	N	µg/m3	1	-	-	-	-	-	5



## Method Summary

Report No.: 18-21125

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
VOC - Tubes	N		20/12/2018		GC-MS
SVOC - Tubes	N		20/12/2018	167	GC-MS
VOC - Tubes	N		20/12/2018	181	GC-MS

Tests marked N are not UKAS accredited



## Report Information

Report No.: 18-21125

### 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



Unit A2  
Windmill Road  
Ponswood Industrial Estate  
St Leonards on Sea  
East Sussex  
TN38 9BY  
Telephone (01424) 718618  
Facsimile (01424) 729911

---

**THE ENVIRONMENTAL LABORATORY LTD**

---

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

Reporting Date: 21 December 2018

**ANALYTICAL REPORT No. 57043**

**Samples Received By:** Laboratory Courier

**Sample Receipt Date:** 10/12/18

**Your Job No:** 14862CO

**Your Order No:** 14862CO

**Site Location:** Wallis Road Air Monitoring 13 December - 19 December 2018

**No Samples Received:** 3

**Date of Sampling:** 19/12/18

---

*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. 57043

Location: Wallis Road Air Monitoring 13 December - 19 December 2018



Your Job No: 14862CO  
Your Order No: 14862CO  
Reporting Date: 21/12/18

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	19/12/18	19/12/18	19/12/18
TP/BH	N246Z - RT T1	N252Z - RT T2	N243Z - RT T3
Our ref	38278	38279	38280
<b><u>Aromatic</u></b>			
>EC <sub>5</sub> -EC <sub>7</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>7</sub> -EC <sub>8</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>8</sub> -EC <sub>10</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>10</sub> -EC <sub>12</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>12</sub> -EC <sub>16</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>16</sub> -EC <sub>21</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>21</sub> -EC <sub>35</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>35</sub> -EC <sub>40</sub>	(µg/m <sup>3</sup> )	<100	<100
<b><u>Aliphatic</u></b>			
>EC <sub>5</sub> -EC <sub>6</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>6</sub> -EC <sub>8</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>8</sub> -EC <sub>10</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>10</sub> -EC <sub>12</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>12</sub> -EC <sub>16</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>16</sub> -EC <sub>21</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>21</sub> -EC <sub>35</sub>	(µg/m <sup>3</sup> )	<100	<100
>EC <sub>35</sub> -EC <sub>40</sub>	(µg/m <sup>3</sup> )	<100	<100
TPH (C <sub>5</sub> - C <sub>40</sub> )	(µg/m <sup>3</sup> )	<100	<100

All results expressed on dry weight basis

\*\* - MCERTS accredited test

Stuart Ballard





Unit A2  
Windmill Road  
Ponswood Industrial Estate  
St Leonards on Sea  
East Sussex  
TN38 9BY  
Telephone (01424) 718618  
Facsimile (01424) 729911

---

## THE ENVIRONMENTAL LABORATORY LTD

---

### SAMPLE RECEIPT AND TEST DATES

Our Analytical Report Number      57043  
Your Ref No:                                14862CO  
Sample Receipt Date:                    20/12/18  
Reporting Date:                            21/12/18  
  
Registered:                                 20/12/18  
Prepared:                                    21/12/18  
Analysis complete:                        21/12/18

### TEST METHOD SUMMARY

PARAMETER	Analysis Undertaken on	Date Tested	Method Number	Technique
Carbon Banding (TPH CWG)	As submitted sample	20/12/18	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

---

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

---