Information in Support of the Analytical Results

Our Ref 14-21207
Client Ref 141118-67
Contract 141118-67

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
734775	10405093 1.00 SOIL	13/11/14	PT 500ml		
734776	10405080 1.00 SOIL	13/11/14	PT 500ml		
734777	10405101 0.50 SOIL	13/11/14	PT 500ml		
734778	10405138 0.50 SOIL	13/11/14	PT 500ml		
734779	10405194 0.75 SOIL	13/11/14	PT 500ml		
734780	10405168 0.50 SOIL	13/11/14	PT 500ml		
734781	10404795 1.00 SOIL	13/11/14	PT 500ml		
734782	10403145 0.50 SOIL	13/11/14	PT 500ml		
734783	10403098 0.50 SOIL	13/11/14	PT 500ml		
734784	10403186 1.00 SOIL	13/11/14	PT 500ml		
734785	10403104 0.50 SOIL	13/11/14	PT 500ml		
734786	10403135 0.50 SOIL	13/11/14	PT 500ml		
734787	10405119 1.00 SOIL	13/11/14	PT 500ml		
734788	10403151 1.00 SOIL	13/11/14	PT 500ml		
734789	10405089 0.50 SOIL	13/11/14	PT 500ml		
734790	10405219 0.50 SOIL	13/11/14	PT 500ml		
734791	10405179 1.00 SOIL	13/11/14	PT 500ml		
734792	10403233 0.50 SOIL	13/11/14	PT 500ml		
734793	10405107 1.00 SOIL	13/11/14	PT 500ml		
734794	10404803 0.50 SOIL	13/11/14	PT 500ml		
734795	10403152 0.50 SOIL	13/11/14	PT 500ml		
734796	10405228 0.50 SOIL	13/11/14	PT 500ml		
734797	10404809 1.00 SOIL	13/11/14	PT 500ml		
734798	10405234 0.50 SOIL	13/11/14	PT 500ml		
734799	10407002 0.50 SOIL	13/11/14	PT 500ml		

Key: P-Plastic T-Tub

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

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

SDG:	141118-67	**Location:**	Coed Darcy	**Order Number:**	CD0980
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	300144
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299977

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. Samples will be run in duplicate upon request, but an additional charge may be incurred

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before presevation was performed
§	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

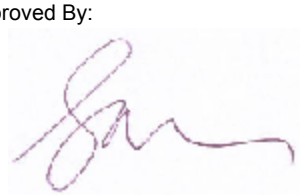
Date:	08 December 2014
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141114-122
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	294719

We received 44 samples on Friday November 14, 2014 and 44 of these samples were scheduled for analysis which was completed on Monday December 08, 2014. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10384070	IP1069		1.00	12/11/2014
10384148	IP1069		2.00	12/11/2014
10384199	IP1070		1.00	12/11/2014
10384301	IP1071		1.00	12/11/2014
10384306	IP1071		2.00	12/11/2014
10384179	IP1073		0.50	12/11/2014
10384184	IP1073		1.00	12/11/2014
10384164	IP1110		0.50	12/11/2014
10384170	IP1110		1.50	12/11/2014
10384175	IP1110		2.50	12/11/2014
10384152	IP1111		1.00	12/11/2014
10384156	IP1111		2.00	12/11/2014
10384160	IP1111		3.00	12/11/2014
10384136	IP1112		1.00	12/11/2014
10384140	IP1112		2.00	12/11/2014
10384144	IP1112		3.00	12/11/2014
10384083	IP1113		1.00	12/11/2014
10384090	IP1113		2.00	12/11/2014
10384099	IP1114		1.00	12/11/2014
10384107	IP1114		2.00	12/11/2014
10384292	IP1115		1.00	12/11/2014
10384296	IP1115		2.00	12/11/2014
10384260	IP1116		0.50	12/11/2014
10384288	IP1116		1.50	12/11/2014
10384115	IP1194		1.00	12/11/2014
10384122	IP1194		2.00	12/11/2014
10384131	IP1194		3.00	12/11/2014
10384246	IP1195		0.50	12/11/2014
10384250	IP1195		1.50	12/11/2014
10384255	IP1195		2.50	12/11/2014
10384265	IP1195		3.50	12/11/2014
10384270	IP1196		0.50	12/11/2014
10384275	IP1196		1.50	12/11/2014
10384280	IP1196		2.50	12/11/2014
10384284	IP1196		3.50	12/11/2014
10384222	IP1197		0.50	12/11/2014
10384234	IP1197		1.50	12/11/2014
10384238	IP1197		2.50	12/11/2014
10384242	IP1197		3.50	12/11/2014
10384194	IP1198		0.50	12/11/2014
10384205	IP1198		1.50	12/11/2014
10384210	IP1198		2.50	12/11/2014
10384218	IP1198		3.50	12/11/2014
10384188	IP1199		0.50	12/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- **X** Test
- **N** No Determination Possible

Lab Sample No(s)			10384070			10384148			10384199			10384301			10384306			10384179			10384184			10384164			10384170			10384175			10384152			10384156			10384160			10384136
Customer Sample Reference			IP1069			IP1069			IP1070			IP1071			IP1071			IP1073			IP1073			IP1110			IP1110			IP1110			IP1111			IP1111			IP1111			IP1112
AGS Reference																																										
Depth (m)			1.00			2.00			1.00			1.00			2.00			0.50			1.00			0.50			1.50			2.50			1.00			2.00			3.00			1.00
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16											X						X			X			X									X								
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X			X			X			X			X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X			X			X			X			X			X			X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 44			X			X			X			X			X			X			X			X			X			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 44	X			X			X			X			X			X			X			X			X			X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 44	X			X			X			X			X			X			X			X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 44		X			X			X			X			X			X			X			X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X			X			X			X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 7	X						X																																	
TPH CWG GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X			X			X			X			X			X			X			X			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16	10384136	IP1112		1.00	400g Tub (ALE214)
			10384140	IP1112		2.00	60g VOC (ALE215)
			10384144	IP1112		3.00	250g Amber Jar (AL
			10384083	IP1113		1.00	400g Tub (ALE214)
			10384090	IP1113		2.00	60g VOC (ALE215)
			10384099	IP1114		1.00	250g Amber Jar (AL
			10384107	IP1114		2.00	400g Tub (ALE214)
			10384292	IP1115		1.00	60g VOC (ALE215)
			10384296	IP1115		2.00	250g Amber Jar (AL
			10384260	IP1116		0.50	400g Tub (ALE214)
			10384288	IP1116		1.50	60g VOC (ALE215)
			10384115	IP1194		1.00	250g Amber Jar (AL
			10384122	IP1194		2.00	400g Tub (ALE214)
			10384131	IP1194		3.00	60g VOC (ALE215)
							250g Amber Jar (AL
							400g Tub (ALE214)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 44					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 44					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 44					
Metals in solid samples by OES	All	NDPs: 0 Tests: 44					
PAH by GCMS	All	NDPs: 0 Tests: 44					
pH	All	NDPs: 0 Tests: 44					
Sample description	All	NDPs: 0 Tests: 38					
Total Organic Carbon	All	NDPs: 0 Tests: 7					
TPH CWG GC (S)	All	NDPs: 0 Tests: 44					

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)	10384131	10384246	10384250	10384255	10384265	10384270	10384275	10384280	10384284	10384222	10384234	10384238	10384242	10384194
Customer Sample Reference	IP1194	IP1195	IP1195	IP1195	IP1195	IP1196	IP1196	IP1196	IP1196	IP1197	IP1197	IP1197	IP1197	IP1198
AGS Reference														
Depth (m)	3.00	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50	0.50
Container	60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar (AL 400g Tub (ALE214) 60g VOC (ALE215)

Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16		X			X				X				X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 44	X		X		X	X	X		X		X	X		X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 44	X		X		X	X	X		X		X	X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 44	X	X		X		X		X		X		X		X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 44	X		X		X	X	X		X		X	X		X	
PAH by GCMS	All	NDPs: 0 Tests: 44	X		X		X	X	X		X		X	X		X	
pH	All	NDPs: 0 Tests: 44		X		X		X		X		X		X		X	X
Sample description	All	NDPs: 0 Tests: 38	X		X		X	X	X		X		X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 7	X						X							X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 44	X		X		X	X	X		X		X	X		X	

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)			10384205			10384210			10384218			10384188		
Customer Sample Reference			IP1198			IP1198			IP1198			IP1199		
AGS Reference														
Depth (m)			1.50			2.50			3.50			0.50		
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16											X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 44			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 44	X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 44	X			X			X			X		
pH	All	NDPs: 0 Tests: 44		X			X			X			X	
Sample description	All	NDPs: 0 Tests: 38							X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 44	X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10384070	IP1069	1.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation	None
10384148	IP1069	2.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation	None
10384199	IP1070	1.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation	None
10384301	IP1071	1.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10384306	IP1071	2.00	Light Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10384179	IP1073	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10384184	IP1073	1.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10384164	IP1110	0.50	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10384170	IP1110	1.50	Light Brown	Sandy Silt Loam	0.1 - 2 mm	None	None
10384175	IP1110	2.50	Light Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10384152	IP1111	1.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384156	IP1111	2.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384160	IP1111	3.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384136	IP1112	1.00	Black	Gravel	0.1 - 2 mm	N/A	Stones
10384140	IP1112	2.00	Light Brown	Clay	<0.063 mm	None	None
10384144	IP1112	3.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10384083	IP1113	1.00	Light Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10384090	IP1113	2.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384099	IP1114	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384107	IP1114	2.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10384292	IP1115	1.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10384296	IP1115	2.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384260	IP1116	0.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10384288	IP1116	1.50	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Vegetation	None
10384115	IP1194	1.00	Black	Clinker	0.1 - 2 mm	N/A	Stones
10384122	IP1194	2.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384131	IP1194	3.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384246	IP1195	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10384250	IP1195	1.50	Black	Gravel	0.1 - 2 mm	Stones	None
10384255	IP1195	2.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384265	IP1195	3.50	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones	Coal fragments
10384270	IP1196	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384275	IP1196	1.50	Black	Gravel	2 - 10 mm	None	None
10384280	IP1196	2.50	Black	N/A	0.1 - 2 mm	Stones	None
10384284	IP1196	3.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10384222	IP1197	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10384234	IP1197	1.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10384238	IP1197	2.50	Dark Brown	N/A	0.1 - 2 mm	Stones	None

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

			Colour	Description	Grain size	Inclusions	Inclusions 2
10384242	IP1197	3.50	Light Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10384194	IP1198	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10384205	IP1198	1.50	Black	N/A	0.1 - 2 mm	Stones	None
10384210	IP1198	2.50	Black	N/A	2 - 10 mm	Stones	None
10384218	IP1198	3.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10384188	IP1199	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	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:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1069	IP1069	IP1070	IP1071	IP1071	IP1073
			Depth (m)	1.00	2.00	1.00	1.00	2.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384070	10384148	10384199	10384301	10384306	10384179
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	23	23	11	12	19
Actinolite*	-	SUB (ASB)					Not Detected #		Not Detected #
Amosite*	-	SUB (ASB)					Not Detected #		Not Detected #
Anthophyllite*	-	SUB (ASB)					Not Detected #		Not Detected #
Chrysotile*	-	SUB (ASB)					Not Detected #		Not Detected #
Crocidolite*	-	SUB (ASB)					Not Detected #		Not Detected #
Tremolite*	-	SUB (ASB)					Not Detected #		Not Detected #
Non-Asbestos Fibres Detected	-	SUB (ASB)					Not Detected #		Not Detected #
Soil Organic Matter (SOM)	<0.35 %	TM132		2.67 #		5.41 #			
pH	1 pH Units	TM133		6.44 M	7.6 M	6.27 M	7.05 M	7.47 M	7.96 M
Arsenic	<0.6 mg/kg	TM181		8.38 M	18.2 M	53.2 M	8.07 M	8.58 M	18.4 M
Cadmium	<0.02 mg/kg	TM181		0.027 M	0.0749 M	<0.02 M	<0.02 M	<0.02 M	0.324 M
Chromium	<0.9 mg/kg	TM181		14.9 M	18.1 M	14.6 M	12.6 M	13.2 M	12.5 M
Copper	<1.4 mg/kg	TM181		18.5 M	27.8 M	44.6 M	12.8 M	12 M	54.1 M
Lead	<0.7 mg/kg	TM181		23.5 M	64.1 M	38.6 M	13.5 M	11.5 M	80.6 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	<0.14 M	0.189 M
Nickel	<0.2 mg/kg	TM181		24 M	21.3 M	27.9 M	20.7 M	28.5 M	19.2 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		19.6 #	23.8 #	23.1 #	15 #	15.8 #	18.2 #
Zinc	<1.9 mg/kg	TM181		77.4 M	322 M	115 M	47.9 M	73.3 M	200 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1073	IP1110	IP1110	IP1110	IP1111	IP1111
			Depth (m)	1.00	0.50	1.50	2.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384184	10384164	10384170	10384175	10384152	10384156
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	11	18	9.9	18	17
Actinolite*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Amosite*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Anthophyllite*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Chrysotile*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Crocidolite*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Tremolite*	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
Non-Asbestos Fibres Detected	-	SUB (ASB)		Not Detected #	Not Detected #			Not Detected #	
pH	1 pH Units	TM133		6.59 M	6.95 M	6.14 M	5.61 M	5.87 M	6.01 M
Arsenic	<0.6 mg/kg	TM181		10.3 M	13.2 M	9.85 M	8.99 M	6.02 M	16 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.02 M	<0.02 M	0.0626 M	0.0545 M
Chromium	<0.9 mg/kg	TM181		15.2 M	15.3 M	17.6 M	14.4 M	13.4 M	14 M
Copper	<1.4 mg/kg	TM181		31.8 M	20.5 M	17.2 M	16.1 M	6.83 M	36.2 M
Lead	<0.7 mg/kg	TM181		27.8 M	17.2 M	12.5 M	14.9 M	11.3 M	51.1 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		18.2 M	14.4 M	16 M	27.8 M	12.9 M	24.2 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		20.9 #	18.8 #	20.5 #	14.5 #	19.4 #	18.2 #
Zinc	<1.9 mg/kg	TM181		73.4 M	46.2 M	47.6 M	73.2 M	42.3 M	127 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1111	IP1112	IP1112	IP1112	IP1113	IP1113
			Depth (m)	3.00	1.00	2.00	3.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384160	10384136	10384140	10384144	10384083	10384090
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	28	23	9.6	20	10
Actinolite*	-	SUB (ASB)			Not Detected #			Not Detected #	
Amosite*	-	SUB (ASB)			Not Detected #			Not Detected #	
Anthophyllite*	-	SUB (ASB)			Not Detected #			Not Detected #	
Chrysotile*	-	SUB (ASB)			Not Detected #			Not Detected #	
Crocidolite*	-	SUB (ASB)			Not Detected #			Not Detected #	
Tremolite*	-	SUB (ASB)			Not Detected #			Not Detected #	
Non-Asbestos Fibres Detected	-	SUB (ASB)			Not Detected #			Not Detected #	
Soil Organic Matter (SOM)	<0.35 %	TM132					1.49 #	3.15 #	
pH	1 pH Units	TM133		6.97 M	6.73 #	5.06 M	6.5 M	5.33 M	6.25 M
Arsenic	<0.6 mg/kg	TM181		8.32 M	23.7 #	20.3 M	7.09 M	11.8 M	8.37 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.138 #	0.156 M	<0.02 M	<0.02 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		11.1 M	8.04 #	20.8 M	11.2 M	16.5 M	12.9 M
Copper	<1.4 mg/kg	TM181		12.7 M	46.8 #	19.5 M	10.5 M	18.1 M	15.9 M
Lead	<0.7 mg/kg	TM181		14.5 M	40.8 #	18 M	10.7 M	23.3 M	23.2 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 #	<0.14 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		25.2 M	26 #	14.2 M	24.9 M	20.7 M	27.9 M
Selenium	<1 mg/kg	TM181		<1 #	1.46 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		13.4 #	18.4 #	43.6 #	13.6 #	20.6 #	16 #
Zinc	<1.9 mg/kg	TM181		64.3 M	72.1 #	67.6 M	70.4 M	80.8 M	80.5 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1114	IP1114	IP1115	IP1115	IP1116	IP1116
			Depth (m)	1.00	2.00	1.00	2.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384099	10384107	10384292	10384296	10384260	10384288
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	21	31	20	24	26
Actinolite*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Amosite*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Anthophyllite*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Chrysotile*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Crocidolite*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Tremolite*	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
Non-Asbestos Fibres Detected	-	SUB (ASB)		Not Detected #		Not Detected #		Not Detected #	
pH	1 pH Units	TM133		5.51 M	6.56 M	7.76 M	6.46 M	7.43 M	4.65 M
Arsenic	<0.6 mg/kg	TM181		6.77 M	10.6 M	18.2 M	10.3 M	76.4 M	54.9 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.233 M	<0.02 M	<0.02 M	0.0871 M	0.947 M
Chromium	<0.9 mg/kg	TM181		14.1 M	17 M	9.84 M	17.1 M	8.52 M	15.4 M
Copper	<1.4 mg/kg	TM181		14 M	40.1 M	42.8 M	26.3 M	40.6 M	102 M
Lead	<0.7 mg/kg	TM181		18 M	70.2 M	20.7 M	15.4 M	24.7 M	28.3 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	0.3 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		15.3 M	23.1 M	30.7 M	21.4 M	35.5 M	21 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	2.73 #	<1 #
Vanadium	<0.2 mg/kg	TM181		16.6 #	23.9 #	27.7 #	21.9 #	26.1 #	29.8 #
Zinc	<1.9 mg/kg	TM181		76.7 M	143 M	47.2 M	64.6 M	114 M	126 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1194	IP1194	IP1194	IP1195	IP1195	IP1195
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384115	10384122	10384131	10384246	10384250	10384255
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	26	15	14	28	24
Actinolite*	-	SUB (ASB)		Not Detected #			Not Detected #		
Amosite*	-	SUB (ASB)		Not Detected #			Not Detected #		
Anthophyllite*	-	SUB (ASB)		Not Detected #			Not Detected #		
Chrysotile*	-	SUB (ASB)		Not Detected #			Not Detected #		
Crocidolite*	-	SUB (ASB)		Not Detected #			Not Detected #		
Tremolite*	-	SUB (ASB)		Not Detected #			Not Detected #		
Non-Asbestos Fibres Detected	-	SUB (ASB)		Not Detected #			Not Detected #		
Soil Organic Matter (SOM)	<0.35 %	TM132					5.55 #		
pH	1 pH Units	TM133		5.26 #	6.08 M	6.73 M	7.8 M	6.27 #	5.48 M
Arsenic	<0.6 mg/kg	TM181		11.9 #	23.9 M	8.02 M	35.5 M	25.2 #	13.1 M
Cadmium	<0.02 mg/kg	TM181		<0.02 #	<0.02 M	<0.02 M	0.585 M	<0.02 #	<0.02 M
Chromium	<0.9 mg/kg	TM181		6.33 #	15.8 M	12.5 M	16.4 M	9.53 #	14.4 M
Copper	<1.4 mg/kg	TM181		33 #	24.6 M	18.8 M	161 M	50.5 #	19.5 M
Lead	<0.7 mg/kg	TM181		10.3 #	17.8 M	15.8 M	135 M	20.9 #	15.3 M
Mercury	<0.14 mg/kg	TM181		<0.14 #	<0.14 M	<0.14 M	<0.14 M	<0.14 #	<0.14 M
Nickel	<0.2 mg/kg	TM181		21.2 #	16.7 M	23.7 M	27.7 M	35 #	22.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		18.1 #	23.9 #	17.4 #	23.2 #	33.3 #	21.5 #
Zinc	<1.9 mg/kg	TM181		26.2 #	64.5 M	54.7 M	302 M	41.4 #	65 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1195	IP1196	IP1196	IP1196	IP1196	IP1197
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384265	10384270	10384275	10384280	10384284	10384222
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.1	10	26	25	17	11
Actinolite*	-	SUB (ASB)			Not Detected #				Not Detected #
Amosite*	-	SUB (ASB)			Not Detected #				Not Detected #
Anthophyllite*	-	SUB (ASB)			Not Detected #				Not Detected #
Chrysotile*	-	SUB (ASB)			Not Detected #				Not Detected #
Crocidolite*	-	SUB (ASB)			Not Detected #				Not Detected #
Tremolite*	-	SUB (ASB)			Not Detected #				Not Detected #
Non-Asbestos Fibres Detected	-	SUB (ASB)			Not Detected #				Not Detected #
Soil Organic Matter (SOM)	<0.35 %	TM132				37.6 #			
pH	1 pH Units	TM133		6.84 M	6.12 M	6.24 #	5.89	8.31 M	7.34 M
Arsenic	<0.6 mg/kg	TM181		8.86 M	9.73 M	15.8 #	12.3	24.1 M	59.8 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.02 #	<0.02	0.202 M	0.69 M
Chromium	<0.9 mg/kg	TM181		10.9 M	13.2 M	12.4 #	13.2	15.9 M	16.4 M
Copper	<1.4 mg/kg	TM181		11.3 M	14.3 M	28.6 #	33.5	56.3 M	189 M
Lead	<0.7 mg/kg	TM181		10.1 M	13.2 M	15.8 #	13.7	76.3 M	421 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 #	<0.14	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		26.6 M	29.7 M	18.5 #	16.6	17.9 M	33.6 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	1.23	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		13 #	16.4 #	23.2 #	22	21.4 #	18.5 #
Zinc	<1.9 mg/kg	TM181		59.4 M	69 M	40.9 #	42.2	206 M	1070 M

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1197	IP1197	IP1197	IP1198	IP1198	IP1198
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384234	10384238	10384242	10384194	10384205	10384210
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		39	41	26	12	31	33
Actinolite*	-	SUB (ASB)					Not Detected #		
Amosite*	-	SUB (ASB)					Not Detected #		
Anthophyllite*	-	SUB (ASB)					Not Detected #		
Chrysotile*	-	SUB (ASB)					Not Detected #		
Crocidolite*	-	SUB (ASB)					Not Detected #		
Tremolite*	-	SUB (ASB)					Not Detected #		
Non-Asbestos Fibres Detected	-	SUB (ASB)					Not Detected #		
Soil Organic Matter (SOM)	<0.35 %	TM132					3.86 #		
pH	1 pH Units	TM133		7.68 M	7.86	6.02 M	7.34 M	8.39	6.86
Arsenic	<0.6 mg/kg	TM181		15.4 M	10.1	12.5 M	77.2 M	16	22
Cadmium	<0.02 mg/kg	TM181		0.35 M	0.698	0.0353 M	0.813 M	0.182	1.36
Chromium	<0.9 mg/kg	TM181		8.7 M	12.4	14.6 M	17.9 M	21.4	17.4
Copper	<1.4 mg/kg	TM181		49.9 M	45.2	29.7 M	234 M	67.7	113
Lead	<0.7 mg/kg	TM181		50.7 M	58.5	37.1 M	555 M	22.3	97.7
Mercury	<0.14 mg/kg	TM181		2.02 M	2.85	1.42 M	<0.14 M	0.572	1.55
Nickel	<0.2 mg/kg	TM181		26.5 M	33	27.2 M	39.6 M	44.7	46.6
Selenium	<1 mg/kg	TM181		<1 #	<1	<1 #	<1 #	<1	<1
Vanadium	<0.2 mg/kg	TM181		26.6 #	36.2	30.7 #	22.8 #	62.1	40.8
Zinc	<1.9 mg/kg	TM181		229 M	380	64.8 M	1280 M	110	443

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1198	IP1199				
			Depth (m)	3.50	0.50				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	12/11/2014	12/11/2014				
			Sample Time	.	.				
			Date Received	14/11/2014	14/11/2014				
			SDG Ref	141114-122	141114-122				
			Lab Sample No.(s)	10384218	10384188				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		28	16				
Actinolite*	-	SUB (ASB)			Not Detected #				
Amosite*	-	SUB (ASB)			Not Detected #				
Anthophyllite*	-	SUB (ASB)			Not Detected #				
Chrysotile*	-	SUB (ASB)			Not Detected #				
Crocidolite*	-	SUB (ASB)			Not Detected #				
Tremolite*	-	SUB (ASB)			Not Detected #				
Non-Asbestos Fibres Detected	-	SUB (ASB)			Not Detected #				
pH	1 pH Units	TM133		6.73 M	8.06 M				
Arsenic	<0.6 mg/kg	TM181		38.3 M	75 M				
Cadmium	<0.02 mg/kg	TM181		1.46 M	0.746 M				
Chromium	<0.9 mg/kg	TM181		18.8 M	21.8 M				
Copper	<1.4 mg/kg	TM181		121 M	395 M				
Lead	<0.7 mg/kg	TM181		232 M	449 M				
Mercury	<0.14 mg/kg	TM181		0.757 M	0.563 M				
Nickel	<0.2 mg/kg	TM181		40.7 M	29.3 M				
Selenium	<1 mg/kg	TM181		<1 #	<1 #				
Vanadium	<0.2 mg/kg	TM181		54.4 #	30.3 #				
Zinc	<1.9 mg/kg	TM181		391 M	988 M				

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1069	IP1069	IP1070	IP1071	IP1071	IP1073
			Depth (m)	1.00	2.00	1.00	1.00	2.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384070	10384148	10384199	10384301	10384306	10384179
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		102	106	105	97.3	95	103
Acenaphthene-d10 % recovery**	%	TM218		98.3	106	103	94.2	93.5	103
Phenanthrene-d10 % recovery**	%	TM218		98.3	101	98.6	92.3	91.6	99.7
Chrysene-d12 % recovery**	%	TM218		89.8	98.7	99.6	87.8	92.8	106
Perylene-d12 % recovery**	%	TM218		85.5	88.8	89	86.8	99.9	114
Naphthalene	<9 µg/kg	TM218		<9 ♦ M	217 ♦ M	<9 ♦ M	19.4 ♦ M	<9 ♦ M	113 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	54.7 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	216 ♦ M	<8 ♦ M	16.9 ♦ M	<8 ♦ M	39.5 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	68 ♦ M	<10 ♦ M	28.2 ♦ M	<10 ♦ M	59.8 ♦ M
Phenanthrene	<15 µg/kg	TM218		19.8 ♦ M	123 ♦ M	38.2 ♦ M	54.7 ♦ M	34.6 ♦ M	270 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	<16 ♦ M	<16 ♦ M	<16 ♦ M	<16 ♦ M	115 ♦ M
Fluoranthene	<17 µg/kg	TM218		<17 ♦ M	96 ♦ M	<17 ♦ M	66.9 ♦ M	<17 ♦ M	685 ♦ M
Pyrene	<15 µg/kg	TM218		<15 ♦ M	69.9 ♦ M	29.6 ♦ M	51.8 ♦ M	<15 ♦ M	681 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 ♦ M	31 ♦ M	<14 ♦ M	41.6 ♦ M	<14 ♦ M	586 ♦ M
Chrysene	<10 µg/kg	TM218		14.1 ♦ M	28.9 ♦ M	36.8 ♦ M	44.9 ♦ M	26.7 ♦ M	528 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		39.5 ♦ M	50.8 ♦ M	71 ♦ M	58.2 ♦ M	43.5 ♦ M	1190 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	<14 ♦ M	<14 ♦ M	21.4 ♦ M	<14 ♦ M	353 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	23.3 ♦ M	<15 ♦ M	23.8 ♦ M	<15 ♦ M	849 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	<18 ♦ M	<18 ♦ M	<18 ♦ M	<18 ♦ M	538 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	<23 ♦ M	<23 ♦ M	<23 ♦ M	<23 ♦ M	167 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	706 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	923	176	428	<118	6940

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1073	IP1110	IP1110	IP1110	IP1111	IP1111
			Depth (m)	1.00	0.50	1.50	2.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384184	10384164	10384170	10384175	10384152	10384156
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.5	101	97.2	96.9	98	98.8
Acenaphthene-d10 % recovery**	%	TM218		94.3	102	93.4	93.2	96.2	97.3
Phenanthrene-d10 % recovery**	%	TM218		92	98.3	89.2	91.1	95	95.2
Chrysene-d12 % recovery**	%	TM218		89.2	85.8	83	85.3	91.3	91.7
Perylene-d12 % recovery**	%	TM218		89.7	89.4	80	83.6	89.6	90
Naphthalene	<9 µg/kg	TM218		20.1 ♦ M	<9 ♦ M	17.7 ♦ M	<9 ♦ M	1270 ♦ M	210 ♦ 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	183 ♦ M	25.6 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	<10 ♦ M	<10 ♦ M	<10 ♦ M	458 ♦ M	53.1 ♦ M
Phenanthrene	<15 µg/kg	TM218		286 ♦ M	291 ♦ M	86.5 ♦ M	54.5 ♦ M	890 ♦ M	351 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	293 ♦ M	<16 ♦ M	<16 ♦ M	50.8 ♦ M	<16 ♦ M
Fluoranthene	<17 µg/kg	TM218		41.6 ♦ M	<17 ♦ M	<17 ♦ M	<17 ♦ M	<17 ♦ M	118 ♦ M
Pyrene	<15 µg/kg	TM218		42.9 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M	21.7 ♦ M	175 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		35.5 ♦ M	241 ♦ M	<14 ♦ M	22.9 ♦ M	25.7 ♦ M	59.2 ♦ M
Chrysene	<10 µg/kg	TM218		120 ♦ M	219 ♦ M	26 ♦ M	37.6 ♦ M	30.6 ♦ M	131 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		126 ♦ M	165 ♦ M	22.7 ♦ M	58.6 ♦ M	<15 ♦ M	296 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		19.2 ♦ M	138 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M	47.8 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M	38 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	<18 ♦ M	<18 ♦ M	<18 ♦ M	<18 ♦ M	31.3 ♦ 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	30.7 ♦ M	<24 ♦ M	37.3 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		691	1350	153	204	2940	1570

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1111	IP1112	IP1112	IP1112	IP1113	IP1113
			Depth (m)	3.00	1.00	2.00	3.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384160	10384136	10384140	10384144	10384083	10384090
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.1	97.3	100	96	103	98.2
Acenaphthene-d10 % recovery**	%	TM218		92.2	97	97.7	95.1	103	97.4
Phenanthrene-d10 % recovery**	%	TM218		89.2	89	94.4	92.1	100	94.8
Chrysene-d12 % recovery**	%	TM218		84.3	86.5	92	90.3	100	95.8
Perylene-d12 % recovery**	%	TM218		83.3	81.5	95.6	93.3	90.6	85.4
Naphthalene	<9 µg/kg	TM218		13.5 ♦ M	101 ♦ #	<9 ♦ M	<9 ♦ M	<9 ♦ M	<9 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	41.1 ♦ #	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	126 ♦ #	<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	209 ♦ #	<10 ♦ M	<10 ♦ M	<10 ♦ M	<10 ♦ M
Phenanthrene	<15 µg/kg	TM218		51.5 ♦ M	3180 ♦ #	<15 ♦ M	38.7 ♦ M	31.2 ♦ M	70.8 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	725 ♦ #	<16 ♦ M	<16 ♦ M	<16 ♦ M	<16 ♦ M
Fluoranthene	<17 µg/kg	TM218		<17 ♦ M	6240 ♦ #	<17 ♦ M	<17 ♦ M	<17 ♦ M	39.8 ♦ M
Pyrene	<15 µg/kg	TM218		<15 ♦ M	3910 ♦ #	<15 ♦ M	<15 ♦ M	<15 ♦ M	41.5 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 ♦ M	3910 ♦ #	<14 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M
Chrysene	<10 µg/kg	TM218		23 ♦ M	3790 ♦ #	<10 ♦ M	21.1 ♦ M	14.7 ♦ M	68.4 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		36 ♦ M	4420 ♦ #	<15 ♦ M	28 ♦ M	26.7 ♦ M	78.9 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	1400 ♦ #	<14 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	2290 ♦ #	<15 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	1040 ♦ #	<18 ♦ M	<18 ♦ M	<18 ♦ M	<18 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	547 ♦ #	<23 ♦ M	<23 ♦ M	<23 ♦ M	<23 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ M	938 ♦ #	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		124	32900	<118	<118	<118	299

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1114	IP1114	IP1115	IP1115	IP1116	IP1116
			Depth (m)	1.00	2.00	1.00	2.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384099	10384107	10384292	10384296	10384260	10384288
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.4	97.8	120	101	115	106
Acenaphthene-d10 % recovery**	%	TM218		99.3	96.4	119	100	116	107
Phenanthrene-d10 % recovery**	%	TM218		98.3	93.2	104	96.3	101	103
Chrysene-d12 % recovery**	%	TM218		96.9	89.8	88.2	97.8	85.3	106
Perylene-d12 % recovery**	%	TM218		106	89.3	63.4	89	63.7	103
Naphthalene	<9 µg/kg	TM218		<9 ♦ M	38 ♦ M	66.5 ♦ M	16.7 ♦ M	58.3 ♦ M	22.7 ♦ 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	18.2 ♦ M	<10 ♦ M	<10 ♦ M	<10 ♦ M	<10 ♦ M
Phenanthrene	<15 µg/kg	TM218		50.1 ♦ M	103 ♦ M	225 ♦ M	44.9 ♦ M	118 ♦ M	45 ♦ 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	125 ♦ M	39.2 ♦ M	<17 ♦ M	25.8 ♦ M	<17 ♦ M
Pyrene	<15 µg/kg	TM218		<15 ♦ M	102 ♦ M	24.5 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		28.9 ♦ M	52.3 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M
Chrysene	<10 µg/kg	TM218		26.3 ♦ M	88.1 ♦ M	99.8 ♦ M	28.2 ♦ M	36.7 ♦ M	<10 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		42.1 ♦ M	125 ♦ M	78.6 ♦ M	55.3 ♦ M	43.2 ♦ M	<15 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	47.2 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M	<14 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	59.3 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M	<15 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	41.3 ♦ 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	56.7 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		147	856	534	145	282	<118

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1194	IP1194	IP1194	IP1195	IP1195	IP1195
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384115	10384122	10384131	10384246	10384250	10384255
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		115	99.6	97.8	92.6	96.8	111
Acenaphthene-d10 % recovery**	%	TM218		112	97	98	89.7	94.7	111
Phenanthrene-d10 % recovery**	%	TM218		96.5	91.7	95	86.6	74.2	105
Chrysene-d12 % recovery**	%	TM218		68.9	85.2	94	88	35.9	87.1
Perylene-d12 % recovery**	%	TM218		50.9	83.2	100	85.8	16.4	85
Naphthalene	<9 µg/kg	TM218		535 ♦ #	33.1 ♦ M	<9 ♦ M	196 ♦ M	363 ♦ #	74.1 ♦ M
Acenaphthylene	<12 µg/kg	TM218		73.5 ♦ #	<12 ♦ M	<12 ♦ M	257 ♦ M	52.9 ♦ #	<12 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ #	<8 ♦ M	<8 ♦ M	202 ♦ M	<8 ♦ #	19.1 ♦ M
Fluorene	<10 µg/kg	TM218		45.1 ♦ #	<10 ♦ M	<10 ♦ M	227 ♦ M	17.5 ♦ #	<10 ♦ M
Phenanthrene	<15 µg/kg	TM218		430 ♦ #	42.9 ♦ M	73.6 ♦ M	2330 ♦ M	207 ♦ #	46.7 ♦ M
Anthracene	<16 µg/kg	TM218		21.9 ♦ #	<16 ♦ M	<16 ♦ M	755 ♦ M	<16 ♦ #	<16 ♦ M
Fluoranthene	<17 µg/kg	TM218		71.6 ♦ #	<17 ♦ M	<17 ♦ M	6120 ♦ M	58.9 ♦ #	<17 ♦ M
Pyrene	<15 µg/kg	TM218		101 ♦ #	<15 ♦ M	25.5 ♦ M	4770 ♦ M	45.3 ♦ #	21.8 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		33 ♦ #	19.9 ♦ M	<14 ♦ M	3400 ♦ M	<14 ♦ #	27.7 ♦ M
Chrysene	<10 µg/kg	TM218		95.2 ♦ #	15.5 ♦ M	42.3 ♦ M	3260 ♦ M	39.1 ♦ #	21.6 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		49.9 ♦ #	<15 ♦ M	32.1 ♦ M	5330 ♦ M	32.3 ♦ #	57.2 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ #	<14 ♦ M	<14 ♦ M	1800 ♦ M	<14 ♦ #	<14 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ #	<15 ♦ M	<15 ♦ M	3550 ♦ M	<15 ♦ #	<15 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ #	<18 ♦ M	<18 ♦ M	2060 ♦ M	<18 ♦ #	<18 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ #	<23 ♦ M	<23 ♦ M	702 ♦ M	<23 ♦ #	<23 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ #	<24 ♦ M	<24 ♦ M	2420 ♦ M	<24 ♦ #	<24 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1460	<118	173	37400	816	268

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1195	IP1196	IP1196	IP1196	IP1196	IP1197
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384265	10384270	10384275	10384280	10384284	10384222
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.7	94.5	108	94.1	98.3	96.4
Acenaphthene-d10 % recovery**	%	TM218		93.4	93	105	92.2	97.2	96.7
Phenanthrene-d10 % recovery**	%	TM218		91.2	90.7	87.4	89.2	94.2	95.5
Chrysene-d12 % recovery**	%	TM218		89.7	88.5	52.1	84.3	95.2	100
Perylene-d12 % recovery**	%	TM218		91.8	92.4	31.9	84.7	91.8	106
Naphthalene	<9 µg/kg	TM218		9.94 ♦ M	<9 ♦ M	79.3 ♦ #	14 ♦	16.9 ♦ M	104 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	<12 ♦ M	<12 ♦ #	<12 ♦	<12 ♦ M	30.7 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	<8 ♦ M	<8 ♦ #	<8 ♦	<8 ♦ M	80.2 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	<10 ♦ M	<10 ♦ #	<10 ♦	<10 ♦ M	160 ♦ M
Phenanthrene	<15 µg/kg	TM218		21.3 ♦ M	48.7 ♦ M	123 ♦ #	56.4 ♦	89.5 ♦ M	1410 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	<16 ♦ M	<16 ♦ #	<16 ♦	<16 ♦ M	303 ♦ M
Fluoranthene	<17 µg/kg	TM218		<17 ♦ M	<17 ♦ M	31.3 ♦ #	<17 ♦	39.1 ♦ M	2370 ♦ M
Pyrene	<15 µg/kg	TM218		<15 ♦ M	<15 ♦ M	22.6 ♦ #	<15 ♦	29.8 ♦ M	1810 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 ♦ M	<14 ♦ M	<14 ♦ #	<14 ♦	26 ♦ M	1650 ♦ M
Chrysene	<10 µg/kg	TM218		12.9 ♦ M	31.2 ♦ M	22.7 ♦ #	30.5 ♦	72.4 ♦ M	1340 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		30.8 ♦ M	33.5 ♦ M	<15 ♦ #	43.4 ♦	88.2 ♦ M	1680 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	<14 ♦ M	<14 ♦ #	<14 ♦	22.1 ♦ M	748 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	<15 ♦ M	<15 ♦ #	<15 ♦	31.5 ♦ M	1180 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	<18 ♦ M	<18 ♦ #	<18 ♦	31.5 ♦ M	663 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	<23 ♦ M	<23 ♦ #	<23 ♦	<23 ♦ M	271 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ M	<24 ♦ M	<24 ♦ #	<24 ♦	48.1 ♦ M	688 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	279	144	495	14500

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1197	IP1197	IP1197	IP1198	IP1198	IP1198
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384234	10384238	10384242	10384194	10384205	10384210
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		113	108	85.5	94.9	102	102
Acenaphthene-d10 % recovery**	%	TM218		117	109	88	93.8	102	101
Phenanthrene-d10 % recovery**	%	TM218		107	98.4	82	91.7	94.1	93.9
Chrysene-d12 % recovery**	%	TM218		96.9	93.8	78	96.5	81.6	91.5
Perylene-d12 % recovery**	%	TM218		95.4	95.1	76	105	82.9	85.9
Naphthalene	<9 µg/kg	TM218		367 ♦ M	792 ♦	280 ♦ M	<9 ♦ M	643 ♦ #	373 ♦ #
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	<60 ♦	<12 ♦ M	<12 ♦ M	43 ♦ #	57.6 ♦ #
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	<40 ♦	<8 ♦ M	<8 ♦ M	<8 ♦ #	246 ♦ #
Fluorene	<10 µg/kg	TM218		<10 ♦ M	<50 ♦	<10 ♦ M	<10 ♦ M	19.5 ♦ #	200 ♦ #
Phenanthrene	<15 µg/kg	TM218		286 ♦ M	974 ♦	247 ♦ M	26.8 ♦ M	1450 ♦ #	2120 ♦ #
Anthracene	<16 µg/kg	TM218		60 ♦ M	<80 ♦	40.8 ♦ M	<16 ♦ M	50.2 ♦ #	336 ♦ #
Fluoranthene	<17 µg/kg	TM218		81.6 ♦ M	149 ♦	68 ♦ M	24.7 ♦ M	249 ♦ #	2400 ♦ #
Pyrene	<15 µg/kg	TM218		183 ♦ M	559 ♦	178 ♦ M	44.4 ♦ M	302 ♦ #	2160 ♦ #
Benz(a)anthracene	<14 µg/kg	TM218		93.7 ♦ M	197 ♦	74.1 ♦ M	29.4 ♦ M	176 ♦ #	1610 ♦ #
Chrysene	<10 µg/kg	TM218		132 ♦ M	323 ♦	109 ♦ M	29.3 ♦ M	393 ♦ #	2320 ♦ #
Benzo(b)fluoranthene	<15 µg/kg	TM218		134 ♦ M	273 ♦	127 ♦ M	50.4 ♦ M	402 ♦ #	2810 ♦ #
Benzo(k)fluoranthene	<14 µg/kg	TM218		36.4 ♦ M	<70 ♦	32.4 ♦ M	17.9 ♦ M	67.8 ♦ #	816 ♦ #
Benzo(a)pyrene	<15 µg/kg	TM218		75.7 ♦ M	204 ♦	65 ♦ M	37 ♦ M	160 ♦ #	1660 ♦ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		64.1 ♦ M	<90 ♦	34.4 ♦ M	<18 ♦ M	113 ♦ #	939 ♦ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		44.7 ♦ M	<115 ♦	<23 ♦ M	<23 ♦ M	79.5 ♦ #	448 ♦ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		171 ♦ M	264 ♦	76.1 ♦ M	28 ♦ M	174 ♦ #	1280 ♦ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1730	3740	1330	288	4320	19800

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1198	IP1199			
			Depth (m)	3.50	0.50			
			Sample Type	Soil/Solid	Soil/Solid			
			Date Sampled	12/11/2014	12/11/2014			
			Sample Time	.	.			
			Date Received	14/11/2014	14/11/2014			
			SDG Ref	141114-122	141114-122			
			Lab Sample No.(s)	10384218	10384188			
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		133	100			
Acenaphthene-d10 % recovery**	%	TM218		129	103			
Phenanthrene-d10 % recovery**	%	TM218		125	99			
Chrysene-d12 % recovery**	%	TM218		123	92.6			
Perylene-d12 % recovery**	%	TM218		130	102			
Naphthalene	<9 µg/kg	TM218		843 ♦ M	87.8 ♦ M			
Acenaphthylene	<12 µg/kg	TM218		<120 ♦ M	46.9 ♦ M			
Acenaphthene	<8 µg/kg	TM218		<80 ♦ M	59.1 ♦ M			
Fluorene	<10 µg/kg	TM218		<100 ♦ M	119 ♦ M			
Phenanthrene	<15 µg/kg	TM218		979 ♦ M	447 ♦ M			
Anthracene	<16 µg/kg	TM218		324 ♦ M	142 ♦ M			
Fluoranthene	<17 µg/kg	TM218		544 ♦ M	712 ♦ M			
Pyrene	<15 µg/kg	TM218		869 ♦ M	765 ♦ M			
Benz(a)anthracene	<14 µg/kg	TM218		632 ♦ M	481 ♦ M			
Chrysene	<10 µg/kg	TM218		817 ♦ M	559 ♦ M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		919 ♦ M	551 ♦ M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		252 ♦ M	280 ♦ M			
Benzo(a)pyrene	<15 µg/kg	TM218		535 ♦ M	564 ♦ M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		323 ♦ M	287 ♦ M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 ♦ M	102 ♦ M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		963 ♦ M	370 ♦ M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		8000	5570			

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1069	IP1069	IP1070	IP1071	IP1071	IP1073
			Depth (m)	1.00	2.00	1.00	1.00	2.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384070	10384148	10384199	10384301	10384306	10384179
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		69 ♦	73 ♦	76 ♦	75 ♦	81 ♦	65 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 ♦ M	5390 ♦ M	<176 ♦ M	280 ♦ M	284 ♦ M	35200 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<36 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<96 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	48.4 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 ♦	63.7 ♦	<40 ♦	<40 ♦	<40 ♦	1020 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 ♦	1530 ♦	<40 ♦	55.4 ♦	47.5 ♦	10700 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 ♦	1660 ♦	<40 ♦	89.3 ♦	96.1 ♦	9770 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	<100	<100	<100	<100	53100
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	<100	<100	<100	<100	82000
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	5930	8790	<100	<100	137000
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	<100	<100	<100	34800
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	5930	8790	<100	<100	307000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 ♦	1020 ♦	<40 ♦	<40 ♦	<40 ♦	7150 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 ♦	1110 ♦	<40 ♦	59.9 ♦	64.4 ♦	6520 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	<100	<100	197	4250
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	729	1740	723	<100	21900
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	3450	13600	5110	1940	135000
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	1820	476	<100	<100	70200
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	796	<100	<100	<100	29500
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	6000	15800	5830	2140	231000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		<100	17300	24600	6110	2420	573000

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1073	IP1110	IP1110	IP1110	IP1111	IP1111
			Depth (m)	1.00	0.50	1.50	2.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384184	10384164	10384170	10384175	10384152	10384156
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		58 ♦	88 ♦	69 ♦	85 ♦	107 ♦	54 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 ♦ M	<176 ♦ M	<176 ♦ M	<176 ♦ M	327000 ♦ M	1250 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M	<8 ♦ M	9.99 ♦ M	<8 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	2110 ♦	<40 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	53100 ♦	49.2 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	74700 ♦	140 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	88500 ♦	564 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	8210	<100	<100	75300	48700
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	13000	<100	<100	57800	66100
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	27700	<100	<100	15900	33900
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	<100	<100	739	4530
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	48900	<100	<100	150000	153000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	49800 ♦	99.6 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	59000 ♦	376 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	1540	<100	<100	22500	2630
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	5990	<100	<100	13200	9040
Aromatics >EC21-EC35	<100 µg/kg	TM173		8070	28800	<100	<100	6800	18200
Aromatics >EC35-EC44	<100 µg/kg	TM173		604	14800	<100	<100	<100	4860
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	6360	<100	<100	<100	1890
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		8680	51200	<100	<100	42500	34700
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		8720	100000	<100	<100	519000	189000

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1111	IP1112	IP1112	IP1112	IP1113	IP1113
			Depth (m)	3.00	1.00	2.00	3.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384160	10384136	10384140	10384144	10384083	10384090
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		60 ♦	37 ♦	85 ♦	57 ♦	64 ♦	60 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		529 ♦ M	1160 ♦ #	<176 ♦ M	<176 ♦ M	<176 ♦ M	2970 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ #	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ #	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ #	<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ #	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ #	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ #	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 ♦	58.4 ♦	<40 ♦	<40 ♦	<40 ♦	56 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		57.1 ♦	190 ♦	<40 ♦	<40 ♦	<40 ♦	202 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		226 ♦	456 ♦	<40 ♦	<40 ♦	<40 ♦	1520 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	1450	<100	<100	11600	10300
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	7460	<100	<100	23400	22400
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	16300	<100	<100	12500	10300
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	3410	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	28600	<100	<100	47600	43000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		42.6 ♦	133 ♦	<40 ♦	<40 ♦	<40 ♦	142 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		150 ♦	304 ♦	<40 ♦	<40 ♦	<40 ♦	1010 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	<100	<100	1840	1920
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	182	<100	<100	8470	9810
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	9080	<100	<100	5150	7490
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	1760	<100	<100	<100	646
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	<100	<100	<100	<100	140
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	11000	<100	<100	15500	19900
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		529	incomplete	<100	<100	63100	65800

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1114	IP1114	IP1115	IP1115	IP1116	IP1116
			Depth (m)	1.00	2.00	1.00	2.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384099	10384107	10384292	10384296	10384260	10384288
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		70 ♦	60 ♦	45 ♦	76 ♦	54 ♦	97 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		584 ♦ M	271 ♦ M	<176 ♦ M	<176 ♦ M	<440 ♦ M	248000 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ M	<50 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ M	<100 ♦ M	60.8 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ M	<20 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<30 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ M	<60 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ M	<30 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	60.8 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<100 ♦	400 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		45.9 ♦	47.9 ♦	55.1 ♦	<40 ♦	<100 ♦	34400 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		110 ♦	66.8 ♦	<40 ♦	<40 ♦	<100 ♦	88600 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		201 ♦	60.5 ♦	<40 ♦	<40 ♦	<100 ♦	39300 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	7430	412	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	10600	1970	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	16300	9270	<100	<100	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	6090	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	40500	11700	<100	<100	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<100 ♦	60.8 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<40 ♦	<100 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		78.1 ♦	44.1 ♦	45 ♦	<40 ♦	<100 ♦	59100 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		134 ♦	40.3 ♦	<40 ♦	<40 ♦	<100 ♦	26200 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	1290	<100	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	11400	1310	<100	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	36500	6400	1750	<100	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	11400	1920	<100	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	4340	<100	<100	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	60600	9640	1750	<100	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		584	101000	21500	1780	<100	248000

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1194	IP1194	IP1194	IP1195	IP1195	IP1195
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384115	10384122	10384131	10384246	10384250	10384255
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		45 ♦	70 ♦	75 ♦	57 ♦	37 ♦	83 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<440 ♦ #	<176 ♦ M	<176 ♦ M	1250 ♦ M	<176 ♦ #	8760 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ #	<20 ♦ M	<20 ♦ M	<20 ♦ M	<20 ♦ #	<20 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ #	<40 ♦ M	<40 ♦ M	<40 ♦ M	<40 ♦ #	<40 ♦ M
Toluene	<2 µg/kg	TM089		<20 ♦ #	<8 ♦ M	<8 ♦ M	<8 ♦ M	<8 ♦ #	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ #	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ #	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ #	<24 ♦ M	<24 ♦ M	<24 ♦ M	<24 ♦ #	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<30 ♦ #	<12 ♦ M	<12 ♦ M	<12 ♦ M	<12 ♦ #	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	167 ♦	<40 ♦	103 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	249 ♦	<40 ♦	1040 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	380 ♦	<40 ♦	4150 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		12800	<100	<100	37100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		74200	<100	<100	74200	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		242000	<100	<100	126000	13400	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		36100	<100	<100	42000	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		365000	<100	<100	279000	13400	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	170 ♦	<40 ♦	692 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<100 ♦	<40 ♦	<40 ♦	254 ♦	<40 ♦	2770 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		1840	<100	<100	8610	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		10200	<100	<100	60200	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		71800	<100	<100	207000	<100	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173		16700	<100	<100	82300	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173		6440	<100	<100	34400	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		101000	<100	<100	358000	<100	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		466000	<100	<100	638000	13400	8760

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1195	IP1196	IP1196	IP1196	IP1196	IP1197
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384265	10384270	10384275	10384280	10384284	10384222
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		68 ♦	77 ♦	30 ♦	81 ♦	88 ♦	82 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 ♦ M	<176 ♦ M	1090 ♦ #	<880 ♦ #	<176 ♦ M	9640 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<20 ♦ #	<100 ♦ #	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<40 ♦ #	<200 ♦ #	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M	<8 ♦ #	<40 ♦ #	<8 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ #	<60 ♦ #	<12 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M	<24 ♦ #	<120 ♦ #	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ #	<60 ♦ #	<12 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦	<40 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 ♦	<40 ♦	76.2 ♦	<200 ♦	<40 ♦	280 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 ♦	<40 ♦	185 ♦	<200 ♦	<40 ♦	1840 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 ♦	<40 ♦	389 ♦	<200 ♦	<40 ♦	3760 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	<100	<100	<100	10200	137000
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	<100	<100	<100	31800	212000
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	<100	16900	<100	79000	318000
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	5550	<100	24200	80300
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	<100	22400	<100	145000	748000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 ♦	<40 ♦	140 ♦	<200 ♦	<40 ♦	1230 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 ♦	<40 ♦	260 ♦	<200 ♦	<40 ♦	2500 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	<100	<100	<100	6110
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	<100	<100	<100	543	36200
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	<100	12300	<100	41700	181000
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	<100	9470	<100	17100	86600
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	<100	3840	<100	3780	36600
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	<100	21800	<100	59400	310000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		<100	<100	45300	<100	204000	1070000

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1197	IP1197	IP1197	IP1198	IP1198	IP1198
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-122	141114-122	141114-122	141114-122	141114-122	141114-122
			Lab Sample No.(s)	10384234	10384238	10384242	10384194	10384205	10384210
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		103 ♦	75 ♦	92 ♦	84 ♦	74 ♦	70 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		6670 ♦ M	4770 ♦	14500 ♦ M	7160 ♦ M	<880 ♦ #	<176 ♦ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ M	<20 ♦	<20 ♦ M	<20 ♦ M	<100 ♦ #	<20 ♦ #
Benzene	<10 µg/kg	TM089		<200 ♦ M	<40 ♦	<40 ♦ M	<40 ♦ M	<200 ♦ #	<40 ♦ #
Toluene	<2 µg/kg	TM089		<40 ♦ M	<8 ♦	<8 ♦ M	<8 ♦ M	<40 ♦ #	<8 ♦ #
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ M	<12 ♦	<12 ♦ M	<12 ♦ M	<60 ♦ #	<12 ♦ #
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ M	<24 ♦	<24 ♦ M	<24 ♦ M	<120 ♦ #	<24 ♦ #
o-Xylene	<3 µg/kg	TM089		<60 ♦ M	<12 ♦	<12 ♦ M	<12 ♦ M	<60 ♦ #	<12 ♦ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	<40 ♦	40.8 ♦	<40 ♦	<200 ♦	<40 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		370 ♦	126 ♦	180 ♦	194 ♦	<200 ♦	<40 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		1090 ♦	440 ♦	937 ♦	983 ♦	<200 ♦	<40 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		2550 ♦	2320 ♦	7630 ♦	3170 ♦	<200 ♦	<40 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		131000	60600	51700	236000	2140	31100
Aliphatics >C16-C21	<100 µg/kg	TM173		310000	192000	94000	261000	20200	110000
Aliphatics >C21-C35	<100 µg/kg	TM173		1240000	1690000	555000	437000	198000	587000
Aliphatics >C35-C44	<100 µg/kg	TM173		195000	224000	111000	121000	63500	203000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1870000	2160000	811000	1060000	283000	931000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		856 ♦	298 ♦	631 ♦	665 ♦	<200 ♦	<40 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		1700 ♦	1550 ♦	5090 ♦	2120 ♦	<200 ♦	<40 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		69300	156000	65200	31700	2950	5950
Aromatics >EC16-EC21	<100 µg/kg	TM173		127000	207000	74600	126000	11900	28700
Aromatics >EC21-EC35	<100 µg/kg	TM173		890000	1110000	189000	340000	120000	351000
Aromatics >EC35-EC44	<100 µg/kg	TM173		276000	360000	90600	121000	87800	244000
Aromatics >EC40-EC44	<100 µg/kg	TM173		92600	117000	46100	46700	35100	96600
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1360000	1840000	420000	619000	223000	629000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		3240000	4010000	1250000	1680000	507000	1560000

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1198	IP1199				
			Depth (m)	3.50	0.50				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	12/11/2014	12/11/2014				
			Sample Time	.	.				
			Date Received	14/11/2014	14/11/2014				
			SDG Ref	141114-122	141114-122				
			Lab Sample No.(s)	10384218	10384188				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		76 ♦	80 ♦				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 ♦ M	22700 ♦ M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M				
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M				
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M				
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M				
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M				
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦				
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦				
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<40 ♦				
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 ♦	556 ♦				
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 ♦	4200 ♦				
Aliphatics >C10-C12	<10 µg/kg	TM089		65.8 ♦	9040 ♦				
Aliphatics >C12-C16	<100 µg/kg	TM173		215000	142000				
Aliphatics >C16-C21	<100 µg/kg	TM173		684000	231000				
Aliphatics >C21-C35	<100 µg/kg	TM173		1180000	365000				
Aliphatics >C35-C44	<100 µg/kg	TM173		359000	99700				
Total Aliphatics >C12-C44	<100 µg/kg	TM173		2440000	838000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦				
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 ♦	2800 ♦				
Aromatics >EC10-EC12	<10 µg/kg	TM089		43.4 ♦	6030 ♦				
Aromatics >EC12-EC16	<100 µg/kg	TM173		41600	19900				
Aromatics >EC16-EC21	<100 µg/kg	TM173		236000	104000				
Aromatics >EC21-EC35	<100 µg/kg	TM173		1210000	327000				
Aromatics >EC35-EC44	<100 µg/kg	TM173		627000	124000				
Aromatics >EC40-EC44	<100 µg/kg	TM173		239000	49400				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		2110000	575000				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		4550000	1440000				

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
SUB (ASB)				
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10384070	10384148	10384199	10384301	10384306	10384179	10384184	10384164	10384170	10384175
Customer Sample Ref.	IP1069	IP1069	IP1070	IP1071	IP1071	IP1073	IP1073	IP1110	IP1110	IP1110
AGS Ref.										
Depth	1.00	2.00	1.00	1.00	2.00	0.50	1.00	0.50	1.50	2.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*				27-Nov-2014		27-Nov-2014	27-Nov-2014	27-Nov-2014		
EPH CWG (Aliphatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014
EPH CWG (Aromatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	08-Dec-2014	05-Dec-2014	07-Dec-2014	08-Dec-2014
Metals in solid samples by OES	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	05-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
PAH by GCMS	05-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
pH	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
Sample description	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	24-Nov-2014	24-Nov-2014
Total Organic Carbon	01-Dec-2014		01-Dec-2014							
TPH CWG GC (S)	07-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	08-Dec-2014	05-Dec-2014	07-Dec-2014	08-Dec-2014

Lab Sample No(s)	10384152	10384156	10384160	10384136	10384140	10384144	10384083	10384090	10384099	10384107
Customer Sample Ref.	IP1111	IP1111	IP1111	IP1112	IP1112	IP1112	IP1113	IP1113	IP1114	IP1114
AGS Ref.										
Depth	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	27-Nov-2014			27-Nov-2014			27-Nov-2014		27-Nov-2014	
EPH CWG (Aliphatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
EPH CWG (Aromatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	07-Dec-2014
Metals in solid samples by OES	01-Dec-2014	01-Dec-2014	01-Dec-2014	28-Nov-2014	01-Dec-2014	01-Dec-2014	04-Dec-2014	01-Dec-2014	28-Nov-2014	01-Dec-2014
PAH by GCMS	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	03-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
pH	03-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
Sample description	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	27-Nov-2014	25-Nov-2014	24-Nov-2014	24-Nov-2014
Total Organic Carbon						01-Dec-2014	04-Dec-2014			
TPH CWG GC (S)	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	07-Dec-2014

Lab Sample No(s)	10384292	10384296	10384260	10384288	10384115	10384122	10384131	10384246	10384250	10384255
Customer Sample Ref.	IP1115	IP1115	IP1116	IP1116	IP1194	IP1194	IP1194	IP1195	IP1195	IP1195
AGS Ref.										
Depth	1.00	2.00	0.50	1.50	1.00	2.00	3.00	0.50	1.50	2.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	27-Nov-2014		27-Nov-2014		27-Nov-2014			27-Nov-2014		
EPH CWG (Aliphatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
EPH CWG (Aromatic) GC (S)	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
GRO by GC-FID (S)	08-Dec-2014	08-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014
Metals in solid samples by OES	01-Dec-2014	01-Dec-2014	28-Nov-2014	01-Dec-2014	28-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
PAH by GCMS	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014	03-Dec-2014	05-Dec-2014	04-Dec-2014
pH	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
Sample description	27-Nov-2014	25-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	27-Nov-2014	24-Nov-2014	24-Nov-2014
Total Organic Carbon								02-Dec-2014		
TPH CWG GC (S)	08-Dec-2014	08-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	07-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014

Lab Sample No(s)	10384265	10384270	10384275	10384280	10384284	10384222	10384234	10384238	10384242	10384194
Customer Sample Ref.	IP1195	IP1196	IP1196	IP1196	IP1196	IP1197	IP1197	IP1197	IP1197	IP1198
AGS Ref.										
Depth	3.50	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50	0.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*		27-Nov-2014				27-Nov-2014				27-Nov-2014
EPH CWG (Aliphatic) GC (S)	05-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014
EPH CWG (Aromatic) GC (S)	05-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	05-Dec-2014	07-Dec-2014	07-Dec-2014	05-Dec-2014	07-Dec-2014	07-Dec-2014	05-Dec-2014	05-Dec-2014	07-Dec-2014
Metals in solid samples by OES	01-Dec-2014	01-Dec-2014	01-Dec-2014	28-Nov-2014	04-Dec-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	04-Dec-2014
PAH by GCMS	03-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014
pH	04-Dec-2014	03-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	03-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
Sample description	24-Nov-2014	26-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	26-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	28-Nov-2014
Total Organic Carbon			01-Dec-2014							03-Dec-2014
TPH CWG GC (S)	07-Dec-2014	05-Dec-2014	07-Dec-2014	07-Dec-2014	05-Dec-2014	07-Dec-2014	07-Dec-2014	05-Dec-2014	05-Dec-2014	07-Dec-2014

CERTIFICATE OF ANALYSIS

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Lab Sample No(s)	10384205	10384210	10384218	10384188
Customer Sample Ref.	IP1198	IP1198	IP1198	IP1199
AGS Ref.				
Depth	1.50	2.50	3.50	0.50
Type	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*				27-Nov-2014
EPH CWG (Aliphatic) GC (S)	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014
EPH CWG (Aromatic) GC (S)	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	07-Dec-2014	05-Dec-2014	07-Dec-2014
Metals in solid samples by OES	01-Dec-2014	01-Dec-2014	01-Dec-2014	05-Dec-2014
PAH by GCMS	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014
pH	04-Dec-2014	04-Dec-2014	04-Dec-2014	04-Dec-2014
Sample description	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014
TPH CWG GC (S)	07-Dec-2014	07-Dec-2014	05-Dec-2014	07-Dec-2014

Derwentside Environmental Testing Services

Certificate of Analysis

Certificate Number 14-21208

26-Nov-14

Client	Alcontrol Laboratories Units 7 & 8 Hawarden Business Park Manor Road Hawarden Deeside CH5 3US
Our Reference	14-21208
Client Reference	141114-122
Contract Title	141114-122
Description	16 Soil samples.
Date Received	20-Nov-14
Date Started	20-Nov-14
Date Completed	26-Nov-14
Test Procedures	Asbestos Analysis DETSC 1101.
Notes	Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Asbestos Analysis
Soil Samples

Our Ref 14-21208
Client Ref 141114-122
Contract Title 141114-122

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
734800	10406901 IP1071 1.00	SOIL	NAD	none	Jeff Cruddas
734801	10406920 IP1073 0.50	SOIL	NAD	none	Jeff Cruddas
734802	10403113 IP1073 1.00	SOIL	NAD	none	Jeff Cruddas
734803	10406927 IP1110 0.50	SOIL	NAD	none	Jeff Cruddas
734804	10404839 IP1111 1.00	SOIL	NAD	none	Jeff Cruddas
734805	10404846 IP1112 1.00	SOIL	NAD	none	Jeff Cruddas
734806	10403085 IP1113 1.00	SOIL	NAD	none	Jeff Cruddas
734807	10403089 IP1114 1.00	SOIL	NAD	none	Jeff Cruddas
734808	10406889 IP1115 1.00	SOIL	NAD	none	Jeff Cruddas
734809	10406955 IP1116 0.50	SOIL	NAD	none	Jeff Cruddas
734810	10404833 IP1194 1.00	SOIL	NAD	none	Jeff Cruddas
734811	10406962 IP1195 0.50	SOIL	NAD	none	Jeff Cruddas
734812	10405036 IP1196 0.50	SOIL	NAD	none	Jeff Cruddas
734813	10405008 IP1197 0.50	SOIL	NAD	none	Jeff Cruddas
734814	10403125 IP1198 0.50	SOIL	NAD	none	Jeff Cruddas
734815	10403130 IP1199 0.50	SOIL	NAD	none	Jeff Cruddas

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 14-21208
Client Ref 141114-122
Contract 141114-122

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
734800	10406901 1.00 SOIL	12/11/14	PT 500ml		
734801	10406920 0.50 SOIL	12/11/14	PT 500ml		
734802	10403113 1.00 SOIL	12/11/14	PT 500ml		
734803	10406927 0.50 SOIL	12/11/14	PT 500ml		
734804	10404839 1.00 SOIL	12/11/14	PT 500ml		
734805	10404846 1.00 SOIL	12/11/14	PT 500ml		
734806	10403085 1.00 SOIL	12/11/14	PT 500ml		
734807	10403089 1.00 SOIL	12/11/14	PT 500ml		
734808	10406889 1.00 SOIL	12/11/14	PT 500ml		
734809	10406955 0.50 SOIL	12/11/14	PT 500ml		
734810	10404833 1.00 SOIL	12/11/14	PT 500ml		
734811	10406962 0.50 SOIL	12/11/14	PT 500ml		
734812	10405036 0.50 SOIL	12/11/14	PT 500ml		
734813	10405008 0.50 SOIL	12/11/14	PT 500ml		
734814	10403125 0.50 SOIL	12/11/14	PT 500ml		
734815	10403130 0.50 SOIL	12/11/14	PT 500ml		

Key: P-Plastic T-Tub

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

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

SDG:	141114-122	**Location:**	Coed Darcy	**Order Number:**	CD0978
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	294719
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

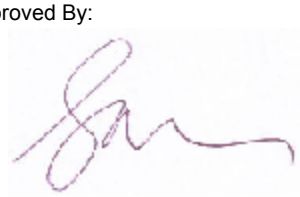
Date:	29 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141114-1
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	299989

We received 62 samples on Friday November 14, 2014 and 62 of these samples were scheduled for analysis which was completed on Wednesday January 28, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10376404	IP1068		0.50	11/11/2014
10376410	IP1118		1.00	11/11/2014
10376297	IP1189		0.50	11/11/2014
10376306	IP1189		1.50	11/11/2014
10376310	IP1189		2.50	11/11/2014
10376315	IP1189		3.50	11/11/2014
10376321	IP1190		0.50	11/11/2014
10376327	IP1190		1.50	11/11/2014
10376333	IP1190		2.50	11/11/2014
10376420	IP1191		1.00	11/11/2014
10376425	IP1191		2.00	11/11/2014
10376429	IP1191		3.00	11/11/2014
10376338	IP1192		1.00	11/11/2014
10376345	IP1192		2.00	11/11/2014
10376350	IP1192		3.00	11/11/2014
10376354	IP1192		4.00	11/11/2014
10376414	TPE586		0.50	11/11/2014
10376433	TPE586		1.50	11/11/2014
10376436	TPE587		0.50	11/11/2014
10376440	TPE587		1.50	11/11/2014
10376156	TPE587		2.50	11/11/2014
10376160	TPE587		3.50	11/11/2014
10376205	TPE588		0.50	11/11/2014
10376209	TPE588		1.50	11/11/2014
10376214	TPE588		2.50	11/11/2014
10376218	TPE588		3.50	11/11/2014
10376222	TPE588		4.50	11/11/2014
10376164	TPE589		0.50	11/11/2014
10376168	TPE589		1.50	11/11/2014
10376173	TPE589		2.50	11/11/2014
10376177	TPE589		3.50	11/11/2014
10376181	TPE642		0.50	11/11/2014
10376186	TPE642		1.50	11/11/2014
10376192	TPE642		2.50	11/11/2014
10376196	TPE642		3.50	11/11/2014
10376152	TPE643		0.50	11/11/2014
10376201	TPE643		1.50	11/11/2014
10376249	TPE643		2.50	11/11/2014
10376301	TPE643		3.50	11/11/2014
10376360	TPE643		4.50	11/11/2014
10376226	TPE644		0.30	11/11/2014
10376230	TPE644		1.50	11/11/2014
10376234	TPE644		2.50	11/11/2014
10376238	TPE644		3.50	11/11/2014
10376243	TPE644		4.50	11/11/2014
10376253	TPE645		0.30	11/11/2014
10376258	TPE645		1.50	11/11/2014
10376262	TPE645		2.50	11/11/2014
10376267	TPE645		3.50	11/11/2014
10376273	TPE645		4.50	11/11/2014
10376277	TPE646		0.50	11/11/2014
10376282	TPE646		1.50	11/11/2014
10376287	TPE646		2.50	11/11/2014
10376293	TPE646		3.50	11/11/2014
10376364	TPE647		0.50	11/11/2014
10376369	TPE647		2.00	11/11/2014

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

10376373	TPE647	3.00	11/11/2014
10376378	TPE647	4.00	11/11/2014
10376383	TPE648	1.00	11/11/2014
10376388	TPE648	2.00	11/11/2014
10376392	TPE648	3.00	11/11/2014
10376399	TPE648	4.00	11/11/2014

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

ALcontrol Laboratories

Validated

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X — **Test**

N — **No Determination Possible**

Lab Sample No(s)			10376404			10376410			10376297			10376306			10376310			10376315			10376321			10376327			10376333			10376420			10376425			10376429			10376338			10376345
Customer Sample Reference			IP1068			IP1118			IP1189			IP1189			IP1189			IP1189			IP1190			IP1190			IP1190			IP1191			IP1191			IP1191			IP1192			IP1192
AGS Reference																																											
Depth (m)			0.50			1.00			0.50			1.50			2.50			3.50			0.50			1.50			2.50			1.00			2.00			3.00			1.00			2.00
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17		X			X			X													X									X									X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 12																																							X		
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 62			X			X			X			X			X			X			X			X			X			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 58	X			X			X									X			X			X			X			X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 8				X												X																		X						
TPH CWG GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X

05:34:28 29/01/2015

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- X — Test
- N — No Determination Possible

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Lab Sample No(s)			10376345		10376350			10376354			10376414			10376433		10376436			10376440			10376156			10376160			10376205			10376209			10376214	10376218			10376222			10376164	
Customer Sample Reference			IP1192		IP1192			IP1192			TPE586			TPE586		TPE587			TPE587			TPE587			TPE587			TPE588			TPE588			TPE588	TPE588			TPE588			TPE589	
AGS Reference																																										
Depth (m)			2.00		3.00			4.00			0.50			1.50		0.50			1.50			2.50			3.50			0.50			1.50			2.50	3.50			4.50			0.50	
Container			400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	400g Tub (ALE214)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17										X					X												X													X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 12										X					X												X													X
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 62			X			X			X			X		X			X			X			X			X			X			X	X			X			X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 62			X			X			X			X		X			X			X			X			X			X			X	X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 62		X			X			X			X		X			X			X			X			X			X			X	X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 62			X			X			X			X		X			X			X			X			X			X			X	X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 62			X			X			X			X		X			X			X			X			X			X			X	X			X			X	
pH	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X		X		X			X			X
Sample description	All	NDPs: 0 Tests: 58			X			X			X			X		X			X			X			X			X			X			X	X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 8												X																								X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 62			X			X			X			X		X			X			X			X			X			X			X	X			X			X	

05:34:28 29/01/2015

CERTIFICATE OF ANALYSIS

SDG: 141114-1
Job: H_ATKINS_LDC-224
Client Reference: Site Wide Trial Pitting
Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie
Order Number: CD0976
Report Number: 299989
Superseded Report:

SOLID

Results Legend

- **X** Test
- **N** No Determination Possible

Lab Sample No(s)			10376164			10376168			10376173			10376177			10376181			10376186			10376192			10376196			10376152			10376201			10376249			10376301			10376360			10376226
Customer Sample Reference			TPE589			TPE589			TPE589			TPE589			TPE642			TPE642			TPE642			TPE642			TPE643			TPE643			TPE643			TPE643			TPE643			TPE644
AGS Reference																																											
Depth (m)			0.50			1.50			2.50			3.50			0.50			1.50			2.50			3.50			0.50			1.50			2.50			3.50			4.50			0.30
Container			60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17												X												X															X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 12												X												X															X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 62	X			X			X			X			X			X			X			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 62			X			X			X			X			X			X			X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 58		X			X			X			X			X			X						X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 8											X												X																	
TPH CWG GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X			X			X			X			X			X			X			X		

05:34:28 29/01/2015

ALcontrol Laboratories

CERTIFICATE OF ANALYSIS

Validated

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- X — Test
- N — No Determination Possible

Lab Sample No(s)			10376230			10376234			10376238			10376243		10376253			10376258			10376262			10376267			10376273			10376277			10376282			10376287			10376293			10376364	
Customer Sample Reference			TPE644			TPE644			TPE644			TPE644		TPE645			TPE645			TPE645			TPE645			TPE645			TPE646			TPE646			TPE646			TPE646			TPE647	
AGS Reference																																										
Depth (m)			1.50			2.50			3.50			4.50		0.30			1.50			2.50			3.50			4.50			0.50			1.50			2.50			3.50			0.50	
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17													X															X												X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 12													X															X												X
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X			X			X			X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 62			X			X			X		X			X			X			X			X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X			X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X			X			X			X	
pH	All	NDPs: 0 Tests: 62		X			X			X		X			X			X			X			X			X			X			X			X			X			X
Sample description	All	NDPs: 0 Tests: 58	X			X			X					X			X			X			X			X			X			X			X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 8																					X																			
TPH CWG GC (S)	All	NDPs: 0 Tests: 62	X			X			X			X		X			X			X			X			X			X			X			X			X			X	

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X Test

N No Determination Possible

		Lab Sample No(s)	10376364			10376369			10376373			10376378			10376383			10376388			10376392			10376399
		Customer Sample Reference	TPE647			TPE647			TPE647			TPE647			TPE648			TPE648			TPE648			TPE648
		AGS Reference																					
		Depth (m)	0.50			2.00			3.00			4.00			1.00			2.00			3.00			4.00
		Container	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17												X									
Asbestos Quantification - Full	All	NDPs: 0 Tests: 12												X									
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X		X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 62	X			X			X			X			X			X		X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 62		X			X			X			X			X			X		X		
PAH by GCMS	All	NDPs: 0 Tests: 62		X			X			X			X			X			X		X		
pH	All	NDPs: 0 Tests: 62			X			X			X			X			X		X			X	
Sample description	All	NDPs: 0 Tests: 58		X			X			X			X			X			X		X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 62		X			X			X			X			X			X		X		

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10376404	IP1068	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10376410	IP1118	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10376297	IP1189	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10376306	IP1189	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10376310	IP1189	2.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10376315	IP1189	3.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10376321	IP1190	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Vegetation	Stones
10376327	IP1190	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10376333	IP1190	2.50	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10376420	IP1191	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10376425	IP1191	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10376429	IP1191	3.00	Grey	Silt Loam	0.063 - 0.1 mm	Vegetation	Stones
10376338	IP1192	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10376345	IP1192	2.00	Black	Clinker	0.1 - 2 mm	Stones	None
10376350	IP1192	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10376354	IP1192	4.00	Grey	Silt Loam	0.063 - 0.1 mm	Stones	Vegetation
10376414	TPE586	0.50	Grey	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10376433	TPE586	1.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Vegetation	Stones
10376156	TPE587	2.50	Black	Sand	0.1 - 2 mm	Stones	None
10376160	TPE587	3.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	None
10376436	TPE587	0.50	Beige	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10376440	TPE587	1.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10376205	TPE588	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10376209	TPE588	1.50	Black	Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376214	TPE588	2.50	Black	Sand	0.1 - 2 mm	Stones	None
10376218	TPE588	3.50	Beige	Loamy Sand	0.1 - 2 mm	Stones	None
10376222	TPE588	4.50	Grey	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10376164	TPE589	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10376168	TPE589	1.50	Black	Sand	0.1 - 2 mm	Stones	Vegetation
10376173	TPE589	2.50	Black	Sand	0.1 - 2 mm	Stones	None
10376177	TPE589	3.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376181	TPE642	0.50	Dark Brown	Sand	0.1 - 2 mm	None	Stones
10376186	TPE642	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10376192	TPE642	2.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10376196	TPE642	3.50	Black	N/A	0.1 - 2 mm	N/A	None
10376152	TPE643	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	N/A
10376201	TPE643	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10376249	TPE643	2.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

			Colour	Description	Grain size	Inclusions	Inclusions 2
10376301	TPE643	3.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10376360	TPE643	4.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10376226	TPE644	0.30	Dark Brown	Silt Loam	0.063 - 0.1 mm	Stones	None
10376230	TPE644	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376234	TPE644	2.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10376238	TPE644	3.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10376243	TPE644	4.50	Black	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10376253	TPE645	0.30	Grey	Sandy Clay	0.1 - 2 mm	Oil/Petroleum	Stones
10376258	TPE645	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376262	TPE645	2.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376267	TPE645	3.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10376273	TPE645	4.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10376277	TPE646	0.50	Black	Sandy Loam	2 - 10 mm	Stones	None
10376282	TPE646	1.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10376287	TPE646	2.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10376293	TPE646	3.50	Black	Sandy Clay	0.1 - 2 mm	Oil/Petroleum	Vegetation
10376364	TPE647	0.50	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10376369	TPE647	2.00	Black	Loamy Sand	0.1 - 2 mm	Coal fragments	Stones
10376373	TPE647	3.00	Black	Loamy Sand	0.1 - 2 mm	Coal fragments	Oil/Petroleum
10376378	TPE647	4.00	Grey	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	None
10376383	TPE648	1.00	Grey	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10376388	TPE648	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10376392	TPE648	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10376399	TPE648	4.00	Black	Loamy Sand	0.1 - 2 mm	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:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1068	IP1118	IP1189	IP1189	IP1189	IP1189
			Depth (m)	0.50	1.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376404	10376410	10376297	10376306	10376310	10376315
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	17	11	18	24	16
Soil Organic Matter (SOM)	<0.35 %	TM132			1.84 #				7.5 #
pH	1 pH Units	TM133		6.4 M	6.09 M	6.38 M	7.06 M	6.43 M	5.83 M
Arsenic	<0.6 mg/kg	TM181		14.8 M	8.12 M	12.6 M	13.7 M	17.2 M	14.1 M
Cadmium	<0.02 mg/kg	TM181		0.239 M	0.0895 M	0.272 M	0.201 M	0.104 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		16.2 M	12.2 M	13.9 M	9.02 M	9.24 M	18.2 M
Copper	<1.4 mg/kg	TM181		56.7 M	13.1 M	23.6 M	96.2 M	140 M	28.2 M
Lead	<0.7 mg/kg	TM181		89 M	24.5 M	31.8 M	26.3 M	24 M	17.1 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	0.158 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		21.4 M	15.9 M	25.6 M	27.9 M	30.6 M	27.4 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		18.5 #	15.3 #	19.8 #	22.6 #	26 #	21.2 #
Zinc	<1.9 mg/kg	TM181		343 M	66.4 M	98.4 M	105 M	80.4 M	66.5 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1190	IP1190	IP1190	IP1191	IP1191	IP1191
			Depth (m)	0.50	1.50	2.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376321	10376327	10376333	10376420	10376425	10376429
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	26	16	13	26	24
Soil Organic Matter (SOM)	<0.35 %	TM132							2.57 #
pH	1 pH Units	TM133		5.37 M	5.19 M	6.01 M	6.51 M	5.79 M	5.35 M
Arsenic	<0.6 mg/kg	TM181		24.8 M	15.3 M	10.2 M	18.5 M	31.5 M	16.1 M
Cadmium	<0.02 mg/kg	TM181		0.167 M	0.0983 M	<0.02 M	0.167 M	0.0584 M	0.836 M
Chromium	<0.9 mg/kg	TM181		13.9 M	7.36 M	14.7 M	14.3 M	8 M	21.4 M
Copper	<1.4 mg/kg	TM181		45.9 M	42.2 M	23.6 M	42.4 M	42.4 M	11.4 M
Lead	<0.7 mg/kg	TM181		41.5 M	17 M	15.4 M	114 M	21.1 M	19 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		24.4 M	30 M	25.9 M	24.3 M	33.3 M	19.3 M
Selenium	<1 mg/kg	TM181		<1 #	1.44 #	<1 #	<1 #	2.09 #	<1 #
Vanadium	<0.2 mg/kg	TM181		24.9 #	21.4 #	18 #	18 #	22 #	28.9 #
Zinc	<1.9 mg/kg	TM181		94.1 M	49.9 M	67.5 M	186 M	47.9 M	92.7 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1192	IP1192	IP1192	IP1192	TPE586	TPE586
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376338	10376345	10376350	10376354	10376414	10376433
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	21	27	23	14	9
Soil Organic Matter (SOM)	<0.35 %	TM132							7.53 #
pH	1 pH Units	TM133		7.64 M	7.32 #	7.7 M	5.9 M	8.11 M	7.16 M
Arsenic	<0.6 mg/kg	TM181		32.8 M	19 #	15.8 M	35 M	30.3 M	15.1 M
Cadmium	<0.02 mg/kg	TM181		0.781 M	0.181 #	0.278 M	0.284 M	0.679 M	0.336 M
Chromium	<0.9 mg/kg	TM181		40.5 M	13.2 #	15.9 M	17.6 M	36.1 M	16 M
Copper	<1.4 mg/kg	TM181		120 M	106 #	46 M	57.5 M	128 M	39 M
Lead	<0.7 mg/kg	TM181		347 M	53.6 #	68.8 M	53.6 M	318 M	139 M
Mercury	<0.14 mg/kg	TM181		0.833 M	<0.14 #	<0.14 M	<0.14 M	0.805 M	0.631 M
Nickel	<0.2 mg/kg	TM181		37.5 M	39.3 #	38.2 M	16.6 M	31.5 M	18.6 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	1.05 #	<1 #
Vanadium	<0.2 mg/kg	TM181		32.6 #	27.1 #	24.1 #	22.9 #	29.9 #	19.3 #
Zinc	<1.9 mg/kg	TM181		669 M	312 #	83.8 M	80.4 M	657 M	324 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE587	TPE587	TPE587	TPE587	TPE588	TPE588
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376436	10376440	10376156	10376160	10376205	10376209
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		16	15	14	20	14	30
pH	1 pH Units	TM133		7.49 M	7.64 M	7.45 M	7.23 M	8.08 M	5.94 M
Arsenic	<0.6 mg/kg	TM181		25.4 M	21.7 M	20.4 M	9.24 M	14.5 M	15.1 M
Cadmium	<0.02 mg/kg	TM181		0.711 M	0.332 M	0.656 M	<0.02 M	0.356 M	0.381 M
Chromium	<0.9 mg/kg	TM181		25.1 M	20.1 M	19.5 M	14.7 M	19.2 M	16.6 M
Copper	<1.4 mg/kg	TM181		108 M	60.6 M	181 M	20.1 M	44.7 M	53.1 M
Lead	<0.7 mg/kg	TM181		183 M	117 M	123 M	12.3 M	76.7 M	77.1 M
Mercury	<0.14 mg/kg	TM181		0.459 M	0.215 M	0.318 M	0.686 M	<0.14 M	0.27 M
Nickel	<0.2 mg/kg	TM181		30 M	32 M	27.5 M	11.6 M	26.2 M	32.9 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		27.5 #	33 #	32.1 #	17.5 #	21.3 #	39.3 #
Zinc	<1.9 mg/kg	TM181		456 M	349 M	347 M	35.1 M	191 M	152 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE588	TPE588	TPE588	TPE589	TPE589	TPE589
			Depth (m)	2.50	3.50	4.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376214	10376218	10376222	10376164	10376168	10376173
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	24	14	13	23	27
Soil Organic Matter (SOM)	<0.35 %	TM132				7.02 #			
pH	1 pH Units	TM133		7.39 M	7.67 M	5.64 M	8.48 M	7.83 M	7.96 M
Arsenic	<0.6 mg/kg	TM181		21 M	15.3 M	8.92 M	9.73 M	15.4 M	14 M
Cadmium	<0.02 mg/kg	TM181		0.299 M	0.0821 M	0.234 M	0.0454 M	0.485 M	0.274 M
Chromium	<0.9 mg/kg	TM181		16.1 M	16.9 M	14.3 M	14.4 M	23.9 M	21.7 M
Copper	<1.4 mg/kg	TM181		63.5 M	50.3 M	31.3 M	23.7 M	78 M	82.6 M
Lead	<0.7 mg/kg	TM181		91.9 M	108 M	38.4 M	51 M	197 M	162 M
Mercury	<0.14 mg/kg	TM181		1.49 M	<0.14 M	<0.14 M	<0.14 M	0.164 M	0.17 M
Nickel	<0.2 mg/kg	TM181		38.7 M	34.2 M	36.6 M	16.1 M	45 M	48.6 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		48.7 #	49.3 #	18.4 #	14.1 #	51 #	52.1 #
Zinc	<1.9 mg/kg	TM181		156 M	179 M	91.2 M	124 M	331 M	333 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE589	TPE642	TPE642	TPE642	TPE642	TPE643
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376177	10376181	10376186	10376192	10376196	10376152
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		22	19	22	21	32	18
Soil Organic Matter (SOM)	<0.35 %	TM132			50.7 #				5.6 #
pH	1 pH Units	TM133		6.79 M	7.9 M	7.51 M	7.9 M	7.92	7.47 M
Arsenic	<0.6 mg/kg	TM181		11.8 M	22.3 M	22 M	23.3 M	19.9	21.5 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.334 M	<0.02 M	0.131 M	<0.02	0.413 M
Chromium	<0.9 mg/kg	TM181		15.7 M	10.3 M	10.9 M	17.3 M	12	14 M
Copper	<1.4 mg/kg	TM181		35.8 M	84.3 M	48 M	48.4 M	54.8	50.5 M
Lead	<0.7 mg/kg	TM181		66.3 M	31.6 M	13 M	18.4 M	10.6	129 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	1.54 M	2.68 M	3.39	<0.14 M
Nickel	<0.2 mg/kg	TM181		30.3 M	31.6 M	36.4 M	56.4 M	74.6	24.7 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.04 #	<1 #	<1	<1 #
Vanadium	<0.2 mg/kg	TM181		29.2 #	27.7 #	38 #	63.9 #	73.4	17.2 #
Zinc	<1.9 mg/kg	TM181		154 M	106 M	238 M	948 M	74.3	258 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE643	TPE643	TPE643	TPE643	TPE644	TPE644
			Depth (m)	1.50	2.50	3.50	4.50	0.30	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376201	10376249	10376301	10376360	10376226	10376230
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		23	26	25	29	17	24
pH	1 pH Units	TM133		6.26 M	6.39 M	6.82 M	6.19 M	6.29 M	6.25 M
Arsenic	<0.6 mg/kg	TM181		21.7 M	14.9 M	19.1 M	19.5 M	13 M	18.8 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.02 M	<0.02 M	0.394 M	0.0267 M
Chromium	<0.9 mg/kg	TM181		11 M	11.2 M	13.2 M	15.4 M	14.1 M	11.4 M
Copper	<1.4 mg/kg	TM181		50.2 M	39.3 M	87.2 M	67.2 M	18.3 M	41.2 M
Lead	<0.7 mg/kg	TM181		50.2 M	28 M	77 M	98 M	29 M	12.9 M
Mercury	<0.14 mg/kg	TM181		0.661 M	0.366 M	0.531 M	1.65 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		29.3 M	27.6 M	37.4 M	38.4 M	26.7 M	30.2 M
Selenium	<1 mg/kg	TM181		1.25 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		26.5 #	29.3 #	33.2 #	39 #	18.6 #	28.2 #
Zinc	<1.9 mg/kg	TM181		52.6 M	36.6 M	105 M	59.6 M	119 M	38.7 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE644	TPE644	TPE644	TPE645	TPE645	TPE645
			Depth (m)	2.50	3.50	4.50	0.30	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376234	10376238	10376243	10376253	10376258	10376262
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	23	28	14	26	31
pH	1 pH Units	TM133		6.65 M	8.21 M	7.17 M	7.66 M	7.83 M	9.29 M
Arsenic	<0.6 mg/kg	TM181		13.8 M	12.4 M	13 M	14.1 M	16.2 M	14.2 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	0.104 M	0.629 M	0.0667 M	0.273 M
Chromium	<0.9 mg/kg	TM181		13.2 M	19.1 M	11.6 M	13.3 M	9.39 M	8.16 M
Copper	<1.4 mg/kg	TM181		43.6 M	44 M	38 M	56.8 M	53.2 M	48.4 M
Lead	<0.7 mg/kg	TM181		8.91 M	15.4 M	24.7 M	104 M	18.1 M	51.5 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.428 M	1.2 M	<0.14 M	<0.14 M	1.24 M
Nickel	<0.2 mg/kg	TM181		28.9 M	38 M	27.3 M	28.7 M	23.1 M	22.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		38.6 #	61.3 #	29.5 #	16.5 #	28.2 #	20.8 #
Zinc	<1.9 mg/kg	TM181		20.1 M	26.6 M	59.9 M	234 M	32.4 M	86 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE645	TPE645	TPE646	TPE646	TPE646	TPE646
			Depth (m)	3.50	4.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376267	10376273	10376277	10376282	10376287	10376293
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		32	19	25	33	32	36
Soil Organic Matter (SOM)	<0.35 %	TM132		40.7 #					
pH	1 pH Units	TM133		7.23 M	7.92 M	7.32 M	7.7 M	7.5 M	7.15 M
Arsenic	<0.6 mg/kg	TM181		14.7 M	17.1 M	24.4 M	29.4 M	7.48 M	11.8 M
Cadmium	<0.02 mg/kg	TM181		0.483 M	0.195 M	0.53 M	0.916 M	0.301 M	0.574 M
Chromium	<0.9 mg/kg	TM181		9.43 M	14.8 M	58.6 M	13.3 M	65 M	29.4 M
Copper	<1.4 mg/kg	TM181		46.4 M	41.2 M	96.3 M	62.9 M	56.8 M	51.2 M
Lead	<0.7 mg/kg	TM181		53.4 M	12.6 M	213 M	129 M	109 M	88.4 M
Mercury	<0.14 mg/kg	TM181		0.94 M	0.174 M	1.49 M	0.6 M	0.563 M	1.24 M
Nickel	<0.2 mg/kg	TM181		16 M	15 M	41.9 M	98.9 M	28.9 M	15.4 M
Selenium	<1 mg/kg	TM181		<1 #	1.2 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		19.4 #	20 #	44.7 #	127 #	145 #	61.8 #
Zinc	<1.9 mg/kg	TM181		90.6 M	51.3 M	474 M	193 M	202 M	178 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE647	TPE647	TPE647	TPE647	TPE648	TPE648
			Depth (m)	0.50	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376364	10376369	10376373	10376378	10376383	10376388
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		41	20	23	51	19	26
pH	1 pH Units	TM133		7.05 M	7.29 M	6.15 M	7.29 M	8 M	7.3 M
Arsenic	<0.6 mg/kg	TM181		36.7 M	20.9 M	35.4 M	3.52 M	23.5 M	23.9 M
Cadmium	<0.02 mg/kg	TM181		0.826 M	0.0524 M	0.405 M	0.268 M	0.475 M	0.0683 M
Chromium	<0.9 mg/kg	TM181		21.5 M	24.3 M	16.4 M	6 M	16.5 M	10.9 M
Copper	<1.4 mg/kg	TM181		142 M	99.1 M	126 M	36.4 M	72.8 M	84.3 M
Lead	<0.7 mg/kg	TM181		169 M	58.1 M	155 M	40.3 M	165 M	44.8 M
Mercury	<0.14 mg/kg	TM181		3.23 M	1.21 M	1.49 M	1.31 M	0.275 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		44.6 M	72 M	58.7 M	6.21 M	21.1 M	34.7 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	1.17 #
Vanadium	<0.2 mg/kg	TM181		73.6 #	89.3 #	54.6 #	9.29 #	20.1 #	29.4 #
Zinc	<1.9 mg/kg	TM181		462 M	65.5 M	109 M	42.1 M	375 M	96.5 M

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE648	TPE648				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	11/11/2014	11/11/2014				
			Sample Time	.	.				
			Date Received	14/11/2014	14/11/2014				
			SDG Ref	141114-1	141114-1				
			Lab Sample No.(s)	10376392	10376399				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	28				
pH	1 pH Units	TM133		7.12 M	7.27 M				
Arsenic	<0.6 mg/kg	TM181		26.7 M	26.8 M				
Cadmium	<0.02 mg/kg	TM181		0.118 M	0.0647 M				
Chromium	<0.9 mg/kg	TM181		12.4 M	9.01 M				
Copper	<1.4 mg/kg	TM181		97.6 M	60 M				
Lead	<0.7 mg/kg	TM181		58.5 M	47.1 M				
Mercury	<0.14 mg/kg	TM181		1.43 M	0.543 M				
Nickel	<0.2 mg/kg	TM181		34.9 M	33.4 M				
Selenium	<1 mg/kg	TM181		<1 #	<1 #				
Vanadium	<0.2 mg/kg	TM181		31.8 #	26.7 #				
Zinc	<1.9 mg/kg	TM181		106 M	103 M				

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1068	IP1118	IP1189	IP1189	IP1189	IP1189
			Depth (m)	0.50	1.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376404	10376410	10376297	10376306	10376310	10376315
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		108	108	95.8	96.3	99.8	97.4
Acenaphthene-d10 % recovery**	%	TM218		107	107	96.9	93.5	100	95.6
Phenanthrene-d10 % recovery**	%	TM218		108	108	98.4	85.1	81.4	93.3
Chrysene-d12 % recovery**	%	TM218		105	105	89.7	72.4	59.7	93.1
Perylene-d12 % recovery**	%	TM218		108	107	93.6	65.9	48.6	95.2
Naphthalene	<9 µg/kg	TM218		<9 @ M	<9 @ M	51.8 @ M	162 @ M	71.5 @ M	21.3 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M	60.7 @ M	24.9 @ M	33.4 @ M	48.5 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<8 @ M	12.3 @ M	<8 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		<10 @ M	<10 @ M	40.5 @ M	<10 @ M	15 @ M	13.5 @ M
Phenanthrene	<15 µg/kg	TM218		90.8 @ M	46.9 @ M	508 @ M	256 @ M	199 @ M	181 @ M
Anthracene	<16 µg/kg	TM218		<16 @ M	<16 @ M	96.6 @ M	30.5 @ M	31.3 @ M	38.7 @ M
Fluoranthene	<17 µg/kg	TM218		22.7 @ M	69.3 @ M	528 @ M	221 @ M	127 @ M	252 @ M
Pyrene	<15 µg/kg	TM218		18.5 @ M	57.5 @ M	795 @ M	167 @ M	103 @ M	206 @ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 @ M	41.2 @ M	463 @ M	96.8 @ M	66.6 @ M	135 @ M
Chrysene	<10 µg/kg	TM218		48.4 @ M	55.9 @ M	588 @ M	134 @ M	86.7 @ M	179 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		39.2 @ M	93.4 @ M	462 @ M	138 @ M	92.7 @ M	214 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	27.1 @ M	154 @ M	43.8 @ M	22.3 @ M	65.7 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 @ M	34.6 @ M	397 @ M	65.7 @ M	37.3 @ M	125 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	<18 @ M	178 @ M	30.7 @ M	<18 @ M	69 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M	87.1 @ M	<23 @ M	<23 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ M	<24 @ M	301 @ M	42.5 @ M	<24 @ M	90.6 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		220	426	4720	1410	886	1640

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1190	IP1190	IP1190	IP1191	IP1191	IP1191
			Depth (m)	0.50	1.50	2.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376321	10376327	10376333	10376420	10376425	10376429
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		108	105	97.9	102	102	101
Acenaphthene-d10 % recovery**	%	TM218		107	106	93.2	103	102	103
Phenanthrene-d10 % recovery**	%	TM218		107	93.8	90.8	102	86.1	100
Chrysene-d12 % recovery**	%	TM218		106	75.6	86.6	100	73.8	102
Perylene-d12 % recovery**	%	TM218		108	64	88.2	101	67.5	115
Naphthalene	<9 µg/kg	TM218		37.2 @ M	70.1 @ M	21.4 @ M	17.8 @ M	52 @ M	<9 @ M
Acenaphthylene	<12 µg/kg	TM218		70.3 @ M	<12 @ M	<12 @ M	19.5 @ 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		38.9 @ M	<10 @ M	<10 @ M	17.4 @ M	<10 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		321 @ M	214 @ M	79.4 @ M	229 @ M	169 @ M	<15 @ M
Anthracene	<16 µg/kg	TM218		80.9 @ M	<16 @ M	<16 @ M	31.4 @ M	<16 @ M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		453 @ M	86.4 @ M	<17 @ M	226 @ M	37 @ M	<17 @ M
Pyrene	<15 µg/kg	TM218		339 @ M	55.2 @ M	<15 @ M	204 @ M	22.7 @ M	<15 @ M
Benz(a)anthracene	<14 µg/kg	TM218		203 @ M	52.1 @ M	<14 @ M	128 @ M	<14 @ M	20.5 @ M
Chrysene	<10 µg/kg	TM218		203 @ M	103 @ M	34.1 @ M	149 @ M	91.3 @ M	<10 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		262 @ M	111 @ M	24.3 @ M	188 @ M	89.3 @ M	<15 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		96 @ M	24.1 @ M	<14 @ M	59.6 @ M	<14 @ M	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		183 @ M	41.9 @ M	<15 @ M	99.5 @ M	<15 @ M	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		102 @ M	<18 @ M	<18 @ M	47.6 @ M	<18 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		41.5 @ M	<23 @ M	<23 @ M	<23 @ M	<23 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		130 @ M	<24 @ M	<24 @ M	59.1 @ M	<24 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2560	758	159	1480	461	<118

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1192	IP1192	IP1192	IP1192	TPE586	TPE586
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376338	10376345	10376350	10376354	10376414	10376433
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		112	95.7	103	106	110	107
Acenaphthene-d10 % recovery**	%	TM218		111	93.6	102	106	111	107
Phenanthrene-d10 % recovery**	%	TM218		112	86.7	94.4	104	107	103
Chrysene-d12 % recovery**	%	TM218		113	73.4	87.9	102	115	100
Perylene-d12 % recovery**	%	TM218		118	63.1	82.6	115	123	101
Naphthalene	<9 µg/kg	TM218		144 @ M	148 @ #	60.7 @ M	22.6 @ M	253 @ M	304 @ M
Acenaphthylene	<12 µg/kg	TM218		75 @ M	<12 @ #	<12 @ M	<12 @ M	73.5 @ M	67 @ M
Acenaphthene	<8 µg/kg	TM218		97.3 @ M	16.6 @ #	247 @ M	<8 @ M	149 @ M	159 @ M
Fluorene	<10 µg/kg	TM218		124 @ M	<10 @ #	229 @ M	<10 @ M	153 @ M	214 @ M
Phenanthrene	<15 µg/kg	TM218		1150 @ M	175 @ #	2040 @ M	31.7 @ M	1130 @ M	2360 @ M
Anthracene	<16 µg/kg	TM218		196 @ M	<16 @ #	315 @ M	<16 @ M	263 @ M	418 @ M
Fluoranthene	<17 µg/kg	TM218		1670 @ M	84.2 @ #	1820 @ M	29.9 @ M	2180 @ M	2640 @ M
Pyrene	<15 µg/kg	TM218		1550 @ M	76.3 @ #	1150 @ M	24.9 @ M	1930 @ M	3200 @ M
Benz(a)anthracene	<14 µg/kg	TM218		968 @ M	35.3 @ #	945 @ M	<14 @ M	1450 @ M	2500 @ M
Chrysene	<10 µg/kg	TM218		1060 @ M	78.2 @ #	881 @ M	25.8 @ M	1910 @ M	5890 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1680 @ M	68.8 @ #	857 @ M	42.9 @ M	2600 @ M	3070 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		523 @ M	18.9 @ #	293 @ M	<14 @ M	930 @ M	828 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		1050 @ M	24.8 @ #	560 @ M	24.9 @ M	2130 @ M	2350 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		719 @ M	<18 @ #	239 @ M	<18 @ M	1280 @ M	874 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		267 @ M	<23 @ #	124 @ M	<23 @ M	477 @ M	580 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		924 @ M	<24 @ #	255 @ M	<24 @ M	1620 @ M	1590 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		12200	726	10000	203	18500	27000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE587	TPE587	TPE587	TPE587	TPE588	TPE588
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376436	10376440	10376156	10376160	10376205	10376209
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		105	105	95	102	106	106
Acenaphthene-d10 % recovery**	%	TM218		106	103	97.2	102	106	107
Phenanthrene-d10 % recovery**	%	TM218		106	105	91.7	102	106	104
Chrysene-d12 % recovery**	%	TM218		105	103	92.8	101	104	99.1
Perylene-d12 % recovery**	%	TM218		110	117	99	111	109	110
Naphthalene	<9 µg/kg	TM218		66.1 @ M	138 @ M	186 @ M	38.5 @ M	47.2 @ M	746 @ M
Acenaphthylene	<12 µg/kg	TM218		84.7 @ M	53.3 @ M	162 @ M	<12 @ M	53 @ M	162 @ M
Acenaphthene	<8 µg/kg	TM218		127 @ M	9.93 @ M	106 @ M	27.8 @ M	28.9 @ M	55 @ M
Fluorene	<10 µg/kg	TM218		132 @ M	27.2 @ M	135 @ M	84.8 @ M	<10 @ M	114 @ M
Phenanthrene	<15 µg/kg	TM218		1090 @ M	269 @ M	1370 @ M	628 @ M	461 @ M	1620 @ M
Anthracene	<16 µg/kg	TM218		222 @ M	60 @ M	271 @ M	86.6 @ M	103 @ M	244 @ M
Fluoranthene	<17 µg/kg	TM218		1820 @ M	379 @ M	1990 @ M	135 @ M	807 @ M	1750 @ M
Pyrene	<15 µg/kg	TM218		1530 @ M	334 @ M	1770 @ M	351 @ M	646 @ M	1640 @ M
Benz(a)anthracene	<14 µg/kg	TM218		1090 @ M	266 @ M	1110 @ M	150 @ M	459 @ M	1130 @ M
Chrysene	<10 µg/kg	TM218		1150 @ M	264 @ M	1440 @ M	195 @ M	544 @ M	1390 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1830 @ M	463 @ M	1650 @ M	148 @ M	842 @ M	1940 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		647 @ M	118 @ M	626 @ M	30.2 @ M	306 @ M	456 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		1210 @ M	291 @ M	1280 @ M	116 @ M	547 @ M	1100 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		644 @ M	169 @ M	707 @ M	31.5 @ M	327 @ M	570 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		227 @ M	78 @ M	329 @ M	<23 @ M	124 @ M	291 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		751 @ M	272 @ M	1000 @ M	77.3 @ M	421 @ M	812 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		12600	3190	14100	2100	5720	14000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE588	TPE588	TPE588	TPE589	TPE589	TPE589
			Depth (m)	2.50	3.50	4.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376214	10376218	10376222	10376164	10376168	10376173
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		105	98.9	100	109	106	98.5
Acenaphthene-d10 % recovery**	%	TM218		105	101	98.9	108	102	96
Phenanthrene-d10 % recovery**	%	TM218		95.9	94.5	98.2	109	99.2	91.6
Chrysene-d12 % recovery**	%	TM218		85	92	96.6	108	100	91.9
Perylene-d12 % recovery**	%	TM218		79.2	89	109	113	105	100
Naphthalene	<9 µg/kg	TM218		728 @ M	308 @ M	13.6 @ M	39.6 @ M	529 @ M	188 @ M
Acenaphthylene	<12 µg/kg	TM218		71.6 @ M	95.1 @ M	<12 @ M	46.3 @ M	1010 @ M	362 @ M
Acenaphthene	<8 µg/kg	TM218		28.5 @ M	41.3 @ M	<8 @ M	33.3 @ M	416 @ M	100 @ M
Fluorene	<10 µg/kg	TM218		72.1 @ M	71.7 @ M	<10 @ M	42.2 @ M	868 @ M	197 @ M
Phenanthrene	<15 µg/kg	TM218		1160 @ M	807 @ M	129 @ M	381 @ M	8810 @ M	2740 @ M
Anthracene	<16 µg/kg	TM218		135 @ M	165 @ M	<16 @ M	81.1 @ M	2030 @ M	549 @ M
Fluoranthene	<17 µg/kg	TM218		785 @ M	1100 @ M	120 @ M	775 @ M	11100 @ M	3960 @ M
Pyrene	<15 µg/kg	TM218		884 @ M	1010 @ M	99.6 @ M	679 @ M	8010 @ M	2860 @ M
Benz(a)anthracene	<14 µg/kg	TM218		331 @ M	549 @ M	72.9 @ M	403 @ M	4970 @ M	2200 @ M
Chrysene	<10 µg/kg	TM218		812 @ M	1000 @ M	117 @ M	455 @ M	4930 @ M	2470 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		698 @ M	790 @ M	165 @ M	765 @ M	6380 @ M	2980 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		224 @ M	325 @ M	24 @ M	244 @ M	2850 @ M	1080 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		392 @ M	592 @ M	65.6 @ M	467 @ M	4980 @ M	1980 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		204 @ M	312 @ M	36.1 @ M	327 @ M	2500 @ M	971 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		122 @ M	139 @ M	27.9 @ M	112 @ M	809 @ M	450 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		283 @ M	428 @ M	64.4 @ M	440 @ M	2910 @ M	1200 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6930	7740	934	5290	63100	24300

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE589	TPE642	TPE642	TPE642	TPE642	TPE643
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376177	10376181	10376186	10376192	10376196	10376152
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		109	105	104	92.6	100	107
Acenaphthene-d10 % recovery**	%	TM218		109	105	106	93.5	99.7	106
Phenanthrene-d10 % recovery**	%	TM218		106	100	97.6	84.3	89.6	106
Chrysene-d12 % recovery**	%	TM218		107	91	84.7	73.5	76.2	104
Perylene-d12 % recovery**	%	TM218		116	84.9	77.1	66.7	67.9	110
Naphthalene	<9 µg/kg	TM218		89.5 @ M	119 @ M	244 @ M	304 @ M	53.7 @	113 @ M
Acenaphthylene	<12 µg/kg	TM218		108 @ M	378 @ M	227 @ M	701 @ M	66.6 @	<24 @ M
Acenaphthene	<8 µg/kg	TM218		24.6 @ M	31.5 @ M	31.3 @ M	41.7 @ M	12.5 @	65.8 @ M
Fluorene	<10 µg/kg	TM218		68.5 @ M	110 @ M	250 @ M	350 @ M	96.7 @	86 @ M
Phenanthrene	<15 µg/kg	TM218		634 @ M	1470 @ M	1790 @ M	5270 @ M	1130 @	614 @ M
Anthracene	<16 µg/kg	TM218		158 @ M	423 @ M	295 @ M	1120 @ M	158 @	151 @ M
Fluoranthene	<17 µg/kg	TM218		1020 @ M	2790 @ M	1630 @ M	6600 @ M	987 @	786 @ M
Pyrene	<15 µg/kg	TM218		765 @ M	1930 @ M	1150 @ M	3930 @ M	707 @	722 @ M
Benz(a)anthracene	<14 µg/kg	TM218		629 @ M	1210 @ M	553 @ M	2960 @ M	380 @	443 @ M
Chrysene	<10 µg/kg	TM218		706 @ M	1190 @ M	700 @ M	2340 @ M	515 @	450 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		874 @ M	1450 @ M	745 @ M	2510 @ M	483 @	653 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		284 @ M	506 @ M	247 @ M	956 @ M	172 @	232 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		574 @ M	924 @ M	434 @ M	1790 @ M	304 @	399 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		276 @ M	492 @ M	246 @ M	920 @ M	152 @	186 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		127 @ M	191 @ M	115 @ M	365 @ M	72.1 @	75.2 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		329 @ M	550 @ M	265 @ M	871 @ M	177 @	235 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6660	13800	8920	31000	5470	5210

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE643	TPE643	TPE643	TPE643	TPE644	TPE644
			Depth (m)	1.50	2.50	3.50	4.50	0.30	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376201	10376249	10376301	10376360	10376226	10376230
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		113	103	107	104	109	99.4
Acenaphthene-d10 % recovery**	%	TM218		115	103	106	105	110	99.1
Phenanthrene-d10 % recovery**	%	TM218		100	91	99.4	96.4	109	89.1
Chrysene-d12 % recovery**	%	TM218		76	80.2	90.1	84.7	108	74.3
Perylene-d12 % recovery**	%	TM218		63.4	72.2	89	79.3	117	65.9
Naphthalene	<9 µg/kg	TM218		112 @ M	215 @ M	599 @ M	532 @ M	76.7 @ M	64.9 @ M
Acenaphthylene	<12 µg/kg	TM218		36.8 @ M	733 @ M	<120 @ M	77.9 @ M	<24 @ M	36.6 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	27.8 @ M	<80 @ M	72.6 @ M	<16 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		21 @ M	76.1 @ M	148 @ M	246 @ M	<20 @ M	37.1 @ M
Phenanthrene	<15 µg/kg	TM218		336 @ M	1340 @ M	842 @ M	1560 @ M	498 @ M	439 @ M
Anthracene	<16 µg/kg	TM218		43 @ M	605 @ M	<160 @ M	261 @ M	286 @ M	69 @ M
Fluoranthene	<17 µg/kg	TM218		394 @ M	4370 @ M	503 @ M	1200 @ M	197 @ M	402 @ M
Pyrene	<15 µg/kg	TM218		385 @ M	3180 @ M	682 @ M	1350 @ M	437 @ M	319 @ M
Benz(a)anthracene	<14 µg/kg	TM218		248 @ M	3590 @ M	256 @ M	676 @ M	139 @ M	131 @ M
Chrysene	<10 µg/kg	TM218		299 @ M	3900 @ M	621 @ M	1080 @ M	<20 @ M	161 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		412 @ M	5190 @ M	561 @ M	1140 @ M	178 @ M	117 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		104 @ M	1900 @ M	239 @ M	300 @ M	<28 @ M	38.5 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		200 @ M	3460 @ M	407 @ M	526 @ M	125 @ M	82.2 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		117 @ M	1830 @ M	552 @ M	370 @ M	<36 @ M	31.2 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		56.9 @ M	747 @ M	<230 @ M	200 @ M	<46 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		151 @ M	1840 @ M	1190 @ M	545 @ M	99.1 @ M	41.6 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2910	33000	6600	10100	2030	1970

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE644	TPE644	TPE644	TPE645	TPE645	TPE645
			Depth (m)	2.50	3.50	4.50	0.30	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376234	10376238	10376243	10376253	10376258	10376262
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		140	116	107	98.1	113	104
Acenaphthene-d10 % recovery**	%	TM218		139	117	118	100	114	111
Phenanthrene-d10 % recovery**	%	TM218		116	107	103	99.9	107	101
Chrysene-d12 % recovery**	%	TM218		83.4	99.5	82.7	91.4	93.8	92.5
Perylene-d12 % recovery**	%	TM218		62.6	116	79.2	95.8	83.3	90.1
Naphthalene	<9 µg/kg	TM218		1060 @ M	4060 @ M	7960 @ M	372 @ M	1170 @ M	17800 @ M
Acenaphthylene	<12 µg/kg	TM218		236 @ M	<120 @ M	<12 @ M	239 @ M	<12 @ M	<24 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<80 @ M	1570 @ M	<8 @ M	252 @ M	4780 @ M
Fluorene	<10 µg/kg	TM218		77 @ M	423 @ M	4220 @ M	265 @ M	862 @ M	15400 @ M
Phenanthrene	<15 µg/kg	TM218		390 @ M	1940 @ M	13800 @ M	2530 @ M	6900 @ M	104000 @ M
Anthracene	<16 µg/kg	TM218		49.2 @ M	<160 @ M	1800 @ M	414 @ M	427 @ M	7180 @ M
Fluoranthene	<17 µg/kg	TM218		160 @ M	237 @ M	1420 @ M	2230 @ M	568 @ M	6990 @ M
Pyrene	<15 µg/kg	TM218		176 @ M	569 @ M	2190 @ M	2270 @ M	1250 @ M	17100 @ M
Benz(a)anthracene	<14 µg/kg	TM218		63.8 @ M	<140 @ M	740 @ M	1240 @ M	467 @ M	5550 @ M
Chrysene	<10 µg/kg	TM218		143 @ M	430 @ M	1260 @ M	1580 @ M	964 @ M	11800 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		73.8 @ M	350 @ M	<15 @ M	1560 @ M	290 @ M	2590 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		28.7 @ M	<140 @ M	<14 @ M	564 @ M	61.3 @ M	480 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		48.8 @ M	410 @ M	<15 @ M	991 @ M	159 @ M	1570 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	369 @ M	<18 @ M	540 @ M	47.5 @ M	417 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	743 @ M	<23 @ M	229 @ M	84.7 @ M	636 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		33 @ M	2070 @ M	<24 @ M	652 @ M	126 @ M	713 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2540	11600	34900	15700	13600	197000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE645	TPE645	TPE646	TPE646	TPE646	TPE646
			Depth (m)	3.50	4.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376267	10376273	10376277	10376282	10376287	10376293
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		117	105	115	128	107	101
Acenaphthene-d10 % recovery**	%	TM218		139	107	118	133	114	134
Phenanthrene-d10 % recovery**	%	TM218		125	106	117	126	111	104
Chrysene-d12 % recovery**	%	TM218		121	106	106	115	106	99.2
Perylene-d12 % recovery**	%	TM218		124	108	110	119	120	112
Naphthalene	<9 µg/kg	TM218		64200 @ M	805 @ M	153 @ M	1280 @ M	2340 @ M	99900 @ M
Acenaphthylene	<12 µg/kg	TM218		<120 @ M	<12 @ M	229 @ M	<24 @ M	<12 @ M	<60 @ M
Acenaphthene	<8 µg/kg	TM218		6070 @ M	66.9 @ M	43.3 @ M	536 @ M	906 @ M	3720 @ M
Fluorene	<10 µg/kg	TM218		22600 @ M	276 @ M	88.1 @ M	1470 @ M	5910 @ M	16700 @ M
Phenanthrene	<15 µg/kg	TM218		166000 @ M	2220 @ M	1110 @ M	5950 @ M	18900 @ M	82800 @ M
Anthracene	<16 µg/kg	TM218		9470 @ M	150 @ M	292 @ M	900 @ M	3640 @ M	7500 @ M
Fluoranthene	<17 µg/kg	TM218		8890 @ M	180 @ M	2140 @ M	1180 @ M	3010 @ M	4330 @ M
Pyrene	<15 µg/kg	TM218		22800 @ M	406 @ M	1740 @ M	3420 @ M	8640 @ M	13000 @ M
Benz(a)anthracene	<14 µg/kg	TM218		7800 @ M	173 @ M	1110 @ M	1250 @ M	5290 @ M	4040 @ M
Chrysene	<10 µg/kg	TM218		15600 @ M	361 @ M	1420 @ M	2620 @ M	15200 @ M	6920 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2920 @ M	140 @ M	1820 @ M	828 @ M	986 @ M	1890 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		656 @ M	<14 @ M	705 @ M	198 @ M	392 @ M	302 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		2070 @ M	64.4 @ M	1120 @ M	563 @ M	1370 @ M	1420 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		580 @ M	<18 @ M	683 @ M	195 @ M	453 @ M	354 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		873 @ M	<23 @ M	273 @ M	241 @ M	590 @ M	404 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		975 @ M	<24 @ M	863 @ M	498 @ M	446 @ M	742 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		332000	4850	13800	21100	68000	244000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE647	TPE647	TPE647	TPE647	TPE648	TPE648
			Depth (m)	0.50	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376364	10376369	10376373	10376378	10376383	10376388
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		116	98.7	105	112	107	96.5
Acenaphthene-d10 % recovery**	%	TM218		119	101	114	123	107	97.4
Phenanthrene-d10 % recovery**	%	TM218		113	93.9	107	103	105	87
Chrysene-d12 % recovery**	%	TM218		121	90.2	97.9	94.8	114	72.5
Perylene-d12 % recovery**	%	TM218		125	90.4	104	88.6	121	67.1
Naphthalene	<9 µg/kg	TM218		15000 @ M	104 @ M	4580 @ M	24700 @ M	438 @ M	90.8 @ M
Acenaphthylene	<12 µg/kg	TM218		101 @ M	22.2 @ M	<12 @ M	<60 @ M	109 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		1260 @ M	48.6 @ M	<8 @ M	6000 @ M	394 @ M	19.1 @ M
Fluorene	<10 µg/kg	TM218		1290 @ M	54.7 @ M	918 @ M	7570 @ M	462 @ M	26.7 @ M
Phenanthrene	<15 µg/kg	TM218		2130 @ M	708 @ M	1790 @ M	15600 @ M	2600 @ M	159 @ M
Anthracene	<16 µg/kg	TM218		510 @ M	102 @ M	251 @ M	1670 @ M	472 @ M	28.7 @ M
Fluoranthene	<17 µg/kg	TM218		826 @ M	1870 @ M	341 @ M	1690 @ M	3470 @ M	127 @ M
Pyrene	<15 µg/kg	TM218		1460 @ M	1660 @ M	658 @ M	3400 @ M	2820 @ M	148 @ M
Benz(a)anthracene	<14 µg/kg	TM218		475 @ M	1580 @ M	224 @ M	1050 @ M	1830 @ M	71.6 @ M
Chrysene	<10 µg/kg	TM218		733 @ M	2010 @ M	250 @ M	1670 @ M	1740 @ M	143 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		685 @ M	2820 @ M	432 @ M	768 @ M	2210 @ M	159 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		246 @ M	1080 @ M	82.6 @ M	250 @ M	892 @ M	52.5 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		598 @ M	1840 @ M	221 @ M	433 @ M	2040 @ M	79.2 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		325 @ M	1090 @ M	115 @ M	189 @ M	1060 @ M	61.5 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		135 @ M	445 @ M	76.6 @ M	<115 @ M	396 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		490 @ M	1260 @ M	248 @ M	267 @ M	1240 @ M	102 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		26200	16700	10200	65300	22200	1270

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE648	TPE648				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	11/11/2014	11/11/2014				
			Sample Time	.	.				
			Date Received	14/11/2014	14/11/2014				
			SDG Ref	141114-1	141114-1				
			Lab Sample No.(s)	10376392	10376399				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		109	89.1				
Acenaphthene-d10 % recovery**	%	TM218		109	90.7				
Phenanthrene-d10 % recovery**	%	TM218		97.9	78				
Chrysene-d12 % recovery**	%	TM218		77.1	65.1				
Perylene-d12 % recovery**	%	TM218		71.4	63.2				
Naphthalene	<9 µg/kg	TM218		157 @ M	205 @ M				
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M				
Acenaphthene	<8 µg/kg	TM218		<8 @ M	12.2 @ M				
Fluorene	<10 µg/kg	TM218		<10 @ M	29.2 @ M				
Phenanthrene	<15 µg/kg	TM218		108 @ M	342 @ M				
Anthracene	<16 µg/kg	TM218		<16 @ M	27.9 @ M				
Fluoranthene	<17 µg/kg	TM218		96.9 @ M	87.8 @ M				
Pyrene	<15 µg/kg	TM218		85.3 @ M	140 @ M				
Benz(a)anthracene	<14 µg/kg	TM218		78.1 @ M	60.1 @ M				
Chrysene	<10 µg/kg	TM218		80.6 @ M	115 @ M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		156 @ M	86.7 @ M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		25.4 @ M	24.6 @ M				
Benzo(a)pyrene	<15 µg/kg	TM218		58.3 @ M	33.6 @ M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		26.6 @ M	<18 @ M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		50 @ M	39.9 @ M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		922	1200				

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1068	IP1118	IP1189	IP1189	IP1189	IP1189
			Depth (m)	0.50	1.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376404	10376410	10376297	10376306	10376310	10376315
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		77 @	85 @	101 @	91 @	105 @	77 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	<176 @ M	390 @ M	<880 @ M	1290 @ M	9800 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<20 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<40 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<8 @ M	<40 @ M	81.8 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<60 @ M	<60 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<24 @ M	<120 @ M	<120 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<60 @ M	80.5 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	80.5 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	162 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<200 @	205 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	<40 @	74.6 @	<200 @	205 @	1320 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	<40 @	75.7 @	<200 @	223 @	1690 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	<40 @	89.3 @	<200 @	<200 @	3230 @
Aliphatics >C12-C16	<100 µg/kg	TM173		6520	<100	2790	2200	5550	8460
Aliphatics >C16-C21	<100 µg/kg	TM173		13600	<100	10400	756	5020	2340
Aliphatics >C21-C35	<100 µg/kg	TM173		14800	<100	60800	20700	30700	11400
Aliphatics >C35-C44	<100 µg/kg	TM173		51600	<100	97100	3220	25100	29700
Total Aliphatics >C12-C44	<100 µg/kg	TM173		86500	<100	171000	26900	66400	51900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	<40 @	59.9 @	<200 @	399 @	1160 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	<40 @	59.9 @	<200 @	<200 @	2150 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		659	<100	1410	<100	1100	958
Aromatics >EC16-EC21	<100 µg/kg	TM173		6920	260	8260	<100	2370	2100
Aromatics >EC21-EC35	<100 µg/kg	TM173		23000	4010	68600	1100	21000	20800
Aromatics >EC35-EC44	<100 µg/kg	TM173		33600	482	97400	<100	28300	36100
Aromatics >EC40-EC44	<100 µg/kg	TM173		17500	<100	42700	<100	13400	16100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		64200	4750	176000	1100	52800	59900
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		151000	4760	347000	28200	120000	122000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1190	IP1190	IP1190	IP1191	IP1191	IP1191
			Depth (m)	0.50	1.50	2.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376321	10376327	10376333	10376420	10376425	10376429
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		84 @	76 @	100 @	81 @	106 @	80 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		1370 @ M	1980 @ M	616 @ M	2390 @ M	1970 @ M	1560 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<20 @ M	<20 @ M	<100 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<40 @ M	<40 @ M	<200 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		13 @ M	146 @ M	10.8 @ M	31.3 @ M	138 @ M	11.9 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 @ M	<12 @ M	15.1 @ M	<60 @ M	35.6 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	170 @ M	<24 @ M	37.1 @ M	189 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		15.3 @ M	107 @ M	<12 @ M	39.4 @ M	115 @ M	27.7 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		15.3 @	277 @	<9 @	76.5 @	304 @	27.7 @
sum of detected BTEX by GC	<24 µg/kg	TM089		28.3 @	423 @	<24 @	123 @	442 @	75.2 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		158 @	362 @	90 @	303 @	343 @	140 @
Aliphatics >C8-C10	<10 µg/kg	TM089		257 @	324 @	138 @	654 @	350 @	475 @
Aliphatics >C10-C12	<10 µg/kg	TM089		398 @	281 @	139 @	507 @	224 @	308 @
Aliphatics >C12-C16	<100 µg/kg	TM173		28800	<100	<100	<100	4200	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		61200	<100	<100	6950	902	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		59500	15200	<100	33200	3830	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		9130	<100	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		159000	15200	<100	40200	8930	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		224 @	564 @	126 @	527 @	613 @	397 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		264 @	<200 @	92.4 @	338 @	<200 @	205 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		4780	<100	<100	<100	846	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		26500	227	<100	1860	3060	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		99900	6020	3050	16200	19100	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173		44300	<100	<100	7510	9680	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173		15500	<100	<100	3000	4930	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		175000	6250	3050	25500	32700	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		335000	23400	3670	68100	43500	1560

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend		Customer Sample R	IP1192	IP1192	IP1192	IP1192	TPE586	TPE586
#	ISO17025 accredited.							
M	*m*CERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% 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	Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
		Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
		Sample Time	.	.	.	.	.	.
		Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
		SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
(F)	Trigger breach confirmed	Lab Sample No.(s)	10376338	10376345	10376350	10376354	10376414	10376433
1-5&+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	76 @	79 @	75 @	81 @	97 @	96 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	20100 @ M	1210 @ #	<176 @ M	2810 @ M	3370 @ M	8660 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ #	<20 @ M	<20 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ #	<40 @ M	<40 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089	<8 @ M	22.9 @ #	<8 @ M	<8 @ M	80 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089	34.2 @ M	<12 @ #	<12 @ M	<12 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ #	<24 @ M	<24 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089	83 @ M	<12 @ #	<12 @ M	<12 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	83 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089	117 @	<24 @	<24 @	<24 @	80 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	48.3 @	<40 @	<40 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089	205 @	150 @	<40 @	120 @	61.5 @	344 @
Aliphatics >C8-C10	<10 µg/kg	TM089	3210 @	159 @	<40 @	691 @	403 @	1260 @
Aliphatics >C10-C12	<10 µg/kg	TM089	8660 @	399 @	<40 @	913 @	1510 @	3580 @
Aliphatics >C12-C16	<100 µg/kg	TM173	51300	<100	9720	<100	42700	34400
Aliphatics >C16-C21	<100 µg/kg	TM173	16200	<100	16800	<100	24500	91000
Aliphatics >C21-C35	<100 µg/kg	TM173	56000	1740	12700	1700	145000	1510000
Aliphatics >C35-C44	<100 µg/kg	TM173	10700	<100	1020	<100	57900	358000
Total Aliphatics >C12-C44	<100 µg/kg	TM173	134000	1740	40300	1700	270000	1990000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	80 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	2260 @	149 @	<40 @	461 @	278 @	986 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	5770 @	267 @	<40 @	609 @	1010 @	2380 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	11500	516	3290	<100	11900	41100
Aromatics >EC16-EC21	<100 µg/kg	TM173	29500	914	6000	424	42700	227000
Aromatics >EC21-EC35	<100 µg/kg	TM173	153000	1860	3390	14200	332000	6250000
Aromatics >EC35-EC44	<100 µg/kg	TM173	80400	<100	210	5040	253000	1090000
Aromatics >EC40-EC44	<100 µg/kg	TM173	35100	<100	<100	<100	111000	224000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	274000	3290	12900	19700	640000	7610000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	429000	6220	53300	24200	913000	9600000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE587	TPE587	TPE587	TPE587	TPE588	TPE588
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376436	10376440	10376156	10376160	10376205	10376209
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78 @	66 @	66 @	109 @	74 @	92 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		41900 @ M	28200 @ M	4830 @ M	229000 @ M	883 @ M	35000 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<100 @ M	<20 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<200 @ M	<40 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<40 @ M	<40 @ M	<8 @ M	<8 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		87.3 @ M	<60 @ M	<60 @ M	<12 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 @ M	<120 @ M	1180 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		127 @ M	<60 @ M	<60 @ M	<12 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		127 @	<9 @	<9 @	1180 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		214 @	<24 @	<24 @	1180 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 @	<200 @	926 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		223 @	448 @	225 @	21900 @	65 @	992 @
Aliphatics >C8-C10	<10 µg/kg	TM089		6400 @	3300 @	625 @	49500 @	139 @	7920 @
Aliphatics >C10-C12	<10 µg/kg	TM089		18500 @	13200 @	2050 @	73600 @	336 @	12400 @
Aliphatics >C12-C16	<100 µg/kg	TM173		164000	46800	816000	7020	29900	63400
Aliphatics >C16-C21	<100 µg/kg	TM173		55600	67900	145000	15700	35400	98700
Aliphatics >C21-C35	<100 µg/kg	TM173		167000	354000	604000	28000	106000	1170000
Aliphatics >C35-C44	<100 µg/kg	TM173		60500	235000	1200000	8760	42200	280000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		447000	703000	2770000	59400	213000	1610000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<200 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	<200 @	<40 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		4480 @	2200 @	457 @	34200 @	98.6 @	5280 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		12300 @	8820 @	1360 @	49000 @	224 @	8250 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		8580	27800	62800	7380	2380	35200
Aromatics >EC16-EC21	<100 µg/kg	TM173		31100	83200	103000	15600	16200	90900
Aromatics >EC21-EC35	<100 µg/kg	TM173		195000	1150000	1050000	57000	85500	1360000
Aromatics >EC35-EC44	<100 µg/kg	TM173		111000	324000	1170000	18400	49000	491000
Aromatics >EC40-EC44	<100 µg/kg	TM173		45300	97400	608000	6530	19200	150000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		346000	1580000	2380000	98400	153000	1980000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		835000	2310000	5150000	387000	367000	3620000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE588	TPE588	TPE588	TPE589	TPE589	TPE589
			Depth (m)	2.50	3.50	4.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376214	10376218	10376222	10376164	10376168	10376173
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		54 2	116 @	73 @	92 @	73 @	71 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		523 2 M	1900 @ M	1030 @ M	1300 @ M	<880 @ M	448 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<5 2 M	<100 @ M	<20 @ M	<20 @ M	<100 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<10 2 M	<200 @ M	<40 @ M	<40 @ M	<200 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		5.36 2 M	<40 @ M	<8 @ M	<8 @ M	<40 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<3 2 M	<60 @ M	<12 @ M	<12 @ M	<60 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<6 2 M	<120 @ M	<24 @ M	<24 @ M	<120 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<3 2 M	<60 @ M	<12 @ M	<12 @ M	<60 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 2	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 2	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 2	<200 @	<40 @	<40 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		13.4 2	<200 @	102 @	41.4 @	<200 @	56.2 @
Aliphatics >C8-C10	<10 µg/kg	TM089		83.1 2	343 @	216 @	148 @	<200 @	103 @
Aliphatics >C10-C12	<10 µg/kg	TM089		212 2	580 @	317 @	592 @	<200 @	104 @
Aliphatics >C12-C16	<100 µg/kg	TM173		21200	47800	23900	10900	5360	12800
Aliphatics >C16-C21	<100 µg/kg	TM173		51500	68400	51300	9910	9720	19500
Aliphatics >C21-C35	<100 µg/kg	TM173		903000	663000	285000	39300	169000	389000
Aliphatics >C35-C44	<100 µg/kg	TM173		226000	171000	57000	9330	37300	90700
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1200000	950000	417000	69500	221000	512000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 2	<200 @	<40 @	<40 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 2	<200 @	<40 @	<40 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		59 2	305 @	151 @	104 @	<200 @	89.1 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		142 2	386 @	211 @	394 @	<200 @	69.9 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		10400	9510	13000	12800	6920	9780
Aromatics >EC16-EC21	<100 µg/kg	TM173		53200	35600	50400	144000	31300	43700
Aromatics >EC21-EC35	<100 µg/kg	TM173		766000	622000	973000	473000	318000	538000
Aromatics >EC35-EC44	<100 µg/kg	TM173		260000	188000	323000	134000	128000	209000
Aromatics >EC40-EC44	<100 µg/kg	TM173		74900	48700	90300	46000	39800	64500
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1090000	855000	1360000	764000	485000	801000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2290000	1810000	1780000	835000	706000	1310000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE589	TPE642	TPE642	TPE642	TPE642	TPE643
			Depth (m)	3.50	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376177	10376181	10376186	10376192	10376196	10376152
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		123 @	73 @	92 @	76 @	80 @	82 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		20800 @ M	<176 @ M	<880 @ M	<176 @ M	<880 @ #	1220 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M	<100 @ M	<20 @ M	<100 @ #	<20 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M	<200 @ M	<40 @ M	<200 @ #	<40 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	11.2 @ M	<40 @ M	<8 @ M	<40 @ #	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<60 @ M	<12 @ M	<60 @ #	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @ M	<120 @ M	<24 @ M	<120 @ #	<24 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<60 @ M	<12 @ M	<60 @ #	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<40 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		844 @	<40 @	<200 @	<40 @	<200 @	56.1 @
Aliphatics >C8-C10	<10 µg/kg	TM089		4010 @	<40 @	<200 @	<40 @	<200 @	113 @
Aliphatics >C10-C12	<10 µg/kg	TM089		7840 @	<40 @	<200 @	<40 @	<200 @	564 @
Aliphatics >C12-C16	<100 µg/kg	TM173		93100	2310	47900	2530	7680	177000
Aliphatics >C16-C21	<100 µg/kg	TM173		62100	5100	153000	9450	14900	462000
Aliphatics >C21-C35	<100 µg/kg	TM173		610000	16600	498000	80500	64100	740000
Aliphatics >C35-C44	<100 µg/kg	TM173		135000	11100	347000	63500	32700	379000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		900000	35100	1050000	156000	119000	1760000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<40 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<40 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		2770 @	<40 @	<200 @	<40 @	<200 @	84.2 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		5220 @	<40 @	<200 @	<40 @	<200 @	376 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		86600	4410	19000	5330	<100	37000
Aromatics >EC16-EC21	<100 µg/kg	TM173		285000	24600	85400	17900	7260	259000
Aromatics >EC21-EC35	<100 µg/kg	TM173		2460000	84600	349000	210000	50200	555000
Aromatics >EC35-EC44	<100 µg/kg	TM173		608000	51000	178000	166000	36700	352000
Aromatics >EC40-EC44	<100 µg/kg	TM173		163000	22700	58700	52600	14500	164000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		3440000	165000	632000	399000	94100	1200000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		4360000	200000	1680000	555000	214000	2960000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE643	TPE643	TPE643	TPE643	TPE644	TPE644
			Depth (m)	1.50	2.50	3.50	4.50	0.30	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376201	10376249	10376301	10376360	10376226	10376230
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74 @	74 @	111 @	109 @	81 @	71 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	<880 @ M	273000 @ M	829000 @ M	47300 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<100 @ M	<100 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	279 @ M	<200 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<40 @ M	2170 @ M	4040 @ M	<8 @ M	76.6 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 @ M	1200 @ M	3290 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 @ M	4630 @ M	20600 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<60 @ M	3840 @ M	14800 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	8470 @	35400 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	12100 @	42700 @	<24 @	76.6 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 @	294 @	10700 @	314 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	<200 @	12500 @	116000 @	2670 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	266 @	57400 @	180000 @	7020 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	273 @	91300 @	215000 @	19500 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		10100	23100	96800	62400	531000	47100
Aliphatics >C16-C21	<100 µg/kg	TM173		21900	71100	83800	76500	908000	95700
Aliphatics >C21-C35	<100 µg/kg	TM173		88000	265000	143000	151000	960000	226000
Aliphatics >C35-C44	<100 µg/kg	TM173		55900	180000	56700	59500	301000	135000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		176000	539000	380000	350000	2700000	503000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	279 @	<200 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	2170 @	4040 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	228 @	47900 @	159000 @	4680 @	239 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	<200 @	60900 @	143000 @	13000 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		5810	7960	46300	28300	152000	13600
Aromatics >EC16-EC21	<100 µg/kg	TM173		15500	44700	78500	50400	549000	23900
Aromatics >EC21-EC35	<100 µg/kg	TM173		100000	203000	224000	200000	1090000	97600
Aromatics >EC35-EC44	<100 µg/kg	TM173		64100	93500	110000	122000	422000	121000
Aromatics >EC40-EC44	<100 µg/kg	TM173		24300	37500	41900	47000	173000	52400
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		186000	349000	459000	401000	2210000	256000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		362000	889000	1110000	1580000	4960000	760000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE644	TPE644	TPE644	TPE645	TPE645	TPE645
			Depth (m)	2.50	3.50	4.50	0.30	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376234	10376238	10376243	10376253	10376258	10376262
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		82 @	90 @	97 @	81 @	121 @	77 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		733 @ M	819000 3 @ M	244000 @ M	318 @ M	489000 @ M	1170000 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<100 @ M	<20 @ M	<100 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<200 @ M	<40 @ M	<200 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		55.4 @ M	2200 @ M	783 @ M	<8 @ M	4130 @ M	1330 @ M
Ethylbenzene	<3 µg/kg	TM089		24.3 @ M	2530 @ M	403 @ M	<12 @ M	3690 @ M	2590 @ M
m,p-Xylene	<6 µg/kg	TM089		51.3 @ M	2080 @ M	452 @ M	<24 @ M	11000 @ M	7310 @ M
o-Xylene	<3 µg/kg	TM089		29.7 @ M	7500 @ M	1360 @ M	<12 @ M	9660 @ M	11700 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		81 @	9580 @	1810 @	<9 @	20700 @	19000 @
sum of detected BTEX by GC	<24 µg/kg	TM089		161 @	14300 @	3000 @	<24 @	28500 @	22900 @
Aliphatics >C5-C6	<10 µg/kg	TM089		55.4 @	4600 3 @	<200 @	<40 @	448 @	584 @
Aliphatics >C6-C8	<10 µg/kg	TM089		165 @	87500 3 @	2780 @	<40 @	31100 @	59700 @
Aliphatics >C8-C10	<10 µg/kg	TM089		99.9 @	190000 3 @	32200 @	61.5 @	118000 @	279000 @
Aliphatics >C10-C12	<10 µg/kg	TM089		95.9 @	238000 3 @	110000 @	92.8 @	139000 @	373000 @
Aliphatics >C12-C16	<100 µg/kg	TM173		7350	282000	389000	1130000	175000	1760000
Aliphatics >C16-C21	<100 µg/kg	TM173		15300	153000	1740000	878000	124000	897000
Aliphatics >C21-C35	<100 µg/kg	TM173		67800	717000	50100000	2010000	323000	1640000
Aliphatics >C35-C44	<100 µg/kg	TM173		49200	2500000	4350000	490000	89400	405000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		140000	3650000	56600000	4510000	712000	4700000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 3 @	<200 @	<40 @	266 @	256 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		55.4 @	2200 3 @	783 @	<40 @	4130 @	1330 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		173 @	139000 3 @	23700 @	51 @	103000 @	208000 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		64.8 @	158000 3 @	73600 @	61.5 @	92800 @	249000 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	69800	444000	240000	117000	1050000
Aromatics >EC16-EC21	<100 µg/kg	TM173		1110	65500	443000	322000	124000	815000
Aromatics >EC21-EC35	<100 µg/kg	TM173		44100	1240000	2430000	985000	462000	2430000
Aromatics >EC35-EC44	<100 µg/kg	TM173		36100	3880000	3800000	376000	161000	684000
Aromatics >EC40-EC44	<100 µg/kg	TM173		13600	1590000	1470000	137000	49000	167000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		81300	5260000	7120000	1920000	864000	4980000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		222000	9730000	63900000	6430000	2060000	10900000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE645	TPE645	TPE646	TPE646	TPE646	TPE646
			Depth (m)	3.50	4.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376267	10376273	10376277	10376282	10376287	10376293
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		110 @	109 @	129 @	90 @	71 @	71 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		67900 @ M	1040000 @ M	385000 @ M	163000 @ M	1120000 @ M	5570000 3 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		101 @ M	<200 @ M	<200 @ M	<200 @ M	<200 @ M	9210 @ M
Toluene	<2 µg/kg	TM089		126 @ M	5060 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		340 @ M	5780 @ M	<60 @ M	<60 @ M	<60 @ M	32800 @ M
m,p-Xylene	<6 µg/kg	TM089		844 @ M	8860 @ M	<120 @ M	<120 @ M	<120 @ M	130000 @ M
o-Xylene	<3 µg/kg	TM089		1150 @ M	15300 @ M	<60 @ M	<60 @ M	<60 @ M	94500 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		1990 @	24200 @	<9 @	<9 @	<9 @	225000 @
sum of detected BTEX by GC	<24 µg/kg	TM089		2560 @	35000 @	<24 @	<24 @	<24 @	267000 @
Aliphatics >C5-C6	<10 µg/kg	TM089		74.5 @	836 @	6100 @	<200 @	513 @	169000 @
Aliphatics >C6-C8	<10 µg/kg	TM089		1230 @	92500 @	79100 @	3350 @	43900 @	1640000 @
Aliphatics >C8-C10	<10 µg/kg	TM089		13700 @	263000 @	86800 @	28500 @	254000 @	1450000 @
Aliphatics >C10-C12	<10 µg/kg	TM089		24700 @	282000 @	92800 @	67000 @	392000 @	642000 @
Aliphatics >C12-C16	<100 µg/kg	TM173		7830000	60600	38900	751000	2110000	17800000
Aliphatics >C16-C21	<100 µg/kg	TM173		4680000	55400	83800	794000	1310000	7750000
Aliphatics >C21-C35	<100 µg/kg	TM173		9560000	112000	277000	1990000	1670000	13700000
Aliphatics >C35-C44	<100 µg/kg	TM173		2310000	22200	146000	513000	389000	3010000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		24400000	251000	546000	4050000	5480000	42300000
Aromatics >EC5-EC7	<10 µg/kg	TM089		101 @	<200 @	<200 @	<200 @	<200 @	9210 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		126 @	5060 @	<200 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		11500 @	205000 @	57900 @	19000 @	169000 @	1230000 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		16400 @	188000 @	61900 @	44700 @	262000 @	428000 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		3520000	57400	13400	342000	350000	4680000
Aromatics >EC16-EC21	<100 µg/kg	TM173		2440000	68400	63100	573000	476000	2860000
Aromatics >EC21-EC35	<100 µg/kg	TM173		4830000	154000	454000	2480000	1250000	6280000
Aromatics >EC35-EC44	<100 µg/kg	TM173		972000	50000	220000	639000	378000	2200000
Aromatics >EC40-EC44	<100 µg/kg	TM173		276000	16800	78200	198000	124000	733000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		11800000	330000	750000	4040000	2450000	16000000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		36200000	1620000	1680000	8250000	9060000	63900000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE647	TPE647	TPE647	TPE647	TPE648	TPE648
			Depth (m)	0.50	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014	14/11/2014
			SDG Ref	141114-1	141114-1	141114-1	141114-1	141114-1	141114-1
			Lab Sample No.(s)	10376364	10376369	10376373	10376378	10376383	10376388
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94 @	71 @	95 @	118 @	88 @	71 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		218000 @ M	27300 @ M	24900 @ M	5070000 @ M	39800 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 @ M	<100 @ M	<100 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<200 @ M	<200 @ M	<200 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<40 @ M	<40 @ M	<40 @ M	<8 @ M	67 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<60 @ M	92.9 @ M	<60 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<120 @ M	223 @ M	<120 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<60 @ M	192 @ M	<60 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	415 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	508 @	<24 @	<24 @	67 @
Aliphatics >C5-C6	<10 µg/kg	TM089		946 @	<200 @	<200 @	222000 @	106 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		16000 @	718 @	715 @	1300000 @	2750 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		41800 @	4400 @	2980 @	1240000 @	12200 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		79000 @	11500 @	11100 @	886000 @	9900 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		4070000	20300	241000	12200000	145000	219000
Aliphatics >C16-C21	<100 µg/kg	TM173		1490000	43000	218000	1670000	137000	170000
Aliphatics >C21-C35	<100 µg/kg	TM173		2100000	116000	520000	1010000	211000	104000
Aliphatics >C35-C44	<100 µg/kg	TM173		595000	44000	125000	266000	39400	62200
Total Aliphatics >C12-C44	<100 µg/kg	TM173		8250000	224000	1100000	15100000	533000	555000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		27900 @	2940 @	2490 @	826000 @	8170 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		52700 @	7640 @	7410 @	591000 @	6600 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		1740000	2450	70400	7180000	32600	10100
Aromatics >EC16-EC21	<100 µg/kg	TM173		1210000	19700	113000	2450000	103000	35400
Aromatics >EC21-EC35	<100 µg/kg	TM173		2660000	211000	487000	3990000	367000	174000
Aromatics >EC35-EC44	<100 µg/kg	TM173		937000	97000	180000	1160000	166000	108000
Aromatics >EC40-EC44	<100 µg/kg	TM173		371000	34000	63000	384000	68600	44300
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		6540000	330000	850000	14800000	669000	328000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		15000000	581000	1980000	35000000	1240000	883000

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE648	TPE648				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	11/11/2014	11/11/2014				
			Sample Time	.	.				
			Date Received	14/11/2014	14/11/2014				
			SDG Ref	141114-1	141114-1				
			Lab Sample No.(s)	10376392	10376399				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		102 @	84 @				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	<176 @ M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M				
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M				
Toluene	<2 µg/kg	TM089		<40 @ M	<8 @ M				
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @ M				
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @ M				
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @ M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @				
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @				
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<40 @				
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	<40 @				
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	<40 @				
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	<40 @				
Aliphatics >C12-C16	<100 µg/kg	TM173		9900	24100				
Aliphatics >C16-C21	<100 µg/kg	TM173		19400	46400				
Aliphatics >C21-C35	<100 µg/kg	TM173		86800	142000				
Aliphatics >C35-C44	<100 µg/kg	TM173		103000	101000				
Total Aliphatics >C12-C44	<100 µg/kg	TM173		219000	314000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @				
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	<40 @				
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	<40 @				
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	7330				
Aromatics >EC16-EC21	<100 µg/kg	TM173		5730	18300				
Aromatics >EC21-EC35	<100 µg/kg	TM173		171000	183000				
Aromatics >EC35-EC44	<100 µg/kg	TM173		275000	119000				
Aromatics >EC40-EC44	<100 µg/kg	TM173		129000	44100				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		451000	328000				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		670000	642000				

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1068 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 07:20:52 141114-1 10376404 TM048	03/12/14	Martin Cotterell	-	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	IP1118 1.00 SOLID 11/11/2014 00:00:00 21/11/2014 07:23:59 141114-1 10376410 TM048	03/12/14	Martin Cotterell	-	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	IP1189 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 11:12:41 141114-1 10376297 TM048	03/12/14	Kevin Hughes	-	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	IP1190 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 11:14:39 141114-1 10376321 TM048	03/12/14	Kevin Hughes	-	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	IP1191 1.00 SOLID 11/11/2014 00:00:00 20/11/2014 20:52:05 141114-1 10376420 TM048	03/12/14	Martin Cotterell	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	IP1192 1.00 SOLID 11/11/2014 00:00:00 20/11/2014 20:54:40 141114-1 10376338 TM048	03/12/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	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	TPE586 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 06:35:13 141114-1 10376414 TM048	03/12/14	Kevin Hughes	Loose fibres in soil	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	TPE587 0.50 SOLID 11/11/2014 00:00:00 24/11/2014 07:54:02 141114-1 10376436 TM048	03/12/14	Martin Cotterell	Soil containing loose fibres and ACM debris	Not Detected (#)	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	TPE588 0.50 SOLID 11/11/2014 00:00:00 24/11/2014 10:26:41 141114-1 10376205 TM048	03/12/14	Martin Cotterell	Loose fibres in soil	Detected (#)	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	TPE589 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 06:49:44 141114-1 10376164 TM048	03/12/14	Martin Cotterell	Soil containing loose fibres and debris typical of asbestos lagging	Not Detected (#)	Detected (#)	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	TPE642 0.50 SOLID 11/11/2014 00:00:00 21/11/2014 06:52:29 141114-1 10376181 TM048	03/12/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	TPE643 0.50 SOLID 11/11/2014 00:00:00 20/11/2014 20:57:55 141114-1 10376152 TM048	03/12/14	Martin Cotterell	Loose fibres in soil	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	TPE644 0.30 SOLID 11/11/2014 00:00:00 21/11/2014 06:31:52 141114-1 10376226 TM048	03/12/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	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	TPE645 0.30 SOLID 11/11/2014 00:00:00 17/11/2014 14:20:58 141114-1 10376253 TM048	03/12/14	Martin Cotterell	Soil containing loose fibres and ACM debris	Detected (#)	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	TPE646 0.50 SOLID 11/11/2014 00:00:00 17/11/2014 14:25:14 141114-1 10376277 TM048	03/12/14	Martin Cotterell	Soil containing loose fibres and ACM debris	Not Detected (#)	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	TPE647 0.50 SOLID 11/11/2014 00:00:00 24/11/2014 07:57:25 141114-1 10376364 TM048	03/12/14	Kevin Hughes	Loose fibres in soil. *Possible Amphibole fibres also detected but unable to positively identify	Not Detected (#)	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	TPE648 1.00 SOLID 11/11/2014 00:00:00 21/11/2014 07:05:35 141114-1 10376383 TM048	03/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1192 1.00 SOLID 11/11/2014 00:00:00 13/01/2015 13:03:12 141114-1 10376338 TM 304	None (#)	N/C	0.0054 (#)	<0.001 (#)	0.0058 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE586 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 11:59:26 141114-1 10376414 TM 304	Chrysotile (#)	Loose fibres	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE587 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 12:05:13 141114-1 10376436 TM 304	None (#)	N/C	0.0073 (#)	<0.001 (#)	0.0075 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE588 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 12:13:28 141114-1 10376205 TM 304	Crocidolite (#)	Loose fibres	0.0199 (#)	<0.001 (#)	0.0201 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE589 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 11:40:14 141114-1 10376164 TM 304	Amosite (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	0.0011 (#)

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE642 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 11:37:41 141114-1 10376181 TM 304	None (#)	N/C	0.6241 (#)	<0.001 (#)	0.6243 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE643 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 13:05:34 141114-1 10376152 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE644 0.30 SOLID 11/11/2014 00:00:00 13/01/2015 12:02:18 141114-1 10376226 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE645 0.30 SOLID 11/11/2014 00:00:00 08/01/2015 13:14:01 141114-1 10376253 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	0.0012 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE646 0.50 SOLID 11/11/2014 00:00:00 08/01/2015 13:20:48 141114-1 10376277 TM 304	None (#)	N/C	0.0055 (#)	<0.001 (#)	0.0057 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE647 0.50 SOLID 11/11/2014 00:00:00 13/01/2015 12:08:28 141114-1 10376364 TM 304	Amosite and Crocidolite (#)	Loose fibres and debris typical of asbestos lagging	0.0296 (#)	<0.001 (#)	0.0298 (#)

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE648 1.00 SOLID 11/11/2014 00:00:00 13/01/2015 11:44:40 141114-1 10376383 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10376404	10376410	10376297	10376306	10376310	10376315	10376321	10376327	10376333	10376420
Customer Sample Ref.	IP1068	IP1118	IP1189	IP1189	IP1189	IP1189	IP1190	IP1190	IP1190	IP1191
AGS Ref.										
Depth	0.50	1.00	0.50	1.50	2.50	3.50	0.50	1.50	2.50	1.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	03-Dec-2014	03-Dec-2014	03-Dec-2014				03-Dec-2014			03-Dec-2014
EPH CWG (Aliphatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014
Metals in solid samples by OES	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	03-Dec-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014
PAH by GCMS	01-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014	01-Dec-2014
pH	03-Dec-2014	03-Dec-2014	03-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014
Sample description	21-Nov-2014	21-Nov-2014	22-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014
Total Organic Carbon		01-Dec-2014				27-Nov-2014				
TPH CWG GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014

Lab Sample No(s)	10376425	10376429	10376338	10376345	10376350	10376354	10376414	10376433	10376156	10376160
Customer Sample Ref.	IP1191	IP1191	IP1192	IP1192	IP1192	IP1192	TPE586	TPE586	TPE587	TPE587
AGS Ref.										
Depth	2.00	3.00	1.00	2.00	3.00	4.00	0.50	1.50	2.50	3.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			03-Dec-2014				03-Dec-2014			
Asbestos Quantification - Full			28-Jan-2015				28-Jan-2015			
EPH CWG (Aliphatic) GC (S)	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	04-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	04-Dec-2014	02-Dec-2014
Metals in solid samples by OES	27-Nov-2014	24-Nov-2014	01-Dec-2014	27-Nov-2014	21-Nov-2014	27-Nov-2014	28-Nov-2014	24-Nov-2014	26-Nov-2014	27-Nov-2014
PAH by GCMS	03-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014
pH	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014
Sample description	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	17-Nov-2014	20-Nov-2014	21-Nov-2014	17-Nov-2014	20-Nov-2014	20-Nov-2014
Total Organic Carbon		24-Nov-2014						20-Nov-2014		
TPH CWG GC (S)	04-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	02-Dec-2014

Lab Sample No(s)	10376436	10376440	10376205	10376209	10376214	10376218	10376222	10376164	10376168	10376173
Customer Sample Ref.	TPE587	TPE587	TPE588	TPE588	TPE588	TPE588	TPE588	TPE589	TPE589	TPE589
AGS Ref.										
Depth	0.50	1.50	0.50	1.50	2.50	3.50	4.50	0.50	1.50	2.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	03-Dec-2014		03-Dec-2014					03-Dec-2014		
Asbestos Quantification - Full	27-Jan-2015		28-Jan-2015					27-Jan-2015		
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
GRO by GC-FID (S)	02-Dec-2014	04-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	04-Dec-2014	03-Dec-2014
Metals in solid samples by OES	28-Nov-2014	21-Nov-2014	28-Nov-2014	26-Nov-2014	26-Nov-2014	21-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
PAH by GCMS	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014
pH	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	01-Dec-2014
Sample description	24-Nov-2014	17-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	17-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014
Total Organic Carbon							27-Nov-2014			
TPH CWG GC (S)	02-Dec-2014	04-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014

Lab Sample No(s)	10376177	10376181	10376186	10376192	10376196	10376152	10376201	10376249	10376301	10376360
Customer Sample Ref.	TPE589	TPE642	TPE642	TPE642	TPE642	TPE643	TPE643	TPE643	TPE643	TPE643
AGS Ref.										
Depth	3.50	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50	4.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples		03-Dec-2014				03-Dec-2014				
Asbestos Quantification - Full		28-Jan-2015				27-Jan-2015				
EPH CWG (Aliphatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
EPH CWG (Aromatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
GRO by GC-FID (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014
Metals in solid samples by OES	27-Nov-2014	28-Nov-2014	24-Nov-2014	24-Nov-2014	27-Nov-2014	28-Nov-2014	24-Nov-2014	24-Nov-2014	02-Dec-2014	24-Nov-2014
PAH by GCMS	02-Dec-2014	01-Dec-2014	03-Dec-2014	30-Nov-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014
pH	02-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014
Sample description	20-Nov-2014	21-Nov-2014	17-Nov-2014	17-Nov-2014	19-Nov-2014	20-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014
Total Organic Carbon		01-Dec-2014				01-Dec-2014				
TPH CWG GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014

CERTIFICATE OF ANALYSIS

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Lab Sample No(s)	10376226	10376230	10376234	10376238	10376243	10376253	10376258	10376262	10376267	10376273
Customer Sample Ref.	TPE644	TPE644	TPE644	TPE644	TPE644	TPE645	TPE645	TPE645	TPE645	TPE645
AGS Ref.										
Depth	0.30	1.50	2.50	3.50	4.50	0.30	1.50	2.50	3.50	4.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	03-Dec-2014					03-Dec-2014				
Asbestos Quantification - Full	27-Jan-2015					28-Jan-2015				
EPH CWG (Aliphatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
EPH CWG (Aromatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
GRO by GC-FID (S)	03-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	04-Dec-2014	02-Dec-2014	03-Dec-2014
Metals in solid samples by OES	26-Nov-2014	21-Nov-2014	27-Nov-2014	27-Nov-2014	21-Nov-2014	20-Nov-2014	21-Nov-2014	21-Nov-2014	21-Nov-2014	24-Nov-2014
PAH by GCMS	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014
pH	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	01-Dec-2014
Sample description	22-Nov-2014	17-Nov-2014	19-Nov-2014	19-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014
Total Organic Carbon									20-Nov-2014	
TPH CWG GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014

Lab Sample No(s)	10376277	10376282	10376287	10376293	10376364	10376369	10376373	10376378	10376383	10376388
Customer Sample Ref.	TPE646	TPE646	TPE646	TPE646	TPE647	TPE647	TPE647	TPE647	TPE648	TPE648
AGS Ref.										
Depth	0.50	1.50	2.50	3.50	0.50	2.00	3.00	4.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	03-Dec-2014				03-Dec-2014				03-Dec-2014	
Asbestos Quantification - Full	27-Jan-2015				27-Jan-2015				27-Jan-2015	
EPH CWG (Aliphatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
EPH CWG (Aromatic) GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014
GRO by GC-FID (S)	03-Dec-2014	02-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	04-Dec-2014
Metals in solid samples by OES	21-Nov-2014	21-Nov-2014	26-Nov-2014	26-Nov-2014	28-Nov-2014	24-Nov-2014	24-Nov-2014	26-Nov-2014	28-Nov-2014	21-Nov-2014
PAH by GCMS	01-Dec-2014	02-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014
pH	03-Dec-2014	02-Dec-2014	02-Dec-2014	01-Dec-2014	03-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	03-Dec-2014	02-Dec-2014
Sample description	17-Nov-2014	17-Nov-2014	20-Nov-2014	20-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	17-Nov-2014
TPH CWG GC (S)	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014	03-Dec-2014	03-Dec-2014	03-Dec-2014	04-Dec-2014

Lab Sample No(s)	10376392	10376399
Customer Sample Ref.	TPE648	TPE648
AGS Ref.		
Depth	3.00	4.00
Type	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	03-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	03-Dec-2014
GRO by GC-FID (S)	03-Dec-2014	02-Dec-2014
Metals in solid samples by OES	26-Nov-2014	21-Nov-2014
PAH by GCMS	03-Dec-2014	02-Dec-2014
pH	02-Dec-2014	02-Dec-2014
Sample description	20-Nov-2014	17-Nov-2014
TPH CWG GC (S)	03-Dec-2014	03-Dec-2014

SDG:	141114-1	**Location:**	Coed Darcy	**Order Number:**	CD0976
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299989
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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 NH_4 by the BRE method, VOC TICS and SVOC TICS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date:	21 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141111-55
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	299365

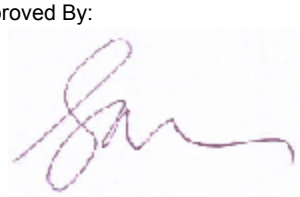
This report has been revised and directly supersedes 299363 in its entirety.

We received 52 samples on Tuesday November 11, 2014 and 52 of these samples were scheduled for analysis which was completed on Wednesday January 21, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10358533	IP1226		0.50	10/11/2014
10358577	IP1226		1.50	10/11/2014
10358573	IP1227		0.50	10/11/2014
10358582	IP1227		1.00	10/11/2014
10358586	IP1227		2.00	10/11/2014
10358590	IP1227		3.00	10/11/2014
10358623	IP1228		0.50	10/11/2014
10358669	IP1228		1.50	10/11/2014
10358715	IP1228		2.50	10/11/2014
10358554	IP1228		3.50	10/11/2014
10358693	IP1299		1.00	10/11/2014
10358697	IP1299		2.00	10/11/2014
10358702	IP1299		3.00	10/11/2014
10358732	IP1302		0.50	10/11/2014
10358736	IP1302		1.50	10/11/2014
10358740	IP1302		2.50	10/11/2014
10358744	IP1302		3.50	10/11/2014
10358594	IP1303		0.50	10/11/2014
10358598	IP1303		1.00	10/11/2014
10358602	IP1303		2.00	10/11/2014
10358606	IP1303		3.00	10/11/2014
10358609	IP1303		4.00	10/11/2014
10358558	IP1304		0.50	10/11/2014
10358561	IP1304		1.50	10/11/2014
10358565	IP1304		2.50	10/11/2014
10358569	IP1304		3.50	10/11/2014
10358613	IP1335		0.50	10/11/2014
10358619	IP1335		1.00	10/11/2014
10358628	IP1335		2.00	10/11/2014
10358632	IP1335		3.50	10/11/2014
10358636	IP1336		0.50	10/11/2014
10358640	IP1336		1.50	10/11/2014
10358644	IP1336		2.50	10/11/2014
10358648	IP1336		3.50	10/11/2014
10358652	IP1337		0.50	10/11/2014
10358656	IP1337		1.00	10/11/2014
10358660	IP1337		2.00	10/11/2014
10358664	IP1337		3.00	10/11/2014
10358673	IP1337		4.00	10/11/2014
10358677	IP1338		1.00	10/11/2014
10358681	IP1338		2.00	10/11/2014
10358685	IP1338		3.00	10/11/2014
10358689	IP1338		4.00	10/11/2014
10358538	IP1339		0.50	10/11/2014
10358542	IP1339		1.50	10/11/2014
10358546	IP1339		2.50	10/11/2014
10358550	IP1339		3.50	10/11/2014
10358707	IP1343		1.00	10/11/2014
10358711	IP1343		2.00	10/11/2014
10358719	IP1343		3.00	10/11/2014
10358723	IP1406		1.00	10/11/2014
10358727	IP1406		2.00	10/11/2014

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

ALcontrol Laboratories

CERTIFICATE OF ANALYSIS

Validated

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

SOLID

Results Legend

- X — **Test**
- N — **No Determination Possible**

Lab Sample No(s)			10358533			10358577			10358573			10358582			10358586			10358590			10358623		
Customer Sample Reference			IP1226			IP1226			IP1227			IP1227			IP1227			IP1227			IP1228		
AGS Reference																							
Depth (m)			0.50			1.50			0.50			1.00			2.00			3.00			0.50		
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17		X									X									X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 15		X									X									X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 51	X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 52			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 49	X			X			X			X			X						X		
Total Organic Carbon	All	NDPs: 0 Tests: 7	X																				
TPH CWG GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X		

Lab Sample No(s)			10358669			10358715			10358554			10358693			10358697			10358702			10358732
Customer Sample Reference			IP1228			IP1228			IP1228			IP1299			IP1299			IP1299			IP1302
AGS Reference																					
Depth (m)			1.50			2.50			3.50			1.00			2.00			3.00			0.50
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17											X								
Asbestos Quantification - Full	All	NDPs: 0 Tests: 15																			
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 51	X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 52			X			X			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 52		X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 49	X						X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 7										X									
TPH CWG GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X

17:24:15 21/01/2015

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17	10358732	IP1302		0.50	400g Tub (ALE214)
			10358736	IP1302		1.50	250g Amber Jar (AL
			10358740	IP1302		2.50	400g Tub (ALE214)
			10358744	IP1302		3.50	60g VOC (ALE215)
			10358594	IP1303		0.50	250g Amber Jar (AL
			10358598	IP1303		1.00	400g Tub (ALE214)
			10358602	IP1303		2.00	60g VOC (ALE215)
			10358606	IP1303		3.00	250g Amber Jar (AL
			10358609	IP1303		4.00	400g Tub (ALE214)
			10358558	IP1304		0.50	60g VOC (ALE215)
			10358561	IP1304		1.50	250g Amber Jar (AL
			10358565	IP1304		2.50	400g Tub (ALE214)
			10358569	IP1304		3.50	60g VOC (ALE215)
			10358613	IP1335		0.50	250g Amber Jar (AL
			10358619	IP1335		1.00	400g Tub (ALE214)
Asbestos Quantification - Full	All	NDPs: 0 Tests: 15	X X X X X X X X X X X X X X X X				
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 51	X X X X X X X X X X X X X X X X X				
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				
PAH by GCMS	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				
pH	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				
Sample description	All	NDPs: 0 Tests: 49	X X X X X X X X X X X X X X X X X				
Total Organic Carbon	All	NDPs: 0 Tests: 7	X X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 52	X X X X X X X X X X X X X X X X X X				

ALcontrol Laboratories

CERTIFICATE OF ANALYSIS

Validated

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)			10358619	10358628			10358632			10358636			10358640			10358644			10358648			10358652			10358656			10358660			10358664			10358673			10358677			10358681		
Customer Sample Reference			IP1335	IP1335			IP1335			IP1336			IP1336			IP1336			IP1336			IP1337			IP1337			IP1337			IP1337			IP1337			IP1338			IP1338		
AGS Reference																																										
Depth (m)			1.00	2.00			3.50			0.50			1.50			2.50			3.50			0.50			1.00			2.00			3.00			4.00			1.00			2.00		
Container			60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17									X												X			X												X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 15									X												X															X				
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 51		X			X			X			X			X			X			X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 52			X			X			X			X			X			X			X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 49		X			X			X			X			X			X			X			X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 7																							X																	
TPH CWG GC (S)	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X			X			X			X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)			10358685			10358689			10358538			10358542			10358546			10358550			10358707			10358711			10358719			10358723			10358727		
Customer Sample Reference			IP1338			IP1338			IP1339			IP1339			IP1339			IP1339			IP1343			IP1343			IP1343			IP1406			IP1406		
AGS Reference																																				
Depth (m)			3.00			4.00			0.50			1.50			2.50			3.50			1.00			2.00			3.00			1.00			2.00		
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17								X												X										X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 15								X												X										X				
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 51	X			X			X			X			X			X			X						X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 52			X			X			X			X			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 52		X			X			X			X			X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 49	X			X			X			X			X			X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 7							X																					X					
TPH CWG GC (S)	All	NDPs: 0 Tests: 52	X			X			X			X			X			X			X			X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

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	Grain size	Inclusions	Inclusions 2
10358533	IP1226	0.50	Black	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10358577	IP1226	1.50	Black	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10358573	IP1227	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358582	IP1227	1.00	Black	Gravel	2 - 10 mm	Stones	None
10358586	IP1227	2.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358590	IP1227	3.00	Dark Brown	Sandy Loam	0.1 - 2 mm	N/A	None
10358554	IP1228	3.50	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10358623	IP1228	0.50	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358669	IP1228	1.50	Black	Sand	0.1 - 2 mm	Stones	None
10358715	IP1228	2.50	Black	N/A	0.1 - 2 mm	Stones	Tar
10358693	IP1299	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10358697	IP1299	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358702	IP1299	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358732	IP1302	0.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10358736	IP1302	1.50	Black	Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10358740	IP1302	2.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358744	IP1302	3.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358594	IP1303	0.50	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Vegetation	Stones
10358598	IP1303	1.00	Black	Gravel	2 - 10 mm	None	None
10358602	IP1303	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10358606	IP1303	3.00	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358609	IP1303	4.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Vegetation
10358558	IP1304	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358561	IP1304	1.50	Black	N/A	0.1 - 2 mm	Tar	Stones
10358565	IP1304	2.50	Black	N/A	0.1 - 2 mm	Stones	Tar
10358569	IP1304	3.50	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358613	IP1335	0.50	Dark Brown	Stone/Soil	0.1 - 2 mm	Stones	Vegetation
10358619	IP1335	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10358628	IP1335	2.00	Light Brown	Silt Loam	0.1 - 2 mm	Stones	None
10358632	IP1335	3.50	Black	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10358636	IP1336	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358640	IP1336	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10358644	IP1336	2.50	Black	Sand	0.1 - 2 mm	Stones	None
10358648	IP1336	3.50	Black	Sand	0.1 - 2 mm	Stones	None
10358652	IP1337	0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Brick
10358656	IP1337	1.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10358660	IP1337	2.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10358664	IP1337	3.00	Black	Sand	0.1 - 2 mm	Stones	None

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

			Colour	Description	Grain size	Inclusions	Inclusions 2
10358673	IP1337	4.00	Grey	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	Vegetation
10358677	IP1338	1.00	Dark Brown	Stone/Soil	0.1 - 2 mm	Stones	None
10358681	IP1338	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358685	IP1338	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358689	IP1338	4.00	Grey	Sandy Loam	0.1 - 2 mm	Vegetation	Oil/Petroleum
10358538	IP1339	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358542	IP1339	1.50	Black	Sand	0.1 - 2 mm	Stones	None
10358546	IP1339	2.50	Black	Sand	0.1 - 2 mm	Stones	None
10358550	IP1339	3.50	Black	Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10358707	IP1343	1.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10358711	IP1343	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358719	IP1343	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358723	IP1406	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10358727	IP1406	2.00	Black	Sand	0.1 - 2 mm	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:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1226	IP1226	IP1227	IP1227	IP1227	IP1227
			Depth (m)	0.50	1.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358533	10358577	10358573	10358582	10358586	10358590
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	20	18	29	19	24
Soil Organic Matter (SOM)	<0.35 %	TM132		6.43 #					
pH	1 pH Units	TM133		8.32 M	7.94 M	7.54 M	7.21 #	5.41 M	5.33 M
Arsenic	<0.6 mg/kg	TM181		32.5 M	29.5 M	52.5 M	13.7 #	18.9 M	48.5 M
Cadmium	<0.02 mg/kg	TM181		0.701 M	0.945 M	0.811 M	0.217 #	0.295 M	0.542 M
Chromium	<0.9 mg/kg	TM181		74.2 M	30.9 M	35.5 M	5.88 #	14.9 M	10.8 M
Copper	<1.4 mg/kg	TM181		170 M	112 M	109 M	39.7 #	29.9 M	94.9 M
Lead	<0.7 mg/kg	TM181		681 M	260 M	230 M	31.4 #	19.1 M	20.4 M
Mercury	<0.14 mg/kg	TM181		0.721 M	0.893 M	0.777 M	0.416 #	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		28.1 M	30.9 M	32.4 M	26.6 #	21.2 M	8.6 M
Selenium	<1 mg/kg	TM181		2.77 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		33.3 #	29.7 #	31.8 #	36.9 #	19 #	15.5 #
Zinc	<1.9 mg/kg	TM181		1750 M	617 M	568 M	43.3 #	83.5 M	69.8 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1228	IP1228	IP1228	IP1228	IP1299	IP1299
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358623	10358669	10358715	10358554	10358693	10358697
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	21	21	19	20	32
Soil Organic Matter (SOM)	<0.35 %	TM132						42.9 #	
pH	1 pH Units	TM133		8.29 M	7.56 M	7.54	6.42 M	5.96 M	6.8 M
Arsenic	<0.6 mg/kg	TM181		33.6 M	19.1 M	20.1	15.9 M	37 M	19 M
Cadmium	<0.02 mg/kg	TM181		0.853 M	0.377 M	0.0624	0.0677 M	1.55 M	0.289 M
Chromium	<0.9 mg/kg	TM181		34.4 M	16.3 M	17.3	16.8 M	30.9 M	18.9 M
Copper	<1.4 mg/kg	TM181		216 M	63.3 M	65.4	46 M	160 M	111 M
Lead	<0.7 mg/kg	TM181		441 M	54.5 M	55	79.5 M	354 M	131 M
Mercury	<0.14 mg/kg	TM181		1.2 M	<0.14 M	<0.14	0.191 M	0.356 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		34.9 M	35.3 M	40.4	22.5 M	66.8 M	39.4 M
Selenium	<1 mg/kg	TM181		1.05 #	<1 #	<1	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		28.4 #	37.5 #	48.4	16.8 #	30.4 #	46 #
Zinc	<1.9 mg/kg	TM181		712 M	151 M	136 #	203 M	576 M	189 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1299	IP1302	IP1302	IP1302	IP1302	IP1303
			Depth (m)	3.00	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358702	10358732	10358736	10358740	10358744	10358594
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		33	19	22	23	20	14
pH	1 pH Units	TM133		6.74 M	7.51 M	7.54 M	7.68 M	5.74 M	8.38 M
Arsenic	<0.6 mg/kg	TM181		12.7 M	36.5 M	22.8 M	20.8 M	12.6 M	32.4 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.11 M	1.84 M	2.92 M	<0.02 M	0.837 M
Chromium	<0.9 mg/kg	TM181		17.9 M	47.9 M	24.4 M	27.9 M	15.2 M	77.8 M
Copper	<1.4 mg/kg	TM181		66.3 M	178 M	98.4 M	134 M	19.6 M	122 M
Lead	<0.7 mg/kg	TM181		13.1 M	445 M	232 M	404 M	12.1 M	520 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	1.58 M	25.8 M	13.5 M	<0.14 M	0.302 M
Nickel	<0.2 mg/kg	TM181		49.7 M	32.3 M	41.9 M	36.8 M	18.1 M	31.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		51.6 #	32.5 #	37.1 #	38 #	20.2 #	88.6 #
Zinc	<1.9 mg/kg	TM181		66.6 M	1080 M	562 M	942 M	59.8 M	482 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1303	IP1303	IP1303	IP1303	IP1304	IP1304
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358598	10358602	10358606	10358609	10358558	10358561
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	21	39	27	16	20
Soil Organic Matter (SOM)	<0.35 %	TM132				37.1 #			
pH	1 pH Units	TM133		7.61 #	7.73 M	7.36 M	7.32 M	8.11 M	9.75
Arsenic	<0.6 mg/kg	TM181		29.4 #	16.6 M	9.41 M	19 M	22.3 M	8.32
Cadmium	<0.02 mg/kg	TM181		5.18 #	1.88 M	0.878 M	0.417 M	0.678 M	0.0445
Chromium	<0.9 mg/kg	TM181		29.4 #	18.4 M	11.9 M	14.7 M	15.2 M	11.4
Copper	<1.4 mg/kg	TM181		172 #	105 M	47.6 M	70.9 M	55.8 M	42.7
Lead	<0.7 mg/kg	TM181		796 #	319 M	139 M	67.9 M	193 M	24
Mercury	<0.14 mg/kg	TM181		0.566 #	0.228 M	1.32 M	1.4 M	<0.14 M	<0.14
Nickel	<0.2 mg/kg	TM181		58.9 #	41.4 M	19.1 M	15.3 M	29.6 M	29
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1
Vanadium	<0.2 mg/kg	TM181		49.5 #	41 #	18.3 #	23.7 #	19 #	34.1
Zinc	<1.9 mg/kg	TM181		1440 #	657 M	417 M	191 M	321 M	127 #

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1304	IP1304	IP1335	IP1335	IP1335	IP1335
			Depth (m)	2.50	3.50	0.50	1.00	2.00	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358565	10358569	10358613	10358619	10358628	10358632
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		24	22	9	18	27	17
Soil Organic Matter (SOM)	<0.35 %	TM132		86 #					
pH	1 pH Units	TM133		8.05	7.3 M	7.97 #	7.18 M	7.67 M	7.57 M
Arsenic	<0.6 mg/kg	TM181		11.3	11.5 M	11.3 #	19.9 M	2.86 M	23.1 M
Cadmium	<0.02 mg/kg	TM181		0.174	<0.02 M	0.379 #	0.664 M	0.253 M	0.347 M
Chromium	<0.9 mg/kg	TM181		13.2	15.2 M	13.1 #	15.8 M	9.77 M	5.48 M
Copper	<1.4 mg/kg	TM181		49.3	25.3 M	54.5 #	64.7 M	6.68 M	19.9 M
Lead	<0.7 mg/kg	TM181		32.1	13.1 M	116 #	75 M	17.4 M	36.7 M
Mercury	<0.14 mg/kg	TM181		0.149	<0.14 M	<0.14 #	<0.14 M	0.182 M	0.511 M
Nickel	<0.2 mg/kg	TM181		34.2	11.3 M	30.4 #	56.3 M	4.17 M	10.5 M
Selenium	<1 mg/kg	TM181		<1	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		38	18.4 #	11.4 #	64.2 #	16.4 #	11.5 #
Zinc	<1.9 mg/kg	TM181		166 #	46.2 M	220 #	162 M	59.4 M	58.4 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1336	IP1336	IP1336	IP1336	IP1337	IP1337
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358636	10358640	10358644	10358648	10358652	10358656
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		23	7.7	12	26	13	18
Soil Organic Matter (SOM)	<0.35 %	TM132							70.5 #
pH	1 pH Units	TM133		5.96 M	7.45 M	5.69 M	6.24 M	8.24 M	7.93 M
Arsenic	<0.6 mg/kg	TM181		8.59 M	23.5 M	14.5 M	12.3 M	27.1 M	13.5 M
Cadmium	<0.02 mg/kg	TM181		0.293 M	0.492 M	0.263 M	0.239 M	0.594 M	0.412 M
Chromium	<0.9 mg/kg	TM181		5.78 M	14.6 M	14.5 M	12.4 M	19.8 M	16 M
Copper	<1.4 mg/kg	TM181		39.3 M	105 M	65.8 M	50.2 M	85.7 M	83.3 M
Lead	<0.7 mg/kg	TM181		18.7 M	66.6 M	24.1 M	21.2 M	132 M	43.9 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.869 M	0.308 M	<0.14 M	0.207 M
Nickel	<0.2 mg/kg	TM181		20.7 M	28.1 M	55 M	31.3 M	33.8 M	35.2 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		17.2 #	17.6 #	55.5 #	34.5 #	18.7 #	41.5 #
Zinc	<1.9 mg/kg	TM181		75.4 M	243 M	164 M	112 M	314 M	97.1 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1337	IP1337	IP1337	IP1338	IP1338	IP1338
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358660	10358664	10358673	10358677	10358681	10358685
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		22	23	13	11	27	23
pH	1 pH Units	TM133		7 M	8.29 M	6.29 M	8.18 #	7.39 M	7.72 M
Arsenic	<0.6 mg/kg	TM181		5.68 M	19.6 M	8.4 M	8.93 #	16.5 M	11.1 M
Cadmium	<0.02 mg/kg	TM181		0.0347 M	0.11 M	0.355 M	0.228 #	0.574 M	0.19 M
Chromium	<0.9 mg/kg	TM181		105 M	12.3 M	18.9 M	10.7 #	9.97 M	8.03 M
Copper	<1.4 mg/kg	TM181		84.8 M	58.9 M	47.9 M	33.3 #	61.5 M	48.7 M
Lead	<0.7 mg/kg	TM181		74.1 M	18.8 M	17.3 M	37.7 #	65.6 M	43.2 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 #	0.401 M	0.38 M
Nickel	<0.2 mg/kg	TM181		15.6 M	18.3 M	7.62 M	27.8 #	26.3 M	31.1 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		243 #	30.9 #	30.7 #	16.6 #	25.1 #	31.3 #
Zinc	<1.9 mg/kg	TM181		66.2 M	42.2 M	56 M	102 #	101 M	78.6 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1338	IP1339	IP1339	IP1339	IP1339	IP1343
			Depth (m)	4.00	0.50	1.50	2.50	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358689	10358538	10358542	10358546	10358550	10358707
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		30	10	15	21	33	25
Soil Organic Matter (SOM)	<0.35 %	TM132			9.81 #				
pH	1 pH Units	TM133		5.59 M	7.98 M	7.05 M	7.51 M	3.86 M	5.94 M
Arsenic	<0.6 mg/kg	TM181		109 M	15.1 M	14.3 M	10.4 M	165 M	22.8 M
Cadmium	<0.02 mg/kg	TM181		0.0545 M	0.446 M	0.17 M	0.0941 M	0.113 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		22.3 M	14.3 M	13.7 M	10.6 M	16 M	9.62 M
Copper	<1.4 mg/kg	TM181		224 M	32.7 M	38.2 M	55.4 M	135 M	89.5 M
Lead	<0.7 mg/kg	TM181		196 M	61.3 M	22.6 M	13.7 M	75.7 M	203 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	4.17 M	0.235 M
Nickel	<0.2 mg/kg	TM181		9.63 M	30.7 M	34.4 M	29.5 M	102 M	40.1 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	1.55 #
Vanadium	<0.2 mg/kg	TM181		28.8 #	17.1 #	24.3 #	29 #	45.4 #	35.3 #
Zinc	<1.9 mg/kg	TM181		203 M	177 M	69 M	33.2 M	295 M	99.6 M

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1343	IP1343	IP1406	IP1406		
			Depth (m)	2.00	3.00	1.00	2.00		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014		
			Sample Time	.	.	.	.		
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
			SDG Ref	141111-55	141111-55	141111-55	141111-55		
			Lab Sample No.(s)	10358711	10358719	10358723	10358727		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	23	25	14		
Soil Organic Matter (SOM)	<0.35 %	TM132				94.3 #			
pH	1 pH Units	TM133		6.92 M	5.97 M	6.47 M	7.02 M		
Arsenic	<0.6 mg/kg	TM181		9.58 M	42.6 M	20.9 M	226 M		
Cadmium	<0.02 mg/kg	TM181		0.177 M	0.0637 M	0.183 M	0.0765 M		
Chromium	<0.9 mg/kg	TM181		10.4 M	16.8 M	8.24 M	14.8 M		
Copper	<1.4 mg/kg	TM181		50.2 M	108 M	68.5 M	345 M		
Lead	<0.7 mg/kg	TM181		26.7 M	37.5 M	37.2 M	117 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.271 M	<0.14 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		38 M	42.7 M	33.7 M	33.9 M		
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181		36.9 #	52.8 #	31.1 #	34.6 #		
Zinc	<1.9 mg/kg	TM181		33.4 M	59.8 M	69.3 M	1060 M		

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1226	IP1226	IP1227	IP1227	IP1227	IP1227
			Depth (m)	0.50	1.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358533	10358577	10358573	10358582	10358586	10358590
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		107	101	96	88.5	97.1	109
Acenaphthene-d10 % recovery**	%	TM218		109	100	94.7	90.4	97.3	108
Phenanthrene-d10 % recovery**	%	TM218		111	99.8	92	85.3	96.1	107
Chrysene-d12 % recovery**	%	TM218		115	97.5	93.8	90.5	96.9	94.3
Perylene-d12 % recovery**	%	TM218		124	103	104	102	110	92.5
Naphthalene	<9 µg/kg	TM218		169 ♦ M	76.8 ♦ M	90.2 ♦ M	960 ♦ #	<9 ♦ M	<9 M
Acenaphthylene	<12 µg/kg	TM218		120 ♦ M	42.9 ♦ M	36.7 ♦ M	185 ♦ #	<12 ♦ M	<12 M
Acenaphthene	<8 µg/kg	TM218		117 ♦ M	46.3 ♦ M	50.6 ♦ M	199 ♦ #	<8 ♦ M	<8 M
Fluorene	<10 µg/kg	TM218		193 ♦ M	83.2 ♦ M	82.4 ♦ M	530 ♦ #	<10 ♦ M	<10 M
Phenanthrene	<15 µg/kg	TM218		1130 ♦ M	656 ♦ M	606 ♦ M	1520 ♦ #	32.9 ♦ M	<15 M
Anthracene	<16 µg/kg	TM218		309 ♦ M	135 ♦ M	115 ♦ M	450 ♦ #	<16 ♦ M	<16 M
Fluoranthene	<17 µg/kg	TM218		1570 ♦ M	980 ♦ M	745 ♦ M	3130 ♦ #	<17 ♦ M	<17 M
Pyrene	<15 µg/kg	TM218		1700 ♦ M	1080 ♦ M	826 ♦ M	16900 ♦ #	<15 ♦ M	<15 M
Benz(a)anthracene	<14 µg/kg	TM218		853 ♦ M	545 ♦ M	521 ♦ M	2500 ♦ #	<14 ♦ M	<14 M
Chrysene	<10 µg/kg	TM218		996 ♦ M	655 ♦ M	558 ♦ M	1570 ♦ #	<10 ♦ M	<10 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1220 ♦ M	675 ♦ M	722 ♦ M	3650 ♦ #	31.4 ♦ M	<15 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		384 ♦ M	314 ♦ M	279 ♦ M	1610 ♦ #	<14 ♦ M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		1030 ♦ M	629 ♦ M	654 ♦ M	3770 ♦ #	<15 ♦ M	<15 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		691 ♦ M	422 ♦ M	374 ♦ M	1750 ♦ #	<18 ♦ M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		288 ♦ M	139 ♦ M	134 ♦ M	783 ♦ #	<23 ♦ M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		906 ♦ M	541 ♦ M	495 ♦ M	4120 ♦ #	<24 ♦ M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		11700	7020	6290	43600	<118	<118

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1228	IP1228	IP1228	IP1228	IP1299	IP1299
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358623	10358669	10358715	10358554	10358693	10358697
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		109	101	119	99.9	101	119
Acenaphthene-d10 % recovery**	%	TM218		110	102	122	98.9	101	119
Phenanthrene-d10 % recovery**	%	TM218		111	95.4	118	98.6	95.3	108
Chrysene-d12 % recovery**	%	TM218		112	92.8	103	93.7	95.1	96.7
Perylene-d12 % recovery**	%	TM218		118	94.5	104	105	96.8	92.2
Naphthalene	<9 µg/kg	TM218		168 ♦ M	100 ♦ M	141 ♦	41.4 ♦ M	157 ♦ M	87.4 ♦ M
Acenaphthylene	<12 µg/kg	TM218		69 ♦ M	<12 ♦ M	<12 ♦	<12 ♦ M	59.2 ♦ M	<12 ♦ M
Acenaphthene	<8 µg/kg	TM218		207 ♦ M	<8 ♦ M	11.6 ♦	14.4 ♦ M	28.4 ♦ M	<8 ♦ M
Fluorene	<10 µg/kg	TM218		226 ♦ M	<10 ♦ M	24.7 ♦	16.1 ♦ M	46.9 ♦ M	<10 ♦ M
Phenanthrene	<15 µg/kg	TM218		1240 ♦ M	204 ♦ M	426 ♦	95.8 ♦ M	836 ♦ M	159 ♦ M
Anthracene	<16 µg/kg	TM218		253 ♦ M	<16 ♦ M	47.5 ♦	<16 ♦ M	161 ♦ M	<16 ♦ M
Fluoranthene	<17 µg/kg	TM218		1710 ♦ M	69.6 ♦ M	170 ♦	100 ♦ M	1730 ♦ M	119 ♦ M
Pyrene	<15 µg/kg	TM218		1860 ♦ M	145 ♦ M	369 ♦	114 ♦ M	1440 ♦ M	109 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		988 ♦ M	69.4 ♦ M	195 ♦	62.6 ♦ M	1220 ♦ M	73.7 ♦ M
Chrysene	<10 µg/kg	TM218		1150 ♦ M	71.5 ♦ M	217 ♦	75.5 ♦ M	1300 ♦ M	51.9 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1760 ♦ M	109 ♦ M	335 ♦	113 ♦ M	1860 ♦ M	116 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		663 ♦ M	27.2 ♦ M	67.4 ♦	33.1 ♦ M	700 ♦ M	39.4 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		1230 ♦ M	79.6 ♦ M	211 ♦	66.2 ♦ M	1260 ♦ M	57.3 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		758 ♦ M	35.8 ♦ M	91.1 ♦	40.2 ♦ M	812 ♦ M	36.9 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		291 ♦ M	<23 ♦ M	77.7 ♦	<23 ♦ M	323 ♦ M	<23 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1030 ♦ M	145 ♦ M	235 ♦	67.9 ♦ M	965 ♦ M	46.5 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		13600	1060	2620	840	12900	895

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1299	IP1302	IP1302	IP1302	IP1302	IP1303
			Depth (m)	3.00	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358702	10358732	10358736	10358740	10358744	10358594
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		120	103	95.6	114	107	96.3
Acenaphthene-d10 % recovery**	%	TM218		120	103	96	113	108	98.4
Phenanthrene-d10 % recovery**	%	TM218		109	104	95.5	113	107	93
Chrysene-d12 % recovery**	%	TM218		95.3	108	95	109	99.2	103
Perylene-d12 % recovery**	%	TM218		88	117	99.6	112	103	117
Naphthalene	<9 µg/kg	TM218		24.1 ♦ M	98.6 ♦ M	3060 ♦ M	686 ♦ M	24.2 M	149 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	41 ♦ M	2260 ♦ M	4400 ♦ M	<12 M	104 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	82 ♦ M	2320 ♦ M	593 ♦ M	14.1 M	123 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	92.5 ♦ M	5420 ♦ M	2900 ♦ M	20.4 M	124 ♦ M
Phenanthrene	<15 µg/kg	TM218		62.6 ♦ M	717 ♦ M	56800 ♦ M	37000 ♦ M	163 M	947 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	144 ♦ M	13000 ♦ M	7800 ♦ M	39.2 M	276 ♦ M
Fluoranthene	<17 µg/kg	TM218		<17 ♦ M	1380 ♦ M	67500 ♦ M	40200 ♦ M	94.3 M	1480 ♦ M
Pyrene	<15 µg/kg	TM218		<15 ♦ M	1130 ♦ M	57000 ♦ M	29600 ♦ M	332 M	1330 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 ♦ M	845 ♦ M	37300 ♦ M	14600 ♦ M	107 M	1080 ♦ M
Chrysene	<10 µg/kg	TM218		<10 ♦ M	887 ♦ M	35200 ♦ M	13500 ♦ M	244 M	1120 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 ♦ M	1230 ♦ M	31700 ♦ M	12400 ♦ M	80.8 M	1710 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	485 ♦ M	13900 ♦ M	6470 ♦ M	<14 M	737 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	1100 ♦ M	31600 ♦ M	12200 ♦ M	52.2 M	1430 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	728 ♦ M	13700 ♦ M	6610 ♦ M	<18 M	985 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	248 ♦ M	6050 ♦ M	2170 ♦ M	<23 M	393 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ M	960 ♦ M	19000 ♦ M	7990 ♦ M	79.9 M	1260 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	10200	396000	199000	1250	13300

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1303	IP1303	IP1303	IP1303	IP1304	IP1304
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358598	10358602	10358606	10358609	10358558	10358561
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		110	89.1	110	104	98.1	105
Acenaphthene-d10 % recovery**	%	TM218		112	89.3	111	104	97.8	105
Phenanthrene-d10 % recovery**	%	TM218		109	77.3	104	101	100	105
Chrysene-d12 % recovery**	%	TM218		103	69.6	102	102	105	96.4
Perylene-d12 % recovery**	%	TM218		105	72.9	121	112	104	99.3
Naphthalene	<9 µg/kg	TM218		392 ♦ #	322 ♦ M	2480 ♦ M	46.7 ♦ M	84.4 ♦ M	162 ♦
Acenaphthylene	<12 µg/kg	TM218		117 ♦ #	108 ♦ M	80.8 ♦ M	29.1 ♦ M	19.1 ♦ M	<12 ♦
Acenaphthene	<8 µg/kg	TM218		206 ♦ #	111 ♦ M	866 ♦ M	30.3 ♦ M	86.6 ♦ M	<8 ♦
Fluorene	<10 µg/kg	TM218		217 ♦ #	182 ♦ M	543 ♦ M	122 ♦ M	96.5 ♦ M	20 ♦
Phenanthrene	<15 µg/kg	TM218		3490 ♦ #	1230 ♦ M	7040 ♦ M	274 ♦ M	542 ♦ M	277 ♦
Anthracene	<16 µg/kg	TM218		727 ♦ #	455 ♦ M	1090 ♦ M	139 ♦ M	130 ♦ M	28.7 ♦
Fluoranthene	<17 µg/kg	TM218		4140 ♦ #	1250 ♦ M	933 ♦ M	408 ♦ M	682 ♦ M	149 ♦
Pyrene	<15 µg/kg	TM218		3690 ♦ #	1210 ♦ M	3860 ♦ M	449 ♦ M	708 ♦ M	160 ♦
Benz(a)anthracene	<14 µg/kg	TM218		2390 ♦ #	884 ♦ M	1010 ♦ M	260 ♦ M	396 ♦ M	123 ♦
Chrysene	<10 µg/kg	TM218		2610 ♦ #	1040 ♦ M	1480 ♦ M	342 ♦ M	387 ♦ M	175 ♦
Benzo(b)fluoranthene	<15 µg/kg	TM218		2480 ♦ #	1070 ♦ M	898 ♦ M	282 ♦ M	513 ♦ M	157 ♦
Benzo(k)fluoranthene	<14 µg/kg	TM218		1100 ♦ #	678 ♦ M	272 ♦ M	117 ♦ M	212 ♦ M	38.5 ♦
Benzo(a)pyrene	<15 µg/kg	TM218		2010 ♦ #	1010 ♦ M	1000 ♦ M	255 ♦ M	464 ♦ M	102 ♦
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1090 ♦ #	798 ♦ M	335 ♦ M	133 ♦ M	297 ♦ M	50 ♦
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		458 ♦ #	586 ♦ M	271 ♦ M	53.8 ♦ M	105 ♦ M	32 ♦
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1330 ♦ #	1000 ♦ M	653 ♦ M	179 ♦ M	402 ♦ M	84.4 ♦
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		26500	11900	22800	3120	5130	1560

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1304	IP1304	IP1335	IP1335	IP1335	IP1335
			Depth (m)	2.50	3.50	0.50	1.00	2.00	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358565	10358569	10358613	10358619	10358628	10358632
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.1	103	106	102	101	106
Acenaphthene-d10 % recovery**	%	TM218		96.4	106	106	103	102	121
Phenanthrene-d10 % recovery**	%	TM218		93.8	104	108	97.4	100	107
Chrysene-d12 % recovery**	%	TM218		84.2	107	111	89.8	97.4	101
Perylene-d12 % recovery**	%	TM218		84.8	115	112	88.8	99.9	104
Naphthalene	<9 µg/kg	TM218		240 ♦	142 ♦ M	669 ♦ #	284 ♦ M	51.8 ♦ M	19300 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦	<12 ♦ M	3480 ♦ #	181 ♦ M	<12 ♦ M	72.7 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦	43.6 ♦ M	328 ♦ #	19.6 ♦ M	12.1 ♦ M	1120 ♦ M
Fluorene	<10 µg/kg	TM218		18.8 ♦	156 ♦ M	1330 ♦ #	98.1 ♦ M	<10 ♦ M	2320 ♦ M
Phenanthrene	<15 µg/kg	TM218		246 ♦	813 ♦ M	21900 ♦ #	2220 ♦ M	174 ♦ M	9260 ♦ M
Anthracene	<16 µg/kg	TM218		22.8 ♦	132 ♦ M	5840 ♦ #	280 ♦ M	<16 ♦ M	924 ♦ M
Fluoranthene	<17 µg/kg	TM218		98.5 ♦	115 ♦ M	46700 ♦ #	1850 ♦ M	44.4 ♦ M	679 ♦ M
Pyrene	<15 µg/kg	TM218		118 ♦	231 ♦ M	29800 ♦ #	1850 ♦ M	231 ♦ M	1380 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		82.5 ♦	107 ♦ M	26100 ♦ #	1490 ♦ M	38.3 ♦ M	344 ♦ M
Chrysene	<10 µg/kg	TM218		120 ♦	137 ♦ M	23600 ♦ #	1820 ♦ M	28.7 ♦ M	488 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		108 ♦	70.7 ♦ M	26200 ♦ #	1460 ♦ M	104 ♦ M	159 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		24.1 ♦	<14 ♦ M	11200 ♦ #	562 ♦ M	<14 ♦ M	<70 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		67.4 ♦	28.1 ♦ M	19700 ♦ #	1150 ♦ M	64.9 ♦ M	131 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		32.2 ♦	<18 ♦ M	11600 ♦ #	719 ♦ M	28.7 ♦ M	<90 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦	<23 ♦ M	4640 ♦ #	404 ♦ M	41 ♦ M	<115 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		55.6 ♦	<24 ♦ M	10900 ♦ #	866 ♦ M	47.2 ♦ M	<120 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1230	1970	244000	15200	865	36200

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1336	IP1336	IP1336	IP1336	IP1337	IP1337
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358636	10358640	10358644	10358648	10358652	10358656
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		101	105	119	115	98.1	111
Acenaphthene-d10 % recovery**	%	TM218		103	102	117	117	98.3	115
Phenanthrene-d10 % recovery**	%	TM218		93.2	100	111	106	99.2	110
Chrysene-d12 % recovery**	%	TM218		75.7	95	106	107	103	100
Perylene-d12 % recovery**	%	TM218		69.2	94.6	115	107	111	95.8
Naphthalene	<9 µg/kg	TM218		281 ♦ M	106 ♦ M	738 ♦ M	928 ♦ M	36.2 ♦ M	367 ♦ M
Acenaphthylene	<12 µg/kg	TM218		34.8 ♦ M	486 ♦ M	101 ♦ M	102 ♦ M	23.2 ♦ M	299 ♦ M
Acenaphthene	<8 µg/kg	TM218		22.5 ♦ M	60.6 ♦ M	<40 ♦ M	39.8 ♦ M	27.8 ♦ M	20.1 ♦ M
Fluorene	<10 µg/kg	TM218		55.8 ♦ M	123 ♦ M	112 ♦ M	147 ♦ M	27.5 ♦ M	55.6 ♦ M
Phenanthrene	<15 µg/kg	TM218		1470 ♦ M	1130 ♦ M	1920 ♦ M	1490 ♦ M	236 ♦ M	1100 ♦ M
Anthracene	<16 µg/kg	TM218		165 ♦ M	375 ♦ M	209 ♦ M	163 ♦ M	51.3 ♦ M	253 ♦ M
Fluoranthene	<17 µg/kg	TM218		331 ♦ M	3060 ♦ M	534 ♦ M	370 ♦ M	426 ♦ M	1460 ♦ M
Pyrene	<15 µg/kg	TM218		1730 ♦ M	2120 ♦ M	892 ♦ M	1120 ♦ M	414 ♦ M	1210 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		412 ♦ M	1550 ♦ M	468 ♦ M	369 ♦ M	279 ♦ M	735 ♦ M
Chrysene	<10 µg/kg	TM218		865 ♦ M	1550 ♦ M	533 ♦ M	305 ♦ M	302 ♦ M	757 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		373 ♦ M	1720 ♦ M	687 ♦ M	442 ♦ M	530 ♦ M	800 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		71.8 ♦ M	778 ♦ M	200 ♦ M	199 ♦ M	227 ♦ M	346 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		298 ♦ M	1340 ♦ M	548 ♦ M	437 ♦ M	475 ♦ M	701 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		130 ♦ M	950 ♦ M	372 ♦ M	250 ♦ M	341 ♦ M	403 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		116 ♦ M	323 ♦ M	393 ♦ M	227 ♦ M	118 ♦ M	149 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		289 ♦ M	1140 ♦ M	1310 ♦ M	556 ♦ M	476 ♦ M	527 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6640	16800	9010	7140	3990	9180

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1337	IP1337	IP1337	IP1338	IP1338	IP1338
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358660	10358664	10358673	10358677	10358681	10358685
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.7	102	102	106	97.9	108
Acenaphthene-d10 % recovery**	%	TM218		99	102	101	107	101	109
Phenanthrene-d10 % recovery**	%	TM218		93.1	83.8	99.9	96	91.7	94.3
Chrysene-d12 % recovery**	%	TM218		84.6	55.8	95	90.1	85.8	81.1
Perylene-d12 % recovery**	%	TM218		90.9	41.3	98.3	101	89.8	75.5
Naphthalene	<9 µg/kg	TM218		283 ♦ M	169 ♦ M	<9 ♦ M	269 ♦ #	780 ♦ M	290 ♦ M
Acenaphthylene	<12 µg/kg	TM218		15.4 ♦ M	19.7 ♦ M	<12 ♦ M	57.6 ♦ #	161 ♦ M	302 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	<8 ♦ M	<8 ♦ M	9.95 ♦ #	146 ♦ M	24.5 ♦ M
Fluorene	<10 µg/kg	TM218		22.4 ♦ M	<10 ♦ M	<10 ♦ M	25.2 ♦ #	229 ♦ M	62.9 ♦ M
Phenanthrene	<15 µg/kg	TM218		209 ♦ M	142 ♦ M	37.9 ♦ M	405 ♦ #	1490 ♦ M	524 ♦ M
Anthracene	<16 µg/kg	TM218		25 ♦ M	<16 ♦ M	<16 ♦ M	72.3 ♦ #	584 ♦ M	218 ♦ M
Fluoranthene	<17 µg/kg	TM218		68.2 ♦ M	68.7 ♦ M	<17 ♦ M	316 ♦ #	736 ♦ M	1440 ♦ M
Pyrene	<15 µg/kg	TM218		88.9 ♦ M	65.4 ♦ M	22.8 ♦ M	346 ♦ #	1180 ♦ M	1000 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		21.3 ♦ M	<14 ♦ M	<14 ♦ M	226 ♦ #	880 ♦ M	738 ♦ M
Chrysene	<10 µg/kg	TM218		24.9 ♦ M	<10 ♦ M	<10 ♦ M	265 ♦ #	1130 ♦ M	868 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		70.1 ♦ M	<15 ♦ M	<15 ♦ M	344 ♦ #	898 ♦ M	1300 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		22 ♦ M	<14 ♦ M	<14 ♦ M	95.8 ♦ #	658 ♦ M	374 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		36.8 ♦ M	<15 ♦ M	<15 ♦ M	244 ♦ #	838 ♦ M	834 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		43 ♦ M	<18 ♦ M	<18 ♦ M	143 ♦ #	681 ♦ M	483 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	<23 ♦ M	<23 ♦ M	66.5 ♦ #	658 ♦ M	191 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		68.3 ♦ M	<24 ♦ M	<24 ♦ M	278 ♦ #	817 ♦ M	537 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		998	465	<118	3160	11900	9190

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1338	IP1339	IP1339	IP1339	IP1339	IP1343
			Depth (m)	4.00	0.50	1.50	2.50	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358689	10358538	10358542	10358546	10358550	10358707
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		84	99.3	119	112	119	115
Acenaphthene-d10 % recovery**	%	TM218		81.2	102	119	113	121	117
Phenanthrene-d10 % recovery**	%	TM218		77.9	98.4	106	104	120	111
Chrysene-d12 % recovery**	%	TM218		77	104	79.8	85.5	118	105
Perylene-d12 % recovery**	%	TM218		83.5	114	63.1	70.7	133	106
Naphthalene	<9 µg/kg	TM218		208 ♦ M	100 ♦ M	116 ♦ M	126 ♦ M	3680 ♦ M	441 ♦ M
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	169 ♦ M	25.2 ♦ M	54.4 ♦ M	127 ♦ M	<12 ♦ M
Acenaphthene	<8 µg/kg	TM218		53.5 ♦ M	25.4 ♦ M	<8 ♦ M	<8 ♦ M	946 ♦ M	<8 ♦ M
Fluorene	<10 µg/kg	TM218		166 ♦ M	121 ♦ M	15.7 ♦ M	21.4 ♦ M	3440 ♦ M	21.8 ♦ M
Phenanthrene	<15 µg/kg	TM218		225 ♦ M	1010 ♦ M	212 ♦ M	253 ♦ M	8980 ♦ M	630 ♦ M
Anthracene	<16 µg/kg	TM218		132 ♦ M	282 ♦ M	<16 ♦ M	41.5 ♦ M	2140 ♦ M	63.2 ♦ M
Fluoranthene	<17 µg/kg	TM218		73.7 ♦ M	1720 ♦ M	110 ♦ M	282 ♦ M	1090 ♦ M	119 ♦ M
Pyrene	<15 µg/kg	TM218		347 ♦ M	1380 ♦ M	107 ♦ M	269 ♦ M	3760 ♦ M	662 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		114 ♦ M	1080 ♦ M	66.6 ♦ M	155 ♦ M	1740 ♦ M	235 ♦ M
Chrysene	<10 µg/kg	TM218		142 ♦ M	959 ♦ M	94.9 ♦ M	184 ♦ M	6270 ♦ M	274 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		65.1 ♦ M	1270 ♦ M	83.2 ♦ M	198 ♦ M	2460 ♦ M	289 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	499 ♦ M	26.8 ♦ M	66.4 ♦ M	491 ♦ M	46 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		115 ♦ M	1020 ♦ M	34.8 ♦ M	125 ♦ M	1930 ♦ M	216 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		32.5 ♦ M	611 ♦ M	21.2 ♦ M	70.3 ♦ M	343 ♦ M	57.7 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	213 ♦ M	<23 ♦ M	30.4 ♦ M	624 ♦ M	84.7 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		118 ♦ M	738 ♦ M	28.7 ♦ M	89 ♦ M	1650 ♦ M	304 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1790	11200	943	1960	39700	3440

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1343	IP1343	IP1406	IP1406		
			Depth (m)	2.00	3.00	1.00	2.00		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014		
			Sample Time	.	.	.	.		
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
			SDG Ref	141111-55	141111-55	141111-55	141111-55		
			Lab Sample No.(s)	10358711	10358719	10358723	10358727		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		100	103	117	99.7		
Acenaphthene-d10 % recovery**	%	TM218		99.7	109	120	100		
Phenanthrene-d10 % recovery**	%	TM218		94.1	106	106	97		
Chrysene-d12 % recovery**	%	TM218		81.4	94.2	101	89.4		
Perylene-d12 % recovery**	%	TM218		80.4	89.6	109	96.7		
Naphthalene	<9 µg/kg	TM218		32.7 ♦ M	1010 ♦ M	1330 ♦ M	88.1 ♦ M		
Acenaphthylene	<12 µg/kg	TM218		<12 ♦ M	<24 ♦ M	46.5 ♦ M	<12 ♦ M		
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	51.5 ♦ M	17.1 ♦ M	<8 ♦ M		
Fluorene	<10 µg/kg	TM218		<10 ♦ M	95.6 ♦ M	39 ♦ M	<10 ♦ M		
Phenanthrene	<15 µg/kg	TM218		96.5 ♦ M	1350 ♦ M	955 ♦ M	170 ♦ M		
Anthracene	<16 µg/kg	TM218		22.4 ♦ M	131 ♦ M	66.6 ♦ M	25.7 ♦ M		
Fluoranthene	<17 µg/kg	TM218		77.8 ♦ M	163 ♦ M	153 ♦ M	198 ♦ M		
Pyrene	<15 µg/kg	TM218		79.3 ♦ M	726 ♦ M	362 ♦ M	196 ♦ M		
Benz(a)anthracene	<14 µg/kg	TM218		67.4 ♦ M	413 ♦ M	200 ♦ M	154 ♦ M		
Chrysene	<10 µg/kg	TM218		93.9 ♦ M	514 ♦ M	301 ♦ M	216 ♦ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		130 ♦ M	825 ♦ M	336 ♦ M	311 ♦ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		39.6 ♦ M	61 ♦ M	44.7 ♦ M	79.6 ♦ M		
Benzo(a)pyrene	<15 µg/kg	TM218		61.5 ♦ M	472 ♦ M	176 ♦ M	151 ♦ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		30.9 ♦ M	103 ♦ M	52.5 ♦ M	94.5 ♦ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	193 ♦ M	69.4 ♦ M	47.6 ♦ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		45.5 ♦ M	766 ♦ M	229 ♦ M	136 ♦ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		778	6870	4370	1870		

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1226	IP1226	IP1227	IP1227	IP1227	IP1227
			Depth (m)	0.50	1.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358533	10358577	10358573	10358582	10358586	10358590
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		93 ♦	84 ♦	85 ♦	45 ♦	134 ♦	98 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		9710 ♦ M	12000 ♦ M	10900 ♦ M	94300 ♦ #	47700 ♦ M	23600 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ M	<50 ♦ M	<50 ♦ M	<100 ♦ #	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ M	<100 ♦ M	<100 ♦ M	<200 ♦ #	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		<20 ♦ M	28.8 ♦ M	34.2 ♦ M	<40 ♦ #	128 ♦ M	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ M	<30 ♦ M	<30 ♦ M	<60 ♦ #	<12 ♦ M	219 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<60 ♦ M	<120 ♦ #	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		<30 ♦ M	<30 ♦ M	39 ♦ M	<60 ♦ #	559 ♦ M	368 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	39 ♦	<9 ♦	559 ♦	368 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	28.8 ♦	73.2 ♦	<24 ♦	687 ♦	587 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<200 ♦	141 ♦	51.1 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		165 ♦	163 ♦	348 ♦	525 ♦	3830 ♦	672 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		1340 ♦	1310 ♦	1430 ♦	4240 ♦	12100 ♦	7050 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		4330 ♦	5740 ♦	4800 ♦	51800 ♦	13700 ♦	6330 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		47000	77300	111000	4070000	14000	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		86800	75000	174000	4460000	11500	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		236000	224000	494000	10800000	12900	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		95800	85400	203000	4090000	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		465000	461000	982000	23500000	38400	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<200 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<200 ♦	128 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		924 ♦	881 ♦	996 ♦	2890 ♦	8600 ♦	5280 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		2890 ♦	3830 ♦	3200 ♦	34600 ♦	9160 ♦	4220 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		14000	3840	7890	528000	5580	1630
Aromatics >EC16-EC21	<100 µg/kg	TM173		83900	21500	50100	1490000	9080	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		401000	171000	374000	5760000	33900	8910
Aromatics >EC35-EC44	<100 µg/kg	TM173		221000	105000	214000	1970000	11000	4790
Aromatics >EC40-EC44	<100 µg/kg	TM173		94900	48100	97400	773000	3620	2880
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		720000	302000	646000	9750000	59500	15300
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1190000	775000	1640000	33300000	146000	38900

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1228	IP1228	IP1228	IP1228	IP1299	IP1299
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358623	10358669	10358715	10358554	10358693	10358697
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		70 ♦	83 ♦	85 ♦	67 ♦	73 ♦	76 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		9600 ♦ M	<440 ♦ M	<440 ♦ #	1530 ♦ M	<440 ♦ M	<440 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<50 ♦ M	<50 ♦ #	<20 ♦ M	<50 ♦ M	<50 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<100 ♦ M	<100 ♦ #	<40 ♦ M	<100 ♦ M	<100 ♦ M
Toluene	<2 µg/kg	TM089		21.3 ♦ M	<20 ♦ M	<20 ♦ #	<8 ♦ M	<20 ♦ M	32.6 ♦ M
Ethylbenzene	<3 µg/kg	TM089		16.3 ♦ M	<30 ♦ M	<30 ♦ #	<12 ♦ M	<30 ♦ M	<30 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<60 ♦ M	<60 ♦ #	<24 ♦ M	<60 ♦ M	<60 ♦ M
o-Xylene	<3 µg/kg	TM089		37.5 ♦ M	<30 ♦ M	<30 ♦ #	<12 ♦ M	<30 ♦ M	<30 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		37.5 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<96 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	32.6 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		103 ♦	<100 ♦	<100 ♦	121 ♦	<100 ♦	<100 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		1240 ♦	<100 ♦	<100 ♦	295 ♦	<100 ♦	<100 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		4400 ♦	<100 ♦	122 ♦	541 ♦	<100 ♦	<100 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		52300	9710	11300	56500	3380	7320
Aliphatics >C16-C21	<100 µg/kg	TM173		64700	26600	35100	16300	12700	20300
Aliphatics >C21-C35	<100 µg/kg	TM173		221000	80700	98900	34400	126000	30200
Aliphatics >C35-C44	<100 µg/kg	TM173		87300	72000	43700	14100	55400	7520
Total Aliphatics >C12-C44	<100 µg/kg	TM173		425000	189000	189000	121000	198000	65400
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		884 ♦	<100 ♦	<100 ♦	197 ♦	<100 ♦	<100 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		2930 ♦	<100 ♦	<100 ♦	360 ♦	<100 ♦	<100 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		2330	4770	3390	1690	2700	1330
Aromatics >EC16-EC21	<100 µg/kg	TM173		20700	15500	11100	5190	20100	5910
Aromatics >EC21-EC35	<100 µg/kg	TM173		167000	148000	149000	36700	184000	26500
Aromatics >EC35-EC44	<100 µg/kg	TM173		109000	99000	73900	21800	152000	14100
Aromatics >EC40-EC44	<100 µg/kg	TM173		50700	40200	29500	10300	65100	6220
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		299000	267000	237000	65300	359000	47800
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		734000	456000	427000	188000	557000	114000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1299	IP1302	IP1302	IP1302	IP1302	IP1303
			Depth (m)	3.00	0.50	1.50	2.50	3.50	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358702	10358732	10358736	10358740	10358744	10358594
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		85 ♦	62 ♦	113 ♦	89 ♦	90 2	83 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<440 ♦ M	1640 ♦ M	2760000 3 ♦ M	1620000 ♦ M	71000 2 M	<440 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ M	<20 ♦ M	<100 ♦ M	<100 ♦ M	<20 2 M	<50 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ M	<40 ♦ M	1230 ♦ M	666 ♦ M	<40 2 M	<100 ♦ M
Toluene	<2 µg/kg	TM089		<20 ♦ M	44.6 ♦ M	<40 ♦ M	<40 ♦ M	<8 2 M	<20 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ M	<12 ♦ M	<60 ♦ M	<60 ♦ M	<12 2 M	<30 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ M	<24 ♦ M	<120 ♦ M	<120 ♦ M	<24 2 M	<60 ♦ M
o-Xylene	<3 µg/kg	TM089		<30 ♦ M	<12 ♦ M	<60 ♦ M	<60 ♦ M	<12 2 M	<30 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 2	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	44.6 ♦	1230 ♦	666 ♦	<24 2	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<40 ♦	75700 3 ♦	23600 ♦	44.6 2	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<100 ♦	110 ♦	778000 3 ♦	356000 ♦	2160 2	<100 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<100 ♦	268 ♦	706000 3 ♦	388000 ♦	15100 2	<100 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<100 ♦	596 ♦	440000 3 ♦	355000 ♦	26200 2	<100 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	18000	5620000	287000	560000	10600
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	79800	2310000	585000	366000	40100
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	305000	2020000	1470000	312000	164000
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	106000	436000	438000	63200	86300
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	509000	10400000	2780000	1300000	301000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<40 ♦	1230 3 ♦	666 ♦	<40 2	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	44.6 ♦	<200 3 ♦	<200 ♦	<40 2	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<100 ♦	198 ♦	471000 3 ♦	259000 ♦	10100 2	<100 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<100 ♦	398 ♦	293000 3 ♦	237000 ♦	17400 2	<100 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	2720	2860000	64100	164000	2120
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	18700	2100000	340000	376000	19700
Aromatics >EC21-EC35	<100 µg/kg	TM173		4670	174000	3260000	2500000	539000	174000
Aromatics >EC35-EC44	<100 µg/kg	TM173		4660	118000	869000	882000	105000	152000
Aromatics >EC40-EC44	<100 µg/kg	TM173		2640	54600	275000	314000	36200	70900
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		9330	314000	9100000	3780000	1180000	349000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		9550	824000	22200000	8180000	2560000	649000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1303	IP1303	IP1303	IP1303	IP1304	IP1304
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358598	10358602	10358606	10358609	10358558	10358561
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		81 ♦	70 ♦	63 2	77 ♦	65 ♦	72 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 ♦ #	<440 ♦ M	61400 2 M	753 ♦ M	3330 ♦ M	<440 ♦ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ #	<50 ♦ M	<50 2 M	<50 ♦ M	<20 ♦ M	<50 ♦ #
Benzene	<10 µg/kg	TM089		<200 ♦ #	<100 ♦ M	<100 2 M	<100 ♦ M	<40 ♦ M	<100 ♦ #
Toluene	<2 µg/kg	TM089		<40 ♦ #	<20 ♦ M	<20 2 M	<20 ♦ M	<8 ♦ M	<20 ♦ #
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ #	<30 ♦ M	<30 2 M	<30 ♦ M	<12 ♦ M	<30 ♦ #
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ #	<60 ♦ M	<60 2 M	<60 ♦ M	<24 ♦ M	<60 ♦ #
o-Xylene	<3 µg/kg	TM089		<60 ♦ #	<30 ♦ M	<30 2 M	<30 ♦ M	16.7 ♦ M	<30 ♦ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 2	<9 ♦	<36 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 2	<24 ♦	<96 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	<100 ♦	<100 2	<100 ♦	47.6 ♦	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 ♦	<100 ♦	1320 2	<100 ♦	144 ♦	<100 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		216 ♦	<100 ♦	4410 2	139 ♦	477 ♦	<100 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		264 ♦	<100 ♦	31600 2	193 ♦	1390 ♦	<100 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		19600	30500	1470000	238000	153000	18500
Aliphatics >C16-C21	<100 µg/kg	TM173		77700	145000	1280000	321000	510000	49000
Aliphatics >C21-C35	<100 µg/kg	TM173		353000	506000	2590000	925000	1120000	150000
Aliphatics >C35-C44	<100 µg/kg	TM173		137000	147000	697000	230000	498000	57800
Total Aliphatics >C12-C44	<100 µg/kg	TM173		587000	828000	6040000	1710000	2280000	275000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<100 ♦	<100 2	<100 ♦	<40 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	<100 ♦	<100 2	<100 ♦	<40 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 ♦	<100 ♦	2940 2	120 ♦	340 ♦	<100 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 ♦	<100 ♦	21100 2	129 ♦	926 ♦	<100 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		9920	7710	824000	162000	8390	6630
Aromatics >EC16-EC21	<100 µg/kg	TM173		42900	34900	831000	300000	107000	21300
Aromatics >EC21-EC35	<100 µg/kg	TM173		542000	594000	2750000	1170000	491000	152000
Aromatics >EC35-EC44	<100 µg/kg	TM173		269000	308000	877000	361000	324000	61900
Aromatics >EC40-EC44	<100 µg/kg	TM173		100000	114000	329000	120000	155000	25400
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		864000	944000	5280000	1990000	930000	242000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1450000	1770000	11400000	3710000	3210000	517000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1304	IP1304	IP1335	IP1335	IP1335	IP1335
			Depth (m)	2.50	3.50	0.50	1.00	2.00	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358565	10358569	10358613	10358619	10358628	10358632
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		80 ♦	96 ♦	68 ♦	68 ♦	83 ♦	87 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		620 ♦ #	6640 ♦ M	<176 ♦ #	<440 ♦ M	46300 ♦ M	2190000 3 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ #	<50 ♦ M	<20 ♦ #	<50 ♦ M	<50 ♦ M	<100 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ #	<100 ♦ M	<40 ♦ #	<100 ♦ M	<100 ♦ M	<200 ♦ M
Toluene	<2 µg/kg	TM089		29 ♦ #	<20 ♦ M	<8 ♦ #	<20 ♦ M	<20 ♦ M	<40 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ #	<30 ♦ M	<12 ♦ #	<30 ♦ M	<30 ♦ M	17800 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ #	<60 ♦ M	<24 ♦ #	<60 ♦ M	<60 ♦ M	14000 ♦ M
o-Xylene	<3 µg/kg	TM089		<30 ♦ #	<30 ♦ M	<12 ♦ #	<30 ♦ M	<30 ♦ M	<60 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<36 ♦	<9 ♦	<9 ♦	14000 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		29 ♦	<24 ♦	<96 ♦	<24 ♦	<24 ♦	31800 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦	51200 3 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		172 ♦	655 ♦	<40 ♦	<100 ♦	228 ♦	582000 3 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<100 ♦	1560 ♦	<40 ♦	<100 ♦	3080 ♦	521000 3 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<100 ♦	2010 ♦	<40 ♦	<100 ♦	24500 ♦	396000 3 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		20500	526000	20600	20300	219000	3110000
Aliphatics >C16-C21	<100 µg/kg	TM173		60000	191000	100000	42600	241000	1710000
Aliphatics >C21-C35	<100 µg/kg	TM173		174000	243000	177000	275000	358000	3380000
Aliphatics >C35-C44	<100 µg/kg	TM173		62900	59400	85400	126000	156000	1510000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		317000	1020000	383000	464000	974000	9710000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦	<200 3 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<100 ♦	<40 ♦	<100 ♦	<100 ♦	<200 3 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		108 ♦	1040 ♦	<40 ♦	<100 ♦	2060 ♦	379000 3 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<100 ♦	1340 ♦	<40 ♦	<100 ♦	16300 ♦	264000 3 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		6560	330000	12000	5160	168000	2590000
Aromatics >EC16-EC21	<100 µg/kg	TM173		22200	252000	178000	30800	249000	1440000
Aromatics >EC21-EC35	<100 µg/kg	TM173		174000	387000	564000	589000	1140000	2590000
Aromatics >EC35-EC44	<100 µg/kg	TM173		70000	66500	190000	290000	190000	947000
Aromatics >EC40-EC44	<100 µg/kg	TM173		28300	20400	74200	105000	66100	359000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		273000	1040000	944000	915000	1750000	7560000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		590000	2060000	1330000	1380000	2770000	19500000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1336	IP1336	IP1336	IP1336	IP1337	IP1337
			Depth (m)	0.50	1.50	2.50	3.50	0.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358636	10358640	10358644	10358648	10358652	10358656
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		84 ♦	61 ♦	76 ♦	61 ♦	85 ♦	77 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<440 ♦ M	6820 ♦ M	670 ♦ M	5620 ♦ M	881 ♦ M	<440 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ M	<20 ♦ M	<50 ♦ M	<50 ♦ M	<20 ♦ M	<50 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ M	<40 ♦ M	<100 ♦ M	<100 ♦ M	<40 ♦ M	<100 ♦ M
Toluene	<2 µg/kg	TM089		<20 ♦ M	16.2 ♦ M	<20 ♦ M	61.2 ♦ M	10.4 ♦ M	<20 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ M	<12 ♦ M	<30 ♦ M	<30 ♦ M	<12 ♦ M	<30 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ M	<24 ♦ M	<60 ♦ M	122 ♦ M	<24 ♦ M	<60 ♦ M
o-Xylene	<3 µg/kg	TM089		<30 ♦ M	44.4 ♦ M	<30 ♦ M	58.5 ♦ M	<12 ♦ M	<30 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	44.4 ♦	<9 ♦	181 ♦	<36 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<96 ♦	<24 ♦	242 ♦	<96 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<100 ♦	299 ♦	121 ♦	378 ♦	80.5 ♦	<100 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<100 ♦	990 ♦	154 ♦	741 ♦	144 ♦	<100 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<100 ♦	2870 ♦	148 ♦	2140 ♦	293 ♦	109 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		24300	63200	27300	130000	28600	8460
Aliphatics >C16-C21	<100 µg/kg	TM173		84200	177000	65600	234000	157000	30000
Aliphatics >C21-C35	<100 µg/kg	TM173		270000	265000	903000	759000	764000	162000
Aliphatics >C35-C44	<100 µg/kg	TM173		120000	97800	4150000	860000	354000	156000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		498000	603000	5150000	1980000	1300000	357000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<40 ♦	<100 ♦	<100 ♦	<40 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<100 ♦	714 ♦	124 ♦	713 ♦	124 ♦	<100 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<100 ♦	1910 ♦	<100 ♦	1420 ♦	196 ♦	<100 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		3100	10100	7380	27600	1260	2020
Aromatics >EC16-EC21	<100 µg/kg	TM173		19600	111000	23200	149000	27400	8450
Aromatics >EC21-EC35	<100 µg/kg	TM173		235000	292000	1430000	1110000	358000	139000
Aromatics >EC35-EC44	<100 µg/kg	TM173		135000	168000	4810000	793000	281000	142000
Aromatics >EC40-EC44	<100 µg/kg	TM173		54100	80000	2290000	333000	135000	64800
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		393000	580000	6270000	2080000	667000	291000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		891000	1190000	11400000	4070000	1970000	649000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1337	IP1337	IP1337	IP1338	IP1338	IP1338
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358660	10358664	10358673	10358677	10358681	10358685
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		100 ♦	77 ♦	99 ♦	79 ♦	72 ♦	87 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		6440 ♦ M	<440 ♦ M	6550 ♦ M	<880 ♦ #	<440 ♦ M	1520 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ M	<50 ♦ M	<20 ♦ M	<100 ♦ #	<50 ♦ M	<50 ♦ M
Benzene	<10 µg/kg	TM089		<100 ♦ M	<100 ♦ M	<40 ♦ M	<200 ♦ #	<100 ♦ M	<100 ♦ M
Toluene	<2 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<8 ♦ M	<40 ♦ #	<20 ♦ M	<20 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ M	<30 ♦ M	<12 ♦ M	<60 ♦ #	<30 ♦ M	<30 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<24 ♦ M	<120 ♦ #	<60 ♦ M	<60 ♦ M
o-Xylene	<3 µg/kg	TM089		38.1 ♦ M	<30 ♦ M	<12 ♦ M	<60 ♦ #	<30 ♦ M	<30 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		38.1 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		38.1 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<100 ♦	68.4 ♦	<200 ♦	<100 ♦	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		267 ♦	<100 ♦	783 ♦	<200 ♦	<100 ♦	164 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		907 ♦	<100 ♦	1310 ♦	<200 ♦	<100 ♦	233 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		2730 ♦	<100 ♦	2110 ♦	<200 ♦	<100 ♦	504 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		25100	1490	17400	12700	40700	116000
Aliphatics >C16-C21	<100 µg/kg	TM173		40000	6320	5740	74000	140000	133000
Aliphatics >C21-C35	<100 µg/kg	TM173		180000	60900	13700	448000	653000	352000
Aliphatics >C35-C44	<100 µg/kg	TM173		125000	46700	7600	238000	378000	135000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		370000	115000	44500	772000	1210000	736000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<100 ♦	<40 ♦	<200 ♦	<100 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<100 ♦	<40 ♦	<200 ♦	<100 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		669 ♦	<100 ♦	872 ♦	<200 ♦	<100 ♦	193 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		1820 ♦	<100 ♦	1410 ♦	<200 ♦	<100 ♦	337 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		8440	128	14700	6420	8200	50100
Aromatics >EC16-EC21	<100 µg/kg	TM173		10800	3400	10800	40400	60500	100000
Aromatics >EC21-EC35	<100 µg/kg	TM173		70500	37300	17600	508000	595000	377000
Aromatics >EC35-EC44	<100 µg/kg	TM173		56100	33800	14200	427000	495000	138000
Aromatics >EC40-EC44	<100 µg/kg	TM173		25400	15000	6350	182000	223000	50100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		146000	74600	57300	982000	1160000	665000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		522000	190000	108000	1760000	2370000	1400000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1338	IP1339	IP1339	IP1339	IP1339	IP1343
			Depth (m)	4.00	0.50	1.50	2.50	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-55	141111-55	141111-55	141111-55	141111-55	141111-55
			Lab Sample No.(s)	10358689	10358538	10358542	10358546	10358550	10358707
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		118 ♦	63 ♦	69 ♦	78 ♦	95 ♦	103 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		80500 ♦ M	1940 ♦ M	<440 ♦ M	<440 ♦ M	1410000 ♦ M	4800 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		163 ♦ M	<20 ♦ M	<50 ♦ M	<50 ♦ M	<100 ♦ M	<50 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<100 ♦ M	<100 ♦ M	<200 ♦ M	<100 ♦ M
Toluene	<2 µg/kg	TM089		<8 ♦ M	<8 ♦ M	<20 ♦ M	<20 ♦ M	<40 ♦ M	89.8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<30 ♦ M	<30 ♦ M	<60 ♦ M	41.5 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<24 ♦ M	<24 ♦ M	<60 ♦ M	<60 ♦ M	<120 ♦ M	141 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<30 ♦ M	<30 ♦ M	<60 ♦ M	77.7 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<9 ♦	<9 ♦	219 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<24 ♦	<24 ♦	350 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		140 ♦	<40 ♦	<100 ♦	<100 ♦	282 ♦	118 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		11600 ♦	72.2 ♦	<100 ♦	<100 ♦	103000 ♦	364 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		19700 ♦	253 ♦	<100 ♦	<100 ♦	392000 ♦	695 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		21400 ♦	849 ♦	<100 ♦	<100 ♦	391000 ♦	1650 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		27700	148000	35400	9520	1320000	42700
Aliphatics >C16-C21	<100 µg/kg	TM173		27000	421000	100000	26300	1130000	84100
Aliphatics >C21-C35	<100 µg/kg	TM173		69200	744000	275000	43800	8350000	406000
Aliphatics >C35-C44	<100 µg/kg	TM173		20700	372000	98000	22200	1770000	119000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		145000	1680000	509000	102000	12600000	652000
Aromatics >EC5-EC7	<10 µg/kg	TM089		48.6 ♦	<40 ♦	<100 ♦	<100 ♦	224 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<100 ♦	<100 ♦	<200 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		13200 ♦	173 ♦	<100 ♦	<100 ♦	261000 ♦	724 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		14300 ♦	566 ♦	<100 ♦	<100 ♦	260000 ♦	1100 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		32400	23800	21600	1250	499000	11100
Aromatics >EC16-EC21	<100 µg/kg	TM173		32400	201000	34800	6430	2440000	33100
Aromatics >EC21-EC35	<100 µg/kg	TM173		96600	578000	291000	29000	33000000	580000
Aromatics >EC35-EC44	<100 µg/kg	TM173		40600	380000	108000	20500	6910000	214000
Aromatics >EC40-EC44	<100 µg/kg	TM173		15300	174000	40700	9620	1880000	70100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		202000	1180000	455000	57200	42800000	838000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		427000	2870000	964000	159000	56800000	1490000

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1343	IP1343	IP1406	IP1406		
			Depth (m)	2.00	3.00	1.00	2.00		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	10/11/2014	10/11/2014	10/11/2014	10/11/2014		
			Sample Time	.	.	.	.		
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
			SDG Ref	141111-55	141111-55	141111-55	141111-55		
			Lab Sample No.(s)	10358711	10358719	10358723	10358727		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		69 ♦	80 ♦	73 ♦	80 ♦		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<440 ♦ M	1740 ♦ M	6380 ♦ M	10800 ♦ M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 ♦ M	<50 ♦ M	<50 ♦ M	<50 ♦ M		
Benzene	<10 µg/kg	TM089		<100 ♦ M	<100 ♦ M	<100 ♦ M	<100 ♦ M		
Toluene	<2 µg/kg	TM089		<20 ♦ M	98.8 ♦ M	40.2 ♦ M	<20 ♦ M		
Ethylbenzene	<3 µg/kg	TM089		<30 ♦ M	<30 ♦ M	<30 ♦ M	<30 ♦ M		
m,p-Xylene	<6 µg/kg	TM089		<60 ♦ M	122 ♦ M	<60 ♦ M	<60 ♦ M		
o-Xylene	<3 µg/kg	TM089		<30 ♦ M	41.6 ♦ M	<30 ♦ M	<30 ♦ M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	164 ♦	<9 ♦	<9 ♦		
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	263 ♦	40.2 ♦	<24 ♦		
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<100 ♦		
Aliphatics >C6-C8	<10 µg/kg	TM089		<100 ♦	302 ♦	419 ♦	336 ♦		
Aliphatics >C8-C10	<10 µg/kg	TM089		<100 ♦	308 ♦	1240 ♦	2130 ♦		
Aliphatics >C10-C12	<10 µg/kg	TM089		<100 ♦	316 ♦	2220 ♦	4110 ♦		
Aliphatics >C12-C16	<100 µg/kg	TM173		1330	125000	46000	22700		
Aliphatics >C16-C21	<100 µg/kg	TM173		10500	148000	88600	29000		
Aliphatics >C21-C35	<100 µg/kg	TM173		107000	1040000	724000	122000		
Aliphatics >C35-C44	<100 µg/kg	TM173		123000	252000	172000	54200		
Total Aliphatics >C12-C44	<100 µg/kg	TM173		242000	1560000	1030000	228000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<100 ♦		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 ♦	<100 ♦	<100 ♦	<100 ♦		
Aromatics >EC8-EC10	<10 µg/kg	TM089		<100 ♦	400 ♦	851 ♦	1420 ♦		
Aromatics >EC10-EC12	<10 µg/kg	TM089		<100 ♦	211 ♦	1480 ♦	2740 ♦		
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	81700	29400	9840		
Aromatics >EC16-EC21	<100 µg/kg	TM173		2920	148000	120000	28900		
Aromatics >EC21-EC35	<100 µg/kg	TM173		98600	1620000	1770000	268000		
Aromatics >EC35-EC44	<100 µg/kg	TM173		133000	425000	404000	120000		
Aromatics >EC40-EC44	<100 µg/kg	TM173		55800	116000	112000	43300		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		234000	2270000	2320000	427000		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		476000	3840000	3360000	666000		

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Asbestos Identification - Solid Samples

		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	IP1226 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 17:56:19 141111-55 10358533 TM048	1/12/14	Martin Cotterell	Loose fibres in soil	Detected (#)	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	IP1227 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 20:53:47 141111-55 10358582 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1228 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 20:43:27 141111-55 10358623 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1299 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 17:28:24 141111-55 10358693 TM048	28/11/14	Kevin Hughes	-	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	IP1302 0.50 SOLID 10/11/2014 00:00:00 14/11/2014 10:12:43 141111-55 10358732 TM048	28/11/14	Paul Fenney	Loose fibres in soil.	Detected (#)	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

		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	IP1303 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 20:40:09 141111-55 10358594 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1303 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 20:45:32 141111-55 10358598 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1304 0.50 SOLID 10/11/2014 00:00:00 14/11/2014 10:52:29 141111-55 10358558 TM048	28/11/14	Martin Cotterell	Loose fibres in soil.	Not Detected (#)	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	IP1335 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 17:45:11 141111-55 10358613 TM048	1/12/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	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	IP1335 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 17:49:46 141111-55 10358619 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Detected (#)	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	IP1336 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 17:48:10 141111-55 10358636 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

		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	IP1337 0.50 SOLID 10/11/2014 00:00:00 14/11/2014 11:25:54 141111-55 10358652 TM048	28/11/14	Martin Cotterell	Loose fibres in soil.	Not Detected (#)	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	IP1337 1.00 SOLID 10/11/2014 00:00:00 14/11/2014 11:30:09 141111-55 10358656 TM048	1/12/14	Kevin Hughes	-	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	IP1338 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 17:58:08 141111-55 10358677 TM048	28/11/14	Paul Fenney	Loose fibres in soil	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	IP1339 0.50 SOLID 10/11/2014 00:00:00 13/11/2014 20:51:16 141111-55 10358538 TM048	28/11/14	Simon Postlewhite	Loose fibres in soil	Not Detected (#)	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	IP1343 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 17:30:19 141111-55 10358707 TM048	1/12/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1406 1.00 SOLID 10/11/2014 00:00:00 13/11/2014 17:31:53 141111-55 10358723 TM048	28/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1226 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:27:51 141111-55 10358533 TM 304	None (#)	N/C	0.0075 (#)	<0.001 (#)	0.0083 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1227 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:38:28 141111-55 10358582 TM 304	None (#)	Amphibole fibres found during PCM analysis.	<0.001 (#)	<0.001 (#)	0.0014 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1228 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:39:41 141111-55 10358623 TM 304	Amosite, Crocidolite (Loose fibres in soil). (#)	N/C	0.0043 (#)	<0.001 (#)	0.0052 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1302 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 06:55:51 141111-55 10358732 TM 304	None (#)	N/C	0.0018 (#)	<0.001 (#)	0.0023 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1303 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:37:16 141111-55 10358594 TM 304	Amosite (Loose fibres in soil). (#)	N/C	0.0209 (#)	0.0010 (#)	0.0219 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1303 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:34:18 141111-55 10358598 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1304 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 06:54:26 141111-55 10358558 TM 304	Amosite (Loose fibres in soil). (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1335 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:43:00 141111-55 10358613 TM 304	None (#)	N/C	0.0015 (#)	<0.001 (#)	0.0017 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1335 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:45:16 141111-55 10358619 TM 304	None (#)	N/C	0.0460 (#)	<0.001 (#)	0.0462 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1336 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:47:02 141111-55 10358636 TM 304	Crocidolite (Loose fibres in soil). (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1337 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 06:51:32 141111-55 10358652 TM 304	None (#)	N/C	0.0012 (#)	<0.001 (#)	0.0015 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1338 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:30:55 141111-55 10358677 TM 304	Chrysotile (Loose fibres in soil). (#)	N/A	0.0010 (#)	<0.001 (#)	0.0013 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1339 0.50 SOLID 10/11/2014 00:00:00 13/01/2015 07:40:17 141111-55 10358538 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1343 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:47:03 141111-55 10358707 TM 304	None (#)	Amphibole fibres found during PCM analysis.	0.0048 (#)	<0.001 (#)	0.0051 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1406 1.00 SOLID 10/11/2014 00:00:00 13/01/2015 07:44:22 141111-55 10358723 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Test Completion Dates

Lab Sample No(s)	10358533	10358577	10358573	10358582	10358586	10358590	10358554	10358623	10358669	10358715
Customer Sample Ref.	IP1226	IP1226	IP1227	IP1227	IP1227	IP1227	IP1228	IP1228	IP1228	IP1228
AGS Ref.										
Depth	0.50	1.50	0.50	1.00	2.00	3.00	3.50	0.50	1.50	2.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014			01-Dec-2014				01-Dec-2014		
Asbestos Quantification - Full	20-Jan-2015			20-Jan-2015				20-Jan-2015		
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	28-Nov-2014	29-Nov-2014	02-Dec-2014	01-Dec-2014	29-Nov-2014	02-Dec-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	28-Nov-2014	29-Nov-2014	02-Dec-2014	01-Dec-2014	29-Nov-2014	02-Dec-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	24-Nov-2014	20-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	26-Nov-2014	26-Nov-2014	24-Nov-2014	19-Nov-2014	26-Nov-2014
PAH by GCMS	30-Nov-2014	29-Nov-2014	30-Nov-2014	30-Nov-2014	29-Nov-2014	27-Nov-2014	28-Nov-2014	01-Dec-2014	30-Nov-2014	29-Nov-2014
pH	29-Nov-2014	29-Nov-2014	28-Nov-2014	01-Dec-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014
Sample description	14-Nov-2014	14-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	14-Nov-2014	13-Nov-2014	12-Nov-2014
Total Organic Carbon	21-Nov-2014									
TPH CWG GC (S)	02-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	01-Dec-2014	29-Nov-2014	02-Dec-2014	29-Nov-2014	02-Dec-2014	02-Dec-2014

Lab Sample No(s)	10358693	10358697	10358702	10358732	10358736	10358740	10358744	10358594	10358598	10358602
Customer Sample Ref.	IP1299	IP1299	IP1299	IP1302	IP1302	IP1302	IP1302	IP1303	IP1303	IP1303
AGS Ref.										
Depth	1.00	2.00	3.00	0.50	1.50	2.50	3.50	0.50	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014			28-Nov-2014				01-Dec-2014	01-Dec-2014	
Asbestos Quantification - Full				19-Jan-2015				21-Jan-2015	20-Jan-2015	
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	27-Nov-2014	02-Dec-2014	01-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	01-Dec-2014	29-Nov-2014	27-Nov-2014	02-Dec-2014	01-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	30-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	24-Nov-2014	19-Nov-2014	19-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	26-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
PAH by GCMS	30-Nov-2014	30-Nov-2014	30-Nov-2014	30-Nov-2014	29-Nov-2014	29-Nov-2014	27-Nov-2014	30-Nov-2014	30-Nov-2014	30-Nov-2014
pH	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014
Sample description	13-Nov-2014	13-Nov-2014	13-Nov-2014	14-Nov-2014	14-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014
Total Organic Carbon	20-Nov-2014									
TPH CWG GC (S)	02-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	30-Nov-2014	01-Dec-2014	02-Dec-2014	01-Dec-2014

Lab Sample No(s)	10358606	10358609	10358558	10358561	10358565	10358569	10358613	10358619	10358628	10358632
Customer Sample Ref.	IP1303	IP1303	IP1304	IP1304	IP1304	IP1304	IP1335	IP1335	IP1335	IP1335
AGS Ref.										
Depth	3.00	4.00	0.50	1.50	2.50	3.50	0.50	1.00	2.00	3.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			28-Nov-2014				01-Dec-2014	01-Dec-2014		
Asbestos Quantification - Full			19-Jan-2015				20-Jan-2015	21-Jan-2015		
EPH CWG (Aliphatic) GC (S)	01-Dec-2014	02-Dec-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	29-Nov-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	01-Dec-2014	02-Dec-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	19-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	21-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
PAH by GCMS	29-Nov-2014	30-Nov-2014	30-Nov-2014	28-Nov-2014	28-Nov-2014	30-Nov-2014	30-Nov-2014	30-Nov-2014	29-Nov-2014	29-Nov-2014
pH	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014
Sample description	13-Nov-2014	13-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014
Total Organic Carbon	18-Nov-2014				20-Nov-2014					
TPH CWG GC (S)	01-Dec-2014	02-Dec-2014	29-Nov-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014

Lab Sample No(s)	10358636	10358640	10358644	10358648	10358652	10358656	10358660	10358664	10358673	10358677
Customer Sample Ref.	IP1336	IP1336	IP1336	IP1336	IP1337	IP1337	IP1337	IP1337	IP1337	IP1338
AGS Ref.										
Depth	0.50	1.50	2.50	3.50	0.50	1.00	2.00	3.00	4.00	1.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014				28-Nov-2014	01-Dec-2014				01-Dec-2014
Asbestos Quantification - Full	20-Jan-2015				20-Jan-2015					21-Jan-2015
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	01-Dec-2014	29-Nov-2014	02-Dec-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
PAH by GCMS	30-Nov-2014	29-Nov-2014	29-Nov-2014	30-Nov-2014	30-Nov-2014	30-Nov-2014	29-Nov-2014	01-Dec-2014	29-Nov-2014	30-Nov-2014
pH	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014
Sample description	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	14-Nov-2014	14-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014
Total Organic Carbon						19-Nov-2014				
TPH CWG GC (S)	01-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014

CERTIFICATE OF ANALYSIS

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

Lab Sample No(s)	10358681	10358685	10358689	10358538	10358542	10358546	10358550	10358707	10358711	10358719
Customer Sample Ref.	IP1338	IP1338	IP1338	IP1339	IP1339	IP1339	IP1339	IP1343	IP1343	IP1343
AGS Ref.										
Depth	2.00	3.00	4.00	0.50	1.50	2.50	3.50	1.00	2.00	3.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples				28-Nov-2014				01-Dec-2014		
Asbestos Quantification - Full				19-Jan-2015				19-Jan-2015		
EPH CWG (Aliphatic) GC (S)	01-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	01-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	21-Nov-2014	19-Nov-2014	19-Nov-2014
PAH by GCMS	30-Nov-2014	01-Dec-2014	30-Nov-2014	30-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	30-Nov-2014	28-Nov-2014	29-Nov-2014
pH	29-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014
Sample description	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	14-Nov-2014	13-Nov-2014	14-Nov-2014	14-Nov-2014	13-Nov-2014	13-Nov-2014
Total Organic Carbon				19-Nov-2014						
TPH CWG GC (S)	01-Dec-2014	02-Dec-2014	01-Dec-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014

Lab Sample No(s)	10358723	10358727
Customer Sample Ref.	IP1406	IP1406
AGS Ref.		
Depth	1.00	2.00
Type	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014	
Asbestos Quantification - Full	20-Jan-2015	
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	19-Nov-2014	24-Nov-2014
PAH by GCMS	30-Nov-2014	28-Nov-2014
pH	01-Dec-2014	29-Nov-2014
Sample description	13-Nov-2014	13-Nov-2014
Total Organic Carbon	26-Nov-2014	
TPH CWG GC (S)	02-Dec-2014	02-Dec-2014

SDG:	141111-55	**Location:**	Coed Darcy	**Order Number:**	CD0970
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299365
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	299363

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 NH_4 by the BRE method, VOC TICS and SVOC TICS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

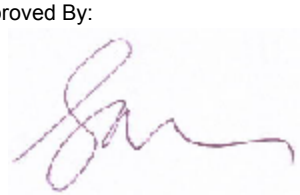
Date:	16 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141111-54
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298966

We received 22 samples on Tuesday November 11, 2014 and 22 of these samples were scheduled for analysis which was completed on Friday January 16, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10358494	IP1300		1.00	07/11/2014
10358498	IP1300		2.00	07/11/2014
10358502	IP1300		3.00	07/11/2014
10358506	IP1300		4.00	07/11/2014
10358460	IP1340		1.00	07/11/2014
10358469	IP1340		2.00	07/11/2014
10358473	IP1340		3.00	07/11/2014
10358477	IP1340		4.00	07/11/2014
10358464	IP1341		1.00	07/11/2014
10358481	IP1341		2.00	07/11/2014
10358485	IP1341		3.00	07/11/2014
10358490	IP1341		4.00	07/11/2014
10358408	IP1407		0.50	07/11/2014
10358418	IP1408		1.00	07/11/2014
10358425	IP1408		2.00	07/11/2014
10358431	IP1409		1.00	07/11/2014
10358435	IP1409		2.00	07/11/2014
10358439	IP1409		3.00	07/11/2014
10358443	IP1409		4.00	07/11/2014
10358447	IP1410		1.00	07/11/2014
10358452	IP1410		2.00	07/11/2014
10358456	IP1410		3.00	07/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- X = Test
- N = No Determination Possible

Lab Sample No(s)			10358494			10358498			10358502			10358506			10358460			10358469		10358473			10358477			10358464			10358481			10358485			10358490			10358408			10358418	
Customer Sample Reference			IP1300			IP1300			IP1300			IP1300			IP1340			IP1340		IP1340			IP1340			IP1341			IP1341			IP1341			IP1341			IP1407			IP1408	
AGS Reference																																										
Depth (m)			1.00			2.00			3.00			4.00			1.00			2.00		3.00			4.00			1.00			2.00			3.00			4.00			0.50			1.00	
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7		X												X												X												X			X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 6		X												X												X												X			X
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 22	X			X			X			X			X			X		X			X			X			X			X			X			X			X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 22	X			X			X			X			X			X		X			X			X			X			X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 22			X			X			X			X			X		X			X			X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 22	X			X			X			X			X			X		X			X			X			X			X			X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 22	X			X			X			X			X			X		X			X			X			X			X			X			X			X	
pH	All	NDPs: 0 Tests: 22		X			X			X			X			X		X			X			X			X			X			X			X			X			X
Sample description	All	NDPs: 0 Tests: 21	X			X			X			X			X					X			X			X			X			X			X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 4	X																							X																	
TPH CWG GC (S)	All	NDPs: 0 Tests: 22	X			X			X			X			X			X		X			X			X			X			X			X			X			X	

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)	10358418	10358425	10358431	10358435	10358439	10358443	10358447	10358452	10358456
Customer Sample Reference	IP1408	IP1408	IP1409	IP1409	IP1409	IP1409	IP1410	IP1410	IP1410
AGS Reference									
Depth (m)	1.00	2.00	1.00	2.00	3.00	4.00	1.00	2.00	3.00
Container	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)

Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7					X												X									
Asbestos Quantification - Full	All	NDPs: 0 Tests: 6																	X									
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 22		X			X			X			X			X			X			X			X			
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 22		X			X			X			X			X			X			X			X			
GRO by GC-FID (S)	All	NDPs: 0 Tests: 22	X			X			X			X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 22		X			X			X			X			X			X			X			X			
PAH by GCMS	All	NDPs: 0 Tests: 22		X			X			X			X			X			X			X			X			
pH	All	NDPs: 0 Tests: 22			X			X			X			X			X			X			X			X			X
Sample description	All	NDPs: 0 Tests: 21		X			X			X			X			X			X			X			X			
Total Organic Carbon	All	NDPs: 0 Tests: 4					X															X							
TPH CWG GC (S)	All	NDPs: 0 Tests: 22		X			X			X			X			X			X			X			X			

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10358494	IP1300	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Vegetation	Stones
10358498	IP1300	2.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358502	IP1300	3.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358506	IP1300	4.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10358460	IP1340	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10358469	IP1340	2.00	Dark Brown	Clinker	2 - 10 mm	None	None
10358473	IP1340	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358477	IP1340	4.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10358464	IP1341	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10358481	IP1341	2.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358485	IP1341	3.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358490	IP1341	4.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358408	IP1407	0.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10358418	IP1408	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10358425	IP1408	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358431	IP1409	1.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10358435	IP1409	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358439	IP1409	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358443	IP1409	4.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358447	IP1410	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10358452	IP1410	2.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358456	IP1410	3.00	Black	Sandy Loam	0.1 - 2 mm	Oil/Petroleum	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:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1300	IP1300	IP1300	IP1300	IP1340	IP1340
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358494	10358498	10358502	10358506	10358460	10358469
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	36	27	28	12	19
Soil Organic Matter (SOM)	<0.35 %	TM132		37.4 #					
pH	1 pH Units	TM133		7.81 M	5.98 M	6.67 M	5.13 M	8.12 M	7.3 #
Arsenic	<0.6 mg/kg	TM181		51.2 M	50.3 M	15.9 M	27.1 M	18.3 M	12.4 #
Cadmium	<0.02 mg/kg	TM181		1.44 M	0.106 M	0.0719 M	1.27 M	0.269 M	0.579 #
Chromium	<0.9 mg/kg	TM181		17.3 M	12.8 M	12 M	15.5 M	17.7 M	39.5 #
Copper	<1.4 mg/kg	TM181		829 M	103 M	54.4 M	49.1 M	51.1 M	61.8 #
Lead	<0.7 mg/kg	TM181		525 M	60.7 M	23.7 M	27.7 M	108 M	107 #
Mercury	<0.14 mg/kg	TM181		0.519 M	<0.14 M	<0.14 M	<0.14 M	0.216 M	<0.14 #
Nickel	<0.2 mg/kg	TM181		34.5 M	43.1 M	36.4 M	27.2 M	25.9 M	48 #
Selenium	<1 mg/kg	TM181		1.21 #	1.56 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		22.1 #	34.9 #	39.7 #	16.8 #	19.7 #	42.8 #
Zinc	<1.9 mg/kg	TM181		856 M	43.3 M	51.6 M	296 M	306 M	471 #

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1340	IP1340	IP1341	IP1341	IP1341	IP1341
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358473	10358477	10358464	10358481	10358485	10358490
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		28	27	20	21	33	44
Soil Organic Matter (SOM)	<0.35 %	TM132				52.2 #			
pH	1 pH Units	TM133		7.06 M	4.47 M	8.12 M	8.07 M	7.81 M	3.93 M
Arsenic	<0.6 mg/kg	TM181		14.8 M	8.14 M	37.1 M	21.1 M	24.8 M	65.7 M
Cadmium	<0.02 mg/kg	TM181		0.651 M	0.364 M	1.09 M	0.643 M	<0.02 M	0.762 M
Chromium	<0.9 mg/kg	TM181		21.6 M	17.7 M	28.3 M	19.7 M	17.4 M	18.5 M
Copper	<1.4 mg/kg	TM181		73.7 M	45.6 M	178 M	87.2 M	41.6 M	127 M
Lead	<0.7 mg/kg	TM181		168 M	56.5 M	897 M	270 M	57.3 M	72.9 M
Mercury	<0.14 mg/kg	TM181		0.245 M	0.33 M	3.16 M	1.09 M	0.444 M	0.596 M
Nickel	<0.2 mg/kg	TM181		38.6 M	36.4 M	48.2 M	40.3 M	31.7 M	49.3 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	3.17 #
Vanadium	<0.2 mg/kg	TM181		49.2 #	44.9 #	40.7 #	36.8 #	37.7 #	76.6 #
Zinc	<1.9 mg/kg	TM181		252 M	230 M	661 M	396 M	89.2 M	469 M

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1407	IP1408	IP1408	IP1409	IP1409	IP1409
			Depth (m)	0.50	1.00	2.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358408	10358418	10358425	10358431	10358435	10358439
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		22	20	23	22	22	28
Soil Organic Matter (SOM)	<0.35 %	TM132					>100 #		
pH	1 pH Units	TM133		7.78 M	7.74 M	7.91 M	6.38 M	6.91 M	7.87 M
Arsenic	<0.6 mg/kg	TM181		34.1 M	11.3 M	16.3 M	14.8 M	12.4 M	13.9 M
Cadmium	<0.02 mg/kg	TM181		0.96 M	0.224 M	0.0293 M	<0.02 M	<0.02 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		31.6 M	13.9 M	16.8 M	6.06 M	10.5 M	9.38 M
Copper	<1.4 mg/kg	TM181		135 M	41.1 M	38.8 M	35.7 M	39.6 M	70.5 M
Lead	<0.7 mg/kg	TM181		378 M	49 M	39.1 M	9.32 M	7.71 M	13.6 M
Mercury	<0.14 mg/kg	TM181		1.37 M	0.206 M	<0.14 M	<0.14 M	<0.14 M	0.38 M
Nickel	<0.2 mg/kg	TM181		45.7 M	33 M	35.4 M	35.6 M	25.2 M	42.6 M
Selenium	<1 mg/kg	TM181		1.06 #	<1 #	<1 #	1.36 #	1.03 #	<1 #
Vanadium	<0.2 mg/kg	TM181		34.7 #	28.6 #	46 #	19.6 #	28.7 #	46.5 #
Zinc	<1.9 mg/kg	TM181		648 M	229 M	212 M	15.3 M	30.4 M	41 M

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1409	IP1410	IP1410	IP1410		
			Depth (m)	4.00	1.00	2.00	3.00		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			Sample Time	.	.	.	.		
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
			SDG Ref	141111-54	141111-54	141111-54	141111-54		
			Lab Sample No.(s)	10358443	10358447	10358452	10358456		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	23	31	34		
Soil Organic Matter (SOM)	<0.35 %	TM132				49.1 #			
pH	1 pH Units	TM133		6.36 M	6.99 M	7.51 M	7.36 M		
Arsenic	<0.6 mg/kg	TM181		15.2 M	10.2 M	12 M	7.97 M		
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.21 M	0.191 M	0.261 M		
Chromium	<0.9 mg/kg	TM181		10.8 M	14 M	8.97 M	15.8 M		
Copper	<1.4 mg/kg	TM181		53.7 M	44.2 M	41.4 M	49.6 M		
Lead	<0.7 mg/kg	TM181		10.1 M	20.4 M	50.3 M	31.6 M		
Mercury	<0.14 mg/kg	TM181		0.688 M	0.208 M	2.36 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		36.2 M	32.7 M	21.3 M	16.8 M		
Selenium	<1 mg/kg	TM181		1.09 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181		42.3 #	37.6 #	23 #	22.6 #		
Zinc	<1.9 mg/kg	TM181		47.2 M	87.6 M	70.9 M	59.2 M		

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1300	IP1300	IP1300	IP1300	IP1340	IP1340
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358494	10358498	10358502	10358506	10358460	10358469
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		99.6	109	109	96.1	95.4	108
Acenaphthene-d10 % recovery**	%	TM218		99.3	108	108	93.3	94	110
Phenanthrene-d10 % recovery**	%	TM218		95.7	97	98.2	92.1	92.5	100
Chrysene-d12 % recovery**	%	TM218		105	81.5	87.6	87.6	98.7	85.6
Perylene-d12 % recovery**	%	TM218		113	69.6	70.8	89.5	104	78.8
Naphthalene	<9 µg/kg	TM218		413 @ M	37.4 @ M	34.7 @ M	<9 @ M	60.4 @ M	282 @ #
Acenaphthylene	<12 µg/kg	TM218		2960 @ M	<12 @ M	18.5 @ M	<12 @ M	322 @ M	103 @ #
Acenaphthene	<8 µg/kg	TM218		270 @ M	<8 @ M	<8 @ M	<8 @ M	42.5 @ M	44.2 @ #
Fluorene	<10 µg/kg	TM218		3300 @ M	<10 @ M	<10 @ M	<10 @ M	142 @ M	66.8 @ #
Phenanthrene	<15 µg/kg	TM218		25400 @ M	98.4 @ M	122 @ M	24.4 @ M	1970 @ M	862 @ #
Anthracene	<16 µg/kg	TM218		6290 @ M	28.3 @ M	<16 @ M	<16 @ M	560 @ M	150 @ #
Fluoranthene	<17 µg/kg	TM218		24600 @ M	65.3 @ M	128 @ M	<17 @ M	4570 @ M	795 @ #
Pyrene	<15 µg/kg	TM218		14700 @ M	46 @ M	88.3 @ M	<15 @ M	2840 @ M	810 @ #
Benz(a)anthracene	<14 µg/kg	TM218		11600 @ M	51.9 @ M	59.6 @ M	<14 @ M	2630 @ M	568 @ #
Chrysene	<10 µg/kg	TM218		10600 @ M	58.8 @ M	93.1 @ M	<10 @ M	3040 @ M	764 @ #
Benzo(b)fluoranthene	<15 µg/kg	TM218		11800 @ M	80.1 @ M	99.7 @ M	<15 @ M	3910 @ M	968 @ #
Benzo(k)fluoranthene	<14 µg/kg	TM218		4660 @ M	<14 @ M	24.9 @ M	<14 @ M	1180 @ M	<14 @ #
Benzo(a)pyrene	<15 µg/kg	TM218		8930 @ M	28.5 @ M	49.2 @ M	<15 @ M	2150 @ M	422 @ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5290 @ M	<18 @ M	27.7 @ M	<18 @ M	1400 @ M	249 @ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		2100 @ M	<23 @ M	<23 @ M	<23 @ M	577 @ M	141 @ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		5440 @ M	<24 @ M	35.4 @ M	<24 @ M	1420 @ M	402 @ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		138000	495	781	<118	26800	6630

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1340	IP1340	IP1341	IP1341	IP1341	IP1341
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358473	10358477	10358464	10358481	10358485	10358490
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		124	110	104	89.3	114	110
Acenaphthene-d10 % recovery**	%	TM218		126	125	103	88.8	115	110
Phenanthrene-d10 % recovery**	%	TM218		120	108	96.5	88.4	111	106
Chrysene-d12 % recovery**	%	TM218		113	103	100	88.3	113	106
Perylene-d12 % recovery**	%	TM218		110	112	103	95.5	114	123
Naphthalene	<9 µg/kg	TM218		995 @ M	16700 @ M	291 @ M	412 @ M	188 @ M	699 @ M
Acenaphthylene	<12 µg/kg	TM218		147 @ M	<60 @ M	504 @ M	2520 @ M	33.1 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		79.5 @ M	2630 @ M	57.9 @ M	230 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		182 @ M	6960 @ M	209 @ M	2110 @ M	<10 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		2000 @ M	29100 @ M	2130 @ M	20000 @ M	361 @ M	595 @ M
Anthracene	<16 µg/kg	TM218		323 @ M	29700 @ M	587 @ M	3880 @ M	63 @ M	154 @ M
Fluoranthene	<17 µg/kg	TM218		1180 @ M	2180 @ M	3270 @ M	22700 @ M	273 @ M	211 @ M
Pyrene	<15 µg/kg	TM218		1760 @ M	6480 @ M	2400 @ M	13700 @ M	384 @ M	939 @ M
Benz(a)anthracene	<14 µg/kg	TM218		1260 @ M	33400 @ M	1920 @ M	10100 @ M	286 @ M	<14 @ M
Chrysene	<10 µg/kg	TM218		2700 @ M	34700 @ M	2020 @ M	8620 @ M	592 @ M	<10 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2420 @ M	9100 @ M	3020 @ M	8900 @ M	513 @ M	<15 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		567 @ M	8390 @ M	1000 @ M	4040 @ M	<14 @ M	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		1090 @ M	19900 @ M	1850 @ M	7940 @ M	211 @ M	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		692 @ M	<90 @ M	1220 @ M	4270 @ M	103 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		381 @ M	<115 @ M	490 @ M	1720 @ M	<23 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		990 @ M	4150 @ M	1380 @ M	4330 @ M	270 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		16800	203000	22400	115000	3280	2600

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1407	IP1408	IP1408	IP1409	IP1409	IP1409
			Depth (m)	0.50	1.00	2.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358408	10358418	10358425	10358431	10358435	10358439
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		103	102	103	120	97.1	124
Acenaphthene-d10 % recovery**	%	TM218		101	101	104	119	94.3	123
Phenanthrene-d10 % recovery**	%	TM218		90.1	95.9	98.2	89.6	78.2	114
Chrysene-d12 % recovery**	%	TM218		80.6	98	85.6	36.5	56.6	96.6
Perylene-d12 % recovery**	%	TM218		77	96.8	78.7	15.2	42.4	91.7
Naphthalene	<9 µg/kg	TM218		187 @ M	156 @ M	245 @ M	437 @ M	239 @ M	415 @ M
Acenaphthylene	<12 µg/kg	TM218		102 @ M	418 @ M	166 @ M	48.8 @ M	<12 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		19.5 @ M	49.4 @ M	24.6 @ M	<8 @ M	<8 @ M	19.4 @ M
Fluorene	<10 µg/kg	TM218		40.5 @ M	242 @ M	92.8 @ M	17.8 @ M	<10 @ M	51.6 @ M
Phenanthrene	<15 µg/kg	TM218		832 @ M	2250 @ M	1940 @ M	135 @ M	131 @ M	1210 @ M
Anthracene	<16 µg/kg	TM218		128 @ M	647 @ M	260 @ M	<16 @ M	<16 @ M	117 @ M
Fluoranthene	<17 µg/kg	TM218		790 @ M	3340 @ M	1350 @ M	<17 @ M	<17 @ M	161 @ M
Pyrene	<15 µg/kg	TM218		767 @ M	2140 @ M	1280 @ M	<15 @ M	<15 @ M	1160 @ M
Benz(a)anthracene	<14 µg/kg	TM218		550 @ M	1660 @ M	782 @ M	<14 @ M	<14 @ M	233 @ M
Chrysene	<10 µg/kg	TM218		795 @ M	1610 @ M	1270 @ M	<10 @ M	31.2 @ M	410 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		924 @ M	1820 @ M	1100 @ M	<15 @ M	<15 @ M	226 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		284 @ M	796 @ M	263 @ M	<14 @ M	<14 @ M	36 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		503 @ M	1260 @ M	551 @ M	<15 @ M	<15 @ M	190 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		305 @ M	715 @ M	279 @ M	<18 @ M	<18 @ M	75.3 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		161 @ M	301 @ M	203 @ M	<23 @ M	<23 @ M	81.1 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		349 @ M	762 @ M	341 @ M	<24 @ M	<24 @ M	250 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6730	18200	10100	638	401	4640

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1409	IP1410	IP1410	IP1410		
			Depth (m)	4.00	1.00	2.00	3.00		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			Sample Time	.	.	.	.		
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
			SDG Ref	141111-54	141111-54	141111-54	141111-54		
			Lab Sample No.(s)	10358443	10358447	10358452	10358456		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		100	107	101	105		
Acenaphthene-d10 % recovery**	%	TM218		99.9	108	107	107		
Phenanthrene-d10 % recovery**	%	TM218		88.6	102	99.6	101		
Chrysene-d12 % recovery**	%	TM218		66.5	92	93	97.8		
Perylene-d12 % recovery**	%	TM218		54.9	88.1	101	102		
Naphthalene	<9 µg/kg	TM218		86.8 @ M	343 @ M	789 @ M	11200 @ M		
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	657 @ M	142 @ M	<12 @ M		
Acenaphthene	<8 µg/kg	TM218		<8 @ M	43 @ M	<8 @ M	2120 @ M		
Fluorene	<10 µg/kg	TM218		<10 @ M	260 @ M	<10 @ M	4970 @ M		
Phenanthrene	<15 µg/kg	TM218		271 @ M	3790 @ M	1810 @ M	12400 @ M		
Anthracene	<16 µg/kg	TM218		<16 @ M	941 @ M	259 @ M	5400 @ M		
Fluoranthene	<17 µg/kg	TM218		44.4 @ M	5570 @ M	970 @ M	2270 @ M		
Pyrene	<15 µg/kg	TM218		119 @ M	3900 @ M	1550 @ M	2200 @ M		
Benz(a)anthracene	<14 µg/kg	TM218		51 @ M	2940 @ M	697 @ M	721 @ M		
Chrysene	<10 µg/kg	TM218		96.2 @ M	2780 @ M	1110 @ M	1440 @ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		58.6 @ M	3870 @ M	893 @ M	508 @ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	1220 @ M	<14 @ M	134 @ M		
Benzo(a)pyrene	<15 µg/kg	TM218		31.3 @ M	1970 @ M	586 @ M	269 @ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	972 @ M	347 @ M	100 @ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	458 @ M	207 @ M	72.5 @ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ M	966 @ M	701 @ M	154 @ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		759	30700	10100	44000		

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend		Customer Sample R	IP1300	IP1300	IP1300	IP1300	IP1340	IP1340
#	ISO17025 accredited.							
M	*m*CERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% 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	Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
		Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
		Sample Time	.	.	.	.	.	.
		Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
		SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
(F)	Trigger breach confirmed	Lab Sample No.(s)	10358494	10358498	10358502	10358506	10358460	10358469
1-5&+§@	Sample deviation (see appendix)	AGS Reference						

Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	85 @	90 @	111 @	132 @	72 @	84 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<880 @ M	1330 @ M	<176 @ M	286 @ M	224 @ M	<880 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<100 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<100 @ #
Benzene	<10 µg/kg	TM089	<200 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<200 @ #
Toluene	<2 µg/kg	TM089	<40 @ M	18.8 @ M	<8 @ M	<8 @ M	<8 @ M	<40 @ #
Ethylbenzene	<3 µg/kg	TM089	<60 @ M	29.8 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ #
m,p-Xylene	<6 µg/kg	TM089	<120 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<120 @ #
o-Xylene	<3 µg/kg	TM089	<60 @ M	33 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	33 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	81.6 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<200 @	61.2 @	<200 @	<40 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089	<200 @	132 @	<200 @	<40 @	<40 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089	<200 @	264 @	<200 @	49.7 @	<40 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089	<200 @	345 @	<200 @	101 @	93.8 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173	5230	<100	<100	201	16400	14400
Aliphatics >C16-C21	<100 µg/kg	TM173	18800	<100	<100	356	42800	28100
Aliphatics >C21-C35	<100 µg/kg	TM173	95500	<100	14600	2570	113000	464000
Aliphatics >C35-C44	<100 µg/kg	TM173	81500	<100	9480	<100	35600	102000
Total Aliphatics >C12-C44	<100 µg/kg	TM173	201000	<100	24000	3120	208000	608000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<200 @	<40 @	<200 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<200 @	<40 @	<200 @	<40 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	<200 @	256 @	<200 @	<40 @	<40 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	<200 @	229 @	<200 @	67.6 @	62.2 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	3290	<100	1820	<100	28300	5400
Aromatics >EC16-EC21	<100 µg/kg	TM173	23700	<100	8620	502	178000	49600
Aromatics >EC21-EC35	<100 µg/kg	TM173	202000	15000	33800	8270	390000	1310000
Aromatics >EC35-EC44	<100 µg/kg	TM173	178000	7210	29700	5330	124000	330000
Aromatics >EC40-EC44	<100 µg/kg	TM173	73700	2500	11600	1670	41000	90500
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	407000	22200	74000	14100	721000	1690000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	609000	23500	98100	17500	929000	2300000

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1340	IP1340	IP1341	IP1341	IP1341	IP1341
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358473	10358477	10358464	10358481	10358485	10358490
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94 @	106 3 @	88 @	72 @	74 @	90 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		2190 @ M	2900000 3 @ M	<176 @ M	357 @ M	3880 @ M	70000 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 3 @ M	<20 @ M	<20 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	1520 3 @ M	<40 @ M	<40 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<40 3 @ M	<8 @ M	15.2 @ M	11.9 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	13400 3 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	14300 3 @ M	<24 @ M	<24 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	27500 3 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	41800 3 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	56700 3 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	50800 3 @	<40 @	<40 @	<40 @	373 @
Aliphatics >C6-C8	<10 µg/kg	TM089		206 @	672000 3 @	<40 @	58.4 @	149 @	6800 @
Aliphatics >C8-C10	<10 µg/kg	TM089		431 @	764000 3 @	<40 @	67.3 @	930 @	17000 @
Aliphatics >C10-C12	<10 µg/kg	TM089		574 @	506000 3 @	<40 @	71.1 @	1290 @	20700 @
Aliphatics >C12-C16	<100 µg/kg	TM173		812000	3070000	10500	22100	10500	1080000
Aliphatics >C16-C21	<100 µg/kg	TM173		473000	1370000	35300	72600	17800	767000
Aliphatics >C21-C35	<100 µg/kg	TM173		2890000	7410000	178000	317000	134000	2910000
Aliphatics >C35-C44	<100 µg/kg	TM173		516000	1440000	109000	152000	50100	1020000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		4690000	13300000	332000	563000	212000	5770000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	1520 3 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 3 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		438 @	565000 3 @	<40 @	74.9 @	620 @	11300 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		382 @	337000 3 @	<40 @	48.3 @	858 @	13800 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		45500	115000	4540	14700	7910	364000
Aromatics >EC16-EC21	<100 µg/kg	TM173		79200	91500	28000	107000	16200	521000
Aromatics >EC21-EC35	<100 µg/kg	TM173		882000	875000	274000	556000	258000	4080000
Aromatics >EC35-EC44	<100 µg/kg	TM173		185000	206000	211000	271000	86500	1350000
Aromatics >EC40-EC44	<100 µg/kg	TM173		47200	50500	87300	106000	26200	460000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1190000	1290000	518000	949000	369000	6310000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		5890000	17500000	850000	1510000	585000	12100000

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1407	IP1408	IP1408	IP1409	IP1409	IP1409
			Depth (m)	0.50	1.00	2.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-54	141111-54	141111-54	141111-54	141111-54	141111-54
			Lab Sample No.(s)	10358408	10358418	10358425	10358431	10358435	10358439
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		96 @	72 @	66 @	98 @	105 @	88 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	<176 @ M	<176 @ M	<880 @ M	<440 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<20 @ M	<100 @ M	<50 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<40 @ M	<200 @ M	<100 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<8 @ M	<40 @ M	<20 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<60 @ M	<30 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<24 @ M	<120 @ M	<60 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<60 @ M	<30 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<36 @	<180 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<96 @	<480 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		11100	36200	24800	<100	290	16100
Aliphatics >C16-C21	<100 µg/kg	TM173		44400	86000	73900	1850	4470	53000
Aliphatics >C21-C35	<100 µg/kg	TM173		188000	218000	271000	12800	37200	231000
Aliphatics >C35-C44	<100 µg/kg	TM173		83500	112000	185000	5390	17600	92400
Total Aliphatics >C12-C44	<100 µg/kg	TM173		327000	452000	555000	20100	59600	393000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<200 @	<100 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		3120	7660	4330	<100	<100	3110
Aromatics >EC16-EC21	<100 µg/kg	TM173		19500	56300	20900	<100	1310	12800
Aromatics >EC21-EC35	<100 µg/kg	TM173		184000	255000	138000	800	17400	253000
Aromatics >EC35-EC44	<100 µg/kg	TM173		138000	116000	78400	4650	12500	199000
Aromatics >EC40-EC44	<100 µg/kg	TM173		60300	42800	33800	1340	4990	74600
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		345000	436000	241000	5450	31200	468000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		672000	888000	796000	25500	91200	861000

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend		Customer Sample R	IP1409	IP1410	IP1410	IP1410		
#	ISO17025 accredited.							
M	*m*CERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% 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							
1-5&+§@	Sample deviation (see appendix)							
		Depth (m)	4.00	1.00	2.00	3.00		
		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
		Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
		Sample Time	.	.	.	.		
		Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014		
		SDG Ref	141111-54	141111-54	141111-54	141111-54		
		Lab Sample No.(s)	10358443	10358447	10358452	10358456		
		AGS Reference						

Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	92 @	94 @	94 @	102 @		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<880 @ M	11200 @ M	5720 @ M	1280000 @ M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<100 @ M	<100 @ M	<20 @ M	<100 @ M		
Benzene	<10 µg/kg	TM089	<200 @ M	<200 @ M	<40 @ M	406 @ M		
Toluene	<2 µg/kg	TM089	<40 @ M	<40 @ M	<8 @ M	<40 @ M		
Ethylbenzene	<3 µg/kg	TM089	<60 @ M	<60 @ M	<12 @ M	7550 @ M		
m,p-Xylene	<6 µg/kg	TM089	<120 @ M	<120 @ M	<24 @ M	21200 @ M		
o-Xylene	<3 µg/kg	TM089	<60 @ M	<60 @ M	21.9 @ M	18400 @ M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	21.9 @	39600 @		
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	47600 @		
Aliphatics >C5-C6	<10 µg/kg	TM089	<200 @	<200 @	62.8 @	23300 @		
Aliphatics >C6-C8	<10 µg/kg	TM089	<200 @	287 @	223 @	243000 @		
Aliphatics >C8-C10	<10 µg/kg	TM089	<200 @	1070 @	629 @	287000 @		
Aliphatics >C10-C12	<10 µg/kg	TM089	<200 @	5310 @	2590 @	292000 @		
Aliphatics >C12-C16	<100 µg/kg	TM173	6160	124000	472000	2070000		
Aliphatics >C16-C21	<100 µg/kg	TM173	11900	143000	642000	1350000		
Aliphatics >C21-C35	<100 µg/kg	TM173	62100	388000	2050000	3210000		
Aliphatics >C35-C44	<100 µg/kg	TM173	23200	150000	508000	485000		
Total Aliphatics >C12-C44	<100 µg/kg	TM173	103000	806000	3670000	7120000		
Aromatics >EC5-EC7	<10 µg/kg	TM089	<200 @	<200 @	<40 @	406 @		
Aromatics >EC7-EC8	<10 µg/kg	TM089	<200 @	<200 @	<40 @	<200 @		
Aromatics >EC8-EC10	<10 µg/kg	TM089	<200 @	822 @	475 @	238000 @		
Aromatics >EC10-EC12	<10 µg/kg	TM089	<200 @	3540 @	1730 @	195000 @		
Aromatics >EC12-EC16	<100 µg/kg	TM173	1760	27500	247000	193000		
Aromatics >EC16-EC21	<100 µg/kg	TM173	3870	112000	304000	178000		
Aromatics >EC21-EC35	<100 µg/kg	TM173	39200	498000	1800000	408000		
Aromatics >EC35-EC44	<100 µg/kg	TM173	24900	183000	631000	88400		
Aromatics >EC40-EC44	<100 µg/kg	TM173	10400	69500	230000	31800		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	69800	820000	2980000	867000		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	173000	1640000	6660000	9260000		

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1300 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 11:23:23 141111-54 10358494 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	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	IP1340 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 11:20:47 141111-54 10358460 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1341 1.00 SOLID 07/11/2014 00:00:00 13/11/2014 10:33:12 141111-54 10358464 TM048	27/11/14	Paul Fenney	Soil containing loose fibres and ACM debris	Not Detected (#)	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	IP1407 0.50 SOLID 07/11/2014 00:00:00 14/11/2014 11:26:04 141111-54 10358408 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1408 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 09:42:04 141111-54 10358418 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	IP1409 1.00 SOLID 07/11/2014 00:00:00 13/11/2014 10:00:14 141111-54 10358431 TM048	27/11/14	Paul Fenney	-	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	IP1410 1.00 SOLID 07/11/2014 00:00:00 13/11/2014 10:03:32 141111-54 10358447 TM048	27/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1300 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 09:04:52 141111-54 10358494 TM 304	Chrysotile and Crocidolite (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1340 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 09:08:21 141111-54 10358460 TM 304	None (#)	N/C	0.0015 (#)	<0.001 (#)	0.0019 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1341 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 07:23:45 141111-54 10358464 TM 304	Amosite (#)	Loose fibres in soil	0.3636 (#)	0.0083 (#)	0.3719 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1407 0.50 SOLID 07/11/2014 00:00:00 09/01/2015 08:59:33 141111-54 10358408 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1408 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 13:21:06 141111-54 10358418 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1410 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 10:34:09 141111-54 10358447 TM 304	Amosite (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10358494	10358498	10358502	10358506	10358460	10358469	10358473	10358477	10358464	10358481
Customer Sample Ref.	IP1300	IP1300	IP1300	IP1300	IP1340	IP1340	IP1340	IP1340	IP1341	IP1341
AGS Ref.										
Depth	1.00	2.00	3.00	4.00	1.00	2.00	3.00	4.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014				28-Nov-2014				28-Nov-2014	
Asbestos Quantification - Full	16-Jan-2015				16-Jan-2015				16-Jan-2015	
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	28-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
Metals in solid samples by OES	24-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	21-Nov-2014	17-Nov-2014	19-Nov-2014	19-Nov-2014	24-Nov-2014	20-Nov-2014
PAH by GCMS	26-Nov-2014	27-Nov-2014	25-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	28-Nov-2014	28-Nov-2014	26-Nov-2014	27-Nov-2014
pH	27-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014
Sample description	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	13-Nov-2014	12-Nov-2014
Total Organic Carbon	19-Nov-2014								19-Nov-2014	
TPH CWG GC (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014

Lab Sample No(s)	10358485	10358490	10358408	10358418	10358425	10358431	10358435	10358439	10358443	10358447
Customer Sample Ref.	IP1341	IP1341	IP1407	IP1408	IP1408	IP1409	IP1409	IP1409	IP1409	IP1410
AGS Ref.										
Depth	3.00	4.00	0.50	1.00	2.00	1.00	2.00	3.00	4.00	1.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			28-Nov-2014	28-Nov-2014		28-Nov-2014				28-Nov-2014
Asbestos Quantification - Full			16-Jan-2015	16-Jan-2015						16-Jan-2015
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014
GRO by GC-FID (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014
Metals in solid samples by OES	21-Nov-2014	20-Nov-2014	24-Nov-2014	21-Nov-2014	19-Nov-2014	21-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014
PAH by GCMS	26-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
pH	26-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	26-Nov-2014	28-Nov-2014	26-Nov-2014	28-Nov-2014	26-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	13-Nov-2014	14-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	13-Nov-2014
Total Organic Carbon						26-Nov-2014				
TPH CWG GC (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	01-Dec-2014

Lab Sample No(s)	10358452	10358456
Customer Sample Ref.	IP1410	IP1410
AGS Ref.		
Depth	2.00	3.00
Type	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	20-Nov-2014	19-Nov-2014
PAH by GCMS	27-Nov-2014	28-Nov-2014
pH	28-Nov-2014	27-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014
Total Organic Carbon	17-Nov-2014	
TPH CWG GC (S)	01-Dec-2014	01-Dec-2014

SDG:	141111-54	**Location:**	Coed Darcy	**Order Number:**	CD0965
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298966
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

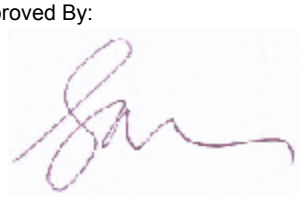
Date:	19 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141111-53
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	299046

We received 24 samples on Tuesday November 11, 2014 and 24 of these samples were scheduled for analysis which was completed on Monday January 19, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10358303	IP1229		1.00	07/11/2014
10358359	IP1229		2.00	07/11/2014
10358386	IP1229		3.00	07/11/2014
10358390	IP1229		4.00	07/11/2014
10358423	IP1230		1.00	07/11/2014
10358308	IP1230		2.00	07/11/2014
10358314	IP1230		3.00	07/11/2014
10358319	IP1230		4.00	07/11/2014
10358367	IP1231		1.00	07/11/2014
10358373	IP1231		2.00	07/11/2014
10358378	IP1231		3.00	07/11/2014
10358382	IP1231		4.00	07/11/2014
10358394	IP1232		1.00	07/11/2014
10358400	IP1232		2.00	07/11/2014
10358404	IP1232		3.00	07/11/2014
10358412	IP1232		4.00	07/11/2014
10358346	IP1233		0.50	07/11/2014
10358350	IP1233		1.50	07/11/2014
10358354	IP1233		3.00	07/11/2014
10358363	IP1233		4.00	07/11/2014
10358323	IP1301		1.00	07/11/2014
10358330	IP1301		2.00	07/11/2014
10358338	IP1301		3.00	07/11/2014
10358342	IP1301		4.00	07/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

		Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6	10358303 IP1229 1.00			400g Tub (ALE214)
Asbestos Quantification - Full	All	NDPs: 0 Tests: 6	10358303 IP1229 1.00			400g Tub (ALE214)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			60g VOC (ALE215)
			10358359 IP1229 2.00			60g VOC (ALE215)
			10358386 IP1229 3.00			60g VOC (ALE215)
			10358390 IP1229 4.00			60g VOC (ALE215)
			10358423 IP1230 1.00			60g VOC (ALE215)
			10358308 IP1230 2.00			60g VOC (ALE215)
			10358314 IP1230 3.00			60g VOC (ALE215)
			10358319 IP1230 4.00			60g VOC (ALE215)
			10358367 IP1231 1.00			60g VOC (ALE215)
			10358373 IP1231 2.00			60g VOC (ALE215)
			10358378 IP1231 3.00			60g VOC (ALE215)
			10358382 IP1231 4.00			60g VOC (ALE215)
			10358394 IP1232 1.00			60g VOC (ALE215)
			10358400 IP1232 2.00			400g Tub (ALE214)
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)
PAH by GCMS	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)
pH	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			400g Tub (ALE214)
			10358359 IP1229 2.00			400g Tub (ALE214)
			10358386 IP1229 3.00			400g Tub (ALE214)
			10358390 IP1229 4.00			400g Tub (ALE214)
			10358423 IP1230 1.00			400g Tub (ALE214)
			10358308 IP1230 2.00			400g Tub (ALE214)
			10358314 IP1230 3.00			400g Tub (ALE214)
			10358319 IP1230 4.00			400g Tub (ALE214)
			10358367 IP1231 1.00			400g Tub (ALE214)
			10358373 IP1231 2.00			400g Tub (ALE214)
			10358378 IP1231 3.00			400g Tub (ALE214)
			10358382 IP1231 4.00			400g Tub (ALE214)
			10358394 IP1232 1.00			400g Tub (ALE214)
			10358400 IP1232 2.00			400g Tub (ALE214)
Sample description	All	NDPs: 0 Tests: 23	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)
Total Organic Carbon	All	NDPs: 0 Tests: 5	10358303 IP1229 1.00			400g Tub (ALE214)
			10358378 IP1231 3.00			400g Tub (ALE214)
			10358394 IP1232 1.00			400g Tub (ALE214)
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	10358303 IP1229 1.00			250g Amber Jar (AL
			10358359 IP1229 2.00			250g Amber Jar (AL
			10358386 IP1229 3.00			250g Amber Jar (AL
			10358390 IP1229 4.00			250g Amber Jar (AL
			10358423 IP1230 1.00			250g Amber Jar (AL
			10358308 IP1230 2.00			250g Amber Jar (AL
			10358314 IP1230 3.00			250g Amber Jar (AL
			10358319 IP1230 4.00			250g Amber Jar (AL
			10358367 IP1231 1.00			250g Amber Jar (AL
			10358373 IP1231 2.00			250g Amber Jar (AL
			10358378 IP1231 3.00			250g Amber Jar (AL
			10358382 IP1231 4.00			250g Amber Jar (AL
			10358394 IP1232 1.00			250g Amber Jar (AL
			10358400 IP1232 2.00			400g Tub (ALE214)

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			10358400	IP1232		2.00	60g VOC (ALE215)
			10358404	IP1232		3.00	250g Amber Jar (AL
			10358412	IP1232		4.00	400g Tub (ALE214)
			10358346	IP1233		0.50	60g VOC (ALE215)
			10358350	IP1233		1.50	250g Amber Jar (AL
			10358354	IP1233		3.00	400g Tub (ALE214)
			10358363	IP1233		4.00	60g VOC (ALE215)
			10358323	IP1301		1.00	250g Amber Jar (AL
			10358330	IP1301		2.00	400g Tub (ALE214)
			10358338	IP1301		3.00	60g VOC (ALE215)
			10358342	IP1301		4.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 6					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 24					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 24					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24					
Metals in solid samples by OES	All	NDPs: 0 Tests: 24					
PAH by GCMS	All	NDPs: 0 Tests: 24					
pH	All	NDPs: 0 Tests: 24					
Sample description	All	NDPs: 0 Tests: 23					
Total Organic Carbon	All	NDPs: 0 Tests: 5					
TPH CWG GC (S)	All	NDPs: 0 Tests: 24					

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10358303	IP1229	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358359	IP1229	2.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358386	IP1229	3.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10358390	IP1229	4.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358308	IP1230	2.00	Dark Brown	Sand	0.1 - 2 mm	N/A	Stones
10358314	IP1230	3.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358319	IP1230	4.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10358423	IP1230	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	None
10358367	IP1231	1.00	Black	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358373	IP1231	2.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358378	IP1231	3.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358382	IP1231	4.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10358394	IP1232	1.00	Black	Silt Loam	0.063 - 0.1 mm	Brick	Stones
10358400	IP1232	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358404	IP1232	3.00	Grey	Sandy Silt Loam	0.1 - 2 mm	Vegetation	None
10358412	IP1232	4.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358346	IP1233	0.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10358350	IP1233	1.50	Dark Brown	Sand	0.1 - 2 mm	Stones	None
10358354	IP1233	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10358363	IP1233	4.00	Grey	Sandy Loam	0.1 - 2 mm	Vegetation	Stones
10358323	IP1301	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10358330	IP1301	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10358338	IP1301	3.00	Grey	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10358342	IP1301	4.00	Grey	Sandy Loam	0.1 - 2 mm	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:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1229	IP1229	IP1229	IP1229	IP1230	IP1230
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358303	10358359	10358386	10358390	10358423	10358308
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	35	13	15	23	25
Soil Organic Matter (SOM)	<0.35 %	TM132		7.4 #					
pH	1 pH Units	TM133		7.75 M	7.22 M	6.84 M	6.98 M	7.69 M	6.2 M
Arsenic	<0.6 mg/kg	TM181		21.4 M	19.5 M	13 M	12.5 M	17.4 M	12.5 M
Cadmium	<0.02 mg/kg	TM181		0.645 M	0.201 M	<0.02 M	0.209 M	0.367 M	0.0836 M
Chromium	<0.9 mg/kg	TM181		30.5 M	20.9 M	10.1 M	10.7 M	15.4 M	15.2 M
Copper	<1.4 mg/kg	TM181		74.9 M	66.2 M	26.1 M	18.4 M	123 M	45.7 M
Lead	<0.7 mg/kg	TM181		175 M	132 M	12.3 M	16.4 M	66.8 M	18.2 M
Mercury	<0.14 mg/kg	TM181		0.302 M	0.392 M	<0.14 M	<0.14 M	0.184 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		26.3 M	43.1 M	25.4 M	26.6 M	27.8 M	37.8 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		26.7 #	39 #	9.55 #	13.9 #	25.1 #	49.1 #
Zinc	<1.9 mg/kg	TM181		427 M	186 M	77.5 M	65.3 M	168 M	46.5 M

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1230	IP1230	IP1231	IP1231	IP1231	IP1231
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358314	10358319	10358367	10358373	10358378	10358382
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		27	21	27	33	30	14
Soil Organic Matter (SOM)	<0.35 %	TM132						87.8 #	
pH	1 pH Units	TM133		6.43 M	4.44 M	7.93 M	6.65 M	6.61 M	5.66 M
Arsenic	<0.6 mg/kg	TM181		17.4 M	13.9 M	32.4 M	20.4 M	26.4 M	28.7 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.237 M	1.31 M	0.069 M	0.0656 M	0.0349 M
Chromium	<0.9 mg/kg	TM181		7.84 M	11.1 M	31.4 M	8.55 M	10.3 M	13 M
Copper	<1.4 mg/kg	TM181		46.9 M	56.1 M	134 M	47.9 M	81.9 M	20 M
Lead	<0.7 mg/kg	TM181		21.5 M	15.1 M	421 M	12 M	63.2 M	15.2 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.462 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		28.5 M	5.68 M	31.6 M	48 M	57.1 M	33.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		23.9 #	17.1 #	43.4 #	33.8 #	43.3 #	17.8 #
Zinc	<1.9 mg/kg	TM181		36.6 M	26.7 M	477 M	32.4 M	43.3 M	62.3 M

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R					
			IP1232	IP1232	IP1232	IP1232	IP1233	IP1233
		Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
		Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
		Sample Time	.	.	.	.	.	.
		Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
		SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
		Lab Sample No.(s)	10358394	10358400	10358404	10358412	10358346	10358350
		AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024	14	23	26	20	21	24
Soil Organic Matter (SOM)	<0.35 %	TM132	4.21 #				14.1 #	
pH	1 pH Units	TM133	7.3 M	6.25 M	5.01 M	5.34 M	7.97 M	8.12 M
Arsenic	<0.6 mg/kg	TM181	30.9 M	12.9 M	17.2 M	7.86 M	18.4 M	14.3 M
Cadmium	<0.02 mg/kg	TM181	0.999 M	<0.02 M	1.15 M	<0.02 M	1.02 M	0.126 M
Chromium	<0.9 mg/kg	TM181	38.2 M	8.11 M	63.1 M	12 M	21.5 M	12.6 M
Copper	<1.4 mg/kg	TM181	117 M	58.6 M	150 M	19.6 M	65.6 M	43.8 M
Lead	<0.7 mg/kg	TM181	320 M	7.75 M	36.5 M	8.23 M	328 M	16.6 M
Mercury	<0.14 mg/kg	TM181	0.467 M	<0.14 M	<0.14 M	<0.14 M	0.216 M	<0.14 M
Nickel	<0.2 mg/kg	TM181	32.4 M	31 M	24.9 M	18.6 M	38 M	31.8 M
Selenium	<1 mg/kg	TM181	<1 #	1.21 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181	29.9 #	26.7 #	38.6 #	13.7 #	26 #	36.9 #
Zinc	<1.9 mg/kg	TM181	661 M	76.4 M	1380 M	69.3 M	399 M	34.8 M

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1233	IP1233	IP1301	IP1301	IP1301	IP1301
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358354	10358363	10358323	10358330	10358338	10358342
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		30	22	12	26	41	20
Soil Organic Matter (SOM)	<0.35 %	TM132					45.3 #		
pH	1 pH Units	TM133		6.86 M	4.34 M	7.99 M	7.14 M	7.74 M	5.33 M
Arsenic	<0.6 mg/kg	TM181		9.26 M	10.9 M	14.5 M	16.3 M	3.3 M	10.3 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.691 M	0.151 M	0.312 M	0.111 M	0.0262 M
Chromium	<0.9 mg/kg	TM181		6.99 M	15.6 M	17.7 M	15.6 M	4.36 M	15.7 M
Copper	<1.4 mg/kg	TM181		41.6 M	25.1 M	44.7 M	56.7 M	14.6 M	39 M
Lead	<0.7 mg/kg	TM181		10.7 M	15.1 M	92.4 M	57.6 M	20 M	16.4 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.32 M	<0.14 M	0.588 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		28.5 M	19.7 M	24.7 M	37.5 M	6.73 M	12.9 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		31.3 #	19.2 #	20.2 #	35.2 #	8.67 #	18.9 #
Zinc	<1.9 mg/kg	TM181		19.5 M	87.8 M	261 M	111 M	33.9 M	36.2 M

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1229	IP1229	IP1229	IP1229	IP1230	IP1230
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358303	10358359	10358386	10358390	10358423	10358308
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		120	105	104	112	101	112
Acenaphthene-d10 % recovery**	%	TM218		118	102	102	112	101	113
Phenanthrene-d10 % recovery**	%	TM218		118	100	98	107	90.6	95.4
Chrysene-d12 % recovery**	%	TM218		113	92.2	90.2	88	87	76.4
Perylene-d12 % recovery**	%	TM218		113	94.1	88.4	84.2	90.9	63.7
Naphthalene	<9 µg/kg	TM218		82.3 @ M	106 @ M	34.1 @ M	17.2 @ M	58.7 @ M	43.2 @ M
Acenaphthylene	<12 µg/kg	TM218		36.4 @ M	30.7 @ M	<12 @ M	<12 @ M	151 @ M	27.6 @ M
Acenaphthene	<8 µg/kg	TM218		72.5 @ M	16.8 @ M	<8 @ M	<8 @ M	30.4 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		112 @ M	32.7 @ M	<10 @ M	<10 @ M	73.5 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		977 @ M	403 @ M	26.9 @ M	54.5 @ M	724 @ M	177 @ M
Anthracene	<16 µg/kg	TM218		160 @ M	102 @ M	<16 @ M	<16 @ M	197 @ M	31 @ M
Fluoranthene	<17 µg/kg	TM218		1400 @ M	504 @ M	<17 @ M	24.1 @ M	988 @ M	134 @ M
Pyrene	<15 µg/kg	TM218		1330 @ M	455 @ M	<15 @ M	22.3 @ M	814 @ M	102 @ M
Benz(a)anthracene	<14 µg/kg	TM218		741 @ M	334 @ M	<14 @ M	25.4 @ M	523 @ M	66 @ M
Chrysene	<10 µg/kg	TM218		1020 @ M	390 @ M	<10 @ M	31.6 @ M	475 @ M	47.5 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1220 @ M	454 @ M	25.3 @ M	28 @ M	660 @ M	68.3 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		489 @ M	193 @ M	<14 @ M	<14 @ M	293 @ M	27.1 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		836 @ M	318 @ M	<15 @ M	<15 @ M	511 @ M	42.8 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		546 @ M	186 @ M	<18 @ M	<18 @ M	280 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		190 @ M	70.4 @ M	<23 @ M	<23 @ M	101 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		741 @ M	246 @ M	<24 @ M	<24 @ M	342 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9950	3840	<118	203	6220	767

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1230	IP1230	IP1231	IP1231	IP1231	IP1231
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358314	10358319	10358367	10358373	10358378	10358382
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		101	96.9	110	107	125	108
Acenaphthene-d10 % recovery**	%	TM218		100	93.6	111	107	125	110
Phenanthrene-d10 % recovery**	%	TM218		85.7	93.8	109	85.8	104	102
Chrysene-d12 % recovery**	%	TM218		67.1	88.3	113	56.6	74.6	75.3
Perylene-d12 % recovery**	%	TM218		54.6	93.5	126	41	58.2	69.2
Naphthalene	<9 µg/kg	TM218		50.6 @ M	<9 @ M	685 @ M	53.9 @ M	59.6 @ M	22.3 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M	168 @ M	<12 @ M	<12 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<8 @ M	2290 @ M	<8 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		<10 @ M	<10 @ M	2540 @ M	<10 @ M	<10 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		152 @ M	69.5 @ M	13500 @ M	149 @ M	179 @ M	104 @ M
Anthracene	<16 µg/kg	TM218		<16 @ M	<16 @ M	1840 @ M	<16 @ M	<16 @ M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		70.1 @ M	61.2 @ M	8580 @ M	<17 @ M	<17 @ M	20.2 @ M
Pyrene	<15 µg/kg	TM218		64.2 @ M	50.2 @ M	7170 @ M	<15 @ M	<15 @ M	18.3 @ M
Benz(a)anthracene	<14 µg/kg	TM218		27.6 @ M	44 @ M	6260 @ M	<14 @ M	<14 @ M	21.6 @ M
Chrysene	<10 µg/kg	TM218		26.3 @ M	33.1 @ M	5810 @ M	<10 @ M	<10 @ M	33.8 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		39.3 @ M	48.7 @ M	4810 @ M	<15 @ M	32.8 @ M	43.9 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	<14 @ M	1900 @ M	<14 @ M	<14 @ M	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		25 @ M	22.9 @ M	4640 @ M	<15 @ M	<15 @ M	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	<18 @ M	2200 @ M	<18 @ M	<18 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M	949 @ M	<23 @ M	<23 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ M	<24 @ M	2510 @ M	<24 @ M	<24 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		455	330	65800	203	271	264

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1232	IP1232	IP1232	IP1232	IP1233	IP1233
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358394	10358400	10358404	10358412	10358346	10358350
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		108	97.3	101	102	96.7	99.8
Acenaphthene-d10 % recovery**	%	TM218		109	94.7	102	98.9	97.6	99.5
Phenanthrene-d10 % recovery**	%	TM218		109	79.3	99	98.9	90.9	88.4
Chrysene-d12 % recovery**	%	TM218		108	58	99.8	90.6	98	69.9
Perylene-d12 % recovery**	%	TM218		114	48.9	115	91.8	98.8	63.5
Naphthalene	<9 µg/kg	TM218		294 @ M	176 @ M	17.6 @ M	209 @ M	496 @ M	68.7 @ M
Acenaphthylene	<12 µg/kg	TM218		232 @ M	<12 @ M	<12 @ M	<12 @ M	8590 @ M	340 @ M
Acenaphthene	<8 µg/kg	TM218		140 @ M	<8 @ M	<8 @ M	<8 @ M	737 @ M	47.9 @ M
Fluorene	<10 µg/kg	TM218		303 @ M	<10 @ M	<10 @ M	<10 @ M	4100 @ M	202 @ M
Phenanthrene	<15 µg/kg	TM218		2860 @ M	93.6 @ M	59 @ M	50.4 @ M	59900 @ M	2940 @ M
Anthracene	<16 µg/kg	TM218		517 @ M	<16 @ M	<16 @ M	<16 @ M	15800 @ M	555 @ M
Fluoranthene	<17 µg/kg	TM218		3850 @ M	42.6 @ M	<17 @ M	<17 @ M	113000 @ M	2990 @ M
Pyrene	<15 µg/kg	TM218		3150 @ M	32.3 @ M	<15 @ M	<15 @ M	67900 @ M	1840 @ M
Benz(a)anthracene	<14 µg/kg	TM218		2190 @ M	<14 @ M	<14 @ M	21 @ M	56700 @ M	1050 @ M
Chrysene	<10 µg/kg	TM218		2380 @ M	23.9 @ M	<10 @ M	39.7 @ M	51100 @ M	1030 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2740 @ M	23.7 @ M	<15 @ M	45.8 @ M	61100 @ M	1180 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1170 @ M	<14 @ M	<14 @ M	<14 @ M	21200 @ M	395 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		2200 @ M	<15 @ M	<15 @ M	<15 @ M	37800 @ M	691 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1390 @ M	<18 @ M	<18 @ M	<18 @ M	23200 @ M	358 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		508 @ M	<23 @ M	<23 @ M	<23 @ M	10600 @ M	134 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1630 @ M	<24 @ M	<24 @ M	<24 @ M	22400 @ M	383 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		25600	392	<118	365	554000	14200

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1233	IP1233	IP1301	IP1301	IP1301	IP1301
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358354	10358363	10358323	10358330	10358338	10358342
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		128	104	99	116	93.2	102
Acenaphthene-d10 % recovery**	%	TM218		134	103	98.1	118	112	102
Phenanthrene-d10 % recovery**	%	TM218		118	99.2	96.6	111	112	97.5
Chrysene-d12 % recovery**	%	TM218		89.9	92.6	99.6	117	124	101
Perylene-d12 % recovery**	%	TM218		71.8	99.3	111	125	134	111
Naphthalene	<9 µg/kg	TM218		206 @ M	166 @ M	43.4 @ M	847 @ M	5560 @ M	98.6 @ M
Acenaphthylene	<12 µg/kg	TM218		18.4 @ M	<12 @ M	51.9 @ M	731 @ M	124 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<8 @ M	28.6 @ M	79.6 @ M	569 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		<10 @ M	<10 @ M	45 @ M	470 @ M	1920 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		168 @ M	30.8 @ M	422 @ M	6770 @ M	2100 @ M	48.1 @ M
Anthracene	<16 µg/kg	TM218		<16 @ M	<16 @ M	89.2 @ M	1320 @ M	605 @ M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		159 @ M	<17 @ M	804 @ M	7670 @ M	592 @ M	<17 @ M
Pyrene	<15 µg/kg	TM218		271 @ M	<15 @ M	811 @ M	5550 @ M	1530 @ M	<15 @ M
Benz(a)anthracene	<14 µg/kg	TM218		105 @ M	<14 @ M	538 @ M	3760 @ M	325 @ M	<14 @ M
Chrysene	<10 µg/kg	TM218		440 @ M	<10 @ M	495 @ M	3140 @ M	720 @ M	<10 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		186 @ M	<15 @ M	788 @ M	3480 @ M	397 @ M	55.3 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		48.3 @ M	<14 @ M	356 @ M	1270 @ M	93.2 @ M	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		119 @ M	<15 @ M	747 @ M	2960 @ M	258 @ M	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	<18 @ M	464 @ M	1470 @ M	97.9 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M	141 @ M	579 @ M	81.6 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		63 @ M	<24 @ M	619 @ M	1920 @ M	183 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1780	197	6440	42000	15200	202

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1229	IP1229	IP1229	IP1229	IP1230	IP1230
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358303	10358359	10358386	10358390	10358423	10358308
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74 @	103 @	69 @	78 @	72 @	64 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		24100 @ M	<440 @ M	<176 @ M	<176 @ M	1950 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<50 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<100 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		10.2 @ M	<20 @ M	<8 @ M	<8 @ M	10.5 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<30 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<60 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<30 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<100 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		151 @	<100 @	<40 @	<40 @	68.1 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		4220 @	<100 @	<40 @	<40 @	199 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		10100 @	<100 @	46 @	<40 @	899 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		37600	<100	4280	<100	11200	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		46800	14100	2290	<100	11300	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		128000	43900	6520	<100	37100	10100
Aliphatics >C35-C44	<100 µg/kg	TM173		45300	<100	<100	<100	14400	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		257000	58000	13100	<100	74000	10100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<100 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<100 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		2820 @	<100 @	<40 @	<40 @	136 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		6760 @	<100 @	<40 @	<40 @	599 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		1960	1520	<100	<100	1320	454
Aromatics >EC16-EC21	<100 µg/kg	TM173		12000	5810	<100	<100	6300	1570
Aromatics >EC21-EC35	<100 µg/kg	TM173		96800	41200	10800	4340	45000	7900
Aromatics >EC35-EC44	<100 µg/kg	TM173		54600	18700	4860	<100	20400	1840
Aromatics >EC40-EC44	<100 µg/kg	TM173		24800	7150	1990	<100	9150	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		165000	67300	15700	4340	72900	11800
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		447000	126000	29000	4360	149000	22000

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1230	IP1230	IP1231	IP1231	IP1231	IP1231
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358314	10358319	10358367	10358373	10358378	10358382
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		55 @	97 @	40 @	60 @	60 @	97 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	2710 @ M	647 @ M	<176 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	15.2 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	109 @	78.7 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	749 @	105 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	790 @	215 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	<100	54700	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	<100	31200	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		10800	<100	142000	3890	<100	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	44900	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		10800	<100	273000	3890	<100	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	514 @	78.7 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	526 @	144 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	2830	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	<100	15500	<100	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		5800	4460	105000	<100	<100	6200
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	<100	55200	<100	<100	4000
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	<100	25100	<100	<100	2290
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		5800	4460	179000	<100	<100	10200
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		16600	7170	452000	3890	<100	10200

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1232	IP1232	IP1232	IP1232	IP1233	IP1233
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358394	10358400	10358404	10358412	10358346	10358350
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		61 @	65 @	96 @	75 @	71 @	45 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		3740 @ M	952 @ M	41200 @ M	5940 @ M	1650 @ M	297 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<50 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<100 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		146 @ M	<20 @ M	<8 @ M	<8 @ M	23.9 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<30 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<60 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<30 @ M	<12 @ M	65 @ M	25.2 @ M	18.5 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<36 @	<9 @	<36 @	65 @	25.2 @	18.5 @
sum of detected BTEX by GC	<24 µg/kg	TM089		146 @	<24 @	<96 @	<96 @	49.1 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<100 @	435 @	110 @	42.8 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		137 @	181 @	7590 @	1140 @	197 @	92.4 @
Aliphatics >C8-C10	<10 µg/kg	TM089		508 @	202 @	14700 @	1850 @	377 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		1530 @	216 @	5270 @	930 @	421 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		21300	<100	<100	<100	28300	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		31300	<100	<100	<100	50500	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		165000	3670	<100	<100	200000	22900
Aliphatics >C35-C44	<100 µg/kg	TM173		98200	<100	<100	<100	140000	7840
Total Aliphatics >C12-C44	<100 µg/kg	TM173		316000	3670	<100	<100	419000	30800
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<100 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		146 @	<100 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		366 @	165 @	9770 @	1300 @	310 @	77.9 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		1020 @	144 @	3510 @	620 @	280 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		6740	<100	<100	511	36700	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		33500	<100	<100	1250	411000	1690
Aromatics >EC21-EC35	<100 µg/kg	TM173		238000	13400	4150	7740	1070000	14000
Aromatics >EC35-EC44	<100 µg/kg	TM173		197000	5560	13000	<100	310000	8490
Aromatics >EC40-EC44	<100 µg/kg	TM173		96200	2260	2390	<100	116000	4040
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		475000	18900	17200	9500	1830000	24100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		795000	23500	58400	15400	2250000	55200

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1233	IP1233	IP1301	IP1301	IP1301	IP1301
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
			SDG Ref	141111-53	141111-53	141111-53	141111-53	141111-53	141111-53
			Lab Sample No.(s)	10358354	10358363	10358323	10358330	10358338	10358342
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		67 @	92 @	67 @	82 @	96 @	124 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		2580 @ M	63500 @ M	1050 @ M	243000 @ M	4810000 3 @ M	39400 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 @ M	<20 @ M	<20 @ M	<50 @ M	<100 @ M	61.3 @ M
Benzene	<10 µg/kg	TM089		<100 @ M	<40 @ M	<40 @ M	<100 @ M	578 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<20 @ M	<8 @ M	<8 @ M	<20 @ M	<40 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<30 @ M	<12 @ M	<12 @ M	<30 @ M	<60 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<60 @ M	<24 @ M	<24 @ M	<60 @ M	<120 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<30 @ M	<12 @ M	<12 @ M	<30 @ M	<60 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<36 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<96 @	<24 @	578 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 @	128 @	<40 @	<100 @	13000 3 @	56.3 @
Aliphatics >C6-C8	<10 µg/kg	TM089		192 @	1940 @	74.1 @	5690 @	933000 3 @	2610 @
Aliphatics >C8-C10	<10 µg/kg	TM089		522 @	29200 @	155 @	48200 @	1650000 3 @	9710 @
Aliphatics >C10-C12	<10 µg/kg	TM089		877 @	7650 @	421 @	93900 @	664000 3 @	12300 @
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	<100	40400	177000	8790000	4700
Aliphatics >C16-C21	<100 µg/kg	TM173		1620	<100	19800	138000	2620000	3980
Aliphatics >C21-C35	<100 µg/kg	TM173		15600	<100	51500	783000	1640000	23500
Aliphatics >C35-C44	<100 µg/kg	TM173		3760	<100	<100	407000	245000	2960
Total Aliphatics >C12-C44	<100 µg/kg	TM173		21000	<100	112000	1510000	13300000	35100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<100 @	578 3 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<100 @	<200 3 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		369 @	19500 @	103 @	32100 @	1100000 3 @	6470 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		585 @	5100 @	280 @	62600 @	443000 3 @	8190 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	6070	36500	1550000	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	175	18500	90000	979000	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		7430	4160	102000	997000	1180000	28900
Aromatics >EC35-EC44	<100 µg/kg	TM173		3210	<100	54700	558000	190000	6080
Aromatics >EC40-EC44	<100 µg/kg	TM173		1160	<100	22600	222000	63200	1170
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		10600	4330	181000	1680000	3900000	35000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		34200	67800	294000	3430000	22000000	109000

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1229 1.00 SOLID 07/11/2014 00:00:00 20/11/2014 07:16:58 141111-53 10358303 TM048	28/11/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	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	IP1230 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 10:35:24 141111-53 10358423 TM048	28/11/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	Detected (#)	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	IP1231 1.00 SOLID 07/11/2014 00:00:00 20/11/2014 07:21:56 141111-53 10358367 TM048	28/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	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	IP1232 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 09:31:30 141111-53 10358394 TM048	28/11/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	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	IP1233 0.50 SOLID 07/11/2014 00:00:00 13/11/2014 09:57:15 141111-53 10358346 TM048	28/11/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	IP1301 1.00 SOLID 07/11/2014 00:00:00 14/11/2014 09:39:54 141111-53 10358323 TM048	28/11/14	Chris Swindells	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1229 1.00 SOLID 07/11/2014 00:00:00 13/01/2015 07:49:37 141111-53 10358303 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1230 1.00 SOLID 07/11/2014 00:00:00 13/01/2015 06:21:31 141111-53 10358423 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1231 1.00 SOLID 07/11/2014 00:00:00 13/01/2015 07:52:14 141111-53 10358367 TM 304	None (#)	N/C	0.0320 (#)	<0.001 (#)	0.0328 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1232 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 12:53:02 141111-53 10358394 TM 304	Amosite (#)	Loose fibres in soil	0.0011 (#)	<0.001 (#)	0.0018 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1233 0.50 SOLID 07/11/2014 00:00:00 09/01/2015 10:38:43 141111-53 10358346 TM 304	None (#)	N/C	0.0051 (#)	<0.001 (#)	0.0055 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1301 1.00 SOLID 07/11/2014 00:00:00 09/01/2015 13:19:10 141111-53 10358323 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10358303	10358359	10358386	10358390	10358308	10358314	10358319	10358423	10358367	10358373
Customer Sample Ref.	IP1229	IP1229	IP1229	IP1229	IP1230	IP1230	IP1230	IP1230	IP1231	IP1231
AGS Ref.										
Depth	1.00	2.00	3.00	4.00	2.00	3.00	4.00	1.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014							01-Dec-2014	01-Dec-2014	
Asbestos Quantification - Full	19-Jan-2015							19-Jan-2015	19-Jan-2015	
EPH CWG (Aliphatic) GC (S)	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014
EPH CWG (Aromatic) GC (S)	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014
GRO by GC-FID (S)	29-Nov-2014	01-Dec-2014	29-Nov-2014	30-Nov-2014	01-Dec-2014	01-Dec-2014	30-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014
Metals in solid samples by OES	19-Nov-2014	26-Nov-2014	26-Nov-2014	19-Nov-2014	19-Nov-2014	26-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
PAH by GCMS	29-Nov-2014	26-Nov-2014	30-Nov-2014	26-Nov-2014	30-Nov-2014	30-Nov-2014	26-Nov-2014	27-Nov-2014	30-Nov-2014	30-Nov-2014
pH	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014
Sample description	13-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014
Total Organic Carbon	19-Nov-2014									
TPH CWG GC (S)	29-Nov-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014

Lab Sample No(s)	10358378	10358382	10358394	10358400	10358404	10358412	10358346	10358350	10358354	10358363
Customer Sample Ref.	IP1231	IP1231	IP1232	IP1232	IP1232	IP1232	IP1233	IP1233	IP1233	IP1233
AGS Ref.										
Depth	3.00	4.00	1.00	2.00	3.00	4.00	0.50	1.50	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			01-Dec-2014				01-Dec-2014			
Asbestos Quantification - Full			19-Jan-2015				19-Jan-2015			
EPH CWG (Aliphatic) GC (S)	01-Dec-2014	29-Nov-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	01-Dec-2014	29-Nov-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	29-Nov-2014	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	01-Dec-2014	30-Nov-2014	29-Nov-2014	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	01-Dec-2014	27-Nov-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	20-Nov-2014	26-Nov-2014	20-Nov-2014	26-Nov-2014	19-Nov-2014	17-Nov-2014	26-Nov-2014	21-Nov-2014
PAH by GCMS	30-Nov-2014	26-Nov-2014	30-Nov-2014	01-Dec-2014	30-Nov-2014	28-Nov-2014	27-Nov-2014	01-Dec-2014	26-Nov-2014	30-Nov-2014
pH	29-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	13-Nov-2014	12-Nov-2014	13-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon	20-Nov-2014		19-Nov-2014				19-Nov-2014			
TPH CWG GC (S)	01-Dec-2014	30-Nov-2014	02-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014

Lab Sample No(s)	10358323	10358330	10358338	10358342
Customer Sample Ref.	IP1301	IP1301	IP1301	IP1301
AGS Ref.				
Depth	1.00	2.00	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	01-Dec-2014			
Asbestos Quantification - Full	19-Jan-2015			
EPH CWG (Aliphatic) GC (S)	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014
EPH CWG (Aromatic) GC (S)	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014
GRO by GC-FID (S)	29-Nov-2014	01-Dec-2014	01-Dec-2014	27-Nov-2014
Metals in solid samples by OES	21-Nov-2014	19-Nov-2014	26-Nov-2014	26-Nov-2014
PAH by GCMS	30-Nov-2014	30-Nov-2014	01-Dec-2014	30-Nov-2014
pH	29-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
Sample description	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon		20-Nov-2014		
TPH CWG GC (S)	02-Dec-2014	01-Dec-2014	02-Dec-2014	02-Dec-2014

SDG:	141111-53	**Location:**	Coed Darcy	**Order Number:**	CD0967
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	299046
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date:	15 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141107-97
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298824

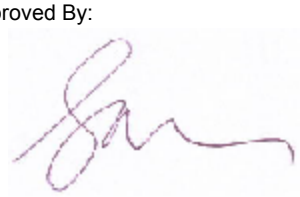
This report has been revised and directly supersedes 293987 in its entirety.

We received 38 samples on Friday November 07, 2014 and 38 of these samples were scheduled for analysis which was completed on Thursday January 15, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10340028	IP1132		1.00	05/11/2014
10340036	IP1132		2.00	05/11/2014
10340041	IP1132		3.00	05/11/2014
10339961	IP1328		1.00	05/11/2014
10340022	IP1328		2.00	05/11/2014
10340086	IP1328		3.00	05/11/2014
10340135	IP1328		4.00	05/11/2014
10340144	IP1328		5.00	05/11/2014
10340148	IP1329		1.00	05/11/2014
10340152	IP1329		2.00	05/11/2014
10340157	IP1329		3.00	05/11/2014
10339998	IP1330		1.00	05/11/2014
10340003	IP1330		2.00	05/11/2014
10340007	IP1330		3.00	05/11/2014
10340017	IP1330		4.00	05/11/2014
10340162	IP1331		1.00	05/11/2014
10339965	IP1331		2.00	05/11/2014
10339969	IP1331		3.00	05/11/2014
10340046	IP1333		1.00	05/11/2014
10340050	IP1333		2.00	05/11/2014
10340055	IP1333		3.00	05/11/2014
10340060	IP1333		4.00	05/11/2014
10340064	IP1334		0.50	05/11/2014
10340072	IP1334		1.50	05/11/2014
10340077	IP1334		3.00	05/11/2014
10340093	IP1334		4.00	05/11/2014
10340098	IP1411		1.00	05/11/2014
10340103	IP1411		2.00	05/11/2014
10340107	IP1411		3.00	05/11/2014
10340112	IP1411		4.00	05/11/2014
10340116	IP1412		1.00	05/11/2014
10340121	IP1412		2.00	05/11/2014
10340126	IP1412		3.00	05/11/2014
10340130	IP1412		4.00	05/11/2014
10339977	IP1413		1.00	05/11/2014
10339983	IP1413		2.00	05/11/2014
10339987	IP1413		3.00	05/11/2014
10339992	IP1413		4.00	05/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	250g Amber Jar (AL)
			10340041	IP1132		3.00	250g Amber Jar (AL)
			10339961	IP1328		1.00	400g Tub (ALE214)
			10340022	IP1328		2.00	250g Amber Jar (AL)
			10340086	IP1328		3.00	250g Amber Jar (AL)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	250g Amber Jar (AL)
			10340148	IP1329		1.00	400g Tub (ALE214)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	250g Amber Jar (AL)
			10339998	IP1330		1.00	250g Amber Jar (AL)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	250g Amber Jar (AL)
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10	10340028	IP1132		1.00	400g Tub (ALE214)
			10340036	IP1132		2.00	60g VOC (ALE215)
			10340041	IP1132		3.00	250g Amber Jar (AL)
			10339961	IP1328		1.00	400g Tub (ALE214)
			10340022	IP1328		2.00	60g VOC (ALE215)
			10340086	IP1328		3.00	250g Amber Jar (AL)
			10340135	IP1328		4.00	400g Tub (ALE214)
			10340144	IP1328		5.00	60g VOC (ALE215)
			10340148	IP1329		1.00	250g Amber Jar (AL)
			10340152	IP1329		2.00	400g Tub (ALE214)
			10340157	IP1329		3.00	60g VOC (ALE215)
			10339998	IP1330		1.00	250g Amber Jar (AL)
			10340003	IP1330		2.00	400g Tub (ALE214)
			10340007	IP1330		3.00	60g VOC (ALE215)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	400g Tub (ALE214)
			10340041	IP1132		3.00	60g VOC (ALE215)
			10339961	IP1328		1.00	250g Amber Jar (AL)
			10340022	IP1328		2.00	400g Tub (ALE214)
			10340086	IP1328		3.00	60g VOC (ALE215)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	400g Tub (ALE214)
			10340148	IP1329		1.00	60g VOC (ALE215)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	400g Tub (ALE214)
			10339998	IP1330		1.00	60g VOC (ALE215)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	400g Tub (ALE214)
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	60g VOC (ALE215)
			10340036	IP1132		2.00	250g Amber Jar (AL)
			10340041	IP1132		3.00	400g Tub (ALE214)
			10339961	IP1328		1.00	60g VOC (ALE215)
			10340022	IP1328		2.00	250g Amber Jar (AL)
			10340086	IP1328		3.00	400g Tub (ALE214)
			10340135	IP1328		4.00	60g VOC (ALE215)
			10340144	IP1328		5.00	250g Amber Jar (AL)
			10340148	IP1329		1.00	400g Tub (ALE214)
			10340152	IP1329		2.00	60g VOC (ALE215)
			10340157	IP1329		3.00	250g Amber Jar (AL)
			10339998	IP1330		1.00	400g Tub (ALE214)
			10340003	IP1330		2.00	60g VOC (ALE215)
			10340007	IP1330		3.00	250g Amber Jar (AL)
GRO by GC-FID (S)	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	60g VOC (ALE215)
			10340036	IP1132		2.00	250g Amber Jar (AL)
			10340041	IP1132		3.00	400g Tub (ALE214)
			10339961	IP1328		1.00	60g VOC (ALE215)
			10340022	IP1328		2.00	250g Amber Jar (AL)
			10340086	IP1328		3.00	400g Tub (ALE214)
			10340135	IP1328		4.00	60g VOC (ALE215)
			10340144	IP1328		5.00	250g Amber Jar (AL)
			10340148	IP1329		1.00	400g Tub (ALE214)
			10340152	IP1329		2.00	60g VOC (ALE215)
			10340157	IP1329		3.00	250g Amber Jar (AL)
			10339998	IP1330		1.00	400g Tub (ALE214)
			10340003	IP1330		2.00	60g VOC (ALE215)
			10340007	IP1330		3.00	250g Amber Jar (AL)
Metals in solid samples by OES	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	400g Tub (ALE214)
			10340041	IP1132		3.00	60g VOC (ALE215)
			10339961	IP1328		1.00	250g Amber Jar (AL)
			10340022	IP1328		2.00	400g Tub (ALE214)
			10340086	IP1328		3.00	60g VOC (ALE215)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	400g Tub (ALE214)
			10340148	IP1329		1.00	60g VOC (ALE215)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	400g Tub (ALE214)
			10339998	IP1330		1.00	60g VOC (ALE215)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	400g Tub (ALE214)
PAH by GCMS	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	400g Tub (ALE214)
			10340041	IP1132		3.00	60g VOC (ALE215)
			10339961	IP1328		1.00	250g Amber Jar (AL)
			10340022	IP1328		2.00	400g Tub (ALE214)
			10340086	IP1328		3.00	60g VOC (ALE215)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	400g Tub (ALE214)
			10340148	IP1329		1.00	60g VOC (ALE215)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	400g Tub (ALE214)
			10339998	IP1330		1.00	60g VOC (ALE215)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	400g Tub (ALE214)
pH	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	400g Tub (ALE214)
			10340036	IP1132		2.00	60g VOC (ALE215)
			10340041	IP1132		3.00	250g Amber Jar (AL)
			10339961	IP1328		1.00	400g Tub (ALE214)
			10340022	IP1328		2.00	60g VOC (ALE215)
			10340086	IP1328		3.00	250g Amber Jar (AL)
			10340135	IP1328		4.00	400g Tub (ALE214)
			10340144	IP1328		5.00	60g VOC (ALE215)
			10340148	IP1329		1.00	250g Amber Jar (AL)
			10340152	IP1329		2.00	400g Tub (ALE214)
			10340157	IP1329		3.00	60g VOC (ALE215)
			10339998	IP1330		1.00	250g Amber Jar (AL)
			10340003	IP1330		2.00	400g Tub (ALE214)
			10340007	IP1330		3.00	60g VOC (ALE215)
Sample description	All	NDPs: 0 Tests: 37	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	400g Tub (ALE214)
			10340041	IP1132		3.00	60g VOC (ALE215)
			10339961	IP1328		1.00	250g Amber Jar (AL)
			10340022	IP1328		2.00	400g Tub (ALE214)
			10340086	IP1328		3.00	60g VOC (ALE215)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	400g Tub (ALE214)
			10340148	IP1329		1.00	60g VOC (ALE215)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	400g Tub (ALE214)
			10339998	IP1330		1.00	60g VOC (ALE215)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	400g Tub (ALE214)
Total Organic Carbon	All	NDPs: 0 Tests: 5	10340022	IP1328		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	250g Amber Jar (AL)
TPH CWG GC (S)	All	NDPs: 0 Tests: 38	10340028	IP1132		1.00	250g Amber Jar (AL)
			10340036	IP1132		2.00	400g Tub (ALE214)
			10340041	IP1132		3.00	60g VOC (ALE215)
			10339961	IP1328		1.00	250g Amber Jar (AL)
			10340022	IP1328		2.00	400g Tub (ALE214)
			10340086	IP1328		3.00	60g VOC (ALE215)
			10340135	IP1328		4.00	250g Amber Jar (AL)
			10340144	IP1328		5.00	400g Tub (ALE214)
			10340148	IP1329		1.00	60g VOC (ALE215)
			10340152	IP1329		2.00	250g Amber Jar (AL)
			10340157	IP1329		3.00	400g Tub (ALE214)
			10339998	IP1330		1.00	60g VOC (ALE215)
			10340003	IP1330		2.00	250g Amber Jar (AL)
			10340007	IP1330		3.00	400g Tub (ALE214)

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

SOLID

Results Legend

X Test

N No Determination Possible

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
GRO by GC-FID (S)	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
Metals in solid samples by OES	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
PAH by GCMS	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
pH	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
Sample description	All	NDPs: 0 Tests: 37	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
Total Organic Carbon	All	NDPs: 0 Tests: 5	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL
TPH CWG GC (S)	All	NDPs: 0 Tests: 38	10340007	IP1330		3.00	400g Tub (ALE214)
			10340017	IP1330		4.00	60g VOC (ALE215)
			10340162	IP1331		1.00	250g Amber Jar (AL
			10339965	IP1331		2.00	400g Tub (ALE214)
			10339969	IP1331		3.00	60g VOC (ALE215)
			10340046	IP1333		1.00	250g Amber Jar (AL
			10340050	IP1333		2.00	60g VOC (ALE215)
			10340055	IP1333		3.00	250g Amber Jar (AL
			10340060	IP1333		4.00	400g Tub (ALE214)
			10340064	IP1334		0.50	60g VOC (ALE215)
			10340072	IP1334		1.50	250g Amber Jar (AL
			10340077	IP1334		3.00	400g Tub (ALE214)
			10340093	IP1334		4.00	60g VOC (ALE215)
			10340098	IP1411		1.00	250g Amber Jar (AL

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 38					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 38					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 38					
Metals in solid samples by OES	All	NDPs: 0 Tests: 38					
PAH by GCMS	All	NDPs: 0 Tests: 38					
pH	All	NDPs: 0 Tests: 38					
Sample description	All	NDPs: 0 Tests: 37					
Total Organic Carbon	All	NDPs: 0 Tests: 5					
TPH CWG GC (S)	All	NDPs: 0 Tests: 38					

Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Asbestos ID in Solid Samples	Asbestos Quantification - Full	EPH CWG (Aliphatic) GC (S)	EPH CWG (Aromatic) GC (S)	GRO by GC-FID (S)	Metals in solid samples by OES	PAH by GCMS	pH	Sample description	Total Organic Carbon	TPH CWG GC (S)
10340098	IP1411		1.00	60g VOC (ALE215)					X						
10340098	IP1411		1.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340098	IP1411		1.00	400g Tub (ALE214)								X		X	
10340103	IP1411		2.00	60g VOC (ALE215)					X						
10340103	IP1411		2.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340103	IP1411		2.00	400g Tub (ALE214)								X		X	
10340107	IP1411		3.00	60g VOC (ALE215)					X						
10340107	IP1411		3.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340107	IP1411		3.00	400g Tub (ALE214)								X		X	
10340112	IP1411		4.00	60g VOC (ALE215)					X						
10340112	IP1411		4.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340112	IP1411		4.00	400g Tub (ALE214)								X		X	
10340116	IP1412		1.00	60g VOC (ALE215)					X						
10340116	IP1412		1.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340116	IP1412		1.00	400g Tub (ALE214)								X		X	
10340121	IP1412		2.00	60g VOC (ALE215)					X						
10340121	IP1412		2.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340121	IP1412		2.00	400g Tub (ALE214)								X		X	
10340126	IP1412		3.00	60g VOC (ALE215)					X						
10340126	IP1412		3.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340126	IP1412		3.00	400g Tub (ALE214)								X		X	
10340130	IP1412		4.00	60g VOC (ALE215)					X						
10340130	IP1412		4.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10340130	IP1412		4.00	400g Tub (ALE214)								X		X	
10339977	IP1413		1.00	60g VOC (ALE215)					X						
10339977	IP1413		1.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10339977	IP1413		1.00	400g Tub (ALE214)								X		X	
10339983	IP1413		2.00	60g VOC (ALE215)					X						
10339983	IP1413		2.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10339983	IP1413		2.00	400g Tub (ALE214)								X		X	
10339987	IP1413		3.00	60g VOC (ALE215)					X						
10339987	IP1413		3.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10339987	IP1413		3.00	400g Tub (ALE214)								X		X	
10339992	IP1413		4.00	250g Amber Jar (AL		X	X	X		X	X		X		X
10339992	IP1413		4.00	400g Tub (ALE214)								X		X	
10339992	IP1413		4.00	60g VOC (ALE215)					X						

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

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	Grain size	Inclusions	Inclusions 2
10340028	IP1132	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10340036	IP1132	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10340041	IP1132	3.00	Dark Brown	Silty Clay	0.1 - 2 mm	Stones	Oil/Petroleum
10339961	IP1328	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10340022	IP1328	2.00	Black	N/A	0.1 - 2 mm	Stones	None
10340086	IP1328	3.00	Black	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Vegetation
10340135	IP1328	4.00	Black	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Vegetation
10340144	IP1328	5.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Oil/Petroleum	Stones
10340148	IP1329	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10340152	IP1329	2.00	Black	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Stones
10340157	IP1329	3.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10339998	IP1330	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10340003	IP1330	2.00	Black	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Vegetation
10340007	IP1330	3.00	Black	Shale	0.1 - 2 mm	Oil/Petroleum	Vegetation
10340017	IP1330	4.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10339965	IP1331	2.00	Black	Rubble/Soil	0.1 - 2 mm	Oil/Petroleum	Vegetation
10339969	IP1331	3.00	Black	Sandy Clay	0.1 - 2 mm	Oil/Petroleum	Stones
10340162	IP1331	1.00	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10340046	IP1333	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	None
10340050	IP1333	2.00	Black	Shale	0.1 - 2 mm	Stones	Vegetation
10340055	IP1333	3.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10340060	IP1333	4.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Oil/Petroleum	Stones
10340064	IP1334	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10340072	IP1334	1.50	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10340077	IP1334	3.00	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10340093	IP1334	4.00	Black	Silty Clay Loam	0.063 - 0.1 mm	Oil/Petroleum	None
10340098	IP1411	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10340103	IP1411	2.00	Light Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10340107	IP1411	3.00	Black	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Stones
10340112	IP1411	4.00	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10340116	IP1412	1.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10340121	IP1412	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10340126	IP1412	3.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Oil/Petroleum
10340130	IP1412	4.00	Black	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10339977	IP1413	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10339983	IP1413	2.00	Light Brown	Sandy Clay	0.1 - 2 mm	Stones	Oil/Petroleum
10339987	IP1413	3.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Brick
10339992	IP1413	4.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Oil/Petroleum	Vegetation

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

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:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1132	IP1132	IP1132	IP1328	IP1328	IP1328
			Depth (m)	1.00	2.00	3.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340028	10340036	10340041	10339961	10340022	10340086
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	24	30	13	23	22
Soil Organic Matter (SOM)	<0.35 %	TM132						52.8 #	
pH	1 pH Units	TM133		7.83 M	8.02 M	7.26 M	7.88 M	8.15	7.71 M
Arsenic	<0.6 mg/kg	TM181		27.5 M	15 M	23.7 M	202 M	73.3	115 M
Cadmium	<0.02 mg/kg	TM181		2.85 M	0.3 M	0.252 M	2.65 M	0.631	2.43 M
Chromium	<0.9 mg/kg	TM181		22.4 M	16.5 M	19.3 M	18.5 M	23.3	18.1 M
Copper	<1.4 mg/kg	TM181		83.5 M	65.9 M	74.4 M	555 M	205	413 M
Lead	<0.7 mg/kg	TM181		218 M	57.6 M	52.2 M	2760 M	414	1000 M
Mercury	<0.14 mg/kg	TM181		0.192 M	0.471 M	0.246 M	0.8 M	0.799	2.41 M
Nickel	<0.2 mg/kg	TM181		31.8 M	39.8 M	39.3 M	47.4 M	62.3	60.7 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	1.13 #	1.04	<1 #
Vanadium	<0.2 mg/kg	TM181		25.3 #	55.8 #	27.4 #	26 #	36.7	47.1 #
Zinc	<1.9 mg/kg	TM181		436 M	111 M	141 M	4640 M	1100	2270 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1328	IP1328	IP1329	IP1329	IP1329	IP1330
			Depth (m)	4.00	5.00	1.00	2.00	3.00	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340135	10340144	10340148	10340152	10340157	10339998
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	22	13	24	28	13
pH	1 pH Units	TM133		7.67 M	8.04 M	7.74 M	7.78 M	8.06 M	7.48 M
Arsenic	<0.6 mg/kg	TM181		103 M	19.9 M	236 M	24.1 M	70.8 M	107 M
Cadmium	<0.02 mg/kg	TM181		1.12 M	1.41 M	2.78 M	<0.02 M	1.56 M	1.75 M
Chromium	<0.9 mg/kg	TM181		21.4 M	19.9 M	17.4 M	17.9 M	13.9 M	21.1 M
Copper	<1.4 mg/kg	TM181		278 M	187 M	654 M	75.7 M	227 M	211 M
Lead	<0.7 mg/kg	TM181		445 M	158 M	1740 M	93.4 M	1150 M	794 M
Mercury	<0.14 mg/kg	TM181		2.03 M	3.36 M	0.295 M	0.899 M	0.721 M	11.8 M
Nickel	<0.2 mg/kg	TM181		52.6 M	29.2 M	41.1 M	79.8 M	29.7 M	45.1 M
Selenium	<1 mg/kg	TM181		1.07 #	1.17 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		40.8 #	27.5 #	33.8 #	92.7 #	26.2 #	38.2 #
Zinc	<1.9 mg/kg	TM181		1640 M	3040 M	4250 M	227 M	3690 M	1930 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1330	IP1330	IP1330	IP1331	IP1331	IP1331
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340003	10340007	10340017	10340162	10339965	10339969
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		24	24	47	22	18	36
Soil Organic Matter (SOM)	<0.35 %	TM132			86.2 #				58.1 #
pH	1 pH Units	TM133		5.77 M	5.82 #	7.33 M	7.44 M	8.02 #	7.62 M
Arsenic	<0.6 mg/kg	TM181		16.6 M	21.8 #	18 M	80.9 M	23 #	32.6 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.0904 #	0.851 M	1.18 M	<0.02 #	0.553 M
Chromium	<0.9 mg/kg	TM181		7.7 M	9.87 #	11.9 M	15.8 M	16.5 #	14.8 M
Copper	<1.4 mg/kg	TM181		49.8 M	71.4 #	74 M	157 M	307 #	169 M
Lead	<0.7 mg/kg	TM181		19.8 M	68.4 #	160 M	343 M	156 #	171 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.689 #	1.64 M	1.95 M	0.367 #	2.24 M
Nickel	<0.2 mg/kg	TM181		25.5 M	35.3 #	27.6 M	31.8 M	34.9 #	33 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		24.5 #	33.2 #	20 #	34 #	27.5 #	33.3 #
Zinc	<1.9 mg/kg	TM181		58.4 M	171 #	305 M	831 M	1200 #	308 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1333	IP1333	IP1333	IP1333	IP1334	IP1334
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340046	10340050	10340055	10340060	10340064	10340072
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		23	26	26	41	17	30
Soil Organic Matter (SOM)	<0.35 %	TM132							81.5 #
pH	1 pH Units	TM133		7.84 M	7.57 #	7.41 M	7.43 M	7.46 M	7.86 M
Arsenic	<0.6 mg/kg	TM181		19.4 M	14.7 #	16.6 M	6.27 M	61.2 M	9.81 M
Cadmium	<0.02 mg/kg	TM181		0.602 M	<0.02 #	0.116 M	0.181 M	0.696 M	0.2 M
Chromium	<0.9 mg/kg	TM181		23.1 M	9.99 #	15.5 M	8.78 M	20.7 M	8.87 M
Copper	<1.4 mg/kg	TM181		73.3 M	39.3 #	62.6 M	25.9 M	136 M	46.1 M
Lead	<0.7 mg/kg	TM181		65 M	16.4 #	37.8 M	33.7 M	118 M	46.1 M
Mercury	<0.14 mg/kg	TM181		0.294 M	0.307 #	13.2 M	1.77 M	<0.14 M	0.223 M
Nickel	<0.2 mg/kg	TM181		57.5 M	24.3 #	45.6 M	11.2 M	33.7 M	22.4 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.03 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		65.4 #	30.1 #	44.9 #	26.8 #	27.2 #	20.2 #
Zinc	<1.9 mg/kg	TM181		145 M	41.9 #	94.4 M	51.2 M	425 M	76.6 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1334	IP1334	IP1411	IP1411	IP1411	IP1411
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340077	10340093	10340098	10340103	10340107	10340112
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		35	44	24	43	32	41
pH	1 pH Units	TM133		6.89 M	6.91 M	7.14 M	7.64 M	7.87 M	7.38 M
Arsenic	<0.6 mg/kg	TM181		8.4 M	11.6 M	18.4 M	9.9 M	23.6 M	11.2 M
Cadmium	<0.02 mg/kg	TM181		0.207 M	0.403 M	0.292 M	0.411 M	0.419 M	0.837 M
Chromium	<0.9 mg/kg	TM181		8.87 M	4.49 M	11.4 M	7.21 M	15.9 M	7.26 M
Copper	<1.4 mg/kg	TM181		39 M	11.5 M	93.8 M	41.8 M	96 M	71.6 M
Lead	<0.7 mg/kg	TM181		49.6 M	36.5 M	26 M	176 M	87.6 M	122 M
Mercury	<0.14 mg/kg	TM181		0.475 M	0.466 M	1.68 M	1.64 M	15.9 M	4.52 M
Nickel	<0.2 mg/kg	TM181		21.7 M	5.5 M	41.7 M	15.7 M	47.3 M	18.9 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		30.9 #	8.02 #	44.3 #	15.3 #	50.7 #	12.9 #
Zinc	<1.9 mg/kg	TM181		74.9 M	64.1 M	72.4 M	107 M	164 M	261 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1412	IP1412	IP1412	IP1412	IP1413	IP1413
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340116	10340121	10340126	10340130	10339977	10339983
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	25	26	42	24	38
Soil Organic Matter (SOM)	<0.35 %	TM132		19.5 #					
pH	1 pH Units	TM133		8.07 M	7.91 M	8.04 M	7.61 M	7.66 M	9.55 M
Arsenic	<0.6 mg/kg	TM181		62.2 M	14.3 M	30.4 M	20.3 M	18.6 M	5.23 M
Cadmium	<0.02 mg/kg	TM181		1.86 M	0.179 M	<0.02 M	1.32 M	<0.02 M	0.146 M
Chromium	<0.9 mg/kg	TM181		23.3 M	22.7 M	18.2 M	17.7 M	17.9 M	4.18 M
Copper	<1.4 mg/kg	TM181		212 M	81.8 M	104 M	100 M	2330 M	8.38 M
Lead	<0.7 mg/kg	TM181		771 M	156 M	170 M	211 M	56.6 M	19.2 M
Mercury	<0.14 mg/kg	TM181		2.31 M	1.27 M	0.6 M	1.81 M	1.44 M	0.761 M
Nickel	<0.2 mg/kg	TM181		42.7 M	36.6 M	33.7 M	35.5 M	28.8 M	3.69 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.31 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		35 #	71.4 #	49.7 #	20.8 #	50.7 #	11 #
Zinc	<1.9 mg/kg	TM181		1320 M	238 M	101 M	279 M	113 M	24 M

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1413	IP1413				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	05/11/2014	05/11/2014				
			Sample Time	.	.				
			Date Received	07/11/2014	07/11/2014				
			SDG Ref	141107-97	141107-97				
			Lab Sample No.(s)	10339987	10339992				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		22	44				
pH	1 pH Units	TM133		7.82 M	7.89 M				
Arsenic	<0.6 mg/kg	TM181		39.7 M	10.7 M				
Cadmium	<0.02 mg/kg	TM181		0.212 M	0.335 M				
Chromium	<0.9 mg/kg	TM181		20.1 M	7.09 M				
Copper	<1.4 mg/kg	TM181		433 M	65.7 M				
Lead	<0.7 mg/kg	TM181		122 M	61.3 M				
Mercury	<0.14 mg/kg	TM181		5.11 M	1.06 M				
Nickel	<0.2 mg/kg	TM181		63.8 M	8.17 M				
Selenium	<1 mg/kg	TM181		1.03 #	<1 #				
Vanadium	<0.2 mg/kg	TM181		85.7 #	11 #				
Zinc	<1.9 mg/kg	TM181		235 M	84.9 M				

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1132	IP1132	IP1132	IP1328	IP1328	IP1328
			Depth (m)	1.00	2.00	3.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340028	10340036	10340041	10339961	10340022	10340086
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.4	102	114	103	94.9	103
Acenaphthene-d10 % recovery**	%	TM218		95.9	104	115	103	93.6	104
Phenanthrene-d10 % recovery**	%	TM218		90.2	99.8	110	102	90.3	99.2
Chrysene-d12 % recovery**	%	TM218		91.3	94.2	106	105	86.5	92.9
Perylene-d12 % recovery**	%	TM218		100	97.9	108	96.2	88.4	95.5
Naphthalene	<9 µg/kg	TM218		140 ♦ M	1260 ♦ M	181 ♦ M	85.8 ♦ M	121 ♦	405 ♦ M
Acenaphthylene	<12 µg/kg	TM218		158 ♦ M	846 ♦ M	18.5 ♦ M	20.2 ♦ M	69.6 ♦	<60 ♦ M
Acenaphthene	<8 µg/kg	TM218		92.7 ♦ M	39.5 ♦ M	<8 ♦ M	20.9 ♦ M	51.2 ♦	56.2 ♦ M
Fluorene	<10 µg/kg	TM218		218 ♦ M	128 ♦ M	<10 ♦ M	49.5 ♦ M	62.7 ♦	384 ♦ M
Phenanthrene	<15 µg/kg	TM218		2050 ♦ M	2600 ♦ M	146 ♦ M	230 ♦ M	1260 ♦	6310 ♦ M
Anthracene	<16 µg/kg	TM218		588 ♦ M	597 ♦ M	64.9 ♦ M	78.3 ♦ M	147 ♦	461 ♦ M
Fluoranthene	<17 µg/kg	TM218		3750 ♦ M	1900 ♦ M	52.2 ♦ M	344 ♦ M	2540 ♦	1560 ♦ M
Pyrene	<15 µg/kg	TM218		3010 ♦ M	2150 ♦ M	96.2 ♦ M	295 ♦ M	2330 ♦	2930 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		2780 ♦ M	1250 ♦ M	32.7 ♦ M	246 ♦ M	1430 ♦	1440 ♦ M
Chrysene	<10 µg/kg	TM218		2670 ♦ M	2410 ♦ M	76.4 ♦ M	322 ♦ M	1710 ♦	2720 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		3420 ♦ M	2390 ♦ M	64.2 ♦ M	389 ♦ M	2810 ♦	1550 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1040 ♦ M	755 ♦ M	<14 ♦ M	146 ♦ M	929 ♦	485 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		2230 ♦ M	1360 ♦ M	45.5 ♦ M	239 ♦ M	1680 ♦	970 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1320 ♦ M	1300 ♦ M	29.7 ♦ M	170 ♦ M	994 ♦	498 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		651 ♦ M	631 ♦ M	<23 ♦ M	71.3 ♦ M	384 ♦	367 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1470 ♦ M	1690 ♦ M	149 ♦ M	221 ♦ M	1220 ♦	804 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		25600	21300	957	2930	17700	20900

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1328	IP1328	IP1329	IP1329	IP1329	IP1330
			Depth (m)	4.00	5.00	1.00	2.00	3.00	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340135	10340144	10340148	10340152	10340157	10339998
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		107	95.6	98.9	109	123	92.3
Acenaphthene-d10 % recovery**	%	TM218		108	97.4	99.4	112	125	93.3
Phenanthrene-d10 % recovery**	%	TM218		103	96.1	101	102	118	88.8
Chrysene-d12 % recovery**	%	TM218		94.5	92.7	99.9	83	101	79.3
Perylene-d12 % recovery**	%	TM218		92.7	102	108	74.2	95	81.4
Naphthalene	<9 µg/kg	TM218		696 ♦ M	126 ♦ M	107 ♦ M	297 ♦ M	228 ♦ M	81.6 ♦ M
Acenaphthylene	<12 µg/kg	TM218		59.1 ♦ M	<12 ♦ M	25.9 ♦ M	26.8 ♦ M	24.5 ♦ M	<60 ♦ M
Acenaphthene	<8 µg/kg	TM218		61.9 ♦ M	81.8 ♦ M	21.3 ♦ M	29.8 ♦ M	<8 ♦ M	<40 ♦ M
Fluorene	<10 µg/kg	TM218		154 ♦ M	212 ♦ M	57.2 ♦ M	64.7 ♦ M	<10 ♦ M	<50 ♦ M
Phenanthrene	<15 µg/kg	TM218		2190 ♦ M	242 ♦ M	249 ♦ M	760 ♦ M	362 ♦ M	260 ♦ M
Anthracene	<16 µg/kg	TM218		166 ♦ M	210 ♦ M	63.9 ♦ M	76.8 ♦ M	48.1 ♦ M	<80 ♦ M
Fluoranthene	<17 µg/kg	TM218		1910 ♦ M	297 ♦ M	464 ♦ M	146 ♦ M	145 ♦ M	242 ♦ M
Pyrene	<15 µg/kg	TM218		2500 ♦ M	572 ♦ M	443 ♦ M	857 ♦ M	201 ♦ M	245 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		980 ♦ M	215 ♦ M	323 ♦ M	130 ♦ M	92.7 ♦ M	165 ♦ M
Chrysene	<10 µg/kg	TM218		1550 ♦ M	228 ♦ M	306 ♦ M	305 ♦ M	225 ♦ M	483 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1880 ♦ M	325 ♦ M	391 ♦ M	185 ♦ M	167 ♦ M	315 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		807 ♦ M	104 ♦ M	157 ♦ M	56.7 ♦ M	51.8 ♦ M	133 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		1420 ♦ M	200 ♦ M	332 ♦ M	120 ♦ M	119 ♦ M	223 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		820 ♦ M	112 ♦ M	204 ♦ M	57.2 ♦ M	75.2 ♦ M	165 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		319 ♦ M	45.4 ♦ M	67.9 ♦ M	65.3 ♦ M	43 ♦ M	<115 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1160 ♦ M	181 ♦ M	247 ♦ M	108 ♦ M	116 ♦ M	246 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		16700	3150	3460	3280	1900	2560

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1330	IP1330	IP1330	IP1331	IP1331	IP1331
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340003	10340007	10340017	10340162	10339965	10339969
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		117	106	82.5	102	103	103
Acenaphthene-d10 % recovery**	%	TM218		118	104	76.7	98.9	104	105
Phenanthrene-d10 % recovery**	%	TM218		99.2	95.2	72.4	93.7	105	99.6
Chrysene-d12 % recovery**	%	TM218		67.6	74.6	65.3	79.7	106	84.2
Perylene-d12 % recovery**	%	TM218		54.4	66	69.8	81.5	116	81.8
Naphthalene	<9 µg/kg	TM218		215 ♦ M	76.2 ♦ #	1350 ♦ M	276 ♦ M	158 ♦ #	1610 ♦ M
Acenaphthylene	<12 µg/kg	TM218		29.1 ♦ M	<12 ♦ #	<12 ♦ M	117 ♦ M	509 ♦ #	36.8 ♦ M
Acenaphthene	<8 µg/kg	TM218		<8 ♦ M	21.6 ♦ #	1600 ♦ M	<40 ♦ M	38.4 ♦ #	43.6 ♦ M
Fluorene	<10 µg/kg	TM218		<10 ♦ M	14.5 ♦ #	11600 ♦ M	124 ♦ M	151 ♦ #	94.9 ♦ M
Phenanthrene	<15 µg/kg	TM218		135 ♦ M	185 ♦ #	102000 ♦ M	597 ♦ M	1950 ♦ #	700 ♦ M
Anthracene	<16 µg/kg	TM218		<16 ♦ M	<16 ♦ #	4490 ♦ M	159 ♦ M	583 ♦ #	93.8 ♦ M
Fluoranthene	<17 µg/kg	TM218		32.6 ♦ M	88.1 ♦ #	3870 ♦ M	883 ♦ M	4950 ♦ #	266 ♦ M
Pyrene	<15 µg/kg	TM218		41.7 ♦ M	85.9 ♦ #	10200 ♦ M	756 ♦ M	3480 ♦ #	404 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		34.6 ♦ M	57.1 ♦ #	2220 ♦ M	522 ♦ M	3150 ♦ #	166 ♦ M
Chrysene	<10 µg/kg	TM218		45 ♦ M	213 ♦ #	5110 ♦ M	753 ♦ M	3190 ♦ #	378 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		57.1 ♦ M	104 ♦ #	512 ♦ M	825 ♦ M	3800 ♦ #	247 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 ♦ M	34.3 ♦ #	117 ♦ M	274 ♦ M	1430 ♦ #	70.6 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 ♦ M	52.9 ♦ #	473 ♦ M	533 ♦ M	2790 ♦ #	168 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 ♦ M	31.8 ♦ #	88.8 ♦ M	359 ♦ M	1590 ♦ #	92.9 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 ♦ M	<23 ♦ #	124 ♦ M	165 ♦ M	627 ♦ #	69.5 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 ♦ M	50.4 ♦ #	182 ♦ M	482 ♦ M	1700 ♦ #	158 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		590	1010	144000	6830	30100	4600

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1333	IP1333	IP1333	IP1333	IP1334	IP1334
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340046	10340050	10340055	10340060	10340064	10340072
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.9	100	116	122	97.5	98.3
Acenaphthene-d10 % recovery**	%	TM218		97.9	103	115	135	96.3	100
Phenanthrene-d10 % recovery**	%	TM218		89.9	96.9	113	117	94.6	94.5
Chrysene-d12 % recovery**	%	TM218		84.3	84.1	104	108	96.8	74.6
Perylene-d12 % recovery**	%	TM218		84.4	81.9	102	115	99.8	69.5
Naphthalene	<9 µg/kg	TM218		250 ♦ M	896 ♦ #	807 ♦ M	10700 ♦ M	52.6 ♦ M	785 ♦ M
Acenaphthylene	<12 µg/kg	TM218		302 ♦ M	79.1 ♦ #	79.9 ♦ M	447 ♦ M	20.1 ♦ M	204 ♦ M
Acenaphthene	<8 µg/kg	TM218		28 ♦ M	167 ♦ #	222 ♦ M	2410 ♦ M	<8 ♦ M	22.9 ♦ M
Fluorene	<10 µg/kg	TM218		90.3 ♦ M	201 ♦ #	895 ♦ M	6780 ♦ M	34.3 ♦ M	121 ♦ M
Phenanthrene	<15 µg/kg	TM218		1330 ♦ M	1360 ♦ #	4370 ♦ M	39300 ♦ M	205 ♦ M	1170 ♦ M
Anthracene	<16 µg/kg	TM218		314 ♦ M	229 ♦ #	388 ♦ M	2180 ♦ M	63.5 ♦ M	174 ♦ M
Fluoranthene	<17 µg/kg	TM218		1560 ♦ M	432 ♦ #	1300 ♦ M	1890 ♦ M	291 ♦ M	994 ♦ M
Pyrene	<15 µg/kg	TM218		1050 ♦ M	1090 ♦ #	2080 ♦ M	4850 ♦ M	374 ♦ M	815 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		904 ♦ M	292 ♦ #	839 ♦ M	1500 ♦ M	200 ♦ M	410 ♦ M
Chrysene	<10 µg/kg	TM218		831 ♦ M	396 ♦ #	1500 ♦ M	3720 ♦ M	242 ♦ M	638 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1130 ♦ M	331 ♦ #	891 ♦ M	819 ♦ M	357 ♦ M	600 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		393 ♦ M	113 ♦ #	286 ♦ M	231 ♦ M	115 ♦ M	199 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		744 ♦ M	271 ♦ #	624 ♦ M	778 ♦ M	246 ♦ M	308 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		459 ♦ M	117 ♦ #	322 ♦ M	317 ♦ M	164 ♦ M	156 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		206 ♦ M	97.6 ♦ #	201 ♦ M	729 ♦ M	61 ♦ M	83.2 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		560 ♦ M	247 ♦ #	458 ♦ M	912 ♦ M	220 ♦ M	234 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		10100	6320	15300	77600	2640	6920

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1334	IP1334	IP1411	IP1411	IP1411	IP1411
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340077	10340093	10340098	10340103	10340107	10340112
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		124	99.3	114	84.2	104	93.9
Acenaphthene-d10 % recovery**	%	TM218		127	118	116	85.4	108	140
Phenanthrene-d10 % recovery**	%	TM218		119	97.2	103	82.3	104	107
Chrysene-d12 % recovery**	%	TM218		97.6	115	87.8	74.8	118	118
Perylene-d12 % recovery**	%	TM218		92.7	121	77.6	77.4	122	125
Naphthalene	<9 µg/kg	TM218		3410 ♦ M	75900 ♦ M	137 ♦ M	833 ♦ M	7120 ♦ M	444000 ♦ M
Acenaphthylene	<12 µg/kg	TM218		49.8 ♦ M	<12 ♦ M	42.5 ♦ M	60.4 ♦ M	<12 ♦ M	1920 ♦ M
Acenaphthene	<8 µg/kg	TM218		110 ♦ M	1730 ♦ M	<8 ♦ M	<8 ♦ M	904 ♦ M	15200 ♦ M
Fluorene	<10 µg/kg	TM218		489 ♦ M	3280 ♦ M	<10 ♦ M	<10 ♦ M	3340 ♦ M	106000 ♦ M
Phenanthrene	<15 µg/kg	TM218		3370 ♦ M	12200 ♦ M	273 ♦ M	396 ♦ M	25300 ♦ M	986000 ♦ M
Anthracene	<16 µg/kg	TM218		289 ♦ M	1160 ♦ M	41.9 ♦ M	90.8 ♦ M	1920 ♦ M	57800 ♦ M
Fluoranthene	<17 µg/kg	TM218		604 ♦ M	414 ♦ M	267 ♦ M	48.6 ♦ M	2970 ♦ M	49800 ♦ M
Pyrene	<15 µg/kg	TM218		1310 ♦ M	1300 ♦ M	216 ♦ M	185 ♦ M	7400 ♦ M	129000 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		240 ♦ M	562 ♦ M	175 ♦ M	37.7 ♦ M	3420 ♦ M	51000 ♦ M
Chrysene	<10 µg/kg	TM218		575 ♦ M	857 ♦ M	238 ♦ M	65.8 ♦ M	6820 ♦ M	131000 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		285 ♦ M	248 ♦ M	294 ♦ M	56.7 ♦ M	2630 ♦ M	15800 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		74.8 ♦ M	38.8 ♦ M	95.9 ♦ M	<14 ♦ M	575 ♦ M	3370 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		208 ♦ M	146 ♦ M	135 ♦ M	126 ♦ M	1730 ♦ M	14400 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		100 ♦ M	43.6 ♦ M	77.8 ♦ M	84.5 ♦ M	752 ♦ M	4020 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		82.6 ♦ M	59.9 ♦ M	47.1 ♦ M	47.3 ♦ M	633 ♦ M	6410 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		256 ♦ M	79.4 ♦ M	112 ♦ M	265 ♦ M	1330 ♦ M	6110 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		11500	98000	2150	2300	66800	2020000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1412	IP1412	IP1412	IP1412	IP1413	IP1413
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340116	10340121	10340126	10340130	10339977	10339983
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		102	96.1	107	92	99	117
Acenaphthene-d10 % recovery**	%	TM218		99.5	101	110	92.2	101	121
Phenanthrene-d10 % recovery**	%	TM218		95.1	92.6	103	86.6	98.1	112
Chrysene-d12 % recovery**	%	TM218		93.8	75.5	110	114	89.8	108
Perylene-d12 % recovery**	%	TM218		97.1	68.7	105	122	93.8	111
Naphthalene	<9 µg/kg	TM218		190 ♦ M	379 ♦ M	252 ♦ M	32200 ♦ M	261 ♦ M	95100 ♦ M
Acenaphthylene	<12 µg/kg	TM218		82 ♦ M	43.7 ♦ M	41.8 ♦ M	707 ♦ M	33.8 ♦ M	287 ♦ M
Acenaphthene	<8 µg/kg	TM218		120 ♦ M	13 ♦ M	33.3 ♦ M	4590 ♦ M	53.4 ♦ M	5950 ♦ M
Fluorene	<10 µg/kg	TM218		139 ♦ M	51.5 ♦ M	79.4 ♦ M	5510 ♦ M	63.4 ♦ M	4690 ♦ M
Phenanthrene	<15 µg/kg	TM218		2150 ♦ M	724 ♦ M	755 ♦ M	8990 ♦ M	215 ♦ M	9790 ♦ M
Anthracene	<16 µg/kg	TM218		400 ♦ M	81.9 ♦ M	113 ♦ M	3150 ♦ M	56 ♦ M	986 ♦ M
Fluoranthene	<17 µg/kg	TM218		3090 ♦ M	425 ♦ M	390 ♦ M	2870 ♦ M	246 ♦ M	1440 ♦ M
Pyrene	<15 µg/kg	TM218		2080 ♦ M	453 ♦ M	415 ♦ M	5500 ♦ M	317 ♦ M	3830 ♦ M
Benz(a)anthracene	<14 µg/kg	TM218		1600 ♦ M	224 ♦ M	287 ♦ M	1410 ♦ M	194 ♦ M	691 ♦ M
Chrysene	<10 µg/kg	TM218		1680 ♦ M	355 ♦ M	445 ♦ M	2340 ♦ M	214 ♦ M	1280 ♦ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1970 ♦ M	293 ♦ M	385 ♦ M	1930 ♦ M	419 ♦ M	549 ♦ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		563 ♦ M	92 ♦ M	104 ♦ M	695 ♦ M	136 ♦ M	217 ♦ M
Benzo(a)pyrene	<15 µg/kg	TM218		1160 ♦ M	179 ♦ M	196 ♦ M	1610 ♦ M	279 ♦ M	428 ♦ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		647 ♦ M	108 ♦ M	128 ♦ M	631 ♦ M	181 ♦ M	153 ♦ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		313 ♦ M	58.3 ♦ M	62.8 ♦ M	261 ♦ M	71.1 ♦ M	<115 ♦ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		752 ♦ M	140 ♦ M	194 ♦ M	1010 ♦ M	283 ♦ M	207 ♦ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		16900	3620	3880	73400	3020	126000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1413	IP1413				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	05/11/2014	05/11/2014				
			Sample Time	.	.				
			Date Received	07/11/2014	07/11/2014				
			SDG Ref	141107-97	141107-97				
			Lab Sample No.(s)	10339987	10339992				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.6	94.5				
Acenaphthene-d10 % recovery**	%	TM218		93.5	105				
Phenanthrene-d10 % recovery**	%	TM218		86.1	92.5				
Chrysene-d12 % recovery**	%	TM218		74.6	88.6				
Perylene-d12 % recovery**	%	TM218		74.2	92.3				
Naphthalene	<9 µg/kg	TM218		104 ♦ M	123000 ♦ M				
Acenaphthylene	<12 µg/kg	TM218		29.3 ♦ M	1390 ♦ M				
Acenaphthene	<8 µg/kg	TM218		22.8 ♦ M	3960 ♦ M				
Fluorene	<10 µg/kg	TM218		58.2 ♦ M	7390 ♦ M				
Phenanthrene	<15 µg/kg	TM218		208 ♦ M	27600 ♦ M				
Anthracene	<16 µg/kg	TM218		60.4 ♦ M	2580 ♦ M				
Fluoranthene	<17 µg/kg	TM218		199 ♦ M	3690 ♦ M				
Pyrene	<15 µg/kg	TM218		239 ♦ M	7730 ♦ M				
Benz(a)anthracene	<14 µg/kg	TM218		126 ♦ M	2380 ♦ M				
Chrysene	<10 µg/kg	TM218		144 ♦ M	4580 ♦ M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		410 ♦ M	1980 ♦ M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		104 ♦ M	576 ♦ M				
Benzo(a)pyrene	<15 µg/kg	TM218		202 ♦ M	1030 ♦ M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		156 ♦ M	511 ♦ M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		69.9 ♦ M	<230 ♦ M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		224 ♦ M	589 ♦ M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2360	189000				

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1132	IP1132	IP1132	IP1328	IP1328	IP1328
			Depth (m)	1.00	2.00	3.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340028	10340036	10340041	10339961	10340022	10340086
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		93 ♦	79 ♦	87 ♦	87 ♦	95 ♦	71 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		4350 ♦ M	<880 ♦ M	<176 ♦ M	7170 ♦ M	<880 ♦ #	1110 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ M	<100 ♦ M	<20 ♦ M	<20 ♦ M	<100 ♦ #	<50 ♦ M
Benzene	<10 µg/kg	TM089		<200 ♦ M	<200 ♦ M	<40 ♦ M	<40 ♦ M	<200 ♦ #	<100 ♦ M
Toluene	<2 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<8 ♦ M	<8 ♦ M	52 ♦ #	<20 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<12 ♦ M	<12 ♦ M	<60 ♦ #	<30 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ M	<120 ♦ M	<24 ♦ M	<24 ♦ M	<120 ♦ #	<60 ♦ M
o-Xylene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<12 ♦ M	<12 ♦ M	<60 ♦ #	<30 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<180 ♦	<9 ♦	<9 ♦	<180 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<480 ♦	<24 ♦	<24 ♦	<480 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	<200 ♦	<40 ♦	59.3 ♦	<200 ♦	<100 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		344 ♦	<200 ♦	<40 ♦	414 ♦	<200 ♦	<100 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		646 ♦	<200 ♦	<40 ♦	1700 ♦	<200 ♦	212 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		1700 ♦	<200 ♦	<40 ♦	2310 ♦	<200 ♦	340 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		148000	51300	76900	38600	3040	77600
Aliphatics >C16-C21	<100 µg/kg	TM173		519000	217000	240000	63000	16100	291000
Aliphatics >C21-C35	<100 µg/kg	TM173		1540000	269000	943000	118000	182000	1310000
Aliphatics >C35-C44	<100 µg/kg	TM173		738000	353000	311000	34600	53300	544000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		2950000	891000	1570000	255000	254000	2230000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<200 ♦	<40 ♦	<40 ♦	<200 ♦	<100 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	<200 ♦	<40 ♦	<40 ♦	<200 ♦	<100 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		449 ♦	<200 ♦	<40 ♦	1150 ♦	205 ♦	180 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		1130 ♦	<200 ♦	<40 ♦	1540 ♦	<200 ♦	227 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		6100	9760	16800	2430	10300	2330
Aromatics >EC16-EC21	<100 µg/kg	TM173		76800	54400	80800	12200	91000	34300
Aromatics >EC21-EC35	<100 µg/kg	TM173		727000	466000	899000	64400	413000	259000
Aromatics >EC35-EC44	<100 µg/kg	TM173		509000	674000	443000	32000	212000	160000
Aromatics >EC40-EC44	<100 µg/kg	TM173		220000	272000	176000	12000	73300	62500
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1320000	1200000	1440000	111000	727000	455000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		4270000	2100000	3010000	373000	981000	2680000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1328	IP1328	IP1329	IP1329	IP1329	IP1330
			Depth (m)	4.00	5.00	1.00	2.00	3.00	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340135	10340144	10340148	10340152	10340157	10339998
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		75 ♦	90 ♦	83 ♦	86 ♦	91 ♦	76 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		6380 ♦ M	160000 ♦ M	1110 ♦ M	23100 ♦ M	4800 ♦ M	653 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ M	<20 ♦ M	<50 ♦ M	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ M	<40 ♦ M	<100 ♦ M	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		17.8 ♦ M	<8 ♦ M	<8 ♦ M	27.7 ♦ M	33.6 ♦ M	17.3 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	<12 ♦ M	<12 ♦ M	<30 ♦ M	28 ♦ M	<12 ♦ M
m,p-Xylene	<6 µg/kg	TM089		35.6 ♦ M	<24 ♦ M	<24 ♦ M	85.8 ♦ M	<24 ♦ M	<24 ♦ M
o-Xylene	<3 µg/kg	TM089		64.8 ♦ M	<12 ♦ M	<12 ♦ M	164 ♦ M	67.2 ♦ M	<12 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		100 ♦	<36 ♦	<9 ♦	250 ♦	67.2 ♦	<9 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		118 ♦	<96 ♦	<24 ♦	278 ♦	129 ♦	<24 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		53.3 ♦	512 ♦	47.2 ♦	<100 ♦	133 ♦	50.6 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		235 ♦	9100 ♦	118 ♦	144 ♦	582 ♦	118 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		1540 ♦	33600 ♦	168 ♦	2320 ♦	980 ♦	102 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		2020 ♦	56600 ♦	362 ♦	11200 ♦	1360 ♦	144 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		54200	1330000	61900	290000	56100	29600
Aliphatics >C16-C21	<100 µg/kg	TM173		152000	895000	124000	458000	80800	112000
Aliphatics >C21-C35	<100 µg/kg	TM173		603000	2640000	235000	980000	230000	268000
Aliphatics >C35-C44	<100 µg/kg	TM173		259000	405000	71300	523000	82900	108000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1070000	5270000	492000	2250000	450000	518000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<100 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<100 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		1130 ♦	22400 ♦	136 ♦	1820 ♦	773 ♦	107 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		1350 ♦	37700 ♦	242 ♦	7480 ♦	907 ♦	95.5 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		12600	65500	7300	48100	6980	3610
Aromatics >EC16-EC21	<100 µg/kg	TM173		78800	125000	50500	168000	33300	30800
Aromatics >EC21-EC35	<100 µg/kg	TM173		556000	441000	189000	608000	244000	235000
Aromatics >EC35-EC44	<100 µg/kg	TM173		366000	104000	78600	297000	124000	163000
Aromatics >EC40-EC44	<100 µg/kg	TM173		143000	39500	29600	122000	51700	72300
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1010000	736000	325000	1120000	408000	432000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2090000	6160000	818000	3400000	863000	951000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1330	IP1330	IP1330	IP1331	IP1331	IP1331
			Depth (m)	2.00	3.00	4.00	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340003	10340007	10340017	10340162	10339965	10339969
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87 ♦	83 ♦	76 ♦	95 ♦	78 ♦	85 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 ♦ M	<880 ♦ #	117000 ♦ M	<880 ♦ M	676 ♦ #	284000 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ M	<100 ♦ #	<100 ♦ M	<100 ♦ M	<50 ♦ #	<20 ♦ M
Benzene	<10 µg/kg	TM089		<200 ♦ M	<200 ♦ #	<200 ♦ M	<200 ♦ M	<100 ♦ #	172 ♦ M
Toluene	<2 µg/kg	TM089		<40 ♦ M	<40 ♦ #	<40 ♦ M	60.2 ♦ M	<20 ♦ #	<8 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ #	<60 ♦ M	<60 ♦ M	<30 ♦ #	841 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ M	<120 ♦ #	<120 ♦ M	<120 ♦ M	<60 ♦ #	3810 ♦ M
o-Xylene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ #	<60 ♦ M	<60 ♦ M	<30 ♦ #	4410 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	<180 ♦	<9 ♦	8220 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	<24 ♦	<480 ♦	<24 ♦	9230 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	<200 ♦	509 ♦	<200 ♦	<100 ♦	8360 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 ♦	211 ♦	13000 ♦	<200 ♦	<100 ♦	63200 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 ♦	245 ♦	20300 ♦	<200 ♦	<100 ♦	53400 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 ♦	<200 ♦	41600 ♦	<200 ♦	257 ♦	68200 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		10700	13000	5860000	31800	60300	228000
Aliphatics >C16-C21	<100 µg/kg	TM173		6780	29000	3560000	127000	193000	235000
Aliphatics >C21-C35	<100 µg/kg	TM173		51700	127000	8750000	348000	569000	646000
Aliphatics >C35-C44	<100 µg/kg	TM173		26300	75700	1750000	117000	304000	204000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		95500	245000	19900000	624000	1130000	1310000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<200 ♦	<200 ♦	<200 ♦	<100 ♦	172 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	<200 ♦	<200 ♦	<200 ♦	<100 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 ♦	<200 ♦	13600 ♦	230 ♦	<100 ♦	44700 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 ♦	<200 ♦	27700 ♦	<200 ♦	171 ♦	45500 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		635	1010	2780000	3550	17700	101000
Aromatics >EC16-EC21	<100 µg/kg	TM173		2480	13700	3480000	23300	133000	179000
Aromatics >EC21-EC35	<100 µg/kg	TM173		36700	147000	6020000	187000	713000	793000
Aromatics >EC35-EC44	<100 µg/kg	TM173		37500	142000	1500000	116000	407000	299000
Aromatics >EC40-EC44	<100 µg/kg	TM173		16700	65300	566000	43900	170000	115000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		77400	304000	13800000	330000	1270000	1370000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		173000	550000	33800000	954000	2400000	2970000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1333	IP1333	IP1333	IP1333	IP1334	IP1334
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340046	10340050	10340055	10340060	10340064	10340072
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		71 ♦	61 ♦	80 ♦	116 ♦	71 ♦	68 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		1380 ♦ M	6160 ♦ #	188000 ♦ M	1690000 ♦ M	749 ♦ M	1550 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<20 ♦ #	<20 ♦ M	<100 ♦ M	<20 ♦ M	<20 ♦ M
Benzene	<10 µg/kg	TM089		<40 ♦ M	<40 ♦ #	68 ♦ M	<200 ♦ M	<40 ♦ M	<40 ♦ M
Toluene	<2 µg/kg	TM089		15.6 ♦ M	17.4 ♦ #	<8 ♦ M	<40 ♦ M	<8 ♦ M	35.5 ♦ M
Ethylbenzene	<3 µg/kg	TM089		29.9 ♦ M	68.3 ♦ #	861 ♦ M	<60 ♦ M	<12 ♦ M	21.3 ♦ M
m,p-Xylene	<6 µg/kg	TM089		36.4 ♦ M	68.3 ♦ #	<24 ♦ M	<120 ♦ M	<24 ♦ M	42.6 ♦ M
o-Xylene	<3 µg/kg	TM089		28.6 ♦ M	60.3 ♦ #	<12 ♦ M	<60 ♦ M	<12 ♦ M	28.4 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		65 ♦	129 ♦	<9 ♦	<9 ♦	<9 ♦	71 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		111 ♦	215 ♦	929 ♦	<24 ♦	<24 ♦	128 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 ♦	75 ♦	126 ♦	26900 ♦	<40 ♦	152 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		181 ♦	244 ♦	6300 ♦	317000 ♦	73.2 ♦	393 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		264 ♦	635 ♦	41200 ♦	339000 ♦	79.2 ♦	234 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		358 ♦	2720 ♦	67400 ♦	467000 ♦	306 ♦	281 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		9280	159000	865000	4070000	99400	54300
Aliphatics >C16-C21	<100 µg/kg	TM173		26800	165000	567000	1060000	305000	116000
Aliphatics >C21-C35	<100 µg/kg	TM173		182000	499000	1030000	2160000	721000	371000
Aliphatics >C35-C44	<100 µg/kg	TM173		133000	184000	423000	1970000	391000	209000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		350000	1010000	2890000	9250000	1520000	751000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 ♦	<40 ♦	68 ♦	<200 ♦	<40 ♦	<40 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 ♦	<40 ♦	<40 ♦	<200 ♦	<40 ♦	<40 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		270 ♦	620 ♦	28300 ♦	226000 ♦	67.2 ♦	249 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		238 ♦	1810 ♦	44900 ♦	311000 ♦	204 ♦	187 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		3100	53500	363000	2790000	16500	26900
Aromatics >EC16-EC21	<100 µg/kg	TM173		22800	107000	365000	1570000	165000	80200
Aromatics >EC21-EC35	<100 µg/kg	TM173		209000	553000	992000	3720000	554000	514000
Aromatics >EC35-EC44	<100 µg/kg	TM173		175000	284000	508000	2510000	356000	332000
Aromatics >EC40-EC44	<100 µg/kg	TM173		61800	107000	178000	909000	171000	135000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		410000	998000	2230000	10600000	1090000	953000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		761000	2010000	5300000	21500000	2610000	1700000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1334	IP1334	IP1411	IP1411	IP1411	IP1411
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340077	10340093	10340098	10340103	10340107	10340112
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		103 ♦	116 ♦	82 ♦	76 ♦	92 ♦	177 3 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		51300 ♦ M	2710000 ♦ M	1560 ♦ M	450 ♦ M	341000 ♦ M	8790000 3 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 ♦ M	<100 ♦ M	<100 ♦ M	<20 ♦ M	<20 ♦ M	<100 3 ♦ M
Benzene	<10 µg/kg	TM089		127 ♦ M	<200 ♦ M	<200 ♦ M	<40 ♦ M	176 ♦ M	35400 3 ♦ M
Toluene	<2 µg/kg	TM089		141 ♦ M	<40 ♦ M	<40 ♦ M	<8 ♦ M	<8 ♦ M	<40 3 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<12 ♦ M	47000 ♦ M	<60 ♦ M	<12 ♦ M	2740 ♦ M	121000 3 ♦ M
m,p-Xylene	<6 µg/kg	TM089		344 ♦ M	62000 ♦ M	<120 ♦ M	<24 ♦ M	<24 ♦ M	362000 3 ♦ M
o-Xylene	<3 µg/kg	TM089		<12 ♦ M	75400 ♦ M	<60 ♦ M	<12 ♦ M	<12 ♦ M	148000 3 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		344 ♦	137000 ♦	<180 ♦	<9 ♦	<9 ♦	510000 3 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		612 ♦	184000 ♦	<480 ♦	<24 ♦	2920 ♦	666000 3 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		259 ♦	88500 ♦	<200 ♦	<40 ♦	1040 ♦	801000 3 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		3770 ♦	641000 ♦	220 ♦	80.5 ♦	33700 ♦	3920000 3 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		13200 ♦	513000 ♦	300 ♦	52.5 ♦	91000 ♦	1500000 3 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		14800 ♦	564000 ♦	356 ♦	130 ♦	91000 ♦	540000 3 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		106000	3790000	7210	703000	840000	22500000
Aliphatics >C16-C21	<100 µg/kg	TM173		147000	3580000	20400	1150000	616000	10500000
Aliphatics >C21-C35	<100 µg/kg	TM173		421000	7170000	132000	3430000	1500000	18800000
Aliphatics >C35-C44	<100 µg/kg	TM173		171000	542000	92100	829000	595000	4370000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		845000	15100000	251000	6110000	3550000	56200000
Aromatics >EC5-EC7	<10 µg/kg	TM089		127 ♦	<200 ♦	<200 ♦	<40 ♦	176 ♦	35400 3 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		141 ♦	<200 ♦	<200 ♦	<40 ♦	<40 ♦	<200 3 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		9150 ♦	526000 ♦	360 ♦	59.5 ♦	63400 ♦	1630000 3 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		9850 ♦	376000 ♦	237 ♦	85.8 ♦	60600 ♦	360000 3 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		80900	4820000	2830	364000	70500	7250000
Aromatics >EC16-EC21	<100 µg/kg	TM173		156000	3320000	11900	808000	83200	6430000
Aromatics >EC21-EC35	<100 µg/kg	TM173		579000	4540000	145000	3550000	309000	8990000
Aromatics >EC35-EC44	<100 µg/kg	TM173		322000	755000	104000	1050000	179000	2350000
Aromatics >EC40-EC44	<100 µg/kg	TM173		128000	244000	40500	388000	69300	866000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1140000	13400000	264000	5780000	642000	25000000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2030000	31200000	517000	11900000	4530000	90000000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1412	IP1412	IP1412	IP1412	IP1413	IP1413
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-97	141107-97	141107-97	141107-97	141107-97	141107-97
			Lab Sample No.(s)	10340116	10340121	10340126	10340130	10339977	10339983
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		85 ♦	103 ♦	93 ♦	111 3 ♦	77 ♦	105 ♦
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 ♦ M	2150 ♦ M	13700 ♦ M	2740000 3 ♦ M	30300 ♦ M	5710000 ♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ M	<100 ♦ M	<50 ♦ M	<100 3 ♦ M	<20 ♦ M	<100 ♦ M
Benzene	<10 µg/kg	TM089		<200 ♦ M	<200 ♦ M	<100 ♦ M	<200 3 ♦ M	<40 ♦ M	<200 ♦ M
Toluene	<2 µg/kg	TM089		<40 ♦ M	<40 ♦ M	39.4 ♦ M	<40 3 ♦ M	48.8 ♦ M	29400 ♦ M
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<30 ♦ M	<60 3 ♦ M	<12 ♦ M	32700 ♦ M
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ M	<120 ♦ M	<60 ♦ M	19200 3 ♦ M	<24 ♦ M	96400 ♦ M
o-Xylene	<3 µg/kg	TM089		<60 ♦ M	<60 ♦ M	<30 ♦ M	<60 3 ♦ M	<12 ♦ M	72900 ♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	<9 ♦	<9 ♦	19200 3 ♦	<9 ♦	169000 ♦
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	<24 ♦	39.4 ♦	19200 3 ♦	48.8 ♦	231000 ♦
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	<200 ♦	131 ♦	78800 3 ♦	55.4 ♦	190000 ♦
Aliphatics >C6-C8	<10 µg/kg	TM089		207 ♦	288 ♦	936 ♦	699000 3 ♦	1570 ♦	1270000 ♦
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 ♦	312 ♦	2710 ♦	742000 3 ♦	6550 ♦	1620000 ♦
Aliphatics >C10-C12	<10 µg/kg	TM089		308 ♦	612 ♦	4820 ♦	421000 3 ♦	10600 ♦	793000 ♦
Aliphatics >C12-C16	<100 µg/kg	TM173		37500	42600	142000	12100000	36400	15600000
Aliphatics >C16-C21	<100 µg/kg	TM173		92900	168000	136000	7990000	103000	2200000
Aliphatics >C21-C35	<100 µg/kg	TM173		310000	454000	365000	23600000	302000	1310000
Aliphatics >C35-C44	<100 µg/kg	TM173		133000	162000	87000	2910000	135000	282000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		573000	826000	729000	46600000	577000	19400000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<200 ♦	<100 ♦	<200 3 ♦	<40 ♦	<200 ♦
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	<200 ♦	<100 ♦	<200 3 ♦	48.8 ♦	29400 ♦
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 ♦	369 ♦	1850 ♦	514000 3 ♦	4370 ♦	1280000 ♦
Aromatics >EC10-EC12	<10 µg/kg	TM089		205 ♦	409 ♦	3220 ♦	280000 3 ♦	7070 ♦	529000 ♦
Aromatics >EC12-EC16	<100 µg/kg	TM173		7580	9080	62000	1960000	8000	359000
Aromatics >EC16-EC21	<100 µg/kg	TM173		39500	49400	88200	2150000	41700	126000
Aromatics >EC21-EC35	<100 µg/kg	TM173		334000	293000	353000	8310000	300000	191000
Aromatics >EC35-EC44	<100 µg/kg	TM173		189000	169000	127000	1350000	237000	46100
Aromatics >EC40-EC44	<100 µg/kg	TM173		78500	69300	43000	461000	90500	12800
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		571000	520000	630000	13800000	588000	721000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1140000	1350000	1370000	63100000	1190000	25800000

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1413	IP1413				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	05/11/2014	05/11/2014				
			Sample Time	.	.				
			Date Received	07/11/2014	07/11/2014				
			SDG Ref	141107-97	141107-97				
			Lab Sample No.(s)	10339987	10339992				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		97 ♦	97 3 ♦				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		1960 ♦ M	7060000 3 ♦ M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 ♦ M	<100 3 ♦ M				
Benzene	<10 µg/kg	TM089		<200 ♦ M	<200 3 ♦ M				
Toluene	<2 µg/kg	TM089		<40 ♦ M	25000 3 ♦ M				
Ethylbenzene	<3 µg/kg	TM089		<60 ♦ M	45300 3 ♦ M				
m,p-Xylene	<6 µg/kg	TM089		<120 ♦ M	176000 3 ♦ M				
o-Xylene	<3 µg/kg	TM089		<60 ♦ M	116000 3 ♦ M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 ♦	292000 3 ♦				
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 ♦	362000 3 ♦				
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 ♦	67900 3 ♦				
Aliphatics >C6-C8	<10 µg/kg	TM089		255 ♦	709000 3 ♦				
Aliphatics >C8-C10	<10 µg/kg	TM089		280 ♦	1720000 3 ♦				
Aliphatics >C10-C12	<10 µg/kg	TM089		595 ♦	1830000 3 ♦				
Aliphatics >C12-C16	<100 µg/kg	TM173		98600	8860000				
Aliphatics >C16-C21	<100 µg/kg	TM173		167000	1370000				
Aliphatics >C21-C35	<100 µg/kg	TM173		318000	753000				
Aliphatics >C35-C44	<100 µg/kg	TM173		121000	177000				
Total Aliphatics >C12-C44	<100 µg/kg	TM173		705000	11200000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 ♦	<200 3 ♦				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 ♦	25000 3 ♦				
Aromatics >EC8-EC10	<10 µg/kg	TM089		368 ♦	1480000 3 ♦				
Aromatics >EC10-EC12	<10 µg/kg	TM089		396 ♦	1220000 3 ♦				
Aromatics >EC12-EC16	<100 µg/kg	TM173		14200	374000				
Aromatics >EC16-EC21	<100 µg/kg	TM173		57700	134000				
Aromatics >EC21-EC35	<100 µg/kg	TM173		332000	172000				
Aromatics >EC35-EC44	<100 µg/kg	TM173		208000	41800				
Aromatics >EC40-EC44	<100 µg/kg	TM173		86900	13500				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		612000	722000				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1320000	18900000				

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Asbestos Identification - Solid Samples

		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	IP1132 1.00 SOLID 05/11/2014 00:00:00 12/11/2014 15:08:21 141107-97 10340028 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	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	IP1328 1.00 SOLID 05/11/2014 00:00:00 13/11/2014 14:46:28 141107-97 10339961 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	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	IP1329 1.00 SOLID 05/11/2014 00:00:00 12/11/2014 15:06:02 141107-97 10340148 TM048	27/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	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	IP1330 1.00 SOLID 05/11/2014 00:00:00 13/11/2014 14:56:36 141107-97 10339998 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	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	IP1331 1.00 SOLID 05/11/2014 00:00:00 13/11/2014 15:00:30 141107-97 10340162 TM048	27/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

		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	IP1333 1.00 SOLID 05/11/2014 00:00:00 12/11/2014 15:19:41 141107-97 10340046 TM048	27/11/14	Martin Cotterell	Soil containing loose fibres and ACM debris	Detected (#)	Detected (#)	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	IP1334 0.50 SOLID 05/11/2014 00:00:00 13/11/2014 14:53:12 141107-97 10340064 TM048	27/11/14	Paul Fenney	Soil containing loose fibres and debris typical of asbestos bitumen	Not Detected (#)	Detected (#)	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	IP1411 1.00 SOLID 05/11/2014 00:00:00 12/11/2014 15:16:47 141107-97 10340098 TM048	27/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	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	IP1412 1.00 SOLID 05/11/2014 00:00:00 14/11/2014 07:58:05 141107-97 10340116 TM048	27/11/14	Martin Cotterell	Soil containing loose fibres and ACM debris	Not Detected (#)	Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1413 1.00 SOLID 05/11/2014 00:00:00 13/11/2014 14:50:27 141107-97 10339977 TM048	27/11/14	Paul Fenney	Soil containing loose fibres and ACM debris	Detected (#)	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1132 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 09:53:58 141107-97 10340028 TM 304	Amosite (Loose fibres in soil.) (#)	N/C	0.0100 (#)	<0.001 (#)	0.0105 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1328 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 11:06:31 141107-97 10339961 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1329 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 12:57:24 141107-97 10340148 TM 304	None (#)	Amphibole fibres detected during PCM analysis	<0.001 (#)	0.0031 (#)	0.0033 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1330 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 11:03:58 141107-97 10339998 TM 304	Amosite (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1331 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 11:02:23 141107-97 10340162 TM 304	Amosite (#)	Loose fibres in soil	0.0017 (#)	0.0012 (#)	0.0029 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1333 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 09:50:11 141107-97 10340046 TM 304	None (#)	N/C	0.0424 (#)	0.0015 (#)	0.0440 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1334 0.50 SOLID 05/11/2014 00:00:00 08/01/2015 11:00:23 141107-97 10340064 TM 304	None (#)	N/C	0.0037 (#)	0.0026 (#)	0.0063 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1411 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 09:51:50 141107-97 10340098 TM 304	None (#)	N/C	0.0011 (#)	<0.001 (#)	0.0013 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1412 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 09:27:24 141107-97 10340116 TM 304	None (#)	N/C	0.0055 (#)	<0.001 (#)	0.0058 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1413 1.00 SOLID 05/11/2014 00:00:00 08/01/2015 11:05:06 141107-97 10339977 TM 304	None (#)	N/C	0.0215 (#)	0.0023 (#)	0.0238 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

Test Completion Dates

Lab Sample No(s)	10340028	10340036	10340041	10339961	10340022	10340086	10340135	10340144	10340148	10340152
Customer Sample Ref.	IP1132	IP1132	IP1132	IP1328	IP1328	IP1328	IP1328	IP1328	IP1329	IP1329
AGS Ref.										
Depth	1.00	2.00	3.00	1.00	2.00	3.00	4.00	5.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014			28-Nov-2014					28-Nov-2014	
Asbestos Quantification - Full	14-Jan-2015			15-Jan-2015					15-Jan-2015	
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	19-Nov-2014	24-Nov-2014	24-Nov-2014	20-Nov-2014	25-Nov-2014	21-Nov-2014	24-Nov-2014	20-Nov-2014
PAH by GCMS	27-Nov-2014	28-Nov-2014	28-Nov-2014	25-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	27-Nov-2014	26-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014
Total Organic Carbon					20-Nov-2014					
TPH CWG GC (S)	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014

Lab Sample No(s)	10340157	10339998	10340003	10340007	10340017	10339965	10339969	10340162	10340046	10340050
Customer Sample Ref.	IP1329	IP1330	IP1330	IP1330	IP1330	IP1331	IP1331	IP1331	IP1333	IP1333
AGS Ref.										
Depth	3.00	1.00	2.00	3.00	4.00	2.00	3.00	1.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples		28-Nov-2014						28-Nov-2014	28-Nov-2014	
Asbestos Quantification - Full		15-Jan-2015						15-Jan-2015	15-Jan-2015	
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014
Metals in solid samples by OES	25-Nov-2014	24-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	24-Nov-2014	19-Nov-2014	21-Nov-2014
PAH by GCMS	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon				20-Nov-2014			20-Nov-2014			
TPH CWG GC (S)	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014

Lab Sample No(s)	10340055	10340060	10340064	10340072	10340077	10340093	10340098	10340103	10340107	10340112
Customer Sample Ref.	IP1333	IP1333	IP1334	IP1334	IP1334	IP1334	IP1411	IP1411	IP1411	IP1411
AGS Ref.										
Depth	3.00	4.00	0.50	1.50	3.00	4.00	1.00	2.00	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			28-Nov-2014				28-Nov-2014			
Asbestos Quantification - Full			14-Jan-2015				15-Jan-2015			
EPH CWG (Aliphatic) GC (S)	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014
Metals in solid samples by OES	19-Nov-2014	19-Nov-2014	19-Nov-2014	21-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014
PAH by GCMS	28-Nov-2014	28-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon				20-Nov-2014						
TPH CWG GC (S)	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	01-Dec-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014

Lab Sample No(s)	10340116	10340121	10340126	10340130	10339977	10339983	10339987	10339992
Customer Sample Ref.	IP1412	IP1412	IP1412	IP1412	IP1413	IP1413	IP1413	IP1413
AGS Ref.								
Depth	1.00	2.00	3.00	4.00	1.00	2.00	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014				28-Nov-2014			
Asbestos Quantification - Full	15-Jan-2015				13-Jan-2015			
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	22-Nov-2014	28-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	22-Nov-2014	28-Nov-2014
GRO by GC-FID (S)	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014
Metals in solid samples by OES	20-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	24-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014
PAH by GCMS	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
pH	27-Nov-2014	27-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon	19-Nov-2014							
TPH CWG GC (S)	01-Dec-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014

SDG:	141107-97	**Location:**	Coed Darcy	**Order Number:**	Cd0962
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298824
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293987

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date:	13 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141107-53
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298545

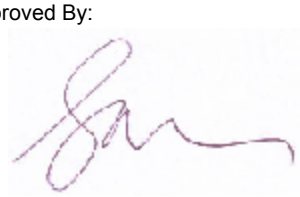
This report has been revised and directly supersedes 293870 in its entirety.

We received 25 samples on Friday November 07, 2014 and 25 of these samples were scheduled for analysis which was completed on Tuesday January 13, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10337537	IP1323		0.50	04/11/2014
10337599	IP1323		1.50	04/11/2014
10337629	IP1323		2.50	04/11/2014
10337634	IP1323		4.00	04/11/2014
10337643	IP1324		1.00	04/11/2014
10337647	IP1324		2.00	04/11/2014
10337651	IP1324		3.00	04/11/2014
10337655	IP1324		4.00	04/11/2014
10337659	IP1325		0.50	04/11/2014
10337543	IP1325		1.50	04/11/2014
10337547	IP1325		3.00	04/11/2014
10337554	IP1325		4.00	04/11/2014
10337559	IP1326		1.00	04/11/2014
10337570	IP1326		2.00	04/11/2014
10337575	IP1326		3.00	04/11/2014
10337580	IP1326		4.00	04/11/2014
10337585	IP1327		1.00	04/11/2014
10337589	IP1327		2.00	04/11/2014
10337594	IP1327		3.00	04/11/2014
10337604	IP1327		4.00	04/11/2014
10337609	IP1414		1.00	04/11/2014
10337613	IP1414		2.00	04/11/2014
10337617	IP1414		3.00	04/11/2014
10337621	IP1414		4.00	04/11/2014
10337625	IP1414		5.00	04/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6	10337537	IP1323		0.50	250g Amber Jar (AL)
			10337599	IP1323		1.50	400g Tub (ALE214)
			10337629	IP1323		2.50	60g VOC (ALE215)
			10337634	IP1323		4.00	250g Amber Jar (AL)
			10337643	IP1324		1.00	400g Tub (ALE214)
			10337647	IP1324		2.00	60g VOC (ALE215)
			10337651	IP1324		3.00	250g Amber Jar (AL)
			10337655	IP1324		4.00	400g Tub (ALE214)
			10337659	IP1325		0.50	60g VOC (ALE215)
			10337543	IP1325		1.50	250g Amber Jar (AL)
			10337547	IP1325		3.00	400g Tub (ALE214)
			10337554	IP1325		4.00	60g VOC (ALE215)
			10337559	IP1326		1.00	250g Amber Jar (AL)
			10337570	IP1326		2.00	60g VOC (ALE215)
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 25					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 25					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 25					
Metals in solid samples by OES	All	NDPs: 0 Tests: 25					
PAH by GCMS	All	NDPs: 0 Tests: 25					
pH	All	NDPs: 0 Tests: 25					
Sample description	All	NDPs: 0 Tests: 20					
Total Organic Carbon	All	NDPs: 0 Tests: 4					
TPH CWG GC (S)	All	NDPs: 0 Tests: 25					

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

SOLID

Results Legend

- X Test
- N No Determination Possible

	Lab Sample No(s)		10337570		10337575			10337580			10337585			10337589			10337594			10337604			10337609			10337613			10337617			10337621			10337625		
	Customer Sample Reference		IP1326		IP1326			IP1326			IP1327			IP1327			IP1327			IP1327			IP1414			IP1414			IP1414			IP1414			IP1414		
	AGS Reference																																				
	Depth (m)		2.00		3.00			4.00			1.00			2.00			3.00			4.00			1.00			2.00			3.00			4.00			5.00		
	Container		400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 6										X												X													
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5										X												X													
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 25			X			X			X			X			X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 25			X			X			X			X			X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 25		X			X			X			X			X			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 25			X			X			X			X			X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 25			X			X			X			X			X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 25	X			X			X			X			X			X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 20									X			X						X			X			X						X					
Total Organic Carbon	All	NDPs: 0 Tests: 4									X															X											
TPH CWG GC (S)	All	NDPs: 0 Tests: 25			X			X			X			X			X			X			X			X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

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	Grain size	Inclusions	Inclusions 2
10337537	IP1323	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10337599	IP1323	1.50	Dark Brown	Shale	0.063 - 0.1 mm	Stones	None
10337629	IP1323	2.50	Dark Brown	Shale	0.063 - 0.1 mm	Stones	None
10337634	IP1323	4.00	Dark Brown	Shale	0.063 - 0.1 mm	Stones	Oil/Petroleum
10337643	IP1324	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10337647	IP1324	2.00	Black	Sandy Loam	0.1 - 2 mm	Stones	Coal fragments
10337651	IP1324	3.00	Black	Loamy Sand	0.1 - 2 mm	Stones	Coal fragments
10337655	IP1324	4.00	Dark Brown	Shale	0.063 - 0.1 mm	Stones	None
10337543	IP1325	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10337547	IP1325	3.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10337554	IP1325	4.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10337659	IP1325	0.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10337559	IP1326	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10337570	IP1326	2.00	Black	N/A	0.1 - 2 mm	N/A	N/A
10337575	IP1326	3.00	Black	N/A	0.1 - 2 mm	Stones	Vegetation
10337580	IP1326	4.00	Black	N/A	0.1 - 2 mm	Stones	Vegetation
10337585	IP1327	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10337589	IP1327	2.00	Black	N/A	0.1 - 2 mm	N/A	N/A
10337594	IP1327	3.00	Black	N/A	0.1 - 2 mm	Stones	None
10337604	IP1327	4.00	Black	N/A	2 - 10 mm	Stones	None
10337609	IP1414	1.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10337613	IP1414	2.00	Black	N/A	0.1 - 2 mm	Brick	Stones
10337617	IP1414	3.00	Black	N/A	0.1 - 2 mm	Stones	None
10337621	IP1414	4.00	Black	N/A	0.1 - 2 mm	Stones	None
10337625	IP1414	5.00	Black	N/A	0.1 - 2 mm	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:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1323	IP1323	IP1323	IP1323	IP1324	IP1324
			Depth (m)	0.50	1.50	2.50	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337537	10337599	10337629	10337634	10337643	10337647
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	22	24	25	7.6	22
Soil Organic Matter (SOM)	<0.35 %	TM132		5.52 #					
pH	1 pH Units	TM133		8.6 M	7.61 #	6.42 #	6.11 #	8.27 M	6.85 M
Arsenic	<0.6 mg/kg	TM181		77.1 M	22.7 #	18.5 #	26.2 #	54 M	20.8 M
Cadmium	<0.02 mg/kg	TM181		1.15 M	<0.02 #	0.16 #	0.383 #	0.645 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		17.5 M	17.2 #	19.1 #	19.3 #	18.5 M	11.8 M
Copper	<1.4 mg/kg	TM181		323 M	55.8 #	95.9 #	231 #	204 M	51.2 M
Lead	<0.7 mg/kg	TM181		791 M	30.1 #	38.5 #	162 #	418 M	34.3 M
Mercury	<0.14 mg/kg	TM181		0.783 M	<0.14 #	0.558 #	3.22 #	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		34.9 M	38.2 #	47.6 #	56.7 #	33.8 M	34.7 M
Selenium	<1 mg/kg	TM181		1.01 #	1.19 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		19.2 #	43.3 #	54 #	46.4 #	16.6 #	36.8 #
Zinc	<1.9 mg/kg	TM181		1450 M	81.2 #	117 #	257 #	1000 M	76.2 M

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1324	IP1324	IP1325	IP1325	IP1325	IP1325
			Depth (m)	3.00	4.00	0.50	1.50	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337651	10337655	10337659	10337543	10337547	10337554
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	17	17	21	21	19
Soil Organic Matter (SOM)	<0.35 %	TM132			44.8 #				
pH	1 pH Units	TM133		6.5 M	6.3 #	8.29 M	7.1 M	6.3 M	6.77 M
Arsenic	<0.6 mg/kg	TM181		17.2 M	17.1 #	49.8 M	17.8 M	26.4 M	32 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.0571 #	0.588 M	<0.02 M	0.324 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		11.6 M	17.7 #	15.8 M	14.2 M	11.8 M	18.9 M
Copper	<1.4 mg/kg	TM181		45.4 M	55.5 #	174 M	40.6 M	87.2 M	74.7 M
Lead	<0.7 mg/kg	TM181		20.3 M	55.8 #	309 M	6.75 M	111 M	46.1 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 #	<0.14 M	<0.14 M	0.222 M	0.181 M
Nickel	<0.2 mg/kg	TM181		33.5 M	40.6 #	28.8 M	38.4 M	33.6 M	45.4 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	1.09 #	<1 #	1.18 #
Vanadium	<0.2 mg/kg	TM181		35.6 #	46.5 #	20.5 #	42.1 #	31.8 #	44.9 #
Zinc	<1.9 mg/kg	TM181		38.6 M	91.4 #	597 M	17.3 M	334 M	467 M

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1326	IP1326	IP1326	IP1326	IP1327	IP1327
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337559	10337570	10337575	10337580	10337585	10337589
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	25	24	21	11	21
Soil Organic Matter (SOM)	<0.35 %	TM132						3.65 #	
pH	1 pH Units	TM133		8.06 M	5.38	5.97	7.13	7.97 M	6
Arsenic	<0.6 mg/kg	TM181		158 M	26.2	21.3	26.1	130 M	43.4
Cadmium	<0.02 mg/kg	TM181		2.81 M	1.07	<0.02	0.223	2.18 M	0.212
Chromium	<0.9 mg/kg	TM181		16.7 M	10.3	10.2	12.5	16.7 M	18.4
Copper	<1.4 mg/kg	TM181		500 M	71.8	46.5	72.8	429 M	212
Lead	<0.7 mg/kg	TM181		2020 M	74.6	23.4	97.3	1620 M	179
Mercury	<0.14 mg/kg	TM181		2.22 M	3.22	2.33	2.52	0.968 M	2.05
Nickel	<0.2 mg/kg	TM181		43.4 M	28.5	31.6	32.5	41.3 M	71.2
Selenium	<1 mg/kg	TM181		1.03 #	<1	<1	<1	<1 #	<1
Vanadium	<0.2 mg/kg	TM181		36.4 #	33.7	29.5	33.5	28.5 #	89.9
Zinc	<1.9 mg/kg	TM181		4290 M	344	50.1	195	3030 M	489

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1327	IP1327	IP1414	IP1414	IP1414	IP1414
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337594	10337604	10337609	10337613	10337617	10337621
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		22	22	16	19	26	26
Soil Organic Matter (SOM)	<0.35 %	TM132					62.6 #		
pH	1 pH Units	TM133		7.69	7.92	8.07 M	7.02 M	6.16	6.27
Arsenic	<0.6 mg/kg	TM181		59.9	34.1	66.2 M	29 M	23.4	23.6
Cadmium	<0.02 mg/kg	TM181		1.12	0.638	1.39 M	1.17 M	0.486	0.0416
Chromium	<0.9 mg/kg	TM181		24.2	25.6	16.1 M	23.6 M	12.2	11.5
Copper	<1.4 mg/kg	TM181		524	365	255 M	230 M	201	70.4
Lead	<0.7 mg/kg	TM181		583	739	576 M	220 M	69.5	75
Mercury	<0.14 mg/kg	TM181		1.17	1.01	<0.14 M	<0.14 M	0.954	0.438
Nickel	<0.2 mg/kg	TM181		65.7	43.9	32 M	44 M	56.8	28.5
Selenium	<1 mg/kg	TM181		<1	<1	<1 #	<1 #	<1	1.28
Vanadium	<0.2 mg/kg	TM181		55.1	43.3	21.7 #	33.6 #	40.8	32.6
Zinc	<1.9 mg/kg	TM181		993	700	1610 M	337 M	135	119

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	
			IP1414	
			Depth (m)	5.00
			Sample Type	Soil/Solid
			Date Sampled	04/11/2014
			Sample Time	.
			Date Received	07/11/2014
			SDG Ref	141107-53
			Lab Sample No.(s)	10337625
			AGS Reference	
Moisture Content Ratio (% of as received sample)	%	PM024	28	
pH	1 pH Units	TM133	5.8	
Arsenic	<0.6 mg/kg	TM181	21.6	
Cadmium	<0.02 mg/kg	TM181	<0.02	
Chromium	<0.9 mg/kg	TM181	9.83	
Copper	<1.4 mg/kg	TM181	86.3	
Lead	<0.7 mg/kg	TM181	48	
Mercury	<0.14 mg/kg	TM181	0.429	
Nickel	<0.2 mg/kg	TM181	33.3	
Selenium	<1 mg/kg	TM181	1.2	
Vanadium	<0.2 mg/kg	TM181	27	
Zinc	<1.9 mg/kg	TM181	137	

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1323	IP1323	IP1323	IP1323	IP1324	IP1324
			Depth (m)	0.50	1.50	2.50	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337537	10337599	10337629	10337634	10337643	10337647
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		99.4	102	88.4	101	99	87.5
Acenaphthene-d10 % recovery**	%	TM218		98.6	103	88.9	99.3	97.7	87.6
Phenanthrene-d10 % recovery**	%	TM218		99.1	93.7	83.6	88.6	99.5	81.1
Chrysene-d12 % recovery**	%	TM218		102	79.8	70.4	80.4	103	73.4
Perylene-d12 % recovery**	%	TM218		106	64.8	64.2	75.1	106	69.7
Naphthalene	<9 µg/kg	TM218		111 @ M	101 #	74.2 @ #	297 #	71.8 @ M	63.5 @ M
Acenaphthylene	<12 µg/kg	TM218		61.9 @ M	43.1 #	<12 @ #	<60 #	20 @ M	28.9 @ M
Acenaphthene	<8 µg/kg	TM218		438 @ M	196 #	26.3 @ #	75.1 #	20.4 @ M	51.4 @ M
Fluorene	<10 µg/kg	TM218		513 @ M	242 #	37.4 @ #	86 #	44.8 @ M	62.5 @ M
Phenanthrene	<15 µg/kg	TM218		3310 @ M	1880 #	427 @ #	918 #	199 @ M	326 @ M
Anthracene	<16 µg/kg	TM218		915 @ M	348 #	34.3 @ #	125 #	56.5 @ M	94.1 @ M
Fluoranthene	<17 µg/kg	TM218		5580 @ M	2310 #	495 @ #	864 #	274 @ M	1050 @ M
Pyrene	<15 µg/kg	TM218		3900 @ M	1510 #	417 @ #	833 #	269 @ M	829 @ M
Benz(a)anthracene	<14 µg/kg	TM218		3530 @ M	1130 #	210 @ #	353 #	243 @ M	804 @ M
Chrysene	<10 µg/kg	TM218		3390 @ M	1210 #	315 @ #	609 #	284 @ M	773 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4720 @ M	1150 #	328 @ #	544 #	563 @ M	1230 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1730 @ M	557 #	115 @ #	226 #	179 @ M	414 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		3130 @ M	680 #	201 @ #	439 #	354 @ M	677 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1760 @ M	289 #	117 @ #	262 #	261 @ M	365 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		719 @ M	164 #	54.4 @ #	<115 #	95.1 @ M	179 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1970 @ M	328 #	166 @ #	469 #	342 @ M	399 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		35800	12100	3020	6100	3280	7340

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1324	IP1324	IP1325	IP1325	IP1325	IP1325
			Depth (m)	3.00	4.00	0.50	1.50	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337651	10337655	10337659	10337543	10337547	10337554
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.7	99.4	102	85.4	106	116
Acenaphthene-d10 % recovery**	%	TM218		92.3	100	102	84.4	108	118
Phenanthrene-d10 % recovery**	%	TM218		84.1	91.6	101	84.9	88.7	102
Chrysene-d12 % recovery**	%	TM218		68.7	72.8	104	82.3	63.1	72.8
Perylene-d12 % recovery**	%	TM218		60.9	64.3	94.5	85.1	52.1	62
Naphthalene	<9 µg/kg	TM218		64.4 @ M	73 @ #	26.8 @ M	13.7 @ M	237 @ M	153 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ #	16 @ M	<12 @ M	52 @ M	28.3 @ M
Acenaphthene	<8 µg/kg	TM218		32.7 @ M	10.2 @ #	33.2 @ M	<8 @ M	46.1 @ M	17.6 @ M
Fluorene	<10 µg/kg	TM218		24.7 @ M	12.5 @ #	53.6 @ M	<10 @ M	143 @ M	29.6 @ M
Phenanthrene	<15 µg/kg	TM218		202 @ M	135 @ #	237 @ M	276 @ M	641 @ M	246 @ M
Anthracene	<16 µg/kg	TM218		51.5 @ M	21.8 @ #	73.4 @ M	<16 @ M	88.7 @ M	32.5 @ M
Fluoranthene	<17 µg/kg	TM218		353 @ M	158 @ #	520 @ M	22.5 @ M	339 @ M	121 @ M
Pyrene	<15 µg/kg	TM218		282 @ M	156 @ #	421 @ M	<15 @ M	368 @ M	139 @ M
Benz(a)anthracene	<14 µg/kg	TM218		270 @ M	117 @ #	354 @ M	20.1 @ M	125 @ M	54.5 @ M
Chrysene	<10 µg/kg	TM218		310 @ M	170 @ #	394 @ M	107 @ M	215 @ M	162 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		525 @ M	226 @ #	571 @ M	64.8 @ M	167 @ M	113 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		170 @ M	62.5 @ #	209 @ M	<14 @ M	55.6 @ M	26.9 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		282 @ M	124 @ #	358 @ M	<15 @ M	105 @ M	55.9 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		153 @ M	61.7 @ #	242 @ M	<18 @ M	69 @ M	30.4 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		79.4 @ M	42.6 @ #	99.2 @ M	<23 @ M	35.5 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		202 @ M	84.1 @ #	278 @ M	<24 @ M	60.8 @ M	54.4 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3000	1450	3890	505	2750	1260

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1326	IP1326	IP1326	IP1326	IP1327	IP1327
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337559	10337570	10337575	10337580	10337585	10337589
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		99.2	96.1	92.9	109	98.9	92.9
Acenaphthene-d10 % recovery**	%	TM218		99.8	101	96.9	108	99	96.9
Phenanthrene-d10 % recovery**	%	TM218		102	92.6	89.2	91.6	99.9	89.2
Chrysene-d12 % recovery**	%	TM218		100	75.5	71	72.7	98.8	71
Perylene-d12 % recovery**	%	TM218		107	68.7	63.6	64.6	106	63.6
Naphthalene	<9 µg/kg	TM218		111 @ M	432 @	182 @	105 @	81.4 @ M	187 @
Acenaphthylene	<12 µg/kg	TM218		37 @ M	49.9 @	39.9 @	18.6 @	24.5 @ M	41 @
Acenaphthene	<8 µg/kg	TM218		77.7 @ M	14.8 @	30.1 @	42.8 @	49.5 @ M	30.9 @
Fluorene	<10 µg/kg	TM218		162 @ M	58.8 @	47.3 @	46.9 @	78.2 @ M	48.6 @
Phenanthrene	<15 µg/kg	TM218		1250 @ M	825 @	355 @	510 @	383 @ M	364 @
Anthracene	<16 µg/kg	TM218		394 @ M	93.4 @	58.5 @	90.5 @	112 @ M	60.2 @
Fluoranthene	<17 µg/kg	TM218		2890 @ M	485 @	296 @	572 @	600 @ M	305 @
Pyrene	<15 µg/kg	TM218		1960 @ M	516 @	314 @	638 @	549 @ M	323 @
Benz(a)anthracene	<14 µg/kg	TM218		2180 @ M	255 @	129 @	370 @	431 @ M	133 @
Chrysene	<10 µg/kg	TM218		1850 @ M	405 @	210 @	349 @	426 @ M	216 @
Benzo(b)fluoranthene	<15 µg/kg	TM218		1970 @ M	334 @	227 @	525 @	574 @ M	233 @
Benzo(k)fluoranthene	<14 µg/kg	TM218		853 @ M	105 @	78.4 @	182 @	215 @ M	80.5 @
Benzo(a)pyrene	<15 µg/kg	TM218		1570 @ M	204 @	127 @	334 @	430 @ M	131 @
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		795 @ M	124 @	62.2 @	168 @	225 @ M	63.9 @
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		341 @ M	66.6 @	47.4 @	72.5 @	77.6 @ M	48.7 @
Benzo(g,h,i)perylene	<24 µg/kg	TM218		825 @ M	160 @	116 @	236 @	265 @ M	119 @
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		17300	4130	2320	4260	4520	2390

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1327	IP1327	IP1414	IP1414	IP1414	IP1414
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337594	10337604	10337609	10337613	10337617	10337621
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.2	98	97.9	95.3	99.2	141
Acenaphthene-d10 % recovery**	%	TM218		98.1	98.5	97.1	93	104	146
Phenanthrene-d10 % recovery**	%	TM218		93.4	92	98.9	82.8	97	119
Chrysene-d12 % recovery**	%	TM218		80.3	82.4	98.2	70.8	80.7	75.6
Perylene-d12 % recovery**	%	TM218		74.8	80.6	105	67	73.5	56.7
Naphthalene	<9 µg/kg	TM218		259 @	120 @	50.4 @ M	123 @ M	728 @	157 @ #
Acenaphthylene	<12 µg/kg	TM218		28.6 @	<12 @	25.5 @ M	26.8 @ M	<12 @	<12 @ #
Acenaphthene	<8 µg/kg	TM218		17 @	<8 @	36.1 @ M	18.7 @ M	2350 @	12.4 @ #
Fluorene	<10 µg/kg	TM218		35.6 @	42.6 @	97.7 @ M	33.2 @ M	2760 @	22.5 @ #
Phenanthrene	<15 µg/kg	TM218		500 @	541 @	843 @ M	422 @ M	12400 @	263 @ #
Anthracene	<16 µg/kg	TM218		63.1 @	59.3 @	256 @ M	67.8 @ M	1740 @	<16 @ #
Fluoranthene	<17 µg/kg	TM218		336 @	641 @	1090 @ M	882 @ M	3610 @	49.1 @ #
Pyrene	<15 µg/kg	TM218		367 @	510 @	904 @ M	628 @ M	5110 @	88.9 @ #
Benz(a)anthracene	<14 µg/kg	TM218		172 @	292 @	515 @ M	491 @ M	1450 @	21.9 @ #
Chrysene	<10 µg/kg	TM218		383 @	392 @	407 @ M	620 @ M	1350 @	98.6 @ #
Benzo(b)fluoranthene	<15 µg/kg	TM218		252 @	603 @	424 @ M	966 @ M	1160 @	69.7 @ #
Benzo(k)fluoranthene	<14 µg/kg	TM218		73.8 @	202 @	171 @ M	413 @ M	558 @	<14 @ #
Benzo(a)pyrene	<15 µg/kg	TM218		164 @	314 @	388 @ M	503 @ M	1100 @	24.3 @ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		91.1 @	236 @	168 @ M	316 @ M	453 @	<18 @ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		56 @	94.3 @	60.3 @ M	169 @ M	188 @	<23 @ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		153 @	343 @	195 @ M	362 @ M	532 @	<24 @ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2950	4390	5640	6040	35400	807

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Customer Sample R	IP1414
Depth (m)	5.00
Sample Type	Soil/Solid
Date Sampled	04/11/2014
Sample Time	.
Date Received	07/11/2014
SDG Ref	141107-53
Lab Sample No.(s)	10337625
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	148
Acenaphthene-d10 % recovery**	%	TM218	155
Phenanthrene-d10 % recovery**	%	TM218	131
Chrysene-d12 % recovery**	%	TM218	96.2
Perylene-d12 % recovery**	%	TM218	81.6
Naphthalene	<9 µg/kg	TM218	159 @ #
Acenaphthylene	<12 µg/kg	TM218	18.4 @ #
Acenaphthene	<8 µg/kg	TM218	39.4 @ #
Fluorene	<10 µg/kg	TM218	55.4 @ #
Phenanthrene	<15 µg/kg	TM218	517 @ #
Anthracene	<16 µg/kg	TM218	64.1 @ #
Fluoranthene	<17 µg/kg	TM218	306 @ #
Pyrene	<15 µg/kg	TM218	510 @ #
Benz(a)anthracene	<14 µg/kg	TM218	167 @ #
Chrysene	<10 µg/kg	TM218	227 @ #
Benzo(b)fluoranthene	<15 µg/kg	TM218	215 @ #
Benzo(k)fluoranthene	<14 µg/kg	TM218	87.3 @ #
Benzo(a)pyrene	<15 µg/kg	TM218	167 @ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	82.4 @ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	47.3 @ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218	120 @ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	2780

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1323	IP1323	IP1323	IP1323	IP1324	IP1324
			Depth (m)	0.50	1.50	2.50	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337537	10337599	10337629	10337634	10337643	10337647
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86 @	88 @	88 @	96 @	79 @	85 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		3260 @ M	<880 @ #	<880 @ #	<880 @ #	<176 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ #	<100 @ #	<100 @ #	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ #	<200 @ #	<200 @ #	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<40 @ #	<40 @ #	<40 @ #	<8 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		18.2 @ M	<60 @ #	<60 @ #	<60 @ #	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 @ #	<120 @ #	<120 @ #	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<60 @ #	<60 @ #	<60 @ #	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		44.5 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		138 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		595 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		1210 @	<200 @	287 @	268 @	<40 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		72700	24100	21800	11400	21300	4610
Aliphatics >C16-C21	<100 µg/kg	TM173		124000	43700	47800	43500	61100	6860
Aliphatics >C21-C35	<100 µg/kg	TM173		132000	83000	105000	233000	96500	39700
Aliphatics >C35-C44	<100 µg/kg	TM173		37600	35000	44700	116000	30500	12400
Total Aliphatics >C12-C44	<100 µg/kg	TM173		367000	186000	219000	405000	209000	63500
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		434 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		808 @	<200 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		15100	2380	3700	1930	1880	3110
Aromatics >EC16-EC21	<100 µg/kg	TM173		171000	17700	23700	18100	8400	15200
Aromatics >EC21-EC35	<100 µg/kg	TM173		490000	111000	145000	188000	48800	171000
Aromatics >EC35-EC44	<100 µg/kg	TM173		118000	61700	90600	157000	26300	74600
Aromatics >EC40-EC44	<100 µg/kg	TM173		33400	21900	35900	67700	10300	20000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		794000	192000	263000	365000	85400	264000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1160000	379000	482000	771000	295000	327000

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1324	IP1324	IP1325	IP1325	IP1325	IP1325
			Depth (m)	3.00	4.00	0.50	1.50	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337651	10337655	10337659	10337543	10337547	10337554
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		82 @	83 @	87 @	89 @	91 @	81 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	<880 @ #	7320 @ M	<880 @ M	21200 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 @ #	<20 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<200 @ #	<40 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<40 @ #	<8 @ M	<40 @ M	<40 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<60 @ #	<12 @ M	<60 @ M	<60 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<120 @ #	<24 @ M	<120 @ M	<120 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<60 @ #	<12 @ M	<60 @ M	<60 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	<200 @	149 @	<200 @	<200 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	<200 @	1600 @	<200 @	1530 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	<200 @	2660 @	<200 @	11100 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		7440	6760	372000	2460	64700	81900
Aliphatics >C16-C21	<100 µg/kg	TM173		10700	10500	199000	4720	86200	153000
Aliphatics >C21-C35	<100 µg/kg	TM173		62400	53800	41500	18800	339000	943000
Aliphatics >C35-C44	<100 µg/kg	TM173		20000	19300	5840	13700	104000	181000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		100000	90300	618000	39700	593000	1360000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	<200 @	1080 @	<200 @	1020 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	<200 @	1770 @	<200 @	7420 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		2660	515	9880	<100	15000	19400
Aromatics >EC16-EC21	<100 µg/kg	TM173		5690	2880	25600	<100	35500	58100
Aromatics >EC21-EC35	<100 µg/kg	TM173		169000	94300	9480	13300	201000	399000
Aromatics >EC35-EC44	<100 µg/kg	TM173		116000	54100	<100	11400	94500	181000
Aromatics >EC40-EC44	<100 µg/kg	TM173		38000	17700	<100	5160	32400	65900
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		293000	152000	45000	24700	346000	657000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		394000	242000	670000	64400	961000	2020000

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1326	IP1326	IP1326	IP1326	IP1327	IP1327
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337559	10337570	10337575	10337580	10337585	10337589
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		84 @	80 3 @	76 @	77 @	81 @	82 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		3060 @ M	<880 3 @ #	2310 @ #	<880 @ #	5290 @ M	<880 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 3 @ #	<100 @ #	<100 @ #	<20 @ M	1910 @ #
Benzene	<10 µg/kg	TM089		<40 @ M	<200 3 @ #	<200 @ #	<200 @ #	<40 @ M	<200 @ #
Toluene	<2 µg/kg	TM089		<8 @ M	<40 3 @ #	<40 @ #	<40 @ #	<8 @ M	<40 @ #
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 3 @ #	<60 @ #	<60 @ #	<12 @ M	<60 @ #
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 3 @ #	<120 @ #	<120 @ #	<24 @ M	<120 @ #
o-Xylene	<3 µg/kg	TM089		<12 @ M	<60 3 @ #	<60 @ #	<60 @ #	<12 @ M	<60 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<180 3 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<480 3 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 3 @	<200 @	<200 @	69.4 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		93.6 @	<200 3 @	<200 @	<200 @	199 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		654 @	<200 3 @	367 @	<200 @	978 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		1100 @	<200 3 @	871 @	<200 @	2010 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		80800	23200	16300	16000	34000	12900
Aliphatics >C16-C21	<100 µg/kg	TM173		82200	93200	119000	66200	70300	26400
Aliphatics >C21-C35	<100 µg/kg	TM173		74300	187000	227000	89100	103000	98300
Aliphatics >C35-C44	<100 µg/kg	TM173		20300	167000	233000	66100	27600	43900
Total Aliphatics >C12-C44	<100 µg/kg	TM173		258000	470000	596000	237000	235000	182000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 3 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 3 @	<200 @	<200 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		436 @	<200 3 @	268 @	<200 @	663 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		734 @	<200 3 @	581 @	<200 @	1340 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		11900	4280	6770	3610	428	6030
Aromatics >EC16-EC21	<100 µg/kg	TM173		35900	32400	44900	21000	6250	20100
Aromatics >EC21-EC35	<100 µg/kg	TM173		86100	191000	241000	142000	37300	252000
Aromatics >EC35-EC44	<100 µg/kg	TM173		36400	203000	234000	129000	11800	188000
Aromatics >EC40-EC44	<100 µg/kg	TM173		14900	85200	88000	46800	2870	72400
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		170000	431000	527000	296000	55800	466000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		431000	901000	1130000	533000	296000	648000

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1327	IP1327	IP1414	IP1414	IP1414	IP1414
			Depth (m)	3.00	4.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-53	141107-53	141107-53	141107-53	141107-53	141107-53
			Lab Sample No.(s)	10337594	10337604	10337609	10337613	10337617	10337621
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		89 @	55 @	91 @	85 @	102 @	85 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ #	738 @ #	7070 @ M	<880 @ #	<880 @ #	<880 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ #	<20 @ #	<20 @ M	<100 @ #	<100 @ #	<100 @ #
Benzene	<10 µg/kg	TM089		<200 @ #	<40 @ #	<40 @ M	<200 @ #	<200 @ #	<200 @ #
Toluene	<2 µg/kg	TM089		<40 @ #	<8 @ #	<8 @ M	<40 @ #	<40 @ #	<40 @ #
Ethylbenzene	<3 µg/kg	TM089		<60 @ #	<12 @ #	<12 @ M	<60 @ #	<60 @ #	<60 @ #
m,p-Xylene	<6 µg/kg	TM089		<120 @ #	<24 @ #	<24 @ M	<120 @ #	<120 @ #	<120 @ #
o-Xylene	<3 µg/kg	TM089		<60 @ #	<12 @ #	<12 @ M	<60 @ #	<60 @ #	<60 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<40 @	42.8 @	<200 @	<200 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	<40 @	132 @	<200 @	<200 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	68.4 @	1360 @	<200 @	<200 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	339 @	2760 @	<200 @	<200 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		42800	13400	130000	5350	13400	13600
Aliphatics >C16-C21	<100 µg/kg	TM173		55900	23200	157000	13100	40500	37700
Aliphatics >C21-C35	<100 µg/kg	TM173		363000	349000	235000	82100	197000	158000
Aliphatics >C35-C44	<100 µg/kg	TM173		243000	282000	65100	31500	87300	47500
Total Aliphatics >C12-C44	<100 µg/kg	TM173		704000	668000	586000	132000	338000	257000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	52.9 @	915 @	<200 @	<200 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	227 @	1840 @	<200 @	<200 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		8160	5070	17400	1550	3790	2170
Aromatics >EC16-EC21	<100 µg/kg	TM173		27700	19200	65300	9720	12000	6180
Aromatics >EC21-EC35	<100 µg/kg	TM173		353000	409000	184000	128000	162000	119000
Aromatics >EC35-EC44	<100 µg/kg	TM173		380000	501000	70400	67300	131000	80400
Aromatics >EC40-EC44	<100 µg/kg	TM173		159000	209000	27300	21800	53100	28000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		769000	935000	337000	207000	310000	208000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1470000	1600000	931000	339000	648000	465000

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Customer Sample R	IP1414		
Depth (m)	5.00		
Sample Type	Soil/Solid		
Date Sampled	04/11/2014		
Sample Time	.		
Date Received	07/11/2014		
SDG Ref	141107-53		
Lab Sample No.(s)	10337625		
AGS Reference			

Component	LOD/Units	Method					
GRO Surrogate % recovery**	%	TM089	78 @				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<880 @ #				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<100 @ #				
Benzene	<10 µg/kg	TM089	<200 @ #				
Toluene	<2 µg/kg	TM089	<40 @ #				
Ethylbenzene	<3 µg/kg	TM089	<60 @ #				
m,p-Xylene	<6 µg/kg	TM089	<120 @ #				
o-Xylene	<3 µg/kg	TM089	<60 @ #				
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @				
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @				
Aliphatics >C5-C6	<10 µg/kg	TM089	<200 @				
Aliphatics >C6-C8	<10 µg/kg	TM089	<200 @				
Aliphatics >C8-C10	<10 µg/kg	TM089	<200 @				
Aliphatics >C10-C12	<10 µg/kg	TM089	<200 @				
Aliphatics >C12-C16	<100 µg/kg	TM173	18400				
Aliphatics >C16-C21	<100 µg/kg	TM173	34300				
Aliphatics >C21-C35	<100 µg/kg	TM173	113000				
Aliphatics >C35-C44	<100 µg/kg	TM173	54400				
Total Aliphatics >C12-C44	<100 µg/kg	TM173	220000				
Aromatics >EC5-EC7	<10 µg/kg	TM089	<200 @				
Aromatics >EC7-EC8	<10 µg/kg	TM089	<200 @				
Aromatics >EC8-EC10	<10 µg/kg	TM089	<200 @				
Aromatics >EC10-EC12	<10 µg/kg	TM089	<200 @				
Aromatics >EC12-EC16	<100 µg/kg	TM173	1940				
Aromatics >EC16-EC21	<100 µg/kg	TM173	7050				
Aromatics >EC21-EC35	<100 µg/kg	TM173	91400				
Aromatics >EC35-EC44	<100 µg/kg	TM173	69200				
Aromatics >EC40-EC44	<100 µg/kg	TM173	26800				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	170000				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	389000				

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Asbestos Identification - Solid Samples

		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	IP1323 0.50 SOLID 04/11/2014 00:00:00 13/11/2014 15:43:58 141107-53 10337537 TM048	27/11/14	Martin Cotterell	-	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	IP1324 1.00 SOLID 04/11/2014 00:00:00 14/11/2014 08:09:38 141107-53 10337643 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	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	IP1325 0.50 SOLID 04/11/2014 00:00:00 14/11/2014 08:11:00 141107-53 10337659 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	Not Detected (#)	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	IP1326 1.00 SOLID 04/11/2014 00:00:00 13/11/2014 09:09:22 141107-53 10337559 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Detected (#)	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	IP1327 1.00 SOLID 04/11/2014 00:00:00 13/11/2014 09:12:40 141107-53 10337585 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

		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	IP1414 1.00 SOLID 04/11/2014 00:00:00 13/11/2014 14:39:12 141107-53 10337609 TM048	27/11/14	Martin Cotterell	Loose fibres in soil	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1324 1.00 SOLID 04/11/2014 00:00:00 09/01/2015 07:00:19 141107-53 10337643 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1325 0.50 SOLID 04/11/2014 00:00:00 09/01/2015 06:55:58 141107-53 10337659 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1326 1.00 SOLID 04/11/2014 00:00:00 08/01/2015 09:13:53 141107-53 10337559 TM 304	None (#)	N/C	0.0010 (#)	<0.001 (#)	0.0014 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1327 1.00 SOLID 04/11/2014 00:00:00 08/01/2015 09:18:52 141107-53 10337585 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1414 1.00 SOLID 04/11/2014 00:00:00 08/01/2015 08:08:23 141107-53 10337609 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

Test Completion Dates

Lab Sample No(s)	10337537	10337599	10337629	10337634	10337643	10337647	10337651	10337655	10337543	10337547
Customer Sample Ref.	IP1323	IP1323	IP1323	IP1323	IP1324	IP1324	IP1324	IP1324	IP1325	IP1325
AGS Ref.										
Depth	0.50	1.50	2.50	4.00	1.00	2.00	3.00	4.00	1.50	3.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014				28-Nov-2014					
Asbestos Quantification - Full					13-Jan-2015					
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
GRO by GC-FID (S)	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014
Metals in solid samples by OES	24-Nov-2014	14-Nov-2014	18-Nov-2014	18-Nov-2014	24-Nov-2014	17-Nov-2014	17-Nov-2014	18-Nov-2014	21-Nov-2014	19-Nov-2014
PAH by GCMS	28-Nov-2014	20-Nov-2014	27-Nov-2014	20-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	13-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	13-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
Total Organic Carbon	19-Nov-2014							18-Nov-2014		
TPH CWG GC (S)	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014	29-Nov-2014

Lab Sample No(s)	10337554	10337659	10337559	10337570	10337575	10337580	10337585	10337589	10337594	10337604
Customer Sample Ref.	IP1325	IP1325	IP1326	IP1326	IP1326	IP1326	IP1327	IP1327	IP1327	IP1327
AGS Ref.										
Depth	4.00	0.50	1.00	2.00	3.00	4.00	1.00	2.00	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples		28-Nov-2014	28-Nov-2014				28-Nov-2014			
Asbestos Quantification - Full		12-Jan-2015	12-Jan-2015				12-Jan-2015			
EPH CWG (Aliphatic) GC (S)	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
EPH CWG (Aromatic) GC (S)	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
GRO by GC-FID (S)	29-Nov-2014	28-Nov-2014	27-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014
Metals in solid samples by OES	21-Nov-2014	20-Nov-2014	24-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	24-Nov-2014	12-Nov-2014	14-Nov-2014	24-Nov-2014
PAH by GCMS	28-Nov-2014	25-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014	27-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	07-Nov-2014	12-Nov-2014	12-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	13-Nov-2014	07-Nov-2014	07-Nov-2014	12-Nov-2014
Total Organic Carbon							19-Nov-2014			
TPH CWG GC (S)	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014	28-Nov-2014

Lab Sample No(s)	10337609	10337613	10337617	10337621	10337625
Customer Sample Ref.	IP1414	IP1414	IP1414	IP1414	IP1414
AGS Ref.					
Depth	1.00	2.00	3.00	4.00	5.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014				
Asbestos Quantification - Full	12-Jan-2015				
EPH CWG (Aliphatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
EPH CWG (Aromatic) GC (S)	28-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
GRO by GC-FID (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014
Metals in solid samples by OES	20-Nov-2014	19-Nov-2014	19-Nov-2014	21-Nov-2014	17-Nov-2014
PAH by GCMS	27-Nov-2014	27-Nov-2014	27-Nov-2014	28-Nov-2014	28-Nov-2014
pH	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Sample description	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon		19-Nov-2014			
TPH CWG GC (S)	28-Nov-2014	28-Nov-2014	28-Nov-2014	29-Nov-2014	28-Nov-2014

SDG:	141107-53	**Location:**	Coed Darcy	**Order Number:**	CD0958
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298545
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	293870

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

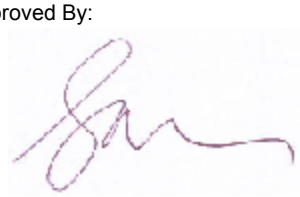
Date:	18 December 2014
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141107-18
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	296263

We received 22 samples on Friday November 07, 2014 and 22 of these samples were scheduled for analysis which was completed on Wednesday December 17, 2014. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10335112	IP1099		0.50	30/10/2014
10335122	IP1100		0.50	30/10/2014
10335139	IP1306		1.00	30/10/2014
10335144	IP1306		2.00	30/10/2014
10335149	IP1306		3.00	30/10/2014
10335154	IP1306		4.00	30/10/2014
10335107	TPE475		0.50	30/10/2014
10335097	TPE476		0.50	30/10/2014
10335062	TPE556		0.50	30/10/2014
10335160	TPE556		2.00	30/10/2014
10335019	TPE556		3.50	30/10/2014
10335031	TPE557		1.00	30/10/2014
10335041	TPE558		0.50	30/10/2014
10335051	TPE558		1.00	30/10/2014
10335073	TPE559		1.00	30/10/2014
10335079	TPE559		2.00	30/10/2014
10335088	TPE559		3.00	30/10/2014
10335092	TPE559		4.00	30/10/2014
10335002	TPE583		1.00	30/10/2014
10335101	TPE583		2.00	30/10/2014
10335129	TPE583		3.00	30/10/2014
10335134	TPE583		4.50	30/10/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			10335112	IP1099		0.50	250g Amber Jar (AL
			10335122	IP1100		0.50	250g Amber Jar (AL
			10335139	IP1306		1.00	250g Amber Jar (AL
			10335144	IP1306		2.00	250g Amber Jar (AL
			10335149	IP1306		3.00	250g Amber Jar (AL
			10335154	IP1306		4.00	250g Amber Jar (AL
			10335107	TPE475		0.50	250g Amber Jar (AL
			10335097	TPE476		0.50	250g Amber Jar (AL
			10335062	TPE556		0.50	250g Amber Jar (AL
			10335160	TPE556		2.00	250g Amber Jar (AL
			10335019	TPE556		3.50	250g Amber Jar (AL
			10335031	TPE557		1.00	250g Amber Jar (AL
			10335041	TPE558		0.50	250g Amber Jar (AL
			10335051	TPE558		1.00	250g Amber Jar (AL
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 11					400g Tub (ALE214)
Asbestos Quantification - Full	All	NDPs: 0 Tests: 7					400g Tub (ALE214)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 22					250g Amber Jar (AL
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 22					250g Amber Jar (AL
GRO by GC-FID (S)	All	NDPs: 0 Tests: 22					60g VOC (ALE215)
Metals in solid samples by OES	All	NDPs: 0 Tests: 22					250g Amber Jar (AL
PAH by GCMS	All	NDPs: 0 Tests: 22					250g Amber Jar (AL
pH	All	NDPs: 0 Tests: 22					400g Tub (ALE214)
Sample description	All	NDPs: 0 Tests: 21					250g Amber Jar (AL
Total Organic Carbon	All	NDPs: 0 Tests: 4					250g Amber Jar (AL
TPH CWG GC (S)	All	NDPs: 0 Tests: 22					250g Amber Jar (AL

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

Lab Sample No(s)	10335051	10335073	10335079	10335088	10335092	10335002	10335101	10335129	10335134
Customer Sample Reference	TPE558	TPE559	TPE559	TPE559	TPE559	TPE583	TPE583	TPE583	TPE583
AGS Reference									
Depth (m)	1.00	1.00	2.00	3.00	4.00	1.00	2.00	3.00	4.50

Container	Asbestos ID in Solid Samples	Asbestos Quantification - Full	EPH CWG (Aliphatic) GC (S)	EPH CWG (Aromatic) GC (S)	GRO by GC-FID (S)	Metals in solid samples by OES	PAH by GCMS	pH	Sample description	Total Organic Carbon	TPH CWG GC (S)
	All	All	All	All	All	All	All	All	All	All	All
	NDPs: 0 Tests: 11	NDPs: 0 Tests: 7	NDPs: 0 Tests: 22	NDPs: 0 Tests: 22	NDPs: 0 Tests: 22	NDPs: 0 Tests: 22	NDPs: 0 Tests: 22	NDPs: 0 Tests: 22	NDPs: 0 Tests: 21	NDPs: 0 Tests: 4	NDPs: 0 Tests: 22
400g Tub (ALE214)	X							X			
60g VOC (ALE215)					X						
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)	X	X						X			
60g VOC (ALE215)					X						
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X			
60g VOC (ALE215)											
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X			
60g VOC (ALE215)											
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X		X	
60g VOC (ALE215)											
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X			
60g VOC (ALE215)											
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X			
60g VOC (ALE215)											
250g Amber Jar (AL			X	X		X	X		X		X
400g Tub (ALE214)					X			X			
60g VOC (ALE215)					X						

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10335112	IP1099	0.50	Grey	Sandy Loam	0.1 - 2 mm	Stones	None
10335122	IP1100	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10335139	IP1306	1.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10335144	IP1306	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10335149	IP1306	3.00	Black	Sand	0.1 - 2 mm	Oil/Petroleum	Stones
10335154	IP1306	4.00	Black	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	None
10335107	TPE475	0.50	Beige	Sandy Loam	0.1 - 2 mm	Crushed Brick	Stones
10335097	TPE476	0.50	Black	Clinker	0.1 - 2 mm	N/A	Coal fragments
10335019	TPE556	3.50	Black	N/A	0.1 - 2 mm	Stones	N/A
10335062	TPE556	0.50	Beige	Sand	0.1 - 2 mm	Stones	None
10335160	TPE556	2.00	Black	N/A	0.1 - 2 mm	Stones	N/A
10335031	TPE557	1.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Crushed Brick	Stones
10335041	TPE558	0.50	Black	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10335051	TPE558	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Crushed Brick	Stones
10335073	TPE559	1.00	Black	Clinker	0.1 - 2 mm	Coal fragments	N/A
10335079	TPE559	2.00	Black	N/A	0.1 - 2 mm	Stones	None
10335088	TPE559	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10335092	TPE559	4.00	Black	N/A	0.1 - 2 mm	Stones	N/A
10335002	TPE583	1.00	Grey	Sandy Loam	0.1 - 2 mm	Stones	None
10335101	TPE583	2.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10335129	TPE583	3.00	Black	Sand	0.1 - 2 mm	Stones	None
10335134	TPE583	4.50	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Oil/Petroleum

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:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1099	IP1100	IP1306	IP1306	IP1306	IP1306
			Depth (m)	0.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335112	10335122	10335139	10335144	10335149	10335154
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.8	8.9	12	24	24	17
Soil Organic Matter (SOM)	<0.35 %	TM132		3.72 #		3.86 #			
pH	1 pH Units	TM133		8.39 M	7.79 M	7.45 M	5.92 M	6.41 M	6.58 M
Arsenic	<0.6 mg/kg	TM181		12.6 M	13.2 M	95.9 M	67.3 M	17 M	7.5 M
Cadmium	<0.02 mg/kg	TM181		0.265 M	0.241 M	1.34 M	0.701 M	0.356 M	0.0883 M
Chromium	<0.9 mg/kg	TM181		12.5 M	10.5 M	15 M	13.4 M	10.7 M	26.9 M
Copper	<1.4 mg/kg	TM181		25.9 M	31.3 M	270 M	246 M	63 M	30.9 M
Lead	<0.7 mg/kg	TM181		54.9 M	85.3 M	1130 M	576 M	66.1 M	34.2 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	0.582 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		19.8 M	17.6 M	33.8 M	35.3 M	24.9 M	10.3 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.08 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		15.3 #	15.6 #	17.4 #	25.6 #	32.2 #	67 #
Zinc	<1.9 mg/kg	TM181		170 M	152 M	2240 M	1080 M	124 M	71.6 M

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE475	TPE476	TPE556	TPE556	TPE556	TPE557
			Depth (m)	0.50	0.50	0.50	2.00	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335107	10335097	10335062	10335160	10335019	10335031
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	21	3.6	29	26	9.7
Soil Organic Matter (SOM)	<0.35 %	TM132				1.58 #			
pH	1 pH Units	TM133		8.42 M	7.86 #	11.9 M	6.31	6.89	7.8 M
Arsenic	<0.6 mg/kg	TM181		20.5 M	9.7 #	15.1 M	15.9	19	28.5 M
Cadmium	<0.02 mg/kg	TM181		0.345 M	<0.02 #	0.126 M	<0.02	<0.02	0.282 M
Chromium	<0.9 mg/kg	TM181		33.2 M	4.84 #	16.3 M	17.5	18.3	20.1 M
Copper	<1.4 mg/kg	TM181		116 M	41.9 #	53 M	50.4	58.8	99.7 M
Lead	<0.7 mg/kg	TM181		220 M	16.6 #	60.4 M	12.7	18.9	116 M
Mercury	<0.14 mg/kg	TM181		0.259 M	<0.14 #	0.336 M	<0.14	<0.14	0.198 M
Nickel	<0.2 mg/kg	TM181		31.8 M	13.5 #	14.7 M	37.9	39	28.1 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1	<1	<1 #
Vanadium	<0.2 mg/kg	TM181		21.3 #	15.3 #	15.6 #	48.7	49.5	22.1 #
Zinc	<1.9 mg/kg	TM181		393 M	30.7 #	215 M	35.2	34.3	251 M

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE558	TPE558	TPE559	TPE559	TPE559	TPE559
			Depth (m)	0.50	1.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335041	10335051	10335073	10335079	10335088	10335092
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.5	9.8	28	31	32	32
pH	1 pH Units	TM133		8.51 M	8.67 M	6.83 #	6.38	6.45 M	6.59
Arsenic	<0.6 mg/kg	TM181		25.8 M	30.6 M	16.8 #	13.9	16.6 M	15.5
Cadmium	<0.02 mg/kg	TM181		0.413 M	<0.02 M	<0.02 #	<0.02	<0.02 M	0.0741
Chromium	<0.9 mg/kg	TM181		15.1 M	20.2 M	6.96 #	10	8.89 M	8.77
Copper	<1.4 mg/kg	TM181		151 M	301 M	50.5 #	38.9	46.2 M	43.2
Lead	<0.7 mg/kg	TM181		142 M	107 M	15.6 #	9.91	12.2 M	11.9
Mercury	<0.14 mg/kg	TM181		0.486 M	0.475 M	<0.14 #	<0.14	<0.14 M	<0.14
Nickel	<0.2 mg/kg	TM181		21.8 M	44.2 M	34.7 #	36.6	37.4 M	36.5
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.22 #	1.24	1.22 #	1.25
Vanadium	<0.2 mg/kg	TM181		22.6 #	45.7 #	22.3 #	32.9	27.1 #	26.2
Zinc	<1.9 mg/kg	TM181		382 M	272 M	36.5 #	17.8	42.2 M	29.2

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE583	TPE583	TPE583	TPE583		
			Depth (m)	1.00	2.00	3.00	4.50		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014		
			Sample Time	.	.	.	.		
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			SDG Ref	141107-18	141107-18	141107-18	141107-18		
			Lab Sample No.(s)	10335002	10335101	10335129	10335134		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	23	26	30		
Soil Organic Matter (SOM)	<0.35 %	TM132		3.81 #					
pH	1 pH Units	TM133		7.62 M	7.63 M	7.43 M	8.1 M		
Arsenic	<0.6 mg/kg	TM181		118 M	10.5 M	38 M	15.4 M		
Cadmium	<0.02 mg/kg	TM181		1.68 M	0.375 M	0.808 M	0.277 M		
Chromium	<0.9 mg/kg	TM181		15.9 M	32.1 M	24.6 M	6.41 M		
Copper	<1.4 mg/kg	TM181		347 M	125 M	198 M	38 M		
Lead	<0.7 mg/kg	TM181		1730 M	267 M	344 M	39.8 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.653 M	24 M	0.674 M		
Nickel	<0.2 mg/kg	TM181		40.2 M	43.2 M	51.5 M	21.6 M		
Selenium	<1 mg/kg	TM181		1.34 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181		20.4 #	94.7 #	57.3 #	12.1 #		
Zinc	<1.9 mg/kg	TM181		3060 M	262 M	613 M	107 M		

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1099	IP1100	IP1306	IP1306	IP1306	IP1306
			Depth (m)	0.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335112	10335122	10335139	10335144	10335149	10335154
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		88.2	99.3	98.5	111	97.8	113
Acenaphthene-d10 % recovery**	%	TM218		87.2	100	97.6	110	112	102
Phenanthrene-d10 % recovery**	%	TM218		86.9	95.8	95.7	95.5	98.5	99.9
Chrysene-d12 % recovery**	%	TM218		90.4	98.1	99.9	77.8	113	118
Perylene-d12 % recovery**	%	TM218		104	92.8	106	75.8	126	122
Naphthalene	<9 µg/kg	TM218		81 @ M	89.7 @ M	56.1 @ M	698 @ M	53100 @ M	14100 @ M
Acenaphthylene	<12 µg/kg	TM218		77.2 @ M	71 @ M	18.3 @ M	116 @ M	1680 @ M	155 @ M
Acenaphthene	<8 µg/kg	TM218		81.3 @ M	49.6 @ M	22.2 @ M	394 @ M	10200 @ M	1620 @ M
Fluorene	<10 µg/kg	TM218		135 @ M	105 @ M	48.7 @ M	327 @ M	81200 @ M	14800 @ M
Phenanthrene	<15 µg/kg	TM218		591 @ M	311 @ M	161 @ M	952 @ M	663000 @ M	117000 @ M
Anthracene	<16 µg/kg	TM218		239 @ M	175 @ M	34.2 @ M	188 @ M	64800 @ M	10900 @ M
Fluoranthene	<17 µg/kg	TM218		1060 @ M	513 @ M	128 @ M	580 @ M	37700 @ M	6300 @ M
Pyrene	<15 µg/kg	TM218		1170 @ M	725 @ M	176 @ M	892 @ M	97800 @ M	21100 @ M
Benz(a)anthracene	<14 µg/kg	TM218		794 @ M	388 @ M	77.7 @ M	229 @ M	56100 @ M	8130 @ M
Chrysene	<10 µg/kg	TM218		820 @ M	462 @ M	159 @ M	406 @ M	104000 @ M	16300 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1100 @ M	888 @ M	172 @ M	318 @ M	14100 @ M	3270 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		511 @ M	270 @ M	55 @ M	150 @ M	3510 @ M	1150 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		1010 @ M	525 @ M	146 @ M	190 @ M	13500 @ M	3330 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		645 @ M	365 @ M	103 @ M	124 @ M	2540 @ M	623 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		255 @ M	158 @ M	41.5 @ M	<115 @ M	3560 @ M	967 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		788 @ M	534 @ M	158 @ M	173 @ M	4060 @ M	860 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9360	5630	1560	5740	1210000	221000

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE475	TPE476	TPE556	TPE556	TPE556	TPE557
			Depth (m)	0.50	0.50	0.50	2.00	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335107	10335097	10335062	10335160	10335019	10335031
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.1	111	94.9	116	112	93.1
Acenaphthene-d10 % recovery**	%	TM218		93.3	107	91.5	114	113	89.9
Phenanthrene-d10 % recovery**	%	TM218		91.6	93	91.4	101	100	89
Chrysene-d12 % recovery**	%	TM218		93.9	71.2	95.7	96.8	92.4	91.8
Perylene-d12 % recovery**	%	TM218		95.7	47.5	98.9	102	81.5	94.1
Naphthalene	<9 µg/kg	TM218		93.6 @ M	321 @ #	77.2 @ M	271 @	107 @	32.5 @ M
Acenaphthylene	<12 µg/kg	TM218		43.4 @ M	34.3 @ #	41.5 @ M	54.2 @	<12 @	<12 @ M
Acenaphthene	<8 µg/kg	TM218		36.4 @ M	<8 @ #	60.6 @ M	<8 @	11.7 @	27.1 @ M
Fluorene	<10 µg/kg	TM218		45.5 @ M	29.5 @ #	48.9 @ M	21.4 @	16 @	24 @ M
Phenanthrene	<15 µg/kg	TM218		356 @ M	499 @ #	458 @ M	224 @	161 @	218 @ M
Anthracene	<16 µg/kg	TM218		123 @ M	55.2 @ #	122 @ M	55.1 @	<16 @	38.8 @ M
Fluoranthene	<17 µg/kg	TM218		714 @ M	147 @ #	652 @ M	129 @	76.4 @	336 @ M
Pyrene	<15 µg/kg	TM218		577 @ M	139 @ #	586 @ M	114 @	62 @	299 @ M
Benz(a)anthracene	<14 µg/kg	TM218		590 @ M	81.8 @ #	465 @ M	47 @	41.9 @	251 @ M
Chrysene	<10 µg/kg	TM218		671 @ M	237 @ #	532 @ M	66 @	109 @	311 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1340 @ M	132 @ #	911 @ M	331 @	237 @	552 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		404 @ M	24.3 @ #	257 @ M	55.2 @	39.9 @	173 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		748 @ M	36.4 @ #	515 @ M	85.9 @	55.6 @	332 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		633 @ M	<18 @ #	355 @ M	55.6 @	52.2 @	240 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		238 @ M	<23 @ #	136 @ M	61.6 @	51.9 @	86.7 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		818 @ M	<24 @ #	447 @ M	153 @	96.5 @	310 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		7430	1740	5660	1720	1120	3230

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE558	TPE558	TPE559	TPE559	TPE559	TPE559
			Depth (m)	0.50	1.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335041	10335051	10335073	10335079	10335088	10335092
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.7	95.6	100	100	105	104
Acenaphthene-d10 % recovery**	%	TM218		93.2	90.5	99.2	97.3	104	103
Phenanthrene-d10 % recovery**	%	TM218		90.8	87.2	83.1	81.1	89.5	91.2
Chrysene-d12 % recovery**	%	TM218		94.9	89.1	68.3	62.9	68.8	74.6
Perylene-d12 % recovery**	%	TM218		94.7	91.3	56.3	49.7	58.2	67.2
Naphthalene	<9 µg/kg	TM218		268 @ M	130 @ M	92.9 @ #	117 @	58.5 @ M	59.9 @ #
Acenaphthylene	<12 µg/kg	TM218		664 @ M	129 @ M	<12 @ #	<12 @	<12 @ M	<12 @ #
Acenaphthene	<8 µg/kg	TM218		277 @ M	55.1 @ M	<8 @ #	<8 @	<8 @ M	<8 @ #
Fluorene	<10 µg/kg	TM218		398 @ M	69.6 @ M	<10 @ #	<10 @	<10 @ M	<10 @ #
Phenanthrene	<15 µg/kg	TM218		2970 @ M	577 @ M	235 @ #	208 @	169 @ M	140 @ #
Anthracene	<16 µg/kg	TM218		965 @ M	179 @ M	<16 @ #	<16 @	<16 @ M	<16 @ #
Fluoranthene	<17 µg/kg	TM218		6000 @ M	1130 @ M	34.2 @ #	34.5 @	25.7 @ M	75.8 @ #
Pyrene	<15 µg/kg	TM218		4590 @ M	943 @ M	22.6 @ #	25.2 @	<15 @ M	64.9 @ #
Benz(a)anthracene	<14 µg/kg	TM218		3860 @ M	737 @ M	20.6 @ #	<14 @	<14 @ M	56.3 @ #
Chrysene	<10 µg/kg	TM218		4310 @ M	1010 @ M	89.2 @ #	68 @	63.3 @ M	76.2 @ #
Benzo(b)fluoranthene	<15 µg/kg	TM218		6940 @ M	1230 @ M	53.4 @ #	44 @	53.3 @ M	73.4 @ #
Benzo(k)fluoranthene	<14 µg/kg	TM218		2340 @ M	538 @ M	<14 @ #	<14 @	<14 @ M	<14 @ #
Benzo(a)pyrene	<15 µg/kg	TM218		5080 @ M	1050 @ M	<15 @ #	<15 @	<15 @ M	28.9 @ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		3430 @ M	685 @ M	<18 @ #	<18 @	<18 @ M	<18 @ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		1190 @ M	262 @ M	<23 @ #	<23 @	<23 @ M	<23 @ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4430 @ M	883 @ M	<24 @ #	<24 @	<24 @ M	<24 @ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		47700	9610	548	497	370	576

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE583	TPE583	TPE583	TPE583		
			Depth (m)	1.00	2.00	3.00	4.50		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014		
			Sample Time	.	.	.	.		
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			SDG Ref	141107-18	141107-18	141107-18	141107-18		
			Lab Sample No.(s)	10335002	10335101	10335129	10335134		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		100	105	113	96.9		
Acenaphthene-d10 % recovery**	%	TM218		99.2	108	111	101		
Phenanthrene-d10 % recovery**	%	TM218		97.9	103	105	89.3		
Chrysene-d12 % recovery**	%	TM218		104	106	109	95.8		
Perylene-d12 % recovery**	%	TM218		110	99	111	99.9		
Naphthalene	<9 µg/kg	TM218		66.8 @ M	308 @ M	464 @ M	14000 @ M		
Acenaphthylene	<12 µg/kg	TM218		44.3 @ M	47.5 @ M	110 @ M	<120 @ M		
Acenaphthene	<8 µg/kg	TM218		25.6 @ M	36.8 @ M	58.5 @ M	1490 @ M		
Fluorene	<10 µg/kg	TM218		80.7 @ M	75.9 @ M	96.2 @ M	2850 @ M		
Phenanthrene	<15 µg/kg	TM218		211 @ M	616 @ M	570 @ M	5790 @ M		
Anthracene	<16 µg/kg	TM218		61.5 @ M	199 @ M	140 @ M	896 @ M		
Fluoranthene	<17 µg/kg	TM218		340 @ M	295 @ M	496 @ M	480 @ M		
Pyrene	<15 µg/kg	TM218		413 @ M	485 @ M	600 @ M	1160 @ M		
Benz(a)anthracene	<14 µg/kg	TM218		310 @ M	213 @ M	340 @ M	394 @ M		
Chrysene	<10 µg/kg	TM218		432 @ M	352 @ M	669 @ M	754 @ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		466 @ M	287 @ M	683 @ M	290 @ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		186 @ M	101 @ M	304 @ M	<140 @ M		
Benzo(a)pyrene	<15 µg/kg	TM218		377 @ M	188 @ M	533 @ M	267 @ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		202 @ M	98.4 @ M	355 @ M	<180 @ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		78.5 @ M	75.1 @ M	<115 @ M	<230 @ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		236 @ M	298 @ M	681 @ M	450 @ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3530	3680	6100	28800		

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1099	IP1100	IP1306	IP1306	IP1306	IP1306
			Depth (m)	0.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335112	10335122	10335139	10335144	10335149	10335154
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74 @	80 @	89 @	90 @	91 @	68 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		18300 @ M	16000 @ M	270 @ M	104000 @ M	274000 @ M	116000 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<20 @ M	<100 @ M	<100 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<40 @ M	<200 @ M	<200 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<40 @ M	<8 @ M	<40 @ M	<40 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 @ M	<12 @ M	<60 @ M	<60 @ M	930 @ M
m,p-Xylene	<6 µg/kg	TM089		42.8 @ M	<120 @ M	<24 @ M	<120 @ M	<120 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	103 @ M	<12 @ M	<60 @ M	<60 @ M	1570 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		42.8 @	103 @	<9 @	<9 @	<180 @	1570 @
sum of detected BTEX by GC	<24 µg/kg	TM089		42.8 @	103 @	<24 @	<24 @	<480 @	2500 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<200 @	309 @	1020 @
Aliphatics >C6-C8	<10 µg/kg	TM089		1640 @	580 @	74.6 @	786 @	31200 @	14000 @
Aliphatics >C8-C10	<10 µg/kg	TM089		4530 @	3520 @	53.1 @	14700 @	67300 @	20900 @
Aliphatics >C10-C12	<10 µg/kg	TM089		5330 @	5620 @	49.7 @	47000 @	78400 @	38100 @
Aliphatics >C12-C16	<100 µg/kg	TM173		183000	273000	174000	932000	5010000	3460000
Aliphatics >C16-C21	<100 µg/kg	TM173		258000	400000	233000	1370000	5540000	2370000
Aliphatics >C21-C35	<100 µg/kg	TM173		419000	490000	310000	3180000	68200000	70300000
Aliphatics >C35-C44	<100 µg/kg	TM173		395000	339000	77400	1850000	9900000	10600000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1260000	1500000	794000	7340000	88700000	86700000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		3060 @	2450 @	<40 @	9810 @	44900 @	16400 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		3560 @	3750 @	<40 @	31300 @	52300 @	25400 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		38500	48600	19800	36700	520000	623000
Aromatics >EC16-EC21	<100 µg/kg	TM173		129000	191000	103000	172000	2660000	1810000
Aromatics >EC21-EC35	<100 µg/kg	TM173		496000	592000	290000	830000	13400000	26300000
Aromatics >EC35-EC44	<100 µg/kg	TM173		642000	602000	110000	393000	3370000	4290000
Aromatics >EC40-EC44	<100 µg/kg	TM173		295000	274000	44300	155000	1060000	930000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1310000	1430000	523000	1430000	20000000	33000000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2580000	2950000	1320000	8870000	109000000	120000000

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE475	TPE476	TPE556	TPE556	TPE556	TPE557
			Depth (m)	0.50	0.50	0.50	2.00	3.50	1.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335107	10335097	10335062	10335160	10335019	10335031
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86 @	82 @	87 @	83 @	80 @	81 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		3630 @ M	<880 @ #	220 @ M	<880 @ #	<880 @ #	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 @ #	<20 @ M	<100 @ #	<100 @ #	<20 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<200 @ #	<40 @ M	<200 @ #	<200 @ #	<40 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<40 @ #	<8 @ M	<40 @ #	<40 @ #	16.7 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<60 @ #	<12 @ M	<60 @ #	<60 @ #	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<120 @ #	<24 @ M	<120 @ #	<120 @ #	<24 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<60 @ #	<12 @ M	<60 @ #	<60 @ #	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		421 @	<200 @	42.5 @	<200 @	<200 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		1610 @	<200 @	57 @	<200 @	<200 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		7120	<100	11300	<100	6650	2880
Aliphatics >C16-C21	<100 µg/kg	TM173		40300	7530	36200	<100	12900	14200
Aliphatics >C21-C35	<100 µg/kg	TM173		188000	64300	126000	<100	78400	74100
Aliphatics >C35-C44	<100 µg/kg	TM173		141000	18300	38500	2090	37300	14700
Total Aliphatics >C12-C44	<100 µg/kg	TM173		376000	90100	212000	2090	135000	106000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<200 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		280 @	<200 @	42.5 @	<200 @	<200 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		1080 @	<200 @	<40 @	<200 @	<200 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		1770	743	1950	1050	1090	666
Aromatics >EC16-EC21	<100 µg/kg	TM173		9860	4610	9430	2650	2670	4300
Aromatics >EC21-EC35	<100 µg/kg	TM173		141000	42200	56400	177000	189000	49100
Aromatics >EC35-EC44	<100 µg/kg	TM173		139000	23900	28100	123000	127000	30100
Aromatics >EC40-EC44	<100 µg/kg	TM173		63600	9480	12200	35700	36300	12800
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		292000	71400	95900	304000	321000	84200
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		671000	162000	308000	306000	456000	190000

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE558	TPE558	TPE559	TPE559	TPE559	TPE559
			Depth (m)	0.50	1.00	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-18	141107-18	141107-18	141107-18	141107-18	141107-18
			Lab Sample No.(s)	10335041	10335051	10335073	10335079	10335088	10335092
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78 @	72 @	79 @	79 @	86 @	109 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	487 @ M	<880 @ #	<880 @ #	<880 @ M	<880 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M	<100 @ #	<100 @ #	<100 @ M	<100 @ #
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M	<200 @ #	<200 @ #	<200 @ M	<200 @ #
Toluene	<2 µg/kg	TM089		<40 @ M	<8 @ M	<40 @ #	<40 @ #	<40 @ M	<40 @ #
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<60 @ #	<60 @ #	<60 @ M	<60 @ #
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @ M	<120 @ #	<120 @ #	<120 @ M	<120 @ #
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<60 @ #	<60 @ #	<60 @ M	<60 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<180 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<480 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<200 @	<200 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	51.1 @	<200 @	<200 @	<200 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	122 @	<200 @	<200 @	<200 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	131 @	<200 @	<200 @	<200 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		7660	1550	2010	<100	<100	760
Aliphatics >C16-C21	<100 µg/kg	TM173		46300	5590	5840	2830	1370	2800
Aliphatics >C21-C35	<100 µg/kg	TM173		389000	40700	20900	12400	10300	15300
Aliphatics >C35-C44	<100 µg/kg	TM173		279000	18800	5070	2220	990	5050
Total Aliphatics >C12-C44	<100 µg/kg	TM173		721000	66600	33800	17400	12600	23900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<200 @	<200 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<200 @	<200 @	<200 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	85.5 @	<200 @	<200 @	<200 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	87.7 @	<200 @	<200 @	<200 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		5140	871	430	<100	<100	545
Aromatics >EC16-EC21	<100 µg/kg	TM173		43400	3560	788	<100	625	739
Aromatics >EC21-EC35	<100 µg/kg	TM173		461000	30200	12300	9440	7580	8240
Aromatics >EC35-EC44	<100 µg/kg	TM173		359000	18900	3420	3200	10200	5250
Aromatics >EC40-EC44	<100 µg/kg	TM173		163000	8090	628	<100	5420	2440
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		869000	53500	17000	12600	18400	14800
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1590000	121000	50800	30100	31100	39100

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend		Customer Sample R	TPE583	TPE583	TPE583	TPE583		
#	ISO17025 accredited.							
M	*m*CERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% 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							
1-5&+§@	Sample deviation (see appendix)							
		Depth (m)	1.00	2.00	3.00	4.50		
		Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
		Date Sampled	30/10/2014	30/10/2014	30/10/2014	30/10/2014		
		Sample Time	.	.	.	.		
		Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
		SDG Ref	141107-18	141107-18	141107-18	141107-18		
		Lab Sample No.(s)	10335002	10335101	10335129	10335134		
		AGS Reference						

Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	79 @	104 @	95 @	73 @		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	13500 @ M	319 @ M	16500 @ M	612000 @ M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ M	<100 @ M	<100 @ M		
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ M	<200 @ M	382 @ M		
Toluene	<2 µg/kg	TM089	<8 @ M	10.4 @ M	<40 @ M	<40 @ M		
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<60 @ M	<60 @ M		
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ M	<120 @ M	<120 @ M		
o-Xylene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<60 @ M	<60 @ M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<180 @		
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<480 @		
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<40 @	<200 @	5020 @		
Aliphatics >C6-C8	<10 µg/kg	TM089	285 @	83.2 @	602 @	104000 @		
Aliphatics >C8-C10	<10 µg/kg	TM089	2600 @	62.4 @	1690 @	178000 @		
Aliphatics >C10-C12	<10 µg/kg	TM089	5320 @	42.9 @	7690 @	124000 @		
Aliphatics >C12-C16	<100 µg/kg	TM173	263000	108000	104000	2390000		
Aliphatics >C16-C21	<100 µg/kg	TM173	262000	372000	290000	1580000		
Aliphatics >C21-C35	<100 µg/kg	TM173	238000	1070000	911000	5480000		
Aliphatics >C35-C44	<100 µg/kg	TM173	60000	632000	578000	26200000		
Total Aliphatics >C12-C44	<100 µg/kg	TM173	822000	2180000	1880000	35700000		
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<200 @	382 @		
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<200 @	<200 @		
Aromatics >EC8-EC10	<10 µg/kg	TM089	1730 @	63.7 @	1140 @	119000 @		
Aromatics >EC10-EC12	<10 µg/kg	TM089	3550 @	<40 @	5130 @	82500 @		
Aromatics >EC12-EC16	<100 µg/kg	TM173	29800	12000	8050	1650000		
Aromatics >EC16-EC21	<100 µg/kg	TM173	113000	79400	44200	887000		
Aromatics >EC21-EC35	<100 µg/kg	TM173	200000	781000	480000	3910000		
Aromatics >EC35-EC44	<100 µg/kg	TM173	67900	681000	385000	16700000		
Aromatics >EC40-EC44	<100 µg/kg	TM173	27400	278000	158000	8500000		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	410000	1550000	917000	23200000		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	1250000	3730000	2820000	59500000		

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1099 0.50 SOLID 30/10/2014 00:00:00 10/11/2014 10:07:14 141107-18 10335112 TM048	17/11/14	Kevin Gill	Loose fibres in soil	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	IP1100 0.50 SOLID 30/10/2014 00:00:00 07/11/2014 18:45:46 141107-18 10335122 TM048	17/11/14	Kevin Gill	-	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	IP1306 1.00 SOLID 30/10/2014 00:00:00 10/11/2014 13:14:07 141107-18 10335139 TM048	17/11/14	Kevin Gill	Loose fibres in Soil	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	TPE475 0.50 SOLID 30/10/2014 00:00:00 11/11/2014 12:43:18 141107-18 10335107 TM048	17/11/14	Kevin Gill	Loose fibres in soil	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	TPE476 0.50 SOLID 30/10/2014 00:00:00 11/11/2014 12:29:36 141107-18 10335097 TM048	17/11/14	Kevin Hughes	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	TPE556 0.50 SOLID 30/10/2014 00:00:00 07/11/2014 18:35:48 141107-18 10335062 TM048	17/11/14	Kevin Gill	-	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	TPE557 1.00 SOLID 30/10/2014 00:00:00 07/11/2014 16:01:29 141107-18 10335031 TM048	17/11/14	Kevin Gill	Loose fibres in soil	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	TPE558 0.50 SOLID 30/10/2014 00:00:00 07/11/2014 18:19:48 141107-18 10335041 TM048	17/11/14	Kevin Gill	-	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	TPE558 1.00 SOLID 30/10/2014 00:00:00 07/11/2014 18:39:47 141107-18 10335051 TM048	17/11/14	Kevin Gill	-	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	TPE559 1.00 SOLID 30/10/2014 00:00:00 07/11/2014 18:43:23 141107-18 10335073 TM048	18/11/14	Kevin Hughes	Loose fibres in soil	Detected (#)	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	TPE583 1.00 SOLID 30/10/2014 00:00:00 13/11/2014 13:06:07 141107-18 10335002 TM048	17/11/14	Kevin Gill	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1099 0.50 SOLID 30/10/2014 00:00:00 11/12/2014 12:17:49 141107-18 10335112 TM 304	Chrysotile (#)	Loose fibres in soil	0.0011 (#)	<0.001 (#)	0.0012 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1306 1.00 SOLID 30/10/2014 00:00:00 08/12/2014 12:36:01 141107-18 10335139 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE475 0.50 SOLID 30/10/2014 00:00:00 21/11/2014 09:12:41 141107-18 10335107 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE476 0.50 SOLID 30/10/2014 00:00:00 21/11/2014 10:31:10 141107-18 10335097 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE557 1.00 SOLID 30/10/2014 00:00:00 11/12/2014 14:34:20 141107-18 10335031 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE559 1.00 SOLID 30/10/2014 00:00:00 08/12/2014 12:38:30 141107-18 10335073 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE583 1.00 SOLID 30/10/2014 00:00:00 21/11/2014 09:13:25 141107-18 10335002 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10335112	10335122	10335139	10335144	10335149	10335154	10335107	10335097	10335019	10335062
Customer Sample Ref.	IP1099	IP1100	IP1306	IP1306	IP1306	IP1306	TPE475	TPE476	TPE556	TPE556
AGS Ref.										
Depth	0.50	0.50	1.00	2.00	3.00	4.00	0.50	0.50	3.50	0.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	18-Nov-2014	18-Nov-2014	18-Nov-2014				18-Nov-2014	18-Nov-2014		18-Nov-2014
Asbestos Quantification - Full	17-Dec-2014		17-Dec-2014				17-Dec-2014	17-Dec-2014		
EPH CWG (Aliphatic) GC (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	19-Nov-2014	19-Nov-2014	18-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	17-Nov-2014
Metals in solid samples by OES	13-Nov-2014	13-Nov-2014	14-Nov-2014	19-Nov-2014	17-Nov-2014	17-Nov-2014	13-Nov-2014	13-Nov-2014	17-Nov-2014	13-Nov-2014
PAH by GCMS	17-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	19-Nov-2014	17-Nov-2014	18-Nov-2014
pH	14-Nov-2014	17-Nov-2014	14-Nov-2014	17-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	17-Nov-2014
Sample description	11-Nov-2014	08-Nov-2014	07-Nov-2014	07-Nov-2014	08-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
Total Organic Carbon	14-Nov-2014		14-Nov-2014							14-Nov-2014
TPH CWG GC (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014

Lab Sample No(s)	10335160	10335031	10335041	10335051	10335073	10335079	10335088	10335092	10335002	10335101
Customer Sample Ref.	TPE556	TPE557	TPE558	TPE558	TPE559	TPE559	TPE559	TPE559	TPE583	TPE583
AGS Ref.										
Depth	2.00	1.00	0.50	1.00	1.00	2.00	3.00	4.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples		18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014				18-Nov-2014	
Asbestos Quantification - Full		16-Dec-2014			16-Dec-2014				17-Dec-2014	
EPH CWG (Aliphatic) GC (S)	20-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	18-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	20-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	18-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	19-Nov-2014	17-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	18-Nov-2014	20-Nov-2014
Metals in solid samples by OES	17-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	14-Nov-2014	17-Nov-2014	14-Nov-2014	13-Nov-2014
PAH by GCMS	15-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	17-Nov-2014
pH	14-Nov-2014	14-Nov-2014	17-Nov-2014	17-Nov-2014	17-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
Sample description	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	10-Nov-2014	08-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
Total Organic Carbon									14-Nov-2014	
TPH CWG GC (S)	20-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	20-Nov-2014	19-Nov-2014	20-Nov-2014

Lab Sample No(s)	10335129	10335134
Customer Sample Ref.	TPE583	TPE583
AGS Ref.		
Depth	3.00	4.50
Type	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	19-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	19-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	20-Nov-2014	20-Nov-2014
Metals in solid samples by OES	19-Nov-2014	17-Nov-2014
PAH by GCMS	18-Nov-2014	18-Nov-2014
pH	14-Nov-2014	14-Nov-2014
Sample description	08-Nov-2014	07-Nov-2014
TPH CWG GC (S)	20-Nov-2014	20-Nov-2014

SDG:	141107-18	**Location:**	Coed Darcy	**Order Number:**	CD0954
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	296263
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

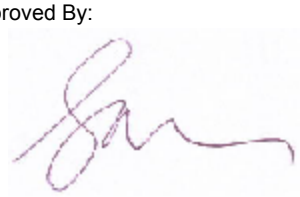
Date:	09 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141107-6
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298250

We received 23 samples on Friday November 07, 2014 and 23 of these samples were scheduled for analysis which was completed on Friday January 09, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10334128	IP1215		0.50	03/11/2014
10334122	IP1216		1.00	03/11/2014
10334118	IP1217		1.00	03/11/2014
10334114	IP1218		1.00	03/11/2014
10334029	IP1219		1.00	03/11/2014
10334079	IP1219		2.00	03/11/2014
10334103	IP1219		3.00	03/11/2014
10334109	IP1220		1.00	03/11/2014
10334065	IP1221		1.00	03/11/2014
10334070	IP1221		2.00	03/11/2014
10334075	IP1221		3.00	03/11/2014
10334083	IP1222		0.50	03/11/2014
10334088	IP1222		1.50	03/11/2014
10334094	IP1222		2.50	03/11/2014
10334099	IP1222		3.50	03/11/2014
10334047	IP1223		0.50	03/11/2014
10334053	IP1223		1.50	03/11/2014
10334057	IP1223		2.50	03/11/2014
10334061	IP1223		3.50	03/11/2014
10334133	IP1224		0.50	03/11/2014
10334033	IP1224		1.00	03/11/2014
10334038	IP1224		2.00	03/11/2014
10334043	IP1224		3.00	03/11/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- X — **Test**
- N — **No Determination Possible**

Lab Sample No(s)			10334128			10334122			10334118			10334114			10334029			10334079			10334103		
Customer Sample Reference			IP1215			IP1216			IP1217			IP1218			IP1219			IP1219			IP1219		
AGS Reference																							
Depth (m)			0.50			1.00			1.00			1.00			1.00			2.00			3.00		
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16		X			X			X			X			X			X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10		X						X			X						X				
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 23		X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 5	X																				
TPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X		

Lab Sample No(s)			10334109			10334065			10334070			10334075			10334083			10334088			10334094
Customer Sample Reference			IP1220			IP1221			IP1221			IP1221			IP1222			IP1222			IP1222
AGS Reference																					
Depth (m)			1.00			1.00			2.00			3.00			0.50			1.50			2.50
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16		X			X			X						X			X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10		X												X					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23			X			X			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 23		X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 5	X																		
TPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X			X			X			X			X

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			10334094	IP1222		2.50	400g Tub (ALE214)
							60g VOC (ALE215)
			10334099	IP1222		3.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334047	IP1223		0.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334053	IP1223		1.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334057	IP1223		2.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334061	IP1223		3.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334133	IP1224		0.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334033	IP1224		1.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334038	IP1224		2.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10334043	IP1224		3.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 16					X X X X X X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 10					X X X X X
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
Metals in solid samples by OES	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
PAH by GCMS	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
pH	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
Sample description	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X
Total Organic Carbon	All	NDPs: 0 Tests: 5					X X X
TPH CWG GC (S)	All	NDPs: 0 Tests: 23					X X X X X X X X X X X X

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10334128	IP1215	0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10334122	IP1216	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10334118	IP1217	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10334114	IP1218	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10334029	IP1219	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10334079	IP1219	2.00	Black	Sand	0.1 - 2 mm	Stones	None
10334103	IP1219	3.00	Black	Loamy Sand	0.063 - 0.1 mm	Stones	None
10334109	IP1220	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10334065	IP1221	1.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10334070	IP1221	2.00	Black	N/A	0.063 - 0.1 mm	Stones	None
10334075	IP1221	3.00	Dark Brown	Shale	0.1 - 2 mm	Stones	Vegetation
10334083	IP1222	0.50	Black	Sandy Loam	0.1 - 2 mm	Stones	None
10334088	IP1222	1.50	Black	Clinker	2 - 10 mm	Coal fragments	Stones
10334094	IP1222	2.50	Dark Brown	Shale	0.1 - 2 mm	Stones	Vegetation
10334099	IP1222	3.50	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation	None
10334047	IP1223	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10334053	IP1223	1.50	Black	Clinker	2 - 10 mm	Coal fragments	Stones
10334057	IP1223	2.50	Dark Brown	Shale	0.1 - 2 mm	Stones	None
10334061	IP1223	3.50	Dark Brown	Silty Clay	0.063 - 0.1 mm	Oil/Petroleum	Vegetation
10334033	IP1224	1.00	Black	Sandy Loam	2 - 10 mm	Stones	None
10334038	IP1224	2.00	Black	Sandy Loam	2 - 10 mm	Stones	None
10334043	IP1224	3.00	Black	Sandy Loam	0.1 - 2 mm	Oil/Petroleum	Stones
10334133	IP1224	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Crushed Brick	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.

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1215	IP1216	IP1217	IP1218	IP1219	IP1219
			Depth (m)	0.50	1.00	1.00	1.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334128	10334122	10334118	10334114	10334029	10334079
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	10	13	15	15	22
Actinolite*	-	SUB (ASB)		Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #
Amosite*	-	SUB (ASB)		Not Detected #	Not Detected #	Detected #	Not Detected #	Not Detected #	Not Detected #
Anthophyllite*	-	SUB (ASB)		Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #
Chrysotile*	-	SUB (ASB)		Detected #	Not Detected #	Not Detected #	Detected #	Not Detected #	Detected #
Crocidolite*	-	SUB (ASB)		Not Detected #	Not Detected #	Not Detected #	Detected #	Not Detected #	Not Detected #
Tremolite*	-	SUB (ASB)		Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #
Non-Asbestos Fibres Detected	-	SUB (ASB)		Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #	Not Detected #
Soil Organic Matter (SOM)	<0.35 %	TM132		6.19 #					
pH	1 pH Units	TM133		7.03 M	7.26 M	7.31 M	8.26 M	7.23 M	7.33 M
Arsenic	<0.6 mg/kg	TM181		81.6 M	76.2 M	92.9 M	49.9 M	101 M	28.9 M
Cadmium	<0.02 mg/kg	TM181		0.496 M	0.733 M	1.65 M	1.26 M	1.04 M	0.821 M
Chromium	<0.9 mg/kg	TM181		15.1 M	14.7 M	18.5 M	23.2 M	15.8 M	13.3 M
Copper	<1.4 mg/kg	TM181		481 M	208 M	401 M	163 M	227 M	116 M
Lead	<0.7 mg/kg	TM181		478 M	646 M	660 M	609 M	596 M	113 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	0.395 M	<0.14 M	1.06 M
Nickel	<0.2 mg/kg	TM181		36 M	38.6 M	41.3 M	31.5 M	33.9 M	49.4 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	1.3 #	<1 #
Vanadium	<0.2 mg/kg	TM181		16.8 #	18.2 #	19.9 #	35.1 #	18.7 #	34.2 #
Zinc	<1.9 mg/kg	TM181		1410 M	1400 M	1470 M	1610 M	1270 M	293 M

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1219	IP1220	IP1221	IP1221	IP1221	IP1222
			Depth (m)	3.00	1.00	1.00	2.00	3.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334103	10334109	10334065	10334070	10334075	10334083
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	16	13	19	21	12
Actinolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Amosite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Anthophyllite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Chrysotile*	-	SUB (ASB)			Detected #	Not Detected #	Not Detected		Detected #
Crocidolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Tremolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Non-Asbestos Fibres Detected	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected		Not Detected #
Soil Organic Matter (SOM)	<0.35 %	TM132			3.65 #				
pH	1 pH Units	TM133		7.58 M	7.48 M	7.82 M	7.35	7.78 #	8.22 M
Arsenic	<0.6 mg/kg	TM181		18.3 M	102 M	100 M	24.3	12.6 #	59.8 M
Cadmium	<0.02 mg/kg	TM181		0.323 M	0.973 M	1.11 M	0.0547	0.0353 #	1.05 M
Chromium	<0.9 mg/kg	TM181		10.7 M	16.9 M	16.9 M	9.93	10.9 #	16.6 M
Copper	<1.4 mg/kg	TM181		78.4 M	705 M	344 M	54.9	47.6 #	226 M
Lead	<0.7 mg/kg	TM181		42.9 M	825 M	873 M	131	76.8 #	750 M
Mercury	<0.14 mg/kg	TM181		0.316 M	<0.14 M	<0.14 M	0.255	<0.14 #	<0.14 M
Nickel	<0.2 mg/kg	TM181		32.6 M	33.7 M	42.5 M	41.2	24.3 #	33.5 M
Selenium	<1 mg/kg	TM181		<1 #	1.31 #	1.17 #	<1	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		29.8 #	20.9 #	21.4 #	38.1	28.1 #	21.1 #
Zinc	<1.9 mg/kg	TM181		291 M	1710 M	1800 M	149	165 #	1220 M

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1222	IP1222	IP1222	IP1223	IP1223	IP1223
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334088	10334094	10334099	10334047	10334053	10334057
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		17	14	29	13	20	23
Actinolite*	-	SUB (ASB)		Not Detected #			Not Detected #	Not Detected #	
Amosite*	-	SUB (ASB)		Not Detected #			Detected #	Not Detected #	
Anthophyllite*	-	SUB (ASB)		Not Detected #			Not Detected #	Not Detected #	
Chrysotile*	-	SUB (ASB)		Not Detected #			Not Detected #	Detected #	
Crocidolite*	-	SUB (ASB)		Not Detected #			Not Detected #	Detected #	
Tremolite*	-	SUB (ASB)		Not Detected #			Not Detected #	Not Detected #	
Non-Asbestos Fibres Detected	-	SUB (ASB)		Not Detected #			Not Detected #	Not Detected #	
Soil Organic Matter (SOM)	<0.35 %	TM132				5.76 #			
pH	1 pH Units	TM133		7.24 #	7.67 #	6.16 M	8.48 M	7.65 #	7.64 #
Arsenic	<0.6 mg/kg	TM181		29.8 #	24.6 #	92.7 M	77.8 M	28.1 #	11.6 #
Cadmium	<0.02 mg/kg	TM181		0.438 #	0.13 #	1.01 M	0.895 M	0.513 #	<0.02 #
Chromium	<0.9 mg/kg	TM181		11.3 #	15.4 #	13 M	16.8 M	23.4 #	10.6 #
Copper	<1.4 mg/kg	TM181		121 #	99.7 #	109 M	348 M	134 #	53.3 #
Lead	<0.7 mg/kg	TM181		212 #	196 #	54.4 M	1440 M	328 #	54.6 #
Mercury	<0.14 mg/kg	TM181		0.409 #	0.689 #	<0.14 M	<0.14 M	3.9 #	0.172 #
Nickel	<0.2 mg/kg	TM181		29.8 #	32.3 #	9.14 M	41 M	27.9 #	30.5 #
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		27 #	26.2 #	23.1 #	24.4 #	32.7 #	33.6 #
Zinc	<1.9 mg/kg	TM181		489 #	427 #	51.9 M	2580 M	532 #	117 #

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1223	IP1224	IP1224	IP1224	IP1224
			Depth (m)	3.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334061	10334133	10334033	10334038	10334043
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		27	13	13	18	35
Actinolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Amosite*	-	SUB (ASB)			Detected #	Not Detected #	Detected #	
Anthophyllite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Chrysotile*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Crocidolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Tremolite*	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Non-Asbestos Fibres Detected	-	SUB (ASB)			Not Detected #	Not Detected #	Not Detected #	
Soil Organic Matter (SOM)	<0.35 %	TM132		3.65 #				0.391 #
pH	1 pH Units	TM133		7.91 M	7.83 M	6.99 M	6.85 M	7.46 M
Arsenic	<0.6 mg/kg	TM181		44.7 M	127 M	15.6 M	26.7 M	11.6 M
Cadmium	<0.02 mg/kg	TM181		0.263 M	1.63 M	0.0972 M	<0.02 M	0.456 M
Chromium	<0.9 mg/kg	TM181		11.1 M	20 M	11.1 M	20.3 M	6.99 M
Copper	<1.4 mg/kg	TM181		81.1 M	525 M	76.4 M	140 M	34 M
Lead	<0.7 mg/kg	TM181		27.1 M	1970 M	102 M	22.9 M	35 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	1.03 M	0.455 M
Nickel	<0.2 mg/kg	TM181		5.9 M	42.8 M	35.8 M	78.8 M	13.6 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		25.2 #	23.2 #	36.9 #	80.2 #	14.9 #
Zinc	<1.9 mg/kg	TM181		55.7 M	3410 M	142 M	49.7 M	754 M

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1215	IP1216	IP1217	IP1218	IP1219	IP1219
			Depth (m)	0.50	1.00	1.00	1.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334128	10334122	10334118	10334114	10334029	10334079
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.9	98.2	98.9	101	99	116
Acenaphthene-d10 % recovery**	%	TM218		102	102	103	102	98.1	115
Phenanthrene-d10 % recovery**	%	TM218		105	105	105	104	94.5	106
Chrysene-d12 % recovery**	%	TM218		105	107	107	107	99.8	80.6
Perylene-d12 % recovery**	%	TM218		118	116	118	118	107	72.8
Naphthalene	<9 µg/kg	TM218		82.5 @ M	114 @ M	71.4 @ M	179 @ M	94 @ M	422 @ M
Acenaphthylene	<12 µg/kg	TM218		61.3 @ M	51.3 @ M	44.8 @ M	219 @ M	<12 @ M	29.2 @ M
Acenaphthene	<8 µg/kg	TM218		430 @ M	56.1 @ M	71.7 @ M	121 @ M	19.9 @ M	126 @ M
Fluorene	<10 µg/kg	TM218		349 @ M	121 @ M	140 @ M	165 @ M	58.2 @ M	85.2 @ M
Phenanthrene	<15 µg/kg	TM218		525 @ M	377 @ M	492 @ M	1240 @ M	238 @ M	731 @ M
Anthracene	<16 µg/kg	TM218		189 @ M	146 @ M	176 @ M	323 @ M	54.7 @ M	86.6 @ M
Fluoranthene	<17 µg/kg	TM218		571 @ M	534 @ M	569 @ M	2930 @ M	193 @ M	362 @ M
Pyrene	<15 µg/kg	TM218		756 @ M	699 @ M	659 @ M	2640 @ M	218 @ M	478 @ M
Benz(a)anthracene	<14 µg/kg	TM218		340 @ M	476 @ M	470 @ M	2350 @ M	178 @ M	217 @ M
Chrysene	<10 µg/kg	TM218		454 @ M	479 @ M	498 @ M	2110 @ M	341 @ M	401 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		541 @ M	888 @ M	675 @ M	5020 @ M	260 @ M	275 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		137 @ M	270 @ M	183 @ M	1510 @ M	81.5 @ M	106 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		340 @ M	571 @ M	479 @ M	3480 @ M	156 @ M	178 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		168 @ M	328 @ M	242 @ M	2090 @ M	104 @ M	90.5 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		89.3 @ M	130 @ M	101 @ M	778 @ M	48.7 @ M	64.2 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		208 @ M	388 @ M	297 @ M	2420 @ M	133 @ M	132 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5240	5630	5170	27600	2180	3780

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1219	IP1220	IP1221	IP1221	IP1221	IP1222
			Depth (m)	3.00	1.00	1.00	2.00	3.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334103	10334109	10334065	10334070	10334075	10334083
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		103	97.7	97.5	116	108	101
Acenaphthene-d10 % recovery**	%	TM218		104	99.4	97	116	111	100
Phenanthrene-d10 % recovery**	%	TM218		96.2	98.6	94.1	100	103	102
Chrysene-d12 % recovery**	%	TM218		77	98.1	101	85.1	76.9	101
Perylene-d12 % recovery**	%	TM218		70.4	101	107	80.6	67.9	109
Naphthalene	<9 µg/kg	TM218		744 @ M	88.1 @ M	85.2 @ M	631 @	67.4 @ #	57.4 @ M
Acenaphthylene	<12 µg/kg	TM218		130 @ M	<12 @ M	<12 @ M	<120 @	<12 @ #	<12 @ M
Acenaphthene	<8 µg/kg	TM218		29.8 @ M	83 @ M	19.5 @ M	<80 @	<8 @ #	16.2 @ M
Fluorene	<10 µg/kg	TM218		83.7 @ M	125 @ M	52.9 @ M	<100 @	<10 @ #	39.4 @ M
Phenanthrene	<15 µg/kg	TM218		1850 @ M	1160 @ M	319 @ M	282 @	54.3 @ #	267 @ M
Anthracene	<16 µg/kg	TM218		127 @ M	195 @ M	55.9 @ M	<160 @	<16 @ #	35.1 @ M
Fluoranthene	<17 µg/kg	TM218		390 @ M	1400 @ M	177 @ M	<170 @	<17 @ #	157 @ M
Pyrene	<15 µg/kg	TM218		648 @ M	1150 @ M	189 @ M	260 @	<15 @ #	185 @ M
Benz(a)anthracene	<14 µg/kg	TM218		348 @ M	679 @ M	209 @ M	<140 @	<14 @ #	147 @ M
Chrysene	<10 µg/kg	TM218		758 @ M	666 @ M	304 @ M	<100 @	<10 @ #	209 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		417 @ M	777 @ M	327 @ M	<150 @	<15 @ #	237 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		76.1 @ M	293 @ M	91.2 @ M	<140 @	<14 @ #	57.2 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		191 @ M	573 @ M	198 @ M	<150 @	<15 @ #	137 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		96 @ M	220 @ M	148 @ M	<180 @	<18 @ #	95.8 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		83.2 @ M	101 @ M	67.3 @ M	<230 @	<23 @ #	41 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		131 @ M	268 @ M	204 @ M	<240 @	<24 @ #	134 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6100	7780	2450	<1180	122	1820

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1222	IP1222	IP1222	IP1223	IP1223	IP1223
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334088	10334094	10334099	10334047	10334053	10334057
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		100	110	98.9	100	90.2	87.5
Acenaphthene-d10 % recovery**	%	TM218		101	108	97.6	101	88.4	87.7
Phenanthrene-d10 % recovery**	%	TM218		97.2	97.7	95.1	101	80.5	75.3
Chrysene-d12 % recovery**	%	TM218		91.4	91.9	96.2	99.3	80.7	66.8
Perylene-d12 % recovery**	%	TM218		97.2	87.3	103	103	84.1	65.3
Naphthalene	<9 µg/kg	TM218		13.3 @ #	242 @ #	35 @ M	65.8 @ M	1310 @ #	66.9 @ #
Acenaphthylene	<12 µg/kg	TM218		<12 @ #	17.3 @ #	<12 @ M	<12 @ M	<60 @ #	<12 @ #
Acenaphthene	<8 µg/kg	TM218		<8 @ #	25.3 @ #	12.7 @ M	<8 @ M	112 @ #	<8 @ #
Fluorene	<10 µg/kg	TM218		<10 @ #	39.1 @ #	<10 @ M	19.8 @ M	124 @ #	<10 @ #
Phenanthrene	<15 µg/kg	TM218		38.6 @ #	290 @ #	<15 @ M	129 @ M	1430 @ #	111 @ #
Anthracene	<16 µg/kg	TM218		<16 @ #	38.9 @ #	<16 @ M	23.5 @ M	239 @ #	<16 @ #
Fluoranthene	<17 µg/kg	TM218		<17 @ #	129 @ #	<17 @ M	80.2 @ M	2120 @ #	60.9 @ #
Pyrene	<15 µg/kg	TM218		<15 @ #	355 @ #	<15 @ M	88.2 @ M	2330 @ #	69.2 @ #
Benz(a)anthracene	<14 µg/kg	TM218		19.3 @ #	175 @ #	<14 @ M	78.3 @ M	1350 @ #	53.2 @ #
Chrysene	<10 µg/kg	TM218		<10 @ #	425 @ #	<10 @ M	89.9 @ M	1730 @ #	65.5 @ #
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 @ #	262 @ #	<15 @ M	132 @ M	2060 @ #	77.1 @ #
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ #	51.9 @ #	<14 @ M	41.3 @ M	782 @ #	<14 @ #
Benzo(a)pyrene	<15 µg/kg	TM218		<15 @ #	158 @ #	<15 @ M	91.9 @ M	1900 @ #	36.6 @ #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ #	71.2 @ #	<18 @ M	72 @ M	1730 @ #	<18 @ #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ #	91.4 @ #	<23 @ M	<23 @ M	534 @ #	<23 @ #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ #	199 @ #	<24 @ M	106 @ M	2780 @ #	<24 @ #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	2570	<118	1020	20500	540

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1223	IP1224	IP1224	IP1224	IP1224
			Depth (m)	3.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334061	10334133	10334033	10334038	10334043
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		98.1	96.5	99.7	127	103
Acenaphthene-d10 % recovery**	%	TM218		97.6	95.6	98.7	123	128
Phenanthrene-d10 % recovery**	%	TM218		95.7	94.1	81.2	109	104
Chrysene-d12 % recovery**	%	TM218		98.8	94.4	60.9	86.6	99.3
Perylene-d12 % recovery**	%	TM218		109	100	46.5	75.3	110
Naphthalene	<9 µg/kg	TM218		<9 @ M	79.9 @ M	86.5 @ M	1940 @ M	13100 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	30.6 @ M	<12 @ M	455 @ M	<120 @ M
Acenaphthene	<8 µg/kg	TM218		32.2 @ M	45.7 @ M	<8 @ M	52 @ M	5000 @ M
Fluorene	<10 µg/kg	TM218		88 @ M	123 @ M	<10 @ M	138 @ M	27500 @ M
Phenanthrene	<15 µg/kg	TM218		727 @ M	265 @ M	81.6 @ M	734 @ M	133000 @ M
Anthracene	<16 µg/kg	TM218		71.8 @ M	106 @ M	<16 @ M	109 @ M	14800 @ M
Fluoranthene	<17 µg/kg	TM218		77.3 @ M	322 @ M	24.3 @ M	460 @ M	12900 @ M
Pyrene	<15 µg/kg	TM218		232 @ M	342 @ M	30.2 @ M	495 @ M	39400 @ M
Benz(a)anthracene	<14 µg/kg	TM218		130 @ M	192 @ M	21 @ M	238 @ M	14800 @ M
Chrysene	<10 µg/kg	TM218		266 @ M	191 @ M	27.2 @ M	336 @ M	28700 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		122 @ M	300 @ M	21.7 @ M	403 @ M	4760 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	91.5 @ M	<14 @ M	128 @ M	528 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		74.4 @ M	183 @ M	<15 @ M	229 @ M	4020 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	116 @ M	<18 @ M	124 @ M	740 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	42.5 @ M	<23 @ M	52.8 @ M	1190 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		89.8 @ M	159 @ M	<24 @ M	188 @ M	1280 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1910	2590	293	6080	301000

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1215	IP1216	IP1217	IP1218	IP1219	IP1219
			Depth (m)	0.50	1.00	1.00	1.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334128	10334122	10334118	10334114	10334029	10334079
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		92 @	85 @	89 @	86 @	81 @	64 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		20700 @ M	20200 @ M	19500 @ M	289 @ M	12200 @ M	1180 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<50 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<100 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<20 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<30 @ M
m,p-Xylene	<6 µg/kg	TM089		27.6 @ M	30.2 @ M	<24 @ M	<24 @ M	30.7 @ M	<60 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<30 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		27.6 @	30.2 @	<9 @	<9 @	30.7 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		27.6 @	30.2 @	<24 @	<24 @	30.7 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		48.3 @	<40 @	<40 @	<40 @	54.3 @	<100 @
Aliphatics >C6-C8	<10 µg/kg	TM089		691 @	399 @	587 @	<40 @	900 @	138 @
Aliphatics >C8-C10	<10 µg/kg	TM089		3970 @	4180 @	3990 @	56.2 @	2920 @	228 @
Aliphatics >C10-C12	<10 µg/kg	TM089		7970 @	7630 @	7360 @	76.1 @	3780 @	353 @
Aliphatics >C12-C16	<100 µg/kg	TM173		432000	316000	322000	35900	159000	20700
Aliphatics >C16-C21	<100 µg/kg	TM173		403000	308000	332000	121000	238000	60600
Aliphatics >C21-C35	<100 µg/kg	TM173		601000	391000	512000	282000	366000	284000
Aliphatics >C35-C44	<100 µg/kg	TM173		164000	121000	160000	94900	98500	135000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1600000	1140000	1330000	533000	861000	500000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<100 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<100 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		2670 @	2820 @	2660 @	53.8 @	1980 @	175 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		5310 @	5090 @	4910 @	50.3 @	2520 @	236 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		57200	35400	35700	6950	4560	13300
Aromatics >EC16-EC21	<100 µg/kg	TM173		195000	136000	130000	61900	29000	39100
Aromatics >EC21-EC35	<100 µg/kg	TM173		436000	319000	330000	337000	133000	351000
Aromatics >EC35-EC44	<100 µg/kg	TM173		155000	134000	132000	164000	53900	169000
Aromatics >EC40-EC44	<100 µg/kg	TM173		59400	53700	52700	66100	20900	63900
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		844000	624000	627000	569000	221000	572000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2460000	1780000	1970000	1100000	1090000	1070000

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1219	IP1220	IP1221	IP1221	IP1221	IP1222
			Depth (m)	3.00	1.00	1.00	2.00	3.00	0.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334103	10334109	10334065	10334070	10334075	10334083
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		73 @	91 @	67 @	86 @	70 @	105 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		587 @ M	9550 @ M	<176 @ M	1330 @	2530 @ #	2690 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 @ M	<20 @ M	<20 @ M	<20 @	<20 @ #	<20 @ M
Benzene	<10 µg/kg	TM089		<100 @ M	<40 @ M	<40 @ M	<40 @	<40 @ #	<40 @ M
Toluene	<2 µg/kg	TM089		<20 @ M	<8 @ M	<8 @ M	9.92 @	<8 @ #	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<30 @ M	<12 @ M	<12 @ M	<12 @	<12 @ #	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<60 @ M	<24 @ M	<24 @ M	31 @	<24 @ #	<24 @ M
o-Xylene	<3 µg/kg	TM089		<30 @ M	<12 @ M	<12 @ M	28.5 @	31.5 @ #	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	59.5 @	31.5 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	69.4 @	31.5 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 @	51.2 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<100 @	670 @	<40 @	57 @	79.4 @	186 @
Aliphatics >C8-C10	<10 µg/kg	TM089		119 @	2060 @	<40 @	145 @	261 @	579 @
Aliphatics >C10-C12	<10 µg/kg	TM089		155 @	3220 @	<40 @	547 @	1140 @	909 @
Aliphatics >C12-C16	<100 µg/kg	TM173		6410	78100	16400	60100	35200	41800
Aliphatics >C16-C21	<100 µg/kg	TM173		37400	154000	80000	153000	82800	97900
Aliphatics >C21-C35	<100 µg/kg	TM173		235000	296000	248000	634000	297000	174000
Aliphatics >C35-C44	<100 µg/kg	TM173		105000	86000	64400	264000	155000	34600
Total Aliphatics >C12-C44	<100 µg/kg	TM173		384000	615000	409000	1110000	570000	348000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<100 @	1390 @	<40 @	167 @	247 @	385 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		104 @	2150 @	<40 @	365 @	760 @	606 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		7390	3380	1460	12200	13600	17400
Aromatics >EC16-EC21	<100 µg/kg	TM173		25800	23500	9840	35500	38500	96600
Aromatics >EC21-EC35	<100 µg/kg	TM173		206000	165000	129000	252000	167000	257000
Aromatics >EC35-EC44	<100 µg/kg	TM173		125000	69200	61500	121000	86600	97200
Aromatics >EC40-EC44	<100 µg/kg	TM173		47800	26400	23300	46200	34100	35400
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		364000	261000	201000	421000	305000	468000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		749000	885000	610000	1530000	878000	819000

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1222	IP1222	IP1222	IP1223	IP1223	IP1223
			Depth (m)	1.50	2.50	3.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334088	10334094	10334099	10334047	10334053	10334057
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		67 @	78 @	76 @	85 @	91 @	103 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		904 @ #	1990 @ #	9890 @ M	637 @ M	<880 @ #	1410 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<50 @ #	<20 @ #	<20 @ M	<20 @ M	<100 @ #	<50 @ #
Benzene	<10 µg/kg	TM089		<100 @ #	<40 @ #	<40 @ M	<40 @ M	<200 @ #	<100 @ #
Toluene	<2 µg/kg	TM089		<20 @ #	11.6 @ #	<8 @ M	<8 @ M	<40 @ #	<20 @ #
Ethylbenzene	<3 µg/kg	TM089		<30 @ #	<12 @ #	<12 @ M	<12 @ M	<60 @ #	<30 @ #
m,p-Xylene	<6 µg/kg	TM089		<60 @ #	<24 @ #	<24 @ M	<24 @ M	<120 @ #	<60 @ #
o-Xylene	<3 µg/kg	TM089		<30 @ #	<12 @ #	<12 @ M	<12 @ M	<60 @ #	<30 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<100 @	<40 @	63.5 @	<40 @	<200 @	<100 @
Aliphatics >C6-C8	<10 µg/kg	TM089		164 @	102 @	1030 @	89.7 @	<200 @	148 @
Aliphatics >C8-C10	<10 µg/kg	TM089		187 @	310 @	1170 @	125 @	218 @	259 @
Aliphatics >C10-C12	<10 µg/kg	TM089		196 @	773 @	4110 @	178 @	253 @	415 @
Aliphatics >C12-C16	<100 µg/kg	TM173		5170	51400	21900	13600	125000	8040
Aliphatics >C16-C21	<100 µg/kg	TM173		15400	66700	14600	76700	249000	21700
Aliphatics >C21-C35	<100 µg/kg	TM173		64700	248000	40100	132000	585000	66100
Aliphatics >C35-C44	<100 µg/kg	TM173		20000	59300	1780	35500	204000	32200
Total Aliphatics >C12-C44	<100 µg/kg	TM173		105000	426000	78300	258000	1160000	128000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<40 @	<200 @	<100 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<100 @	<40 @	<40 @	<40 @	<200 @	<100 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		170 @	247 @	781 @	97.8 @	205 @	236 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		131 @	515 @	2740 @	120 @	<200 @	277 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		5450	8880	20300	2000	90600	7040
Aromatics >EC16-EC21	<100 µg/kg	TM173		13500	42600	11700	7950	129000	19700
Aromatics >EC21-EC35	<100 µg/kg	TM173		114000	573000	76100	60400	477000	85600
Aromatics >EC35-EC44	<100 µg/kg	TM173		43400	156000	11700	29800	167000	43200
Aromatics >EC40-EC44	<100 µg/kg	TM173		13800	44300	3050	11500	60600	17100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		176000	780000	120000	100000	864000	155000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		282000	1210000	208000	358000	2030000	285000

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1223	IP1224	IP1224	IP1224	IP1224
			Depth (m)	3.50	0.50	1.00	2.00	3.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	03/11/2014	03/11/2014	03/11/2014	03/11/2014	03/11/2014
			Sample Time	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-6	141107-6	141107-6	141107-6	141107-6
			Lab Sample No.(s)	10334061	10334133	10334033	10334038	10334043
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		61 @	70 @	67 @	75 @	68 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		1260000 @ M	6410 @ M	1030 @ M	587 @ M	1690000 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M	<50 @ M	<50 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M	<100 @ M	<100 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<8 @ M	<20 @ M	<20 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<30 @ M	<30 @ M	15800 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @ M	<60 @ M	<60 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<30 @ M	<30 @ M	15200 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	15200 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	31000 @
Aliphatics >C5-C6	<10 µg/kg	TM089		2240 @	<40 @	<100 @	<100 @	17800 @
Aliphatics >C6-C8	<10 µg/kg	TM089		80100 @	160 @	132 @	<100 @	188000 @
Aliphatics >C8-C10	<10 µg/kg	TM089		263000 @	1220 @	199 @	105 @	389000 @
Aliphatics >C10-C12	<10 µg/kg	TM089		446000 @	2500 @	275 @	123 @	483000 @
Aliphatics >C12-C16	<100 µg/kg	TM173		50400	348000	13000	8850	12900000
Aliphatics >C16-C21	<100 µg/kg	TM173		19600	343000	29800	49500	4700000
Aliphatics >C21-C35	<100 µg/kg	TM173		79500	334000	69700	174000	3080000
Aliphatics >C35-C44	<100 µg/kg	TM173		27900	94200	68100	72600	746000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		177000	1120000	181000	305000	21400000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<100 @	<100 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<100 @	<100 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		175000 @	829 @	189 @	144 @	290000 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		297000 @	1660 @	183 @	<100 @	322000 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		53600	33500	1810	3810	7420000
Aromatics >EC16-EC21	<100 µg/kg	TM173		48300	106000	7350	13500	6170000
Aromatics >EC21-EC35	<100 µg/kg	TM173		335000	231000	49600	151000	5880000
Aromatics >EC35-EC44	<100 µg/kg	TM173		133000	83800	36900	130000	877000
Aromatics >EC40-EC44	<100 µg/kg	TM173		31800	30400	15700	55100	248000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		570000	455000	95700	298000	20400000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		2010000	1580000	277000	604000	43400000

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1215 0.50 SOLID 03/11/2014 00:00:00 07/01/2015 09:25:48 141107-6 10334128 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1217 1.00 SOLID 03/11/2014 00:00:00 07/01/2015 09:23:07 141107-6 10334118 TM 304	Chrysotile (Loose fibres in soil.) (#)	N/C	<0.001 (#)	0.0013 (#)	0.0015 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1218 1.00 SOLID 03/11/2014 00:00:00 07/01/2015 09:21:01 141107-6 10334114 TM 304	None (#)	N/C	0.0285 (#)	<0.001 (#)	0.0287 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1219 2.00 SOLID 03/11/2014 00:00:00 07/01/2015 08:31:04 141107-6 10334079 TM 304	Amosite (#)	Loose fibres in soil	0.0019 (#)	<0.001 (#)	0.0022 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1220 1.00 SOLID 03/11/2014 00:00:00 07/01/2015 09:08:28 141107-6 10334109 TM 304	None (#)	N/C	0.0028 (#)	<0.001 (#)	0.0028 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1222 0.50 SOLID 03/11/2014 00:00:00 07/01/2015 09:06:15 141107-6 10334083 TM 304	Amosite (#)	Loose fibres in soil	0.0017 (#)	0.0011 (#)	0.0028 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1223 0.50 SOLID 03/11/2014 00:00:00 07/01/2015 10:51:26 141107-6 10334047 TM 304	None (#)	N/C	0.0410 (#)	0.0039 (#)	0.0449 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1223 1.50 SOLID 03/11/2014 00:00:00 07/01/2015 10:48:12 141107-6 10334053 TM 304	Amosite - Loose fibres in soil. (#)	N/C	0.1618 (#)	0.0165 (#)	0.1783 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1224 0.50 SOLID 03/11/2014 00:00:00 07/01/2015 09:15:26 141107-6 10334133 TM 304	Chrysotile (#)	Loose fibres in soil	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1224 2.00 SOLID 03/11/2014 00:00:00 07/01/2015 09:13:26 141107-6 10334038 TM 304	Chrysotile (#)	Loose fibres in soil	0.0058 (#)	0.0022 (#)	0.0079 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
SUB (ASB)				
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10334128	10334122	10334118	10334114	10334029	10334079	10334103	10334109	10334065	10334070
Customer Sample Ref.	IP1215	IP1216	IP1217	IP1218	IP1219	IP1219	IP1219	IP1220	IP1221	IP1221
AGS Ref.										
Depth	0.50	1.00	1.00	1.00	1.00	2.00	3.00	1.00	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014		14-Nov-2014	14-Nov-2014	14-Nov-2014
Asbestos Quantification - Full	08-Jan-2015		08-Jan-2015	09-Jan-2015		09-Jan-2015		09-Jan-2015		
EPH CWG (Aliphatic) GC (S)	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014
EPH CWG (Aromatic) GC (S)	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014
Metals in solid samples by OES	14-Nov-2014	14-Nov-2014	19-Nov-2014	19-Nov-2014	25-Nov-2014	18-Nov-2014	17-Nov-2014	25-Nov-2014	25-Nov-2014	20-Nov-2014
PAH by GCMS	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014
pH	24-Nov-2014	24-Nov-2014	25-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	20-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014
Sample description	08-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	11-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014
Total Organic Carbon	19-Nov-2014							19-Nov-2014		
TPH CWG GC (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014

Lab Sample No(s)	10334075	10334083	10334088	10334094	10334099	10334047	10334053	10334057	10334061	10334033
Customer Sample Ref.	IP1221	IP1222	IP1222	IP1222	IP1222	IP1223	IP1223	IP1223	IP1223	IP1224
AGS Ref.										
Depth	3.00	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50	1.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*		14-Nov-2014	14-Nov-2014			14-Nov-2014	14-Nov-2014			14-Nov-2014
Asbestos Quantification - Full		09-Jan-2015				09-Jan-2015	08-Jan-2015			
EPH CWG (Aliphatic) GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	22-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014
EPH CWG (Aromatic) GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	22-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014
Metals in solid samples by OES	17-Nov-2014	19-Nov-2014	19-Nov-2014	17-Nov-2014	17-Nov-2014	25-Nov-2014	19-Nov-2014	17-Nov-2014	17-Nov-2014	19-Nov-2014
PAH by GCMS	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	19-Nov-2014	25-Nov-2014	26-Nov-2014	19-Nov-2014	19-Nov-2014	26-Nov-2014
pH	20-Nov-2014	24-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	25-Nov-2014	25-Nov-2014	20-Nov-2014	20-Nov-2014	24-Nov-2014
Sample description	11-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	08-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014
Total Organic Carbon					13-Nov-2014				13-Nov-2014	
TPH CWG GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014

Lab Sample No(s)	10334038	10334043	10334133
Customer Sample Ref.	IP1224	IP1224	IP1224
AGS Ref.			
Depth	2.00	3.00	0.50
Type	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014		14-Nov-2014
Asbestos Quantification - Full	09-Jan-2015		09-Jan-2015
EPH CWG (Aliphatic) GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014
EPH CWG (Aromatic) GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014
Metals in solid samples by OES	19-Nov-2014	24-Nov-2014	19-Nov-2014
PAH by GCMS	21-Nov-2014	25-Nov-2014	21-Nov-2014
pH	25-Nov-2014	19-Nov-2014	25-Nov-2014
Sample description	11-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon		17-Nov-2014	
TPH CWG GC (S)	26-Nov-2014	25-Nov-2014	25-Nov-2014

Derwentside Environmental Testing Services

Certificate of Analysis

Certificate Number 14-20469

13-Nov-14

Client	Alcontrol Laboratories Units 7 & 8 Hawarden Business Park Manor Road Hawarden Deeside CH5 3US
Our Reference	14-20469
Client Reference	141107-6
Contract Title	141107-6
Description	16 Soil samples.
Date Received	11-Nov-14
Date Started	11-Nov-14
Date Completed	13-Nov-14
Test Procedures	Asbestos Analysis DETSC 1101.
Notes	Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Asbestos Analysis
Soil Samples

Our Ref 14-20469
Client Ref 141107-6
Contract Title 141107-6

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
728773	10349891 IP1215 0.50	SOIL	Chrysotile	Small bundle of Chrysotile fibres	Keith Wilson
728774	10349889 IP1216 1.00	SOIL	NAD	none	Keith Wilson
728775	10349881 IP1217 1.00	SOIL	Amosite	Clumps & loose bundles of Amosite fibres	Keith Wilson
728776	10349876 IP1218 1.00	SOIL	Chrysotile Crocidolite	Insulation debris present	Keith Wilson
728777	10349885 IP1219 1.00	SOIL	NAD	none	Keith Wilson
728778	10349879 IP1219 2.00	SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
728779	10350602 IP1220 1.00	SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
728780	10350600 IP1221 1.00	SOIL	NAD	none	Keith Wilson
728781	10350603 IP1221 2.00	SOIL	NAD	none	Keith Wilson
728782	10350593 IP1222 0.50	SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
728783	10349563 IP1222 1.50	SOIL	NAD	none	Keith Wilson
728784	10349561 IP1223 0.50	SOIL	Amosite	Clumps & loose bundles of Amosite fibres	Keith Wilson
728785	10349568 IP1223 1.50	SOIL	Chrysotile Crocidolite	Insulation debris present & loose bunles of Chrysotile & Crocidolite	Keith Wilson
728786	10349505 IP1224 0.50	SOIL	Amosite	Clumps & loose bundles of Amosite fibres	Keith Wilson
728787	10349573 IP1224 1.00	SOIL	NAD	none	Keith Wilson
728788	10349514 IP1224 2.00	SOIL	Amosite	Bundles of Amosite fibres	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 14-20469
Client Ref 141107-6
Contract 141107-6

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
728773	10349891 0.50 SOIL	03/11/14	PT 500ml		
728774	10349889 1.00 SOIL	03/11/14	PT 500ml		
728775	10349881 1.00 SOIL	03/11/14	PT 500ml		
728776	10349876 1.00 SOIL	03/11/14	PT 500ml		
728777	10349885 1.00 SOIL	03/11/14	PT 500ml		
728778	10349879 2.00 SOIL	03/11/14	PT 500ml		
728779	10350602 1.00 SOIL	03/11/14	PT 500ml		
728780	10350600 1.00 SOIL	03/11/14	PT 500ml		
728781	10350603 2.00 SOIL	03/11/14	PT 500ml		
728782	10350593 0.50 SOIL	03/11/14	PT 500ml		
728783	10349563 1.50 SOIL	03/11/14	PT 500ml		
728784	10349561 0.50 SOIL	03/11/14	PT 500ml		
728785	10349568 1.50 SOIL	03/11/14	PT 500ml		
728786	10349505 0.50 SOIL	03/11/14	PT 500ml		
728787	10349573 1.00 SOIL	03/11/14	PT 500ml		
728788	10349514 2.00 SOIL	03/11/14	PT 500ml		

Key: P-Plastic T-Tub

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

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

SDG:	141107-6	**Location:**	Coed Darcy	**Order Number:**	CD0953
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298250
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

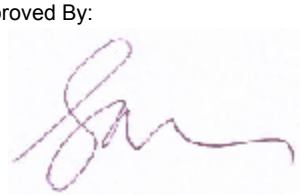
Date:	12 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141107-3
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298444

We received 34 samples on Friday November 07, 2014 and 34 of these samples were scheduled for analysis which was completed on Monday January 12, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10333478	IP1101		0.50	31/10/2014
10333490	IP1101		1.50	31/10/2014
10333494	IP1101		2.50	31/10/2014
10333498	IP1101		4.00	31/10/2014
10333503	IP1109		0.50	31/10/2014
10333508	IP1109		0.80	31/10/2014
10333513	IP1109		1.50	31/10/2014
10333518	IP1109		3.00	31/10/2014
10333443	IP1225		0.50	31/10/2014
10333447	IP1225		1.50	31/10/2014
10333453	IP1225		2.50	31/10/2014
10333457	IP1225		3.50	31/10/2014
10333594	IP1305		1.00	31/10/2014
10333602	IP1305		2.00	31/10/2014
10333438	IP1305		3.00	31/10/2014
10333577	TPE546		0.50	31/10/2014
10333581	TPE546		1.50	31/10/2014
10333586	TPE546		2.50	31/10/2014
10333433	TPE547		1.00	31/10/2014
10333482	TPE547		2.00	31/10/2014
10333542	TPE547		3.00	31/10/2014
10333572	TPE547		4.00	31/10/2014
10333553	TPE548		0.50	31/10/2014
10333558	TPE548		1.50	31/10/2014
10333563	TPE548		2.50	31/10/2014
10333568	TPE548		3.50	31/10/2014
10333526	TPE549		0.50	31/10/2014
10333532	TPE549		1.50	31/10/2014
10333536	TPE549		2.50	31/10/2014
10333548	TPE549		3.50	31/10/2014
10333462	TPE584		0.50	31/10/2014
10333466	TPE584		1.50	31/10/2014
10333470	TPE584		2.50	31/10/2014
10333474	TPE584		3.50	31/10/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			10333478	IP1101		0.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333490	IP1101		1.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333494	IP1101		2.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333498	IP1101		4.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333503	IP1109		0.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333508	IP1109		0.80	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333513	IP1109		1.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333518	IP1109		3.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333443	IP1225		0.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333447	IP1225		1.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333453	IP1225		2.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333457	IP1225		3.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333594	IP1305		1.00	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
			10333602	IP1305		2.00	250g Amber Jar (AL
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 7					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 34					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 34					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 34					
Metals in solid samples by OES	All	NDPs: 0 Tests: 34					
PAH by GCMS	All	NDPs: 0 Tests: 34					
pH	All	NDPs: 0 Tests: 34					
Sample description	All	NDPs: 0 Tests: 32					
Total Organic Carbon	All	NDPs: 0 Tests: 5					
TPH CWG GC (S)	All	NDPs: 0 Tests: 34					

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Asbestos ID in Solid Samples	Asbestos Quantification - Full	EPH CWG (Aliphatic) GC (S)	EPH CWG (Aromatic) GC (S)	GRO by GC-FID (S)	Metals in solid samples by OES	PAH by GCMS	pH	Sample description	Total Organic Carbon	TPH CWG GC (S)
					All	All	All	All	All	All	All	All	All	All	All
					NDPs: 0 Tests: 10	NDPs: 0 Tests: 7	NDPs: 0 Tests: 34	NDPs: 0 Tests: 34	NDPs: 0 Tests: 34	NDPs: 0 Tests: 34	NDPs: 0 Tests: 34	NDPs: 0 Tests: 34	NDPs: 0 Tests: 32	NDPs: 0 Tests: 5	NDPs: 0 Tests: 34
10333602	IP1305		2.00	400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333438	IP1305		3.00	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)										X	
				60g VOC (ALE215)					X			X			
10333577	TPE546		0.50	250g Amber Jar (AL		X	X	X			X		X		X
				400g Tub (ALE214)	X										
				60g VOC (ALE215)					X			X			
10333581	TPE546		1.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333586	TPE546		2.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333433	TPE547		1.00	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)	X										
				60g VOC (ALE215)					X			X			
10333482	TPE547		2.00	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333542	TPE547		3.00	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333572	TPE547		4.00	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333553	TPE548		0.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)	X										
				60g VOC (ALE215)					X			X			
10333558	TPE548		1.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333563	TPE548		2.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333568	TPE548		3.50	250g Amber Jar (AL			X	X			X				X
				400g Tub (ALE214)											
				60g VOC (ALE215)					X			X			
10333526	TPE549		0.50	250g Amber Jar (AL			X	X			X		X		X
				400g Tub (ALE214)	X	X						X			

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

X **Test**

N **No Determination Possible**

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
			10333526	TPE549		0.50	60g VOC (ALE215)
			10333532	TPE549		1.50	250g Amber Jar (AL
			10333536	TPE549		2.50	400g Tub (ALE214)
			10333548	TPE549		3.50	60g VOC (ALE215)
			10333462	TPE584		0.50	250g Amber Jar (AL
			10333466	TPE584		1.50	400g Tub (ALE214)
			10333470	TPE584		2.50	60g VOC (ALE215)
			10333474	TPE584		3.50	250g Amber Jar (AL
							400g Tub (ALE214)
							60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 7					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 34					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 34					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 34					
Metals in solid samples by OES	All	NDPs: 0 Tests: 34					
PAH by GCMS	All	NDPs: 0 Tests: 34					
pH	All	NDPs: 0 Tests: 34					
Sample description	All	NDPs: 0 Tests: 32					
Total Organic Carbon	All	NDPs: 0 Tests: 5					
TPH CWG GC (S)	All	NDPs: 0 Tests: 34					

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10333478	IP1101	0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10333490	IP1101	1.50	Black	N/A	0.1 - 2 mm	Stones	Vegetation
10333494	IP1101	2.50	Light Brown	Sandy Clay	0.1 - 2 mm	None	None
10333498	IP1101	4.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Coal fragments	Stones
10333503	IP1109	0.50	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10333508	IP1109	0.80	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10333513	IP1109	1.50	Light Brown	Sandy Clay Loam	0.1 - 2 mm	None	None
10333518	IP1109	3.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Coal fragments	None
10333443	IP1225	0.50	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10333447	IP1225	1.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Vegetation	Stones
10333453	IP1225	2.50	Dark Brown	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	Vegetation
10333457	IP1225	3.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10333438	IP1305	3.00	Black	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	Vegetation
10333594	IP1305	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10333602	IP1305	2.00	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10333577	TPE546	0.50	Grey	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10333581	TPE546	1.50	Black	Clinker	0.1 - 2 mm	N/A	Stones
10333586	TPE546	2.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10333433	TPE547	1.00	Black	Sandy Loam	0.1 - 2 mm	Stones	None
10333482	TPE547	2.00	Black	N/A	0.1 - 2 mm	Stones	None
10333542	TPE547	3.00	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10333572	TPE547	4.00	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10333553	TPE548	0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10333558	TPE548	1.50	Black	Sand	0.1 - 2 mm	Stones	Vegetation
10333563	TPE548	2.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Vegetation
10333568	TPE548	3.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10333526	TPE549	0.50	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10333532	TPE549	1.50	Black	Sand	0.1 - 2 mm	Stones	Vegetation
10333536	TPE549	2.50	Black	N/A	0.1 - 2 mm	Stones	N/A
10333548	TPE549	3.50	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10333462	TPE584	0.50	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10333466	TPE584	1.50	Black	Loamy Sand	0.1 - 2 mm	Stones	None
10333470	TPE584	2.50	Black	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Coal fragments
10333474	TPE584	3.50	Black	Sandy Clay Loam	0.1 - 2 mm	Oil/Petroleum	Vegetation

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1101	IP1101	IP1101	IP1101	IP1109	IP1109
			Depth (m)	0.50	1.50	2.50	4.00	0.50	0.80
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333478	10333490	10333494	10333498	10333503	10333508
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	18	18	17	12	22
Soil Organic Matter (SOM)	<0.35 %	TM132							44.8 #
pH	1 pH Units	TM133		7.72 M	8.31	6.62 M	7.09 M	6.47 M	6.22 M
Arsenic	<0.6 mg/kg	TM181		18.6 M	35.9	10.1 M	13.3 M	28.1 M	192 M
Cadmium	<0.02 mg/kg	TM181		0.473 M	<0.02	<0.02 M	<0.02 M	0.588 M	1.13 M
Chromium	<0.9 mg/kg	TM181		23.5 M	9.12	18.6 M	15.3 M	13.6 M	14.3 M
Copper	<1.4 mg/kg	TM181		98.4 M	89.4	7.17 M	23.6 M	68.9 M	162 M
Lead	<0.7 mg/kg	TM181		70.2 M	21.5	10.7 M	18.9 M	27.4 M	93.9 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14	<0.14 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		34.6 M	39.9	14 M	21.3 M	24.4 M	39.8 M
Selenium	<1 mg/kg	TM181		<1 #	1.26	1.14 #	1.08 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		21.3 #	38	23.4 #	20.7 #	17.7 #	47.1 #
Zinc	<1.9 mg/kg	TM181		192 M	37.8	54.7 M	72.7 M	97.1 M	116 M

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1109	IP1109	IP1225	IP1225	IP1225	IP1225
			Depth (m)	1.50	3.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333513	10333518	10333443	10333447	10333453	10333457
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	15	18	14	41	33
pH	1 pH Units	TM133		4.41 M	6.58 M	7.75 M	8.38 M	7.45 M	7.62 M
Arsenic	<0.6 mg/kg	TM181		9.6 M	9.93 M	17.6 M	20.6 M	5.11 M	21.1 M
Cadmium	<0.02 mg/kg	TM181		0.0296 M	<0.02 M	0.704 M	0.291 M	0.25 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		18.8 M	16.3 M	16.5 M	16.5 M	5.17 M	14.4 M
Copper	<1.4 mg/kg	TM181		29.8 M	21.1 M	82.7 M	67.1 M	38.3 M	155 M
Lead	<0.7 mg/kg	TM181		16.1 M	12.6 M	105 M	132 M	135 M	79.8 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.236 M	<0.14 M	0.895 M	0.997 M
Nickel	<0.2 mg/kg	TM181		16.6 M	28.1 M	30 M	22.5 M	10.9 M	122 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		21.7 #	21.1 #	39.6 #	19.2 #	8.9 #	43 #
Zinc	<1.9 mg/kg	TM181		51.8 M	79.3 M	235 M	280 M	60 M	63.4 M

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1305	IP1305	IP1305	TPE546	TPE546	TPE546
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333594	10333602	10333438	10333577	10333581	10333586
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		28	33	46	18	32	21
Soil Organic Matter (SOM)	<0.35 %	TM132				33.3 #			
pH	1 pH Units	TM133		8.15 M	7.76 M	5.22 M	7.99 M	7 #	6.09 M
Arsenic	<0.6 mg/kg	TM181		10.1 M	11.4 M	43.3 M	25.6 M	12.3 #	10.7 M
Cadmium	<0.02 mg/kg	TM181		0.418 M	0.443 M	1.04 M	0.659 M	0.0541 #	<0.02 M
Chromium	<0.9 mg/kg	TM181		10.8 M	12.1 M	10.6 M	22.8 M	12.5 #	17.3 M
Copper	<1.4 mg/kg	TM181		45.8 M	56.7 M	70.1 M	87.9 M	47.1 #	11.3 M
Lead	<0.7 mg/kg	TM181		94 M	95.9 M	74.9 M	185 M	11.5 #	10.5 M
Mercury	<0.14 mg/kg	TM181		0.313 M	0.199 M	0.704 M	0.813 M	<0.14 #	<0.14 M
Nickel	<0.2 mg/kg	TM181		22.2 M	25.7 M	33 M	28.3 M	31.9 #	17.6 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	1.09 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		27 #	29.8 #	23.5 #	24.7 #	41.8 #	21 #
Zinc	<1.9 mg/kg	TM181		207 M	252 M	205 M	461 M	13.3 #	45.3 M

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R					
			TPE547	TPE547	TPE547	TPE547	TPE548	TPE548
Depth (m)			1.00	2.00	3.00	4.00	0.50	1.50
Sample Type			Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
Date Sampled			31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
Sample Time			.	.	.	.	.	.
Date Received			07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
SDG Ref			141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
Lab Sample No.(s)			10333433	10333482	10333542	10333572	10333553	10333558
AGS Reference								
Moisture Content Ratio (% of as received sample)	%	PM024	21	18	19	22	12	15
Soil Organic Matter (SOM)	<0.35 %	TM132	74.1 #					
pH	1 pH Units	TM133	7.34 M	7.21	6.97 M	6.7 M	7.92 M	5.79 M
Arsenic	<0.6 mg/kg	TM181	17.6 M	15.4	9.48 M	12.8 M	15.2 M	9.83 M
Cadmium	<0.02 mg/kg	TM181	1.11 M	0.405	<0.02 M	0.173 M	0.437 M	0.293 M
Chromium	<0.9 mg/kg	TM181	11.8 M	11.3	17.4 M	18.3 M	9.86 M	9.62 M
Copper	<1.4 mg/kg	TM181	64.3 M	42	3.74 M	27.2 M	41.1 M	44.4 M
Lead	<0.7 mg/kg	TM181	136 M	77.4	13.2 M	17.1 M	60.2 M	19.4 M
Mercury	<0.14 mg/kg	TM181	0.203 M	<0.14	<0.14 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181	32.4 M	28.9	17.4 M	22.8 M	17.1 M	35.7 M
Selenium	<1 mg/kg	TM181	<1 #	<1	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181	21.5 #	22.3	22.1 #	23.8 #	15.4 #	31.1 #
Zinc	<1.9 mg/kg	TM181	428 M	251	34.5 M	84.6 M	151 M	82.9 M

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE548	TPE548	TPE549	TPE549	TPE549	TPE549
			Depth (m)	2.50	3.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333563	10333568	10333526	10333532	10333536	10333548
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		25	12	14	28	24	22
Soil Organic Matter (SOM)	<0.35 %	TM132		5.84 #					
pH	1 pH Units	TM133		5.5 M	6.05 M	7.29 M	6.12 M	6.7	5.81 M
Arsenic	<0.6 mg/kg	TM181		17.3 M	8.07 M	23.8 M	14.6 M	14.7	10.5 M
Cadmium	<0.02 mg/kg	TM181		0.0456 M	0.0509 M	0.443 M	<0.02 M	0.196	<0.02 M
Chromium	<0.9 mg/kg	TM181		17.1 M	12.5 M	14.1 M	9.05 M	11.8	16.7 M
Copper	<1.4 mg/kg	TM181		30 M	17.6 M	82 M	40.3 M	67.3	11.8 M
Lead	<0.7 mg/kg	TM181		14.2 M	15.2 M	124 M	10.3 M	16.1	12.4 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M	<0.14	<0.14 M
Nickel	<0.2 mg/kg	TM181		15.8 M	29.7 M	19.8 M	33.3 M	45.4	16.7 M
Selenium	<1 mg/kg	TM181		1.3 #	<1 #	<1 #	<1 #	<1	<1 #
Vanadium	<0.2 mg/kg	TM181		21.3 #	16.1 #	18.6 #	28.4 #	38.9	22.1 #
Zinc	<1.9 mg/kg	TM181		59 M	64.6 M	293 M	36.5 M	43.1	50.6 M

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE584	TPE584	TPE584	TPE584		
			Depth (m)	0.50	1.50	2.50	3.50		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014		
			Sample Time	.	.	.	.		
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			SDG Ref	141107-3	141107-3	141107-3	141107-3		
			Lab Sample No.(s)	10333462	10333466	10333470	10333474		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	22	37	30		
Soil Organic Matter (SOM)	<0.35 %	TM132			50.7 #				
pH	1 pH Units	TM133		7.5 M	7.81 M	7.84 M	5.31 M		
Arsenic	<0.6 mg/kg	TM181		186 M	53.1 M	19.5 M	32.8 M		
Cadmium	<0.02 mg/kg	TM181		2.87 M	0.952 M	0.567 M	0.845 M		
Chromium	<0.9 mg/kg	TM181		19.8 M	20.3 M	9.92 M	12.4 M		
Copper	<1.4 mg/kg	TM181		625 M	272 M	52.1 M	23.4 M		
Lead	<0.7 mg/kg	TM181		2040 M	279 M	117 M	58.1 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	0.851 M	0.3 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		44.5 M	56.6 M	15.7 M	11.2 M		
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181		26.4 #	87.1 #	25.5 #	20.8 #		
Zinc	<1.9 mg/kg	TM181		3870 M	784 M	298 M	86 M		

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1101	IP1101	IP1101	IP1101	IP1109	IP1109
			Depth (m)	0.50	1.50	2.50	4.00	0.50	0.80
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333478	10333490	10333494	10333498	10333503	10333508
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.7	107	108	98.3	94.8	121
Acenaphthene-d10 % recovery**	%	TM218		96.9	103	107	97	91.5	121
Phenanthrene-d10 % recovery**	%	TM218		101	95.1	104	97.5	89.9	110
Chrysene-d12 % recovery**	%	TM218		101	87.5	93.8	105	89.3	94.5
Perylene-d12 % recovery**	%	TM218		111	79.9	88.5	106	87.8	74.2
Naphthalene	<9 µg/kg	TM218		101 @ M	590 @	<9 M	49.3 @ M	40.5 @ M	47.3 @ M
Acenaphthylene	<12 µg/kg	TM218		423 @ M	2070 @	<12 M	16.6 @ M	<12 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		120 @ M	208 @	<8 M	14.7 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		186 @ M	1040 @	<10 M	28.7 @ M	<10 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		1190 @ M	13300 @	<15 M	126 @ M	239 @ M	204 @ M
Anthracene	<16 µg/kg	TM218		471 @ M	3240 @	<16 M	32 @ M	<16 @ M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		5030 @ M	20000 @	<17 M	112 @ M	37.2 @ M	148 @ M
Pyrene	<15 µg/kg	TM218		4380 @ M	13100 @	<15 M	95.4 @ M	29.3 @ M	103 @ M
Benz(a)anthracene	<14 µg/kg	TM218		3560 @ M	8580 @	<14 M	43.7 @ M	20.5 @ M	50.1 @ M
Chrysene	<10 µg/kg	TM218		3240 @ M	7300 @	<10 M	74.8 @ M	123 @ M	90.1 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		5460 @ M	9900 @	<15 M	74.3 @ M	123 @ M	88.3 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1880 @ M	3800 @	<14 M	30 @ M	<14 @ M	21.1 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		4370 @ M	6190 @	<15 M	50.5 @ M	<15 @ M	31.4 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2640 @ M	3300 @	<18 M	30.7 @ M	<18 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		845 @ M	1210 @	<23 M	<23 @ M	<23 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2860 @ M	3340 @	<24 M	40.7 @ M	<24 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		36800	97300	<118	819	612	783

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1109	IP1109	IP1225	IP1225	IP1225	IP1225
			Depth (m)	1.50	3.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333513	10333518	10333443	10333447	10333453	10333457
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		99.2	98	97.6	96.2	99.8	100
Acenaphthene-d10 % recovery**	%	TM218		98.5	96.9	97	96.8	119	103
Phenanthrene-d10 % recovery**	%	TM218		99.2	97.7	90.5	97.6	100	101
Chrysene-d12 % recovery**	%	TM218		108	107	76.8	112	98.8	112
Perylene-d12 % recovery**	%	TM218		106	109	72.3	113	111	113
Naphthalene	<9 µg/kg	TM218		<9 @ M	<9 @ M	92.3 @ M	63.9 @ M	18000 @ M	583 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M	24.3 @ M	51.9 @ M	<60 @ M	36.3 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<8 @ M	10.8 @ M	69.5 @ M	9190 @ M	154 @ M
Fluorene	<10 µg/kg	TM218		<10 @ M	<10 @ M	20.1 @ M	78.8 @ M	53300 @ M	197 @ M
Phenanthrene	<15 µg/kg	TM218		34.8 @ M	49.1 @ M	272 @ M	550 @ M	397000 @ M	1100 @ M
Anthracene	<16 µg/kg	TM218		<16 @ M	<16 @ M	37.6 @ M	125 @ M	36300 @ M	296 @ M
Fluoranthene	<17 µg/kg	TM218		<17 @ M	<17 @ M	255 @ M	1010 @ M	20100 @ M	714 @ M
Pyrene	<15 µg/kg	TM218		<15 @ M	<15 @ M	220 @ M	953 @ M	67900 @ M	10900 @ M
Benz(a)anthracene	<14 µg/kg	TM218		<14 @ M	<14 @ M	136 @ M	690 @ M	29800 @ M	1350 @ M
Chrysene	<10 µg/kg	TM218		<10 @ M	<10 @ M	202 @ M	852 @ M	52500 @ M	5120 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<15 @ M	<15 @ M	209 @ M	1040 @ M	7860 @ M	1800 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	<14 @ M	64.9 @ M	456 @ M	<70 @ M	307 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 @ M	<15 @ M	112 @ M	981 @ M	7230 @ M	1710 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	<18 @ M	67.8 @ M	616 @ M	1160 @ M	427 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M	34 @ M	236 @ M	1930 @ M	678 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ M	<24 @ M	95.3 @ M	764 @ M	2490 @ M	1050 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<118	<118	1850	8540	705000	26400

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1305	IP1305	IP1305	TPE546	TPE546	TPE546
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333594	10333602	10333438	10333577	10333581	10333586
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		100	97.2	106	108	102	98.6
Acenaphthene-d10 % recovery**	%	TM218		100	98.5	124	110	100	100
Phenanthrene-d10 % recovery**	%	TM218		94.3	89.4	105	110	88	101
Chrysene-d12 % recovery**	%	TM218		79.2	84.9	123	114	68.5	116
Perylene-d12 % recovery**	%	TM218		74.2	70.8	124	117	51.5	119
Naphthalene	<9 µg/kg	TM218		696 @ M	2150 @ M	21400 @ M	63.3 @ M	38.8 @ #	<9 @ M
Acenaphthylene	<12 µg/kg	TM218		27.4 @ M	38.1 @ M	800 @ M	36.6 @ M	<12 @ #	<12 @ M
Acenaphthene	<8 µg/kg	TM218		16.8 @ M	28.9 @ M	7850 @ M	67.2 @ M	<8 @ #	<8 @ M
Fluorene	<10 µg/kg	TM218		29.5 @ M	92.9 @ M	17000 @ M	132 @ M	<10 @ #	<10 @ M
Phenanthrene	<15 µg/kg	TM218		346 @ M	544 @ M	50100 @ M	720 @ M	85.5 @ #	38.5 @ M
Anthracene	<16 µg/kg	TM218		97.9 @ M	71.9 @ M	7620 @ M	149 @ M	<16 @ #	<16 @ M
Fluoranthene	<17 µg/kg	TM218		241 @ M	142 @ M	3720 @ M	710 @ M	<17 @ #	<17 @ M
Pyrene	<15 µg/kg	TM218		281 @ M	185 @ M	10200 @ M	1030 @ M	<15 @ #	<15 @ M
Benz(a)anthracene	<14 µg/kg	TM218		117 @ M	73.1 @ M	2990 @ M	505 @ M	<14 @ #	<14 @ M
Chrysene	<10 µg/kg	TM218		165 @ M	172 @ M	8150 @ M	688 @ M	22 @ #	<10 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		192 @ M	101 @ M	1510 @ M	671 @ M	22.4 @ #	<15 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		47.4 @ M	29.8 @ M	719 @ M	218 @ M	<14 @ #	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		91.2 @ M	75.3 @ M	1540 @ M	488 @ M	<15 @ #	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		51.9 @ M	37.7 @ M	531 @ M	296 @ M	<18 @ #	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		33.2 @ M	36.9 @ M	588 @ M	135 @ M	<23 @ #	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		69.1 @ M	54.9 @ M	897 @ M	397 @ M	<24 @ #	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2500	3840	136000	6300	169	<118

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE547	TPE547	TPE547	TPE547	TPE548	TPE548
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333433	10333482	10333542	10333572	10333553	10333558
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		107	110	112	112	99.5	93.7
Acenaphthene-d10 % recovery**	%	TM218		106	108	111	112	97.9	91.7
Phenanthrene-d10 % recovery**	%	TM218		97.2	96.8	109	110	94.3	91.5
Chrysene-d12 % recovery**	%	TM218		81.4	84.9	97	99.5	97.4	84.2
Perylene-d12 % recovery**	%	TM218		74.8	71.2	94.7	104	103	79.8
Naphthalene	<9 µg/kg	TM218		143 @ M	280 @	<9 @ M	<9 @ M	23.7 @ M	<9 @ M
Acenaphthylene	<12 µg/kg	TM218		15.7 @ M	46.9 @	<12 @ M	<12 @ M	<12 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	19.8 @	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		18.4 @ M	35.3 @	<10 @ M	<10 @ M	14.8 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		308 @ M	368 @	<15 @ M	<15 @ M	101 @ M	35.2 @ M
Anthracene	<16 µg/kg	TM218		23.9 @ M	99.1 @	<16 @ M	<16 @ M	<16 @ M	<16 @ M
Fluoranthene	<17 µg/kg	TM218		142 @ M	278 @	<17 @ M	<17 @ M	152 @ M	<17 @ M
Pyrene	<15 µg/kg	TM218		110 @ M	197 @	<15 @ M	<15 @ M	140 @ M	19.7 @ M
Benz(a)anthracene	<14 µg/kg	TM218		70.3 @ M	133 @	<14 @ M	<14 @ M	122 @ M	21.5 @ M
Chrysene	<10 µg/kg	TM218		168 @ M	295 @	<10 @ M	<10 @ M	162 @ M	15.3 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		147 @ M	257 @	<15 @ M	<15 @ M	201 @ M	17.7 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		23.4 @ M	57.9 @	<14 @ M	<14 @ M	78.1 @ M	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		42.5 @ M	78.2 @	<15 @ M	<15 @ M	150 @ M	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		24.8 @ M	37.3 @	<18 @ M	<18 @ M	97.9 @ M	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @	<23 @ M	<23 @ M	39.9 @ M	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		32.3 @ M	43.6 @	<24 @ M	<24 @ M	138 @ M	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1270	2230	<118	<118	1420	<118

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE548	TPE548	TPE549	TPE549	TPE549	TPE549
			Depth (m)	2.50	3.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333563	10333568	10333526	10333532	10333536	10333548
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.7	106	97.3	115	93.1	113
Acenaphthene-d10 % recovery**	%	TM218		91.7	108	94	113	90.6	113
Phenanthrene-d10 % recovery**	%	TM218		91.5	106	93.1	89.3	84	110
Chrysene-d12 % recovery**	%	TM218		84.2	93	91.5	44	62.2	100
Perylene-d12 % recovery**	%	TM218		79.8	91.3	93	22	50	107
Naphthalene	<9 µg/kg	TM218		12.5 @ M	21.1 @ M	36.7 @ M	183 @ M	121 @ #	46.2 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M	<12 @ M	22 @ M	<12 @ #	<12 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	<8 @ M	10.2 @ M	<8 @ M	<8 @ #	<8 @ M
Fluorene	<10 µg/kg	TM218		<10 @ M	<10 @ M	18.7 @ M	<10 @ M	<10 @ #	<10 @ M
Phenanthrene	<15 µg/kg	TM218		43 @ M	145 @ M	98.2 @ M	205 @ M	156 @ #	<15 @ M
Anthracene	<16 µg/kg	TM218		<16 @ M	<16 @ M	26.2 @ M	<16 @ M	<16 @ #	<16 @ M
Fluoranthene	<17 µg/kg	TM218		<17 @ M	26 @ M	176 @ M	29.8 @ M	54.9 @ #	<17 @ M
Pyrene	<15 µg/kg	TM218		24.1 @ M	42.3 @ M	164 @ M	<15 @ M	51.2 @ #	<15 @ M
Benz(a)anthracene	<14 µg/kg	TM218		26.3 @ M	44.7 @ M	93.6 @ M	<14 @ M	26.8 @ #	<14 @ M
Chrysene	<10 µg/kg	TM218		18.7 @ M	70.8 @ M	156 @ M	24.6 @ M	57.7 @ #	<10 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		21.7 @ M	69.4 @ M	154 @ M	<15 @ M	44 @ #	<15 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 @ M	<14 @ M	58.2 @ M	<14 @ M	<14 @ #	<14 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 @ M	<15 @ M	114 @ M	<15 @ M	<15 @ #	<15 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 @ M	<18 @ M	92.2 @ M	<18 @ M	<18 @ #	<18 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 @ M	<23 @ M	34.2 @ M	<23 @ M	<23 @ #	<23 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 @ M	<24 @ M	121 @ M	<24 @ M	<24 @ #	<24 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		146	419	1350	465	511	<118

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE584	TPE584	TPE584	TPE584		
			Depth (m)	0.50	1.50	2.50	3.50		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014		
			Sample Time	.	.	.	.		
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			SDG Ref	141107-3	141107-3	141107-3	141107-3		
			Lab Sample No.(s)	10333462	10333466	10333470	10333474		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		103	91.9	134	101		
Acenaphthene-d10 % recovery**	%	TM218		104	88.3	191	98.7		
Phenanthrene-d10 % recovery**	%	TM218		102	84.4	142	95.2		
Chrysene-d12 % recovery**	%	TM218		108	88.6	157	107		
Perylene-d12 % recovery**	%	TM218		113	83.6	165	106		
Naphthalene	<9 µg/kg	TM218		109 @ M	367 @ M	164000 @ M	205 @ M		
Acenaphthylene	<12 µg/kg	TM218		44.9 @ M	49.6 @ M	<60 @ M	<12 @ M		
Acenaphthene	<8 µg/kg	TM218		33.4 @ M	36 @ M	15800 @ M	80.1 @ M		
Fluorene	<10 µg/kg	TM218		95.5 @ M	74.4 @ M	199000 @ M	605 @ M		
Phenanthrene	<15 µg/kg	TM218		250 @ M	769 @ M	1290000 @ M	745 @ M		
Anthracene	<16 µg/kg	TM218		72.3 @ M	131 @ M	164000 @ M	185 @ M		
Fluoranthene	<17 µg/kg	TM218		219 @ M	775 @ M	94400 @ M	164 @ M		
Pyrene	<15 µg/kg	TM218		294 @ M	688 @ M	252000 @ M	362 @ M		
Benz(a)anthracene	<14 µg/kg	TM218		183 @ M	370 @ M	113000 @ M	140 @ M		
Chrysene	<10 µg/kg	TM218		206 @ M	596 @ M	228000 @ M	249 @ M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		364 @ M	645 @ M	22700 @ M	57.6 @ M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		111 @ M	296 @ M	5260 @ M	24.7 @ M		
Benzo(a)pyrene	<15 µg/kg	TM218		216 @ M	405 @ M	23700 @ M	59.8 @ M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		134 @ M	231 @ M	4450 @ M	<18 @ M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		57.1 @ M	119 @ M	8590 @ M	<23 @ M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		185 @ M	304 @ M	5780 @ M	<24 @ M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2580	5860	2590000	2880		

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1101	IP1101	IP1101	IP1101	IP1109	IP1109
			Depth (m)	0.50	1.50	2.50	4.00	0.50	0.80
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333478	10333490	10333494	10333498	10333503	10333508
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86 @	45 @	103 @	92 @	74 @	79 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		36100 @ M	388 @ #	<176 @ M	69000 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ #	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ #	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ #	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ #	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ #	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ #	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<36 @	<9 @	<36 @	<36 @	<36 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<96 @	<24 @	<96 @	<96 @	<96 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		110 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		4920 @	67.1 @	<40 @	51.6 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		10000 @	98.8 @	<40 @	4460 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		8630 @	69.5 @	<40 @	36900 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		233000	13100	<100	18600	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		310000	32200	<100	4750	<100	1830
Aliphatics >C21-C35	<100 µg/kg	TM173		355000	175000	<100	4950	<100	10700
Aliphatics >C35-C44	<100 µg/kg	TM173		92300	182000	<100	5200	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		991000	403000	<100	33500	<100	12600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		6680 @	81.7 @	<40 @	2980 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		5750 @	46.4 @	<40 @	24600 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		36400	2020	<100	35800	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		150000	9980	<100	107000	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		356000	128000	<100	40700	<100	3840
Aromatics >EC35-EC44	<100 µg/kg	TM173		186000	157000	<100	3830	<100	5330
Aromatics >EC40-EC44	<100 µg/kg	TM173		87900	82900	<100	1390	<100	1950
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		727000	297000	<100	187000	<100	9170
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1750000	700000	<100	290000	<100	21800

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1109	IP1109	IP1225	IP1225	IP1225	IP1225
			Depth (m)	1.50	3.00	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333513	10333518	10333443	10333447	10333453	10333457
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		119 @	104 @	84 @	74 @	132 @	70 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	<176 @ M	<880 @ M	<176 @ M	4670000 3 @ M	85700 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<100 @ M	<20 @ M	<100 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<200 @ M	<40 @ M	<200 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<40 @ M	<8 @ M	<40 @ M	149 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ M	<12 @ M	<60 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<120 @ M	<24 @ M	<120 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ M	<12 @ M	<60 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<36 @	<36 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<96 @	<96 @	<24 @	<24 @	<24 @	149 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	137000 3 @	209 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	1300000 3 @	6080 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	1170000 3 @	15900 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	765000 3 @	31600 @
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	<100	23300	13300	8200000	924000
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	<100	56400	16200	3730000	828000
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	<100	142000	62100	2480000	651000
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	51800	23200	411000	138000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	<100	274000	115000	14800000	2540000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	<200 3 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	<200 3 @	149 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	783000 3 @	10600 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<40 @	510000 3 @	21100 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	2380	3200	4920000	429000
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	<100	18900	15000	7180000	872000
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	<100	148000	123000	5390000	1430000
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	<100	94100	57000	404000	214000
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	<100	38000	22300	87400	71300
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	<100	263000	198000	17900000	2950000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		<100	<100	537000	313000	37400000	5580000

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1305	IP1305	IP1305	TPE546	TPE546	TPE546
			Depth (m)	1.00	2.00	3.00	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333594	10333602	10333438	10333577	10333581	10333586
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78 @	76 @	112 @	110 @	76 @	85 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	1500 @ M	3210000 3 @ M	13700 @ M	<880 @ #	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M	<100 @ M	<100 @ M	<100 @ #	<20 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M	<200 @ M	<200 @ M	<200 @ #	<40 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	79.5 @ M	<40 @ M	<40 @ M	<40 @ #	10.1 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	43.5 @ M	<60 @ M	<60 @ M	<60 @ #	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	88.5 @ M	<120 @ M	<120 @ M	<120 @ #	<24 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	30 @ M	<60 @ M	<60 @ M	<60 @ #	17.6 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	119 @	<9 @	<9 @	<9 @	17.6 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	242 @	<24 @	<24 @	<24 @	27.7 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	84 @	49700 3 @	<200 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	231 @	674000 3 @	495 @	<200 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	242 @	722000 3 @	1910 @	<200 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	290 @	768000 3 @	5940 @	<200 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		37800	58000	13900000	101000	<100	1210
Aliphatics >C16-C21	<100 µg/kg	TM173		118000	303000	6430000	45900	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		302000	395000	8980000	116000	<100	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		80300	103000	1940000	37400	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		538000	859000	31300000	300000	<100	1210
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	58.5 @	<200 3 @	<200 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	79.5 @	<200 3 @	<200 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	324 @	481000 3 @	1270 @	<200 @	54.2 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	192 @	512000 3 @	3960 @	<200 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		12100	14300	3640000	6610	<100	586
Aromatics >EC16-EC21	<100 µg/kg	TM173		40300	40600	2840000	25300	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		231000	239000	4950000	133000	<100	4070
Aromatics >EC35-EC44	<100 µg/kg	TM173		117000	109000	1380000	77600	<100	161
Aromatics >EC40-EC44	<100 µg/kg	TM173		46700	40000	502000	35300	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		401000	403000	12800000	242000	<100	4810
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		939000	1260000	47300000	556000	<100	6120

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE547	TPE547	TPE547	TPE547	TPE548	TPE548
			Depth (m)	1.00	2.00	3.00	4.00	0.50	1.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333433	10333482	10333542	10333572	10333553	10333558
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86 @	47 @	143 @	131 @	87 @	70 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	<176 @	<176 @ M	<176 @ M	<176 @ M	<880 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @	<20 @ M	<20 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @	<40 @ M	<40 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<8 @	<8 @ M	<8 @ M	<8 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @	<12 @ M	<12 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @	<24 @ M	<24 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @	<12 @ M	<12 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aliphatics >C12-C16	<100 µg/kg	TM173		602	4130	<100	796	5900	3420
Aliphatics >C16-C21	<100 µg/kg	TM173		13000	15500	<100	<100	25400	13600
Aliphatics >C21-C35	<100 µg/kg	TM173		68100	67900	<100	<100	68500	49100
Aliphatics >C35-C44	<100 µg/kg	TM173		19600	25900	<100	<100	15800	17100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		101000	113000	<100	796	116000	83100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	<100	<100	265	1170	1220
Aromatics >EC16-EC21	<100 µg/kg	TM173		3260	<100	<100	<100	10900	4990
Aromatics >EC21-EC35	<100 µg/kg	TM173		40600	25400	4210	4040	84200	32600
Aromatics >EC35-EC44	<100 µg/kg	TM173		30900	15000	6070	8220	46000	11800
Aromatics >EC40-EC44	<100 µg/kg	TM173		14700	6070	3620	4400	18000	4840
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		74800	40500	10300	12500	142000	50600
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		176000	154000	10300	13300	258000	134000

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE548	TPE548	TPE549	TPE549	TPE549	TPE549
			Depth (m)	2.50	3.50	0.50	1.50	2.50	3.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014	31/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014	07/11/2014
			SDG Ref	141107-3	141107-3	141107-3	141107-3	141107-3	141107-3
			Lab Sample No.(s)	10333563	10333568	10333526	10333532	10333536	10333548
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		97 @	82 @	98 @	43 @	61 @	104 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 @ M	<880 @ M	<176 @ M	<176 @ M	<176 @ #	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<20 @ M	<20 @ M	<20 @ #	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<40 @ M	<40 @ M	<40 @ #	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<40 @ M	<8 @ M	<8 @ M	<8 @ #	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 @ M	<12 @ M	<12 @ M	<12 @ #	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 @ M	<24 @ M	<24 @ M	<24 @ #	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<60 @ M	<12 @ M	<12 @ M	<12 @ #	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<36 @	<9 @	<9 @	<36 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<96 @	<24 @	<24 @	<96 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		2690	2990	12600	<100	<100	604
Aliphatics >C16-C21	<100 µg/kg	TM173		1780	3510	32900	3960	5620	304
Aliphatics >C21-C35	<100 µg/kg	TM173		2020	10900	69300	14900	26400	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	4290	18600	4890	10400	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		6500	21700	133000	23700	42400	908
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40 @	<200 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		600	920	846	<100	<100	1470
Aromatics >EC16-EC21	<100 µg/kg	TM173		1110	1960	12400	<100	1480	133
Aromatics >EC21-EC35	<100 µg/kg	TM173		5610	16600	66300	<100	14300	1500
Aromatics >EC35-EC44	<100 µg/kg	TM173		4940	6640	40900	<100	4680	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173		2530	2500	17800	<100	1390	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		12300	26100	120000	<100	20400	3100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		18800	47800	254000	23700	62800	4060

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE584	TPE584	TPE584	TPE584		
			Depth (m)	0.50	1.50	2.50	3.50		
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid		
			Date Sampled	31/10/2014	31/10/2014	31/10/2014	31/10/2014		
			Sample Time	.	.	.	.		
			Date Received	07/11/2014	07/11/2014	07/11/2014	07/11/2014		
			SDG Ref	141107-3	141107-3	141107-3	141107-3		
			Lab Sample No.(s)	10333462	10333466	10333470	10333474		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		73 @	78 @	90 @	113 @		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		13800 @ M	4610 @ M	326000 @ M	67500 @ M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<100 @ M	<100 @ M	<20 @ M		
Benzene	<10 µg/kg	TM089		<40 @ M	<200 @ M	<200 @ M	<40 @ M		
Toluene	<2 µg/kg	TM089		<8 @ M	166 @ M	1190 @ M	<8 @ M		
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<60 @ M	2460 @ M	140 @ M		
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<120 @ M	6010 @ M	122 @ M		
o-Xylene	<3 µg/kg	TM089		<12 @ M	<60 @ M	6070 @ M	190 @ M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	12100 @	312 @		
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	166 @	15800 @	452 @		
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	476 @	362 @	1130 @		
Aliphatics >C6-C8	<10 µg/kg	TM089		174 @	1120 @	13100 @	5210 @		
Aliphatics >C8-C10	<10 µg/kg	TM089		2330 @	778 @	68900 @	6520 @		
Aliphatics >C10-C12	<10 µg/kg	TM089		5800 @	709 @	109000 @	29900 @		
Aliphatics >C12-C16	<100 µg/kg	TM173		226000	40200	4000000	27300		
Aliphatics >C16-C21	<100 µg/kg	TM173		248000	109000	2290000	28300		
Aliphatics >C21-C35	<100 µg/kg	TM173		224000	449000	5130000	56300		
Aliphatics >C35-C44	<100 µg/kg	TM173		44100	285000	1730000	11800		
Total Aliphatics >C12-C44	<100 µg/kg	TM173		742000	884000	13200000	124000		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<200 @	<200 @	41.8 @		
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<200 @	1190 @	<40 @		
Aromatics >EC8-EC10	<10 µg/kg	TM089		1550 @	748 @	60500 @	4800 @		
Aromatics >EC10-EC12	<10 µg/kg	TM089		3860 @	474 @	72800 @	19900 @		
Aromatics >EC12-EC16	<100 µg/kg	TM173		15700	7970	5330000	33900		
Aromatics >EC16-EC21	<100 µg/kg	TM173		69500	44600	9000000	33500		
Aromatics >EC21-EC35	<100 µg/kg	TM173		178000	457000	8260000	74200		
Aromatics >EC35-EC44	<100 µg/kg	TM173		73200	437000	1210000	28400		
Aromatics >EC40-EC44	<100 µg/kg	TM173		29700	204000	294000	10100		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		336000	947000	23800000	170000		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		1090000	1840000	37300000	361000		

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1101 0.50 SOLID 31/10/2014 00:00:00 08/11/2014 08:34:20 141107-3 10333478 TM048	28/11/2014	Simon Postlewhite	Loose fibres in soil	Not Detected (#)	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	IP1109 0.50 SOLID 31/10/2014 00:00:00 11/11/2014 09:57:08 141107-3 10333503 TM048	26/11/14	Martin Cotterell	-	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	IP1109 0.80 SOLID 31/10/2014 00:00:00 11/11/2014 09:54:03 141107-3 10333508 TM048	26/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	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	IP1225 0.50 SOLID 31/10/2014 00:00:00 13/11/2014 15:39:09 141107-3 10333443 TM048	26/11/14	Martin Cotterell	Loose fibres in soil	Not Detected (#)	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	IP1305 1.00 SOLID 31/10/2014 00:00:00 10/11/2014 14:12:05 141107-3 10333594 TM048	26/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	TPE546 0.50 SOLID 31/10/2014 00:00:00 10/11/2014 14:16:26 141107-3 10333577 TM048	26/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	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	TPE547 1.00 SOLID 31/10/2014 00:00:00 11/11/2014 12:33:50 141107-3 10333433 TM048	26/11/14	Martin Cotterell	-	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	TPE548 0.50 SOLID 31/10/2014 00:00:00 11/11/2014 14:12:53 141107-3 10333553 TM048	26/11/14	Martin Cotterell	-	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	TPE549 0.50 SOLID 31/10/2014 00:00:00 11/11/2014 09:50:43 141107-3 10333526 TM048	26/11/14	Paul Fenney	Loose fibres in soil	Not Detected (#)	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	TPE584 0.50 SOLID 31/10/2014 00:00:00 13/11/2014 15:42:31 141107-3 10333462 TM048	26/11/14	Martin Cotterell	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1101 0.50 SOLID 31/10/2014 00:00:00 11/12/2014 12:14:58 141107-3 10333478 TM 304	None (#)	N/C	0.0015 (#)	<0.001 (#)	0.0015 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1109 0.80 SOLID 31/10/2014 00:00:00 07/01/2015 19:13:30 141107-3 10333508 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1225 0.50 SOLID 31/10/2014 00:00:00 08/01/2015 06:45:10 141107-3 10333443 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1305 1.00 SOLID 31/10/2014 00:00:00 07/01/2015 12:49:52 141107-3 10333594 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	0.0011 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE546 0.50 SOLID 31/10/2014 00:00:00 07/01/2015 12:53:16 141107-3 10333577 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE549 0.50 SOLID 31/10/2014 00:00:00 07/01/2015 19:15:54 141107-3 10333526 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE584 0.50 SOLID 31/10/2014 00:00:00 08/01/2015 06:47:14 141107-3 10333462 TM 304	None (#)	N/C	0.0015 (#)	<0.001 (#)	0.002 (#)

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10333478	10333490	10333494	10333498	10333503	10333508	10333513	10333518	10333443	10333447
Customer Sample Ref.	IP1101	IP1101	IP1101	IP1101	IP1109	IP1109	IP1109	IP1109	IP1225	IP1225
AGS Ref.										
Depth	0.50	1.50	2.50	4.00	0.50	0.80	1.50	3.00	0.50	1.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	28-Nov-2014				27-Nov-2014	27-Nov-2014			27-Nov-2014	
Asbestos Quantification - Full	06-Jan-2015					11-Jan-2015			11-Jan-2015	
EPH CWG (Aliphatic) GC (S)	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	27-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014
Metals in solid samples by OES	18-Nov-2014	12-Nov-2014	13-Nov-2014	21-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	13-Nov-2014	26-Nov-2014	19-Nov-2014
PAH by GCMS	27-Nov-2014	19-Nov-2014	11-Nov-2014	19-Nov-2014	18-Nov-2014	27-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014
pH	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	14-Nov-2014
Sample description	11-Nov-2014	10-Nov-2014	07-Nov-2014	07-Nov-2014	08-Nov-2014	11-Nov-2014	07-Nov-2014	07-Nov-2014	10-Nov-2014	07-Nov-2014
Total Organic Carbon						19-Nov-2014				
TPH CWG GC (S)	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014

Lab Sample No(s)	10333453	10333457	10333438	10333594	10333602	10333577	10333581	10333586	10333433	10333482
Customer Sample Ref.	IP1225	IP1225	IP1305	IP1305	IP1305	TPE546	TPE546	TPE546	TPE547	TPE547
AGS Ref.										
Depth	2.50	3.50	3.00	1.00	2.00	0.50	1.50	2.50	1.00	2.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples				27-Nov-2014		27-Nov-2014			27-Nov-2014	
Asbestos Quantification - Full				12-Jan-2015		11-Jan-2015				
EPH CWG (Aliphatic) GC (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014	27-Nov-2014	26-Nov-2014	19-Nov-2014	27-Nov-2014	27-Nov-2014
EPH CWG (Aromatic) GC (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014	27-Nov-2014	26-Nov-2014	19-Nov-2014	27-Nov-2014	27-Nov-2014
GRO by GC-FID (S)	27-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	27-Nov-2014	25-Nov-2014
Metals in solid samples by OES	19-Nov-2014	21-Nov-2014	13-Nov-2014	21-Nov-2014	18-Nov-2014	18-Nov-2014	19-Nov-2014	19-Nov-2014	18-Nov-2014	12-Nov-2014
PAH by GCMS	19-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014	26-Nov-2014	27-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014
pH	14-Nov-2014	21-Nov-2014	14-Nov-2014	26-Nov-2014	14-Nov-2014	26-Nov-2014	21-Nov-2014	21-Nov-2014	25-Nov-2014	25-Nov-2014
Sample description	07-Nov-2014	07-Nov-2014	07-Nov-2014	10-Nov-2014	07-Nov-2014	10-Nov-2014	07-Nov-2014	07-Nov-2014	11-Nov-2014	10-Nov-2014
Total Organic Carbon			12-Nov-2014						19-Nov-2014	
TPH CWG GC (S)	27-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014

Lab Sample No(s)	10333542	10333572	10333553	10333558	10333563	10333568	10333526	10333532	10333536	10333548
Customer Sample Ref.	TPE547	TPE547	TPE548	TPE548	TPE548	TPE548	TPE549	TPE549	TPE549	TPE549
AGS Ref.										
Depth	3.00	4.00	0.50	1.50	2.50	3.50	0.50	1.50	2.50	3.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			27-Nov-2014				27-Nov-2014			
Asbestos Quantification - Full							11-Jan-2015			
EPH CWG (Aliphatic) GC (S)	19-Nov-2014	19-Nov-2014	26-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	19-Nov-2014	19-Nov-2014	26-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	27-Nov-2014	25-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014
Metals in solid samples by OES	17-Nov-2014	17-Nov-2014	18-Nov-2014	21-Nov-2014	21-Nov-2014	17-Nov-2014	19-Nov-2014	20-Nov-2014	18-Nov-2014	17-Nov-2014
PAH by GCMS	27-Nov-2014	26-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014	26-Nov-2014
pH	14-Nov-2014	21-Nov-2014	25-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	25-Nov-2014	25-Nov-2014	21-Nov-2014	25-Nov-2014
Sample description	07-Nov-2014	07-Nov-2014	11-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	11-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
Total Organic Carbon					17-Nov-2014					
TPH CWG GC (S)	25-Nov-2014	25-Nov-2014	26-Nov-2014	27-Nov-2014	25-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014	27-Nov-2014

Lab Sample No(s)	10333462	10333466	10333470	10333474
Customer Sample Ref.	TPE584	TPE584	TPE584	TPE584
AGS Ref.				
Depth	0.50	1.50	2.50	3.50
Type	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	27-Nov-2014			
Asbestos Quantification - Full	11-Jan-2015			
EPH CWG (Aliphatic) GC (S)	25-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
EPH CWG (Aromatic) GC (S)	25-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
GRO by GC-FID (S)	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014
Metals in solid samples by OES	20-Nov-2014	19-Nov-2014	18-Nov-2014	18-Nov-2014
PAH by GCMS	27-Nov-2014	19-Nov-2014	27-Nov-2014	19-Nov-2014
pH	25-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
Sample description	13-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
Total Organic Carbon		21-Nov-2014		
TPH CWG GC (S)	27-Nov-2014	27-Nov-2014	27-Nov-2014	26-Nov-2014

SDG:	141107-3	**Location:**	Coed Darcy	**Order Number:**	cd0955
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298444
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors
employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

ALcontrol Laboratories

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

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

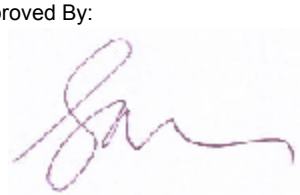
Date:	08 January 2015
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	141106-119
Your Reference:	Site Wide Trial Pitting
Location:	Coed Darcy
Report No:	298129

We received 26 samples on Thursday November 06, 2014 and 26 of these samples were scheduled for analysis which was completed on Thursday January 08, 2015. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager

Alcontrol Laboratories is a trading division of ALcontrol UK Limited
Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No.

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10331900	IP1307		1.00	29/10/2014
10331904	IP1307		2.00	29/10/2014
10331908	IP1307		3.00	29/10/2014
10331913	IP1307		4.00	29/10/2014
10331872	IP1308		1.00	29/10/2014
10331878	IP1308		2.00	29/10/2014
10331882	IP1308		3.00	29/10/2014
10331886	IP1308		4.00	29/10/2014
10331847	IP1309		0.50	29/10/2014
10331812	IP1310		0.50	29/10/2014
10331817	IP1310		1.50	29/10/2014
10331821	IP1310		2.50	29/10/2014
10331825	IP1310		3.50	29/10/2014
10331917	TPE579		0.50	29/10/2014
10331829	TPE580		1.00	29/10/2014
10331833	TPE580		2.00	29/10/2014
10331838	TPE580		3.00	29/10/2014
10331842	TPE580		4.00	29/10/2014
10331851	TPE581		0.50	29/10/2014
10331859	TPE581		1.50	29/10/2014
10331863	TPE581		2.50	29/10/2014
10331867	TPE581		3.50	29/10/2014
10331808	TPE582		1.00	29/10/2014
10331855	TPE582		2.00	29/10/2014
10331892	TPE582		3.00	29/10/2014
10331896	TPE582		4.00	29/10/2014

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

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- **X** Test
- **N** No Determination Possible

Lab Sample No(s)			10331900			10331904			10331908			10331913			10331872			10331878			10331882			10331886			10331847			10331812			10331817			10331821			10331825			10331917
Customer Sample Reference			IP1307			IP1307			IP1307			IP1307			IP1308			IP1308			IP1308			IP1308			IP1309			IP1310			IP1310			IP1310			IP1310			TPE579
AGS Reference																																										
Depth (m)			1.00			2.00			3.00			4.00			1.00			2.00			3.00			4.00			0.50			0.50			1.50			2.50			3.50			0.50
Container			250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7		X												X													X			X											
Asbestos Quantification - Full	All	NDPs: 0 Tests: 3		X																																							
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X			X
PAH by GCMS	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 26		X			X			X			X			X			X			X			X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 25	X			X			X			X			X			X			X			X			X			X			X			X			X			X
Total Organic Carbon	All	NDPs: 0 Tests: 4																X									X															X
TPH CWG GC (S)	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X			X

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

SOLID

Results Legend

- **X** Test
- **N** No Determination Possible

Lab Sample No(s)			10331917		10331829			10331833			10331838			10331842			10331851			10331859			10331863			10331867			10331808			10331855			10331892			10331896		
Customer Sample Reference			TPE579		TPE580			TPE580			TPE580			TPE580			TPE581			TPE581			TPE581			TPE581			TPE582			TPE582			TPE582			TPE582		
AGS Reference																																								
Depth (m)			0.50		1.00			2.00			3.00			4.00			0.50			1.50			2.50			3.50			1.00			2.00			3.00			4.00		
Container			400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)	250g Amber Jar (AL	400g Tub (ALE214)	60g VOC (ALE215)
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7	X			X																									X										
Asbestos Quantification - Full	All	NDPs: 0 Tests: 3				X																									X										
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26		X			X			X			X			X			X			X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 26	X			X			X			X			X			X			X			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 25			X						X			X			X			X			X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 4																												X											
TPH CWG GC (S)	All	NDPs: 0 Tests: 26			X			X			X			X			X			X			X			X			X			X			X			X		

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**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	Grain size	Inclusions	Inclusions 2
10331900	IP1307	1.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	None
10331904	IP1307	2.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10331908	IP1307	3.00	Dark Brown	Sandy Silt Loam	0.063 - 0.1 mm	Stones	None
10331913	IP1307	4.00	Dark Brown	Shale	0.1 - 2 mm	Stones	None
10331872	IP1308	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	N/A
10331878	IP1308	2.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10331882	IP1308	3.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10331886	IP1308	4.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10331847	IP1309	0.50	Beige	Sandy Loam	0.1 - 2 mm	Crushed Brick	Stones
10331812	IP1310	0.50	Beige	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10331817	IP1310	1.50	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10331821	IP1310	2.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10331825	IP1310	3.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10331917	TPE579	0.50	Beige	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10331829	TPE580	1.00	Beige	Sandy Loam	0.1 - 2 mm	Crushed Brick	Stones
10331833	TPE580	2.00	Black	Shale	0.1 - 2 mm	Stones	Vegetation
10331838	TPE580	3.00	Dark Brown	Shale	0.1 - 2 mm	Stones	Oil/Petroleum
10331842	TPE580	4.00	Black	Shale	0.1 - 2 mm	Brick	Concrete/Aggregate
10331851	TPE581	0.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10331859	TPE581	1.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	N/A
10331863	TPE581	2.50	Dark Brown	Shale	0.1 - 2 mm	Stones	None
10331867	TPE581	3.50	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Vegetation	Stones
10331808	TPE582	1.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10331855	TPE582	2.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10331892	TPE582	3.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Oil/Petroleum
10331896	TPE582	4.00	Dark Brown	Silt Loam	0.063 - 0.1 mm	Stones	Oil/Petroleum

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:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1307	IP1307	IP1307	IP1307	IP1308	IP1308
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331900	10331904	10331908	10331913	10331872	10331878
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	22	24	10	10
Soil Organic Matter (SOM)	<0.35 %	TM132							4.76 #
pH	1 pH Units	TM133		7.42 M	7.35 M	7.92 M	6.84 #	8.18 M	8.27 M
Arsenic	<0.6 mg/kg	TM181		57.3 M	105 M	26.8 M	23.2 #	118 M	151 M
Cadmium	<0.02 mg/kg	TM181		1.09 M	2.12 M	0.55 M	0.826 #	2.31 M	0.989 M
Chromium	<0.9 mg/kg	TM181		16.3 M	17.1 M	29.1 M	13.8 #	15.6 M	23.2 M
Copper	<1.4 mg/kg	TM181		220 M	429 M	104 M	97.7 #	463 M	445 M
Lead	<0.7 mg/kg	TM181		676 M	2100 M	196 M	235 #	2630 M	911 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.342 M	0.379 #	0.271 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		35.7 M	37.6 M	44.5 M	52.1 #	34.6 M	33.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		19.6 #	23.3 #	63.3 #	38.5 #	23.9 #	24.3 #
Zinc	<1.9 mg/kg	TM181		1370 M	4380 M	467 M	544 #	3660 M	2390 M

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1308	IP1308	IP1309	IP1310	IP1310	IP1310
			Depth (m)	3.00	4.00	0.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331882	10331886	10331847	10331812	10331817	10331821
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		26	30	13	11	17	16
Soil Organic Matter (SOM)	<0.35 %	TM132				7.53 #			
pH	1 pH Units	TM133		7.8 M	7.66 M	8.4 M	7.97 M	6.5 M	7.47 M
Arsenic	<0.6 mg/kg	TM181		23 M	23.9 M	351 M	66.2 M	28.5 M	22.5 M
Cadmium	<0.02 mg/kg	TM181		0.34 M	0.506 M	5.04 M	1.06 M	0.788 M	0.0533 M
Chromium	<0.9 mg/kg	TM181		27 M	23.1 M	18.6 M	14 M	17.4 M	15 M
Copper	<1.4 mg/kg	TM181		195 M	187 M	2030 M	188 M	73 M	86.3 M
Lead	<0.7 mg/kg	TM181		388 M	352 M	4340 M	647 M	51.3 M	97.2 M
Mercury	<0.14 mg/kg	TM181		6.43 M	3.49 M	0.315 M	<0.14 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		43.6 M	40.4 M	56.8 M	24.8 M	17.6 M	31.7 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vanadium	<0.2 mg/kg	TM181		57.4 #	36.3 #	35 #	20.3 #	23 #	25.6 #
Zinc	<1.9 mg/kg	TM181		996 M	766 M	7690 M	1300 M	188 M	194 M

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1310	TPE579	TPE580	TPE580	TPE580	TPE580
			Depth (m)	3.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331825	10331917	10331829	10331833	10331838	10331842
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	14	13	21	20	25
Soil Organic Matter (SOM)	<0.35 %	TM132			3.5 #				
pH	1 pH Units	TM133		6.79 M	7.82 M	8.1 M	7.52 #	7.65 #	6.61 M
Arsenic	<0.6 mg/kg	TM181		13.7 M	78 M	261 M	22.7 #	27.3 #	37.4 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.48 M	3.54 M	0.0323 #	0.0352 #	<0.02 M
Chromium	<0.9 mg/kg	TM181		11.4 M	20 M	17.9 M	17.6 #	17 #	16.8 M
Copper	<1.4 mg/kg	TM181		64 M	342 M	1170 M	60.9 #	76.2 #	124 M
Lead	<0.7 mg/kg	TM181		33.9 M	470 M	2340 M	21.8 #	105 #	84.5 M
Mercury	<0.14 mg/kg	TM181		0.158 M	<1.4 M	<0.14 M	<0.14 #	0.707 #	0.535 M
Nickel	<0.2 mg/kg	TM181		30.5 M	34 M	44.3 M	45.8 #	36.3 #	39.1 M
Selenium	<1 mg/kg	TM181		<1 #	<10 #	<1 #	<1 #	<1 #	1.25 #
Vanadium	<0.2 mg/kg	TM181		26.8 #	27.1 #	30.2 #	48.8 #	42 #	53.3 #
Zinc	<1.9 mg/kg	TM181		46.3 M	1240 M	5170 M	71.8 #	299 #	97.5 M

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE581	TPE581	TPE581	TPE581	TPE582	TPE582
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331851	10331859	10331863	10331867	10331808	10331855
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	12	20	21	13	15
Soil Organic Matter (SOM)	<0.35 %	TM132						4.67 #	
pH	1 pH Units	TM133		8.43 M	8.16 M	7.12 #	6.52 M	7.49 M	7.84 M
Arsenic	<0.6 mg/kg	TM181		146 M	110 M	40.7 #	16 M	95.8 M	62.2 M
Cadmium	<0.02 mg/kg	TM181		1.82 M	1.12 M	0.402 #	<0.02 M	1.33 M	0.668 M
Chromium	<0.9 mg/kg	TM181		18 M	14.8 M	14.7 #	16.5 M	18.1 M	17.2 M
Copper	<1.4 mg/kg	TM181		515 M	373 M	269 #	75.7 M	609 M	294 M
Lead	<0.7 mg/kg	TM181		1490 M	811 M	265 #	114 M	544 M	293 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.288 #	0.329 M	<1.4 M	0.269 M
Nickel	<0.2 mg/kg	TM181		44.9 M	31.8 M	42.2 #	34.4 M	44.8 M	30.5 M
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #	<10 #	<1 #
Vanadium	<0.2 mg/kg	TM181		29 #	20.7 #	35.7 #	37.4 #	24.1 #	21.4 #
Zinc	<1.9 mg/kg	TM181		2280 M	1660 M	481 #	154 M	1540 M	764 M

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE582	TPE582				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	29/10/2014	29/10/2014				
			Sample Time	.	.				
			Date Received	06/11/2014	06/11/2014				
			SDG Ref	141106-119	141106-119				
			Lab Sample No.(s)	10331892	10331896				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		21	45				
pH	1 pH Units	TM133		7.32 M	7.04 M				
Arsenic	<0.6 mg/kg	TM181		30.9 M	18.2 M				
Cadmium	<0.02 mg/kg	TM181		0.257 M	0.426 M				
Chromium	<0.9 mg/kg	TM181		16.8 M	8.44 M				
Copper	<1.4 mg/kg	TM181		96.9 M	34.4 M				
Lead	<0.7 mg/kg	TM181		88.6 M	80.9 M				
Mercury	<0.14 mg/kg	TM181		0.48 M	1.63 M				
Nickel	<0.2 mg/kg	TM181		30.8 M	19.1 M				
Selenium	<1 mg/kg	TM181		<1 #	<1 #				
Vanadium	<0.2 mg/kg	TM181		41.2 #	10.8 #				
Zinc	<1.9 mg/kg	TM181		319 M	91.2 M				

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1307	IP1307	IP1307	IP1307	IP1308	IP1308
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331900	10331904	10331908	10331913	10331872	10331878
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.8	94.4	116	110	96.2	98.6
Acenaphthene-d10 % recovery**	%	TM218		98.8	94.1	117	111	96.3	95.7
Phenanthrene-d10 % recovery**	%	TM218		98.6	91.2	107	100	93.9	93.5
Chrysene-d12 % recovery**	%	TM218		98.6	94.8	108	85.9	88	99.2
Perylene-d12 % recovery**	%	TM218		103	105	108	78.6	92.7	103
Naphthalene	<9 µg/kg	TM218		99.9 @ M	79.7 @ M	499 @ M	808 @ #	49.2 @ M	93.9 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	<12 @ M	49.7 @ M	96.5 @ #	13.5 @ M	23.2 @ M
Acenaphthene	<8 µg/kg	TM218		<8 @ M	10.5 @ M	133 @ M	37.2 @ #	13.9 @ M	30.5 @ M
Fluorene	<10 µg/kg	TM218		46.9 @ M	40 @ M	157 @ M	91.4 @ #	29.8 @ M	56.7 @ M
Phenanthrene	<15 µg/kg	TM218		294 @ M	153 @ M	858 @ M	1420 @ #	115 @ M	226 @ M
Anthracene	<16 µg/kg	TM218		66.1 @ M	32.6 @ M	121 @ M	91.6 @ #	36.7 @ M	60.4 @ M
Fluoranthene	<17 µg/kg	TM218		388 @ M	109 @ M	328 @ M	317 @ #	183 @ M	327 @ M
Pyrene	<15 µg/kg	TM218		339 @ M	132 @ M	881 @ M	639 @ #	162 @ M	284 @ M
Benz(a)anthracene	<14 µg/kg	TM218		261 @ M	111 @ M	319 @ M	283 @ #	130 @ M	283 @ M
Chrysene	<10 µg/kg	TM218		228 @ M	130 @ M	806 @ M	622 @ #	143 @ M	315 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		313 @ M	170 @ M	371 @ M	349 @ #	236 @ M	489 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		126 @ M	50.5 @ M	122 @ M	82.3 @ #	73.7 @ M	156 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		244 @ M	116 @ M	270 @ M	196 @ #	136 @ M	292 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		131 @ M	73.9 @ M	139 @ M	102 @ #	101 @ M	221 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		46.3 @ M	29.9 @ M	134 @ M	94 @ #	38.4 @ M	84.9 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		169 @ M	97.5 @ M	656 @ M	221 @ #	132 @ M	264 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2750	1330	5840	5450	1590	3210

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1308	IP1308	IP1309	IP1310	IP1310	IP1310
			Depth (m)	3.00	4.00	0.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331882	10331886	10331847	10331812	10331817	10331821
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.9	104	103	103	93.8	93.4
Acenaphthene-d10 % recovery**	%	TM218		97.9	106	104	103	92.8	92
Phenanthrene-d10 % recovery**	%	TM218		91	103	102	101	91.7	83.7
Chrysene-d12 % recovery**	%	TM218		92	94.7	104	106	93.3	75.2
Perylene-d12 % recovery**	%	TM218		105	105	94.5	97.9	100	71.2
Naphthalene	<9 µg/kg	TM218		295 @ M	313 @ M	163 @ M	169 @ M	<9 @ M	44.3 @ M
Acenaphthylene	<12 µg/kg	TM218		<60 @ M	<60 @ M	49.3 @ M	41.4 @ M	<12 @ M	<12 @ M
Acenaphthene	<8 µg/kg	TM218		<40 @ M	481 @ M	54.1 @ M	46.8 @ M	<8 @ M	<8 @ M
Fluorene	<10 µg/kg	TM218		<50 @ M	380 @ M	205 @ M	217 @ M	<10 @ M	<10 @ M
Phenanthrene	<15 µg/kg	TM218		845 @ M	815 @ M	308 @ M	301 @ M	92.8 @ M	193 @ M
Anthracene	<16 µg/kg	TM218		192 @ M	209 @ M	127 @ M	97 @ M	37.3 @ M	35.1 @ M
Fluoranthene	<17 µg/kg	TM218		876 @ M	348 @ M	258 @ M	196 @ M	95.5 @ M	125 @ M
Pyrene	<15 µg/kg	TM218		1070 @ M	514 @ M	287 @ M	269 @ M	87.6 @ M	113 @ M
Benz(a)anthracene	<14 µg/kg	TM218		552 @ M	257 @ M	142 @ M	123 @ M	74.4 @ M	93.3 @ M
Chrysene	<10 µg/kg	TM218		671 @ M	256 @ M	181 @ M	166 @ M	87.3 @ M	159 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		915 @ M	463 @ M	205 @ M	202 @ M	133 @ M	189 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		275 @ M	110 @ M	103 @ M	82.3 @ M	31.8 @ M	47.4 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		731 @ M	315 @ M	142 @ M	131 @ M	56 @ M	95.9 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		395 @ M	218 @ M	98.4 @ M	89.5 @ M	38.3 @ M	51.6 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		191 @ M	<115 @ M	43.6 @ M	35.2 @ M	<23 @ M	33.6 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		765 @ M	367 @ M	127 @ M	121 @ M	43.8 @ M	77.7 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		7780	5050	2490	2290	778	1260

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1310	TPE579	TPE580	TPE580	TPE580	TPE580
			Depth (m)	3.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331825	10331917	10331829	10331833	10331838	10331842
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.9	104	99.9	91.3	88.9	129
Acenaphthene-d10 % recovery**	%	TM218		90.4	105	99.6	90.6	87.7	130
Phenanthrene-d10 % recovery**	%	TM218		82.4	103	98.7	81.5	79.4	122
Chrysene-d12 % recovery**	%	TM218		76.6	106	100	68.5	73.7	107
Perylene-d12 % recovery**	%	TM218		73	98.8	92.6	63	71.6	82.5
Naphthalene	<9 µg/kg	TM218		52.7 @ M	111 @ M	240 @ M	100 @ #	229 @ #	424 @ M
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	50.5 @ M	36.2 @ M	<12 @ #	<12 @ #	16.2 @ M
Acenaphthene	<8 µg/kg	TM218		12.6 @ M	42.1 @ M	35.2 @ M	<8 @ #	<8 @ #	12.6 @ M
Fluorene	<10 µg/kg	TM218		14.9 @ M	106 @ M	158 @ M	<10 @ #	<10 @ #	52.1 @ M
Phenanthrene	<15 µg/kg	TM218		317 @ M	349 @ M	301 @ M	169 @ #	266 @ #	639 @ M
Anthracene	<16 µg/kg	TM218		91.5 @ M	135 @ M	77.9 @ M	<16 @ #	64.7 @ #	36.7 @ M
Fluoranthene	<17 µg/kg	TM218		803 @ M	735 @ M	165 @ M	60.1 @ #	104 @ #	104 @ M
Pyrene	<15 µg/kg	TM218		549 @ M	999 @ M	236 @ M	58.5 @ #	168 @ #	261 @ M
Benz(a)anthracene	<14 µg/kg	TM218		456 @ M	552 @ M	105 @ M	<14 @ #	70 @ #	88.8 @ M
Chrysene	<10 µg/kg	TM218		568 @ M	620 @ M	189 @ M	63.8 @ #	82 @ #	202 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		577 @ M	847 @ M	185 @ M	93.9 @ #	152 @ #	135 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		177 @ M	354 @ M	65.8 @ M	<14 @ #	39.1 @ #	32.1 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		312 @ M	613 @ M	112 @ M	29.9 @ #	65.5 @ #	60.1 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		150 @ M	357 @ M	79.4 @ M	<18 @ #	57.9 @ #	51.6 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		76.6 @ M	137 @ M	30.8 @ M	<23 @ #	<23 @ #	36.7 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		172 @ M	443 @ M	104 @ M	<24 @ #	77.6 @ #	79.2 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4330	6450	2120	576	1380	2230

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE581	TPE581	TPE581	TPE581	TPE582	TPE582
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331851	10331859	10331863	10331867	10331808	10331855
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		102	98.4	105	118	98.3	100
Acenaphthene-d10 % recovery**	%	TM218		100	96.4	107	118	99.3	99.3
Phenanthrene-d10 % recovery**	%	TM218		98.6	94.4	93.9	104	97.5	95.8
Chrysene-d12 % recovery**	%	TM218		103	100	70.8	85.9	101	106
Perylene-d12 % recovery**	%	TM218		107	104	65.7	70.2	92.1	113
Naphthalene	<9 µg/kg	TM218		95.2 @ M	93.9 @ M	206 @ #	211 @ M	77.6 @ M	120 @ M
Acenaphthylene	<12 µg/kg	TM218		25.1 @ M	<12 @ M	40.5 @ #	45.4 @ M	<12 @ M	51.5 @ M
Acenaphthene	<8 µg/kg	TM218		39.4 @ M	46.5 @ M	44.8 @ #	36.8 @ M	11.3 @ M	99.1 @ M
Fluorene	<10 µg/kg	TM218		85 @ M	122 @ M	74.3 @ #	86.6 @ M	44 @ M	149 @ M
Phenanthrene	<15 µg/kg	TM218		346 @ M	178 @ M	380 @ #	494 @ M	134 @ M	598 @ M
Anthracene	<16 µg/kg	TM218		112 @ M	75.9 @ M	68.8 @ #	58.2 @ M	27 @ M	213 @ M
Fluoranthene	<17 µg/kg	TM218		739 @ M	229 @ M	447 @ #	305 @ M	83 @ M	1090 @ M
Pyrene	<15 µg/kg	TM218		605 @ M	220 @ M	393 @ #	237 @ M	98.1 @ M	1250 @ M
Benz(a)anthracene	<14 µg/kg	TM218		641 @ M	215 @ M	241 @ #	171 @ M	74.3 @ M	933 @ M
Chrysene	<10 µg/kg	TM218		653 @ M	232 @ M	385 @ #	243 @ M	105 @ M	936 @ M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1200 @ M	354 @ M	499 @ #	315 @ M	98.3 @ M	1630 @ M
Benzo(k)fluoranthene	<14 µg/kg	TM218		366 @ M	112 @ M	147 @ #	91.8 @ M	41.7 @ M	500 @ M
Benzo(a)pyrene	<15 µg/kg	TM218		679 @ M	210 @ M	300 @ #	127 @ M	73.8 @ M	1060 @ M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		507 @ M	142 @ M	154 @ #	72.9 @ M	55.7 @ M	638 @ M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		201 @ M	53.4 @ M	73.6 @ #	45.2 @ M	<23 @ M	245 @ M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		592 @ M	175 @ M	179 @ #	94.6 @ M	79.8 @ M	766 @ M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6880	2460	3630	2630	1000	10300

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE582	TPE582				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	29/10/2014	29/10/2014				
			Sample Time	.	.				
			Date Received	06/11/2014	06/11/2014				
			SDG Ref	141106-119	141106-119				
			Lab Sample No.(s)	10331892	10331896				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.4	139				
Acenaphthene-d10 % recovery**	%	TM218		91.6	170				
Phenanthrene-d10 % recovery**	%	TM218		80.1	133				
Chrysene-d12 % recovery**	%	TM218		68.6	130				
Perylene-d12 % recovery**	%	TM218		63.1	120				
Naphthalene	<9 µg/kg	TM218		84.4 @ M	20800 @ M				
Acenaphthylene	<12 µg/kg	TM218		<12 @ M	3780 @ M				
Acenaphthene	<8 µg/kg	TM218		<8 @ M	12200 @ M				
Fluorene	<10 µg/kg	TM218		38.5 @ M	29700 @ M				
Phenanthrene	<15 µg/kg	TM218		520 @ M	132000 @ M				
Anthracene	<16 µg/kg	TM218		48.4 @ M	11100 @ M				
Fluoranthene	<17 µg/kg	TM218		174 @ M	8500 @ M				
Pyrene	<15 µg/kg	TM218		372 @ M	30600 @ M				
Benz(a)anthracene	<14 µg/kg	TM218		161 @ M	6910 @ M				
Chrysene	<10 µg/kg	TM218		377 @ M	17800 @ M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		179 @ M	3040 @ M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		36.1 @ M	732 @ M				
Benzo(a)pyrene	<15 µg/kg	TM218		80.4 @ M	2530 @ M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		34.6 @ M	730 @ M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		31.8 @ M	691 @ M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		61.8 @ M	1520 @ M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2200	283000				

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1307	IP1307	IP1307	IP1307	IP1308	IP1308
			Depth (m)	1.00	2.00	3.00	4.00	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331900	10331904	10331908	10331913	10331872	10331878
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87 @	104 @	90 @	90 @	87 @	89 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		581 @ M	9210 @ M	<880 @ M	<880 @ #	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<100 @ M	<100 @ #	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<200 @ M	<200 @ #	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<40 @ M	<40 @ #	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ M	<60 @ #	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<120 @ M	<120 @ #	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ M	<60 @ #	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	68.4 @	<200 @	<200 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		68.4 @	472 @	<200 @	<200 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		94.6 @	2140 @	<200 @	<200 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		189 @	3060 @	<200 @	<200 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		15100	104000	12400	12800	111000	88900
Aliphatics >C16-C21	<100 µg/kg	TM173		52500	157000	41100	33000	139000	131000
Aliphatics >C21-C35	<100 µg/kg	TM173		74600	194000	154000	118000	70900	91800
Aliphatics >C35-C44	<100 µg/kg	TM173		13100	43300	80700	46900	19200	22100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		155000	497000	288000	211000	341000	334000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		68.4 @	1430 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		127 @	2040 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		3870	10200	2670	1280	10600	3570
Aromatics >EC16-EC21	<100 µg/kg	TM173		12300	43000	10900	7110	34200	15600
Aromatics >EC21-EC35	<100 µg/kg	TM173		62800	122000	135000	95800	53300	59900
Aromatics >EC35-EC44	<100 µg/kg	TM173		27500	38200	100000	62700	22600	26100
Aromatics >EC40-EC44	<100 µg/kg	TM173		9470	14600	39300	23700	9600	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		106000	213000	249000	167000	121000	105000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		262000	720000	537000	378000	461000	439000

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1308	IP1308	IP1309	IP1310	IP1310	IP1310
			Depth (m)	3.00	4.00	0.50	0.50	1.50	2.50
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331882	10331886	10331847	10331812	10331817	10331821
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74 @	85 @	78 @	96 @	105 @	73 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		3770 @ M	19800 @ M	26400 @ M	80000 @ M	<176 @ M	1480 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 @ M	<20 @ M	<20 @ M	<20 @ M	<100 @ M
Benzene	<10 µg/kg	TM089		<200 @ M	<200 @ M	<40 @ M	<40 @ M	<40 @ M	<200 @ M
Toluene	<2 µg/kg	TM089		<40 @ M	<40 @ M	<8 @ M	<8 @ M	<8 @ M	<40 @ M
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<60 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ M
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<120 @ M	<24 @ M	<24 @ M	<24 @ M	<120 @ M
o-Xylene	<3 µg/kg	TM089		<60 @ M	<60 @ M	<12 @ M	<12 @ M	<12 @ M	<60 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	<200 @	<40 @	52 @	<40 @	<200 @
Aliphatics >C6-C8	<10 µg/kg	TM089		347 @	252 @	278 @	5730 @	<40 @	<200 @
Aliphatics >C8-C10	<10 µg/kg	TM089		419 @	1720 @	5500 @	27400 @	<40 @	221 @
Aliphatics >C10-C12	<10 µg/kg	TM089		1570 @	9890 @	10100 @	17100 @	<40 @	537 @
Aliphatics >C12-C16	<100 µg/kg	TM173		295000	620000	814000	555000	24100	6240
Aliphatics >C16-C21	<100 µg/kg	TM173		400000	601000	471000	299000	45900	14000
Aliphatics >C21-C35	<100 µg/kg	TM173		1390000	981000	67100	82600	60500	66500
Aliphatics >C35-C44	<100 µg/kg	TM173		695000	465000	4410	13300	12400	27000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		2780000	2670000	1360000	950000	143000	114000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 @	<40 @	<40 @	<40 @	<200 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		291 @	1190 @	3670 @	18300 @	<40 @	<200 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		1050 @	6590 @	6760 @	11400 @	<40 @	359 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		34000	218000	119000	64000	4680	512
Aromatics >EC16-EC21	<100 µg/kg	TM173		115000	384000	155000	89800	17400	3550
Aromatics >EC21-EC35	<100 µg/kg	TM173		654000	1450000	95900	95300	58100	96700
Aromatics >EC35-EC44	<100 µg/kg	TM173		384000	547000	29100	32100	21500	66200
Aromatics >EC40-EC44	<100 µg/kg	TM173		153000	199000	11600	11300	7530	22000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		1190000	2590000	399000	281000	102000	167000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		3970000	5280000	1780000	1310000	245000	282000

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	IP1310	TPE579	TPE580	TPE580	TPE580	TPE580
			Depth (m)	3.50	0.50	1.00	2.00	3.00	4.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331825	10331917	10331829	10331833	10331838	10331842
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		95 @	74 @	103 @	95 @	93 @	75 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<880 @ M	9670 @ M	20800 @ M	<880 @ #	<880 @ #	<176 @ #
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<20 @ M	<20 @ M	<100 @ #	<100 @ #	<20 @ #
Benzene	<10 µg/kg	TM089		<200 @ M	<40 @ M	<40 @ M	<200 @ #	<200 @ #	<40 @ #
Toluene	<2 µg/kg	TM089		<40 @ M	<8 @ M	<8 @ M	<40 @ #	<40 @ #	<8 @ #
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<12 @ M	<60 @ #	<60 @ #	<12 @ #
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<24 @ M	<24 @ M	<120 @ #	<120 @ #	<24 @ #
o-Xylene	<3 µg/kg	TM089		<60 @ M	<12 @ M	<12 @ M	<60 @ #	<60 @ #	<12 @ #
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	57.3 @	52.9 @	<200 @	<200 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		<200 @	645 @	442 @	<200 @	<200 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089		<200 @	2410 @	5310 @	<200 @	<200 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089		<200 @	2960 @	6880 @	<200 @	208 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173		2350	237000	588000	8110	103000	30400
Aliphatics >C16-C21	<100 µg/kg	TM173		11400	358000	408000	41200	316000	234000
Aliphatics >C21-C35	<100 µg/kg	TM173		51800	371000	116000	59100	351000	211000
Aliphatics >C35-C44	<100 µg/kg	TM173		19900	97100	10600	9630	129000	30200
Total Aliphatics >C12-C44	<100 µg/kg	TM173		85500	1060000	1120000	118000	900000	505000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<200 @	<200 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<40 @	<40 @	<200 @	<200 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		<200 @	1610 @	3540 @	<200 @	<200 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		<200 @	1980 @	4590 @	<200 @	<200 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		489	21000	47800	2010	11400	9220
Aromatics >EC16-EC21	<100 µg/kg	TM173		4010	93000	104000	13700	81200	45000
Aromatics >EC21-EC35	<100 µg/kg	TM173		77400	257000	105000	60200	339000	169000
Aromatics >EC35-EC44	<100 µg/kg	TM173		54800	103000	30100	22400	211000	68300
Aromatics >EC40-EC44	<100 µg/kg	TM173		18400	37300	9940	7420	82100	24800
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		137000	474000	288000	98300	643000	292000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		222000	1550000	1430000	216000	1540000	797000

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE581	TPE581	TPE581	TPE581	TPE582	TPE582
			Depth (m)	0.50	1.50	2.50	3.50	1.00	2.00
			Sample Type	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
			Date Sampled	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014	29/10/2014
			Sample Time	.	.	.	.	.	.
			Date Received	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014	06/11/2014
			SDG Ref	141106-119	141106-119	141106-119	141106-119	141106-119	141106-119
			Lab Sample No.(s)	10331851	10331859	10331863	10331867	10331808	10331855
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		91 @	101 @	79 @	77 @	86 @	84 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		13800 @ M	47700 @ M	<880 @ #	<880 @ M	<176 @ M	5850 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 @ M	<20 @ M	<100 @ #	<100 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089		<40 @ M	<40 @ M	<200 @ #	<200 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089		<8 @ M	<8 @ M	<40 @ #	<40 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ #	<60 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089		<24 @ M	<24 @ M	<120 @ #	<120 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089		<12 @ M	<12 @ M	<60 @ #	<60 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089		<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<200 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089		653 @	2250 @	<200 @	<200 @	<40 @	358 @
Aliphatics >C8-C10	<10 µg/kg	TM089		3850 @	13200 @	<200 @	<200 @	<40 @	1070 @
Aliphatics >C10-C12	<10 µg/kg	TM089		4040 @	14000 @	<200 @	<200 @	<40 @	2190 @
Aliphatics >C12-C16	<100 µg/kg	TM173		91700	261000	21300	16000	12900	205000
Aliphatics >C16-C21	<100 µg/kg	TM173		102000	160000	30700	22900	52000	378000
Aliphatics >C21-C35	<100 µg/kg	TM173		74300	43500	94100	73600	75100	527000
Aliphatics >C35-C44	<100 µg/kg	TM173		19400	13700	53200	42100	13800	147000
Total Aliphatics >C12-C44	<100 µg/kg	TM173		288000	478000	199000	155000	154000	1260000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40 @	<40 @	<200 @	<200 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089		2570 @	8820 @	<200 @	<200 @	<40 @	716 @
Aromatics >EC10-EC12	<10 µg/kg	TM089		2700 @	9360 @	<200 @	<200 @	<40 @	1460 @
Aromatics >EC12-EC16	<100 µg/kg	TM173		5080	58200	2170	2270	4070	8630
Aromatics >EC16-EC21	<100 µg/kg	TM173		19500	69500	7190	7880	14200	58900
Aromatics >EC21-EC35	<100 µg/kg	TM173		68300	55500	74300	68400	67500	263000
Aromatics >EC35-EC44	<100 µg/kg	TM173		28400	21400	54900	54200	28100	120000
Aromatics >EC40-EC44	<100 µg/kg	TM173		11100	8810	22100	22400	8550	49400
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		121000	205000	139000	133000	114000	450000
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		423000	730000	338000	287000	268000	1710000

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% 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
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample R	TPE582	TPE582				
			Depth (m)	3.00	4.00				
			Sample Type	Soil/Solid	Soil/Solid				
			Date Sampled	29/10/2014	29/10/2014				
			Sample Time	.	.				
			Date Received	06/11/2014	06/11/2014				
			SDG Ref	141106-119	141106-119				
			Lab Sample No.(s)	10331892	10331896				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87 @	66 @				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		14900 @ M	1440000 @ M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<100 @ M	<100 @ M				
Benzene	<10 µg/kg	TM089		<200 @ M	<200 @ M				
Toluene	<2 µg/kg	TM089		<40 @ M	<40 @ M				
Ethylbenzene	<3 µg/kg	TM089		<60 @ M	<60 @ M				
m,p-Xylene	<6 µg/kg	TM089		<120 @ M	<120 @ M				
o-Xylene	<3 µg/kg	TM089		235 @ M	<60 @ M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089		235 @	<9 @				
sum of detected BTEX by GC	<24 µg/kg	TM089		235 @	<24 @				
Aliphatics >C5-C6	<10 µg/kg	TM089		<200 @	320 @				
Aliphatics >C6-C8	<10 µg/kg	TM089		363 @	37900 @				
Aliphatics >C8-C10	<10 µg/kg	TM089		1420 @	293000 @				
Aliphatics >C10-C12	<10 µg/kg	TM089		7000 @	549000 @				
Aliphatics >C12-C16	<100 µg/kg	TM173		25300	6450000				
Aliphatics >C16-C21	<100 µg/kg	TM173		37200	3380000				
Aliphatics >C21-C35	<100 µg/kg	TM173		98700	6790000				
Aliphatics >C35-C44	<100 µg/kg	TM173		38300	1330000				
Total Aliphatics >C12-C44	<100 µg/kg	TM173		199000	18000000				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<200 @	<200 @				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<200 @	<200 @				
Aromatics >EC8-EC10	<10 µg/kg	TM089		1270 @	195000 @				
Aromatics >EC10-EC12	<10 µg/kg	TM089		4670 @	366000 @				
Aromatics >EC12-EC16	<100 µg/kg	TM173		8410	4110000				
Aromatics >EC16-EC21	<100 µg/kg	TM173		13500	2910000				
Aromatics >EC21-EC35	<100 µg/kg	TM173		96500	5890000				
Aromatics >EC35-EC44	<100 µg/kg	TM173		83200	1380000				
Aromatics >EC40-EC44	<100 µg/kg	TM173		40100	405000				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		202000	14300000				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		416000	33700000				

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Identification - Solid Samples

		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	IP1307 1.00 SOLID 29/10/2014 00:00:00 12/11/2014 07:50:05 141106-119 10331900 TM048	26/11/14	Kevin Gill	Loose fibres in soil	Detected (#)	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	IP1308 1.00 SOLID 29/10/2014 00:00:00 13/11/2014 08:19:36 141106-119 10331872 TM048	26/11/14	Kevin Gill	-	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	IP1309 0.50 SOLID 29/10/2014 00:00:00 12/11/2014 12:19:32 141106-119 10331847 TM048	26/11/14	Kevin Gill	-	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	IP1310 0.50 SOLID 29/10/2014 00:00:00 12/11/2014 08:31:24 141106-119 10331812 TM048	26/11/14	Kevin Gill	-	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	TPE579 0.50 SOLID 29/10/2014 00:00:00 12/11/2014 08:28:24 141106-119 10331917 TM048	26/11/14	Kevin Gill	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

		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	TPE580 1.00 SOLID 29/10/2014 00:00:00 12/11/2014 12:17:24 141106-119 10331829 TM048	26/11/14	Kevin Gill	Loose fibres in soil	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	TPE582 1.00 SOLID 29/10/2014 00:00:00 13/11/2014 08:22:18 141106-119 10331808 TM048	26/11/14	Kevin Gill	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	IP1307 1.00 SOLID 29/10/2014 00:00:00 07/01/2015 07:57:53 141106-119 10331900 TM 304	None (#)	N/C	0.0010 (#)	0.0015 (#)	0.0025 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE580 1.00 SOLID 29/10/2014 00:00:00 06/01/2015 12:43:36 141106-119 10331829 TM 304	None (#)	N/C	0.0055 (#)	0.0022 (#)	0.0076 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TPE582 1.00 SOLID 29/10/2014 00:00:00 07/01/2015 06:24:08 141106-119 10331808 TM 304	None (#)	Amphibole fibres found during PCM analysis.	<0.001 (#)	<0.001 (#)	0.0014 (#)

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample [1]	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

[1] Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

CERTIFICATE OF ANALYSIS

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	10331900	10331904	10331908	10331913	10331872	10331878	10331882	10331886	10331847	10331812
Customer Sample Ref.	IP1307	IP1307	IP1307	IP1307	IP1308	IP1308	IP1308	IP1308	IP1309	IP1310
AGS Ref.										
Depth	1.00	2.00	3.00	4.00	1.00	2.00	3.00	4.00	0.50	0.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	26-Nov-2014				26-Nov-2014				26-Nov-2014	26-Nov-2014
Asbestos Quantification - Full	08-Jan-2015									
EPH CWG (Aliphatic) GC (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	22-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014
EPH CWG (Aromatic) GC (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	22-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014
Metals in solid samples by OES	20-Nov-2014	19-Nov-2014	13-Nov-2014	14-Nov-2014	20-Nov-2014	18-Nov-2014	25-Nov-2014	19-Nov-2014	20-Nov-2014	20-Nov-2014
PAH by GCMS	25-Nov-2014	19-Nov-2014	26-Nov-2014	25-Nov-2014	21-Nov-2014	26-Nov-2014	19-Nov-2014	24-Nov-2014	25-Nov-2014	25-Nov-2014
pH	25-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	25-Nov-2014	24-Nov-2014
Sample description	12-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	13-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014
Total Organic Carbon						13-Nov-2014			19-Nov-2014	
TPH CWG GC (S)	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014

Lab Sample No(s)	10331817	10331821	10331825	10331917	10331829	10331833	10331838	10331842	10331851	10331859
Customer Sample Ref.	IP1310	IP1310	IP1310	TPE579	TPE580	TPE580	TPE580	TPE580	TPE581	TPE581
AGS Ref.										
Depth	1.50	2.50	3.50	0.50	1.00	2.00	3.00	4.00	0.50	1.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples				26-Nov-2014	26-Nov-2014					
Asbestos Quantification - Full					08-Jan-2015					
EPH CWG (Aliphatic) GC (S)	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014
EPH CWG (Aromatic) GC (S)	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	24-Nov-2014	24-Nov-2014
Metals in solid samples by OES	19-Nov-2014	21-Nov-2014	21-Nov-2014	17-Nov-2014	20-Nov-2014	19-Nov-2014	21-Nov-2014	20-Nov-2014	19-Nov-2014	25-Nov-2014
PAH by GCMS	19-Nov-2014	19-Nov-2014	19-Nov-2014	25-Nov-2014	25-Nov-2014	19-Nov-2014	19-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014
pH	20-Nov-2014	19-Nov-2014	20-Nov-2014	24-Nov-2014	25-Nov-2014	19-Nov-2014	19-Nov-2014	25-Nov-2014	24-Nov-2014	24-Nov-2014
Sample description	12-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014
Total Organic Carbon				19-Nov-2014						
TPH CWG GC (S)	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014

Lab Sample No(s)	10331863	10331867	10331808	10331855	10331892	10331896
Customer Sample Ref.	TPE581	TPE581	TPE582	TPE582	TPE582	TPE582
AGS Ref.						
Depth	2.50	3.50	1.00	2.00	3.00	4.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples			26-Nov-2014			
Asbestos Quantification - Full			08-Jan-2015			
EPH CWG (Aliphatic) GC (S)	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014
EPH CWG (Aromatic) GC (S)	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	25-Nov-2014
GRO by GC-FID (S)	25-Nov-2014	25-Nov-2014	25-Nov-2014	24-Nov-2014	26-Nov-2014	26-Nov-2014
Metals in solid samples by OES	19-Nov-2014	21-Nov-2014	17-Nov-2014	18-Nov-2014	21-Nov-2014	17-Nov-2014
PAH by GCMS	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	19-Nov-2014	25-Nov-2014
pH	24-Nov-2014	24-Nov-2014	24-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
Sample description	11-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014
Total Organic Carbon			19-Nov-2014			
TPH CWG GC (S)	26-Nov-2014	26-Nov-2014	25-Nov-2014	26-Nov-2014	26-Nov-2014	26-Nov-2014

SDG:	141106-119	**Location:**	Coed Darcy	**Order Number:**	CD0950
Job:	H_ATKINS_LDC-224	**Customer:**	Atkins Global Ltd	**Report Number:**	298129
Client Reference:	Site Wide Trial Pitting	**Attention:**	Jack Lowrie	**Superseded Report:**	

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. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. 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. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. 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.

5. 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.

6. 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. The quantity of asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. 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.

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

20. 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. 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.

23. 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.

Sample Deviations

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

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.

Michelle Lee

Atkins Ltd.
The Axis
10 Holliday Street
Birmingham
B1 1TF

michelle.lee@atkinsglobal.com
07812 23 7628

© Atkins Ltd except where stated otherwise.

The Atkins logo, ‘Carbon Critical Design’ and the strapline ‘Plan Design Enable’ are trademarks of Atkins Ltd.

Coed Darcy

Validation Report
Monitor Phase 58

St Modwen Developments Limited

ATKINS

Notice

This report was produced by Atkins Limited for St. Modwen Developments Ltd (St. Modwen) for the specific purpose of Coed Darcy.

This report may not be used by any person other than St. Modwen without their express permission. In any event, Atkins accepts no liability for any costs, liabilities or losses arising as a result of the use of or reliance upon the contents of this report by any person other than St. Modwen.

Document history

Job number: 5122307			**Document ref: 5041216-OSW-RPT-0001385**			
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
0	Draft	MM	CRS	ML	MP	May 2015
1	Draft –Updated in line with Monitor comments	CRS	MJT	ML		Oct 2015

Client signoff

Client	St Modwen Developments Limited
Project	Coed Darcy
Document title	Validation Report Monitor Phase 58
Job no.	5122307
Copy no.	
Document reference	5041216-OSW-RPT-0001385

Table of contents

Chapter		Pages
1.	**Introduction**	**5**
1.1.	Background	5
1.2.	Aims and Objectives	5
1.3.	Scope of Work	5
1.4.	Soil Quality Assessment Standards	6
1.5.	Information Sources	6
1.6.	Limitations	7
2.	**The Site**	**8**
2.1.	Location and Description	8
2.2.	Historical Land Use	8
2.3.	Published Geology	9
2.4.	Hydrogeology and Hydrology	9
2.5.	Landfills and Waste Management Facilities	9
2.6.	Sensitive Land Uses	9
3.	**Historical Ground Investigation by URS**	**11**
3.1.	Recorded Ground Conditions	11
3.2.	Soil and Groundwater Contamination	12
4.	**Requirements under the S106**	**14**
4.1.	Section 106 Deed of Planning Obligations Requirements	14
5.	**Recent Ground Investigation by Atkins**	**15**
5.1.	Introduction	15
5.2.	Recorded Ground Conditions	15
5.3.	Laboratory Analysis	16
5.4.	Soil and Groundwater Contamination	16
5.5.	Relict Pipework	22
6.	**Identified Issues Requiring Further Works**	**24**
7.	**Validation**	**25**
7.1.	Requirements of the S106	25
7.2.	Sampling Frequencies	25
7.3.	Follow-up Ground Investigation and Sampling	26
7.4.	Further Investigation	27
7.5.	Investigation of Historical Electricity Substation	34
7.6.	Hotspot Excavation	34
7.7.	Pipework Removal	35
7.8.	Summary	36
8.	**Summary**	**38**

Drawings

Appendices

Appendix A. **Summary of Adopted Thresholds**

Appendix B. **Exploratory Hole Logs**

Appendix C. **Laboratory Analytical Results – Ground Investigation**

Appendix D. **Laboratory Analytical Results – Remedial Works**

Appendix E. **Photosheet**

Glossary of Terms

Term	Meaning / Definition
CSM	Conceptual Site Model
RBSL	Risk Based Screening Level
ACM	Asbestos Containing Material
TPH	Total Petroleum Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
FFL	Finished Floor Level
mAOD	metres Above Ordnance Datum
RAP	Remedial Action Plan
VO	Visual/Olfactory Observations
BGL	Below Ground Level

1. Introduction

1.1. Background

Atkins Limited has been commissioned by St. Modwen Developments Limited (St. Modwen) to provide consultancy advice with regard to the redevelopment of the former Llandarcy Oil Refinery as Coed Darcy.

The purpose of this report is to provide data relating to Monitor Phase 58 to confirm the suitability of this area for redevelopment in line with the specific requirements of the S106 and enable St. Modwen to achieve sign off by the Monitor. For the purpose of Monitor sign off the extent of Monitor Phase 58 is shown on Drawing 5041216-REM-DWG-1892.

This document represents an updated version of an earlier report and takes into account Monitor comments in RFI0140, dated 25h June 2015.

Based upon the current Masterplan Monitor Phase 58 is shown as an area of proposed residential housing in the final development. Further to discussion with St. Modwen, however, the following assessment assumes a proposed commercial end use for Monitor Phase 58 in terms of comparison with the requirements of the S106.

In the absence of detailed information relating to any proposed layout and/or finished floor levels (FFL) across this area, the following assessment assumes that existing ground levels represent a depth of 1m below FFL for the purpose of comparison with the requirements of the S106.

1.2. Aims and Objectives

This report provides an overview of the site including information regarding the site setting, local geology and hydrogeology, identified contamination and details of remedial works undertaken.

In the long term, it is anticipated that the suitability of land quality will need to be reassessed once detailed development proposals for each area are defined.

Planning Condition 44 of the Outline Planning Permission for the site (P2005/0393) requires that:

Prior to the submission of the first reserved matters application on each phase of development, notwithstanding the provisions of Condition 26, a phase specific remediation strategy focusing upon the remediation requirements of that area shall be submitted to and approved in writing by the Local Planning Authority. The submitted documents shall include the results from the site investigation and risk assessment; and using the above information a method statement shall be submitted detailing remediation measures and a detailed programme for the submission of verification reports upon completion of the remedial works confirming implementation of agreed measures, together with proposals for future monitoring and reporting. The approved details shall be fully implemented on site, in line with a schedule of works that shall form part of the details submitted to the Local Planning Authority for approval.

In line with the detailed information relating to historical and recent ground investigation and laboratory analysis for Monitor Phase 58 as provided in the following report, it is envisaged that this document will form part of any later planning submission for this part of the site in line with the requirements of Planning Condition 44.

1.3. Scope of Work

The scope of works includes:

- A review of all readily available information including geological, hydrogeological, historical site plans, Environment Agency and British Geological Society (BGS) records;
- A review of available historical maps relating to Monitor Phase 58 and adjacent areas;

- A review of historical (1998-2004) and recent (2014-2015) ground investigation information relating to Monitor Phase 58;
- Comparison of the available ground investigation information and laboratory data against the requirements of the S106, specific to the proposed end use for Monitor Phase 58.
- Details of remedial works and further investigation undertaken, and
- Details of all validation/further investigation in order to confirm that the remedial works were successfully carried out and to demonstrate that this area is now suitable for use in line with the required criteria.

1.4. Soil Quality Assessment Standards

To maintain consistency of approach, the assessment standards for historical and recent data are those indicated in the S106 Agreement for Coed Darcy. The visual and aesthetic classification system defined within the S106, is provided as Table 1.1.

Atkins proposes to continue this system for the classification of all soils encountered, to aid assessment of each area in terms of the required remediation requirements. The assigned classifications for each strata are quoted on the trial pit logs for recent ground investigation (refer to Section 5).

Table 1.1 – Scale of Aesthetic Criteria

Class	Visual	Olfactory
0	**No visible staining of soil, no visible suspect ACM*.**	**No detectable odour on soil.**
1	**Occasional staining of soil, no visible suspect ACM*.**	**Faint odour on soil.**
2	**Frequent staining of soil.**	**Distinct but not strong odour on soil.**
3	**Occasional heavy staining of soil.**	**Strong odour on soil.**
4	**Heavy staining of soil.**	**Strong odour discernible in ambient air.**
5	**Visible hydrocarbon present.**	**Overwhelming odour.**

* visible suspect ACM refers to asbestos containing material visible to the naked eye which a reasonable and prudent person used to managing asbestos may suspect to be asbestos-containing.

The S106 for the proposed development presents a series of contamination thresholds referred to as Risk Based Screening levels (RBSLs) which are defined as being the 'minimum base level standard' for redevelopment remediation works (Schedule 8, Part 2, Paragraph 2,5).

In order to update the assessment of contamination in line with current UK guidance, these RBSLs are also now supplemented by a series of Remedial Target Concentrations (RTCs) derived by Atkins (Atkins reference: 5041216-REM-REP-000476 v1). A summary of the adopted thresholds are presented in Appendix A.

Details of the required frequencies of testing, as stated within the S106, are presented in Section 7.

Compliance with the redevelopment remediation requirements stated within Schedule 8 of the S106 (refer to Section 4) form the basis for obtaining the relevant sign off from the Monitor.

1.5. Information Sources

Information, reviewed as part of the following assessment, has been obtained from the following sources:

- URS BP Llandarcy Refinery Desk Study 44382742/BRRP0001, July 2007
- URS Report FR1287 Final Factual Report for Ground Investigation, August 2005

- Section 106 Deed of Planning Obligations (Dewey & LeBoeuf report GNP/NJR/13773-2), February 2008

1.6. Limitations

As previously indicated, this report has been prepared with the sole intention of providing sufficient information to enable St. Modwen to obtain Monitor sign off for Monitor Phase 58 in accordance with criteria set out in the Coed Darcy Section 106 Agreement. Whilst the report may be relevant for submission as part of a reserved matters planning application, additional reports and submissions will be required to inform future plot development.

The investigation works undertaken and summarised within this report represent a sampling exercise to determine ground conditions, in line with the required methodology outlined within the S106. The proposed works were carried out predominantly to investigate contamination across this area and do not include a review of any geotechnical issues or constraints that may exist which would need to be taken into account as part of any proposed redevelopment.

In addition, it should be noted that ground and groundwater conditions can vary over time and between sampling points. Whilst this report provides information relating to the removal of identified pipework and below ground structures encountered during the works, unidentified pipework and/or structures may still exist in situ.

The following assessment assumes a proposed Commercial end use for this part of the former refinery. Where a change in proposed end use is proposed, reassessment of the data will be required in order to confirm the need for additional investigation and/or further remediation.

2. The Site

2.1. Location and Description

Monitor Phase 58 is a roughly rectangular-shaped parcel of land covering approximately 5.06ha (hectares). This area lies in the south west of the former Llandarcy Oil Refinery at the northern extent of the Southern Tank Farm.

Monitor Phase 58 lies directly to the south of the containment lagoons/former refinery landfill and to the east of a small area of existing housing known as the Demonstration Village. This housing remains unoccupied at the time of the writing and it is understood that occupation of this housing is restricted until the provision of new infrastructure within this part of the former refinery. The location of Monitor Phase 58 is shown on Drawing 5041216-REM-DWG-1892.

Monitor Phase 58 is characterised by a sloping topography from an elevation of approximately 20 metres above ordnance datum (mAOD) in the south to 10mAOD in the north. A topographical survey of the area is presented as Drawing-ATK-DR-C-REM-2025.

An existing site haul road passes roughly east to west through the centre of Monitor Phase 58.

2.2. Historical Land Use

Construction of Llandarcy Oil refinery commenced in 1917 but was temporarily suspended during the war due to the lack of men and resources. Construction started again in 1919 with production beginning in 1921. The refinery was officially opened in 1922.

The purpose of the refinery was to produce motor spirit, kerosene, gas fuel oil, fuel residue and lubricating oil and wax from imported crude oil. Between the wars, the oil industry developed rapidly. By 1939, the refinery had little of the original plant in operation.

In the mid 1980's a number of rationalisations occurred with the closure of the refinery being formally announced in 1997.

Based upon the information in URS Report 44382742/BRRP0001, Monitor Phase 58 is indicated to have contained several historic land uses/activities associated with the former refinery. A fuel oil blending area, that was built pre-war and remained until site closure, is shown in the north western part if Monitor Phase 58. A fuel pump house is shown to have been located to the east of the fuel pump house was a crude oil pump house. This is reported to have been built pre-war and active until the 1980s. This is reported to have pumped crude to the Crude Oil Distillation Units (CDUs) on the top terrace.

In the south east of Monitor Phase 58, bottom sludge and sediment tanks are reported from the 1950s. These are indicated to have more recently used as recovered oil tanks.

The majority of the southern section of Monitor Phase 58 is shown to have been occupied by three C-series tanks. These are reported to have been built pre-war, for the storage of crude oil and are suggested to have remained in useuntil the late 1980s. The location of a fourth C-series tank is shown to span the southern boundary of Monitor Phase 58.

A small electricity substation, labelled number 15, is shown to have been located centrally within Monitor Phase 58, to the south of an existing haul road.

Tanks and above ground infrastructure were removed from Monitor Phase 58 prior to acquisition of the refinery by St. Modwen in 2008. It is not known, therefore, what condition these were in when they were removed in terms of the potential for historical spillage and leakages within this area.

Details of historical land use within Monitor Phase 58, based on the information available, is shown on Drawing 5041216-REM-DWG-1893.

2.3. Published Geology

A review of published geological information (BGS map 247, Swansea 1:50,000 scale) indicates Monitor Phase 58 to be underlain by:

- Peat, a 'brushwood' (freshwater) peat and 'phragmites' (brackish) peat in the north and north east;
- Till (Diamicton), a heterogeneous deposit of glacial origin; and
- Pennant Sandstone Formation, specifically the Hughes Member which is described by the BGS as *'green-grey, lithic arenites ("Pennant sandstones") with thin mudstone/siltstone and seatearth interbeds and mainly thin coals'*.

2.4. Hydrogeology and Hydrology

2.4.1. Groundwater

Environment Agency data suggests that the Till (Diamicton) underlying Monitor Phase 58 is classified as 'Unproductive Strata'. These are defined as:

'…rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.'

The underlying sandstone bedrock is classified as a 'Secondary A Aquifer'. This is defined as:

'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.'

Groundwater contours presented by URS in report FR1287 indicate that the groundwater flow beneath Monitor Phase 58 in both drift (water permitting) and bedrock is towards the north-north west, towards the containment lagoons/former landfill.

2.4.2. Surface Waters

Crymlyn Bog is located approximately 180m to the north of Monitor Phase 58.

The closest surface water bodies, within the confines of the former Llandarcy Oil Refinery, are the containment lagoons, located directly to the north and north west of Monitor Phase 58.

An existing pond, known as theTriangular Pond is located approximately 100m to the south of Monitor Phase 58. This pond is to be removed as part of the redevelopment of the former refinery.

2.5. Landfills and Waste Management Facilities

The Containment Area (see Section 2.4 above) lies immediately to the north of Monitor Phase 58 and has been previously used by BP for historical landfilling activities.

Atkins is currently in the process of remediating the landfill associated with the former Llandarcy Oil Refinery and are in ongoing discussion with Natural Resources Wales relating to the surrender of Environmental Permit No. EPR/AP3990LR.

2.6. Sensitive Land Uses

Crymlyn Bog Site of Special Scientific Interest (SSSI) lies within the flood plain of the Neath river estuary and represents the most extensive area of lowland fen in Wales. At its closest point, the SSSI is located approximately 180m to the north of Monitor Phase 58.

Crymlyn Bog SSSI is internationally important for its very wet mires often identified by an unstable `quaking` surface. Bottle sedge and bogbean are important components of some stands, together with common cottongrass, water horsetail, star sedge, mud sedge, and in places, the nationally rare slender cottongrass. Crymlyn Bog supports the largest area of calcium-rich fen dominated by great fen sedge vegetation in south Wales. Some of these stands are dominated by great fen

sedge, but other areas display a more diverse vegetation in which tufted-sedge, royal fern and a range of tall-herb fen species are prominent. Some of these stands are unique in a Welsh context. In addition there are areas of wet woodland with alder and willow being the dominant species (http://www.ccgc.gov.uk/landscape--wildlife).

3. Historical Ground Investigation by URS

3.1. Recorded Ground Conditions

3.1.1. General

A total of 54 historical exploratory holes are reported to have been excavated historically by URS within Monitor Phase 58 on behalf of the previous site owner, BP. The locations of known exploratory holes are presented on Drawing 5041216-REM-DWG-1894.

The exploratory holes were excavated between 1998 and 2004 (URS Report FR1287) as part of a series of investigations across the former refinery.

3.1.2. Ground Condition Summary

3.1.2.1. Made Ground

Made Ground is recorded to have been historically encountered in 40 exploratory holes within Monitor Phase 58 and is generally described as being both granular and cohesive, comprising a mixture of reworked glacial materials (varying quantities of clay, silt, sand and gravel matrices included different frequencies of cobbles and boulders). Anthropogenic inclusions of brick, concrete, clinker, pipe fragments and slag were identified within the Made Ground and ash was also present in several exploratory holes.

Made Ground, comprising ash and clinker, was encountered to a maximum depth of 4.1m below ground level (m bgl) in WSTP230. This was located on the eastern boundary of Monitor Phase 58, adjacent to the railhead.

3.1.2.2. Drift Geology

Natural soils beneath Monitor Phase 58 are reported to have been historically encountered in 50 exploratory holes and are described as various compositions of glacial till, such as silty sand, sandy silt, sandy clay, sandy silty clay, clayey silty gravel, gravelly clay and gravelly silt.

Peat was identified locally within the superficial geology as layers and thin lenses. Varying quantities of sandstone gravel and cobbles were identified during excavation.

Natural soils were encountered from ground level in 12 exploratory holes, to depths of between 0.7m and 12.3m bgl with the maximum depth encountered in MSMW175d located in the northern part of Monitor Phase 58.

3.1.2.3. Bedrock Geology

Bedrock geology was encountered in 11 exploratory holes at depths ranging from 1.5m bgl to 6.0m bgl predominantly as a weathered zone. Rockhead was encountered during drilling at 12.3m bgl in MSMW175d.

Where encountered, bedrock is described as light grey fine grained sandstone, grey sandstone intercalated with siltstone, fine to medium grained weathered sandstone, and weak mudstone.

3.1.2.4. Water Strikes

Water strikes were recorded in 35 historical exploratory holes across Monitor Phase 58. The water strikes range from ‘seepage’ to ‘rapid ingress’. The depths of the water strikes ranged from 0.3m – 12.5m bgl.

Water strikes were recorded within the Made Ground, drift and bedrock geology, and the variation in depths recorded infers perched water and natural groundwater to be present beneath this area within shallow soils.

3.2. Soil and Groundwater Contamination

3.2.1. Visual and Olfactory Evidence of Contamination

Visual and olfactory evidence of contamination was identified in the historical boreholes and trial pits in Monitor Phase 58. Observed contamination is reported to have been widespread across Monitor Phase 58 and included the presence of hydrocarbon staining, oily sheens and hydrocarbon odours.

Free product was also observed locally and is discussed in Section 3.2.2, below.

3.2.2. Free Product

Free product was identified at the following exploratory holes during excavation across Monitor Phase 58:

- CARW032 displayed pockets of free phase in the superficial deposits at approximately 1.0m bgl.
- CARW034 identified some free phase product in the superficial geology between 1.5m and 2.5m bgl.
- MSTP078 observed free phase product in Made Ground between 1.0m and 1.2m bgl.
- MSTP079 encountered free phase product in the natural deposits at 3.5m bgl.
- MSTP093 displayed free phase product in the superficial deposits at 1.5m bgl.
- MSTP101 identified free phase seepage in Made Ground at 1.25m bgl.
- MSTP327 observed free product in the superficial geology from 1.0m to 2.3m bgl.
- PTTP025 identified free product in the natural deposits at 2.45m bgl.
- TFTP002 displayed free product in the superficial deposits 1.0m bgl.
- TFTP007 encountered free product at approximately 0.25m bgl within the superficial deposits.
- TFTP157 observed free product on arisings in the natural geology at approximately 1.8m bgl.
- WSMW115PIT displayed free product between 0.5m and 1.75m bgl within Made Ground and superficial deposits.
- WST210 identified free product within the superficial deposits at approximately 1.5m and 2.5m bgl.
- WST228 observed oily water/product at 0.6m bgl in the natural deposits.
- WSTP233 displayed brown free product on water seepage at approximately 2.5m bgl, within the superficial geology.

Based upon a review of available groundwater monitoring data, free product was encountered in nine boreholes. These were CARW032, CARW034, CARW035, MSMW031s, MSMW177d, MSTP327, PTTP023, TFTP002 and TFTP156.

The maximum thickness of product recorded was 0.396m in CARW035 during March 2003.

3.2.3. Soil Contamination

Based upon available laboratory data from historical ground investigation, there are no reported exceedances of the laboratory data when screened against the Risk Based Screening Level (RBSL) for deep soils in a commercial (>1m) criteria.

3.2.4. Groundwater Contamination

The laboratory data for groundwater samples identified short to mid-range hydrocarbon contamination being most prevalent across Monitor Phase 58.

Screening of the available data against the RBSL for deep groundwater (>1m) in a commercial setting as detailed in Table 3.1, below indicates a single exceedance relating to benzene in MSMW025.

Reference to the relevant exploratory hole log for this location suggeststhis installation to lie within bedrock beneath Monitor Phase 58. The reported concentration was 6,032 µg/l, compared with the RBSL of 88.8 µg/l. MSMW025 is shown to have been located in the central section of Monitor Phase 58.

3.2.5. Exclusion Areas / Special Process Areas

Based upon the findings of previous assessment by URS, a series of 'Special Process Areas' were defined around the former refinery. These represent areas of potentially increased contamination associated with historical activities or processes

There are six designated Special Process Area recorded to be located, either fully or partially, within Monitor Phase 58:

- The Barn Workshop;
- Substation;
- Benzene Tankfarm - Dissolved Benzene (this coincides with the location of the elevated concentration of benzene in groundwater in borehole MSMW025);
- TPH Tankfarm Pump Raft;
- Crude Pump House and
- Pump Raft (this coincides with the location of the bottom sludge and sediment tanks referred to in Section 2.2).

It is noted that the presence of free product noted during historical investigations (refer to section 3.2.2) coincides with the designated Special Process Areas.

The location and extent of the Special Process Areas within Monitor Phase 58 are shown on Drawing 5041216-REM-DWG-1893.

4. Requirements under the S106

4.1. Section 106 Deed of Planning Obligations Requirements

Following the review of available data, the Monitor Phase 58 area is considered to represent a **'commercial end use where groundwater is in soil'** scenario, as outlined in the S106.

Based upon this classification, the following remediation requirements are stated in the S106 (Schedule 8, Section 6.0) as being the minimum remediation requirements required in order to release this area for redevelopment for a commercial end use.

- *All oil saturated soils and soil containing free product other than minor sheens shall be removed to a minimum depth of 2.00m below FFL(Final Finished Level) or 0.50m below the likely lowest seasonal groundwater elevation following development of the intended Urban Village, whichever is the deeper. This depth is to be established by consideration of all available groundwater level monitoring data.*
- *All soils must meet the RBSL for TPH to at least 1m below FFL.*
- *All soils must meet in bulk, considering both dispersed fibres and pieces of ACM, the RBSL for ACM to at least 1m below FFL. Any visible ACM encountered during construction in the first 1m below FFL is to be removed.*
- *Where there is a risk of the migration in the ground of hazardous gas or contaminated liquid into remediated areas, the Developer shall take all appropriate measures to prevent this occurring. Such measures could include the installation of interception trenches and management of discharge from those. The Developer shall monitor whatever measures are put in place after their installation to continue to demonstrate their effectiveness.*
- *Where necessary, seeps, sheens and iron rich discharges from the bedrock must be controlled such that there is no visible discharge at surface and little or no odour. Acceptable methodologies for remediation may include, but are not limited to the use of land drainage via interceptors.*

Schedule 10, Paragraph 6 of the S106 states that 'Irrespective of the Intended Use of each Phase or part thereof, all existing buried services at the Property shall be removed and the routes of those services shall be backfilled with material no more permeable than the general material in the vicinity'.

As previously highlighted, in the absence of detailed information relating to finished floor levels associated with any proposed redevelopment of this area, the following assessment assumes that the current ground levels, shown on Drawing 5041216-ATK-DR-C-REM-2025, represent 1m below FFL in the final development for the purpose of comparison with the requirements of the S106.

5. Recent Ground Investigation by Atkins

5.1. Introduction

With the aim of supplementing and updating the limited historical investigation, a total of 445 machine-excavated trial pits were undertaken across the accessible parts of Monitor Phase 58 between June 2014 and April 2015.

Environmental Scientifics Group (ESG) were employed by the client, St Modwen, to complete the works, under direction from Atkins.

Trial pits were advanced to the maximum reach of the excavator, unless terminated on bedrock or obstructions or because of water ingress, collapse or contamination. All trial pits were backfilled with arisings in the reverse order to which they were excavated, then compacted with the back of the excavator bucket. Excess arisings were left in a mound above the surrounding ground surface to allow for subsequent settlement.

The locations of all of the recent trial pits are shown on Drawing 5041216-REM-DWG-1895.

Copies of all exploratory hole logs, for the recent investigation works, are presented in Appendix B.

Two serviceable historical boreholes, MSMW031 and TFTP156, located within Monitor Phase 58 were sampled by Atkins in January 2015. The relevant log for MSMW031 indicates this installation is constructed within the bedrock beneath Monitor Phase 58. The log for TFTP156 indicates that this installation screens both the superficial deposits and weathered bedrock. The locations of these historical boreholes are shown on Drawing 5041216-REM-DWG-1893.

5.2. Recorded Ground Conditions

Made Ground is reported to have been encountered in 282 of the recent Atkins trial pits and is reported to have been variable in composition, comprising clay, sand and gravel with numerous anthropogenic inclusions. Gravel is described asangular to rounded fine to coarse fragments of siltstone, sandstone, limestone, brick, concrete, clinker, coal and burnt shale. Ash is recorded to have been encountered within pits in the eastern part of Monitor Phase 58, adjacent to the railhead, and within the southern half of the phase. Cobbles were encountered at varying frequencies and comprised siltstone, sandstone, limestone, clinker, slag, bitumen, brick and concrete. Boulders comprised sandstone, siltstone, concrete and slag.

Pockets of black fibrous peat were identified locally within Monitor Phase 58. Plastic, pipes, metal waste, cables, wood and fabric were also identified locally in Made Ground, which was reported to depths ranging from 0.05m to 5.20m bgl.

During the works, 30+ barrels containing tar/bitumen and possible asbestos fragments were recorded at a depth of 2.0m bgl in IP1663. This pit was located in the east of Monitor Phase 58 in close proximity to the ‘The Barn Workshop’ Special Process Area.

Pipework was encountered in situ in 20 trial pits and concrete/brick obstructions were encountered in 20 trial pits within Monitor Phase 58.

Superficial deposits, beneath Monitor Phase 58, were generally described as being variable from a sandy gravel and gravelly sand to sandy and gravelly clays or silts, with varying quantities of cobbles and boulders. Gravel comprised sandstone, siltstone and mudstone. Cobbles comprised tabular sandstone, siltstone and limestone, and boulders were tabular sandstone.

Sandstone bedrock was encountered as a weathered zone comprising tabular sandstone gravel, cobbles and boulders. Trial pits in Monitor Phase 58 were terminated within bedrock at depths ranging from 0.40m bgl in IP1739 in the east to 4.40m bgl in IP2785 in the west.

Water strikes (described as ‘seepages’ or ‘slow ingress’) were recorded in 240 of the trial pits excavated across Monitor Phase 58, at depths ranging from 0.1m to 5.0m bgl.

Seepages were predominantly encountered in Made Ground or superficial soils and are considered to represent groundwater within soils beneath Monitor Phase 58.

5.3. Laboratory Analysis

A total of 1064 soil samples, representing identified soils from across Monitor Phase 58, were submitted to Alcontrol Laboratories and were analysed for a suite of contaminants considered appropriate for the former use of the area.

Due to the uncertainty over final floor levels, a generic suite comprising the majority of determinands listed in the RBSLs, was scheduled on all soil samples collected during the ground investigation. Due to the absence of any identified sources of historical solvent use within this area, no testing for volatile organic compounds was undertaken.

Once determined, should final floor levels be proposed to lie at or below the current ground levels, the availability of this additional data will enable a reassessment of the relevant data without the need for further investigation and/or additional sampling.

The analytical suite comprised:

- Metals - arsenic, cadmium, chromium, copper, lead, nickel, mercury, selenium, vanadium, zinc (all samples);
- pH (all samples);
- Polycyclic Aromatic Hydrocarbons (all samples);
- Speciated Petroleum Hydrocarbons plus BTEX hydrocarbons (all samples);
- Soil Organic Matter (selected samples);
- Asbestos screen and identification (samples within top 1m of existing ground level only, assuming that current levels represent 1m below FFL and the asbestos RBSL does not apply at depths greater than 2m below FFL in any land use scenario).

The groundwater sample collected from boreholes MSMW031 and TFTP156 were analysed for:

- Metals - arsenic, cadmium, chromium, hexavalent chromium, copper, lead, nickel, mercury, vanadium, zinc;
- pH;
- Polycyclic Aromatic Hydrocarbons; and
- Speciated Petroleum Hydrocarbons plus BTEX hydrocarbons.

The achieved frequency of testing, based on the recent trial pitting, is discussed in Section 7.

5.4. Soil and Groundwater Contamination

5.4.1. Visual and Olfactory Evidence of Contamination

A review of the logs for the 445 trial pits recently excavated within Monitor Phase 58 shows that a visual and/or olfactory classification of 5 (refer to Table 1.1) was recorded in pits at 40 locations (refer to Table 5.1)

Hydrocarbon sheens or free product were encountered in 77 trial pit locations within Monitor Phase 58. The locations do not appear to correlate with any specific area within this Phase.

Table 5.1 – Visual and Olfactory Evidence of Contamination in Monitor Phase 58

Trial Pit	Depth	Visual and Olfactory Evidence of Contamination
IP1579	2.40-3.80m	VO 3,5 No description of olfactory evidence of contamination
IP1648	3.00m	Water seepage mixing with hydrocarbon product leaving a black oily sheen
IP1663	2.00m	VO 5,0 Broken oil barrel filled with bitumen/tar. Pit extended to remove in excess of 30 barrels of tar and bitumen
IP1664	1.30-2.60m	VO 5,4 Frequent pockets of solid bitumen
IP1667	1.30-1.50m	Pockets of black free product and thick oily film on surface of water
IP1736	0.80-1.00m	Free product
IP1737	0.50-1.50m	Localised lenses of free product
IP1739	0.00-0.40m	VO 5,4 No description of visual or olfactory evidence of contamination
IP1751	0.30-1.40m	VO 5,4 No description of visual or olfactory evidence of contamination
IP1755	0.00-0.80m	VO 5,3 Pockets of free product
	0.80-3.70m	VO 3,5 No description of olfactory evidence of contamination
IP1756	0.00-1.00m	VO 5,3 No description of visual evidence of contamination
	1.00-1.50m	Free product staining
	2.50m	Standing water with thick oily film on surface
IP1757	2.80m	Seepage mixing with hydrocarbon product giving it an oily black sheen
IP1758	0.80-3.50m	VO 3,5 Occasional pockets of grey clay with free product
IP1821	1.80m	Slight seepage - thick oily sheen
IP1823	0.00-1.50m	VO 5,5 Overwhelming odour; no description of visual evidence of contamination
IP1824	0.00-3.00m	Localised free product
IP1836	0.50-0.80m	Oily residue (free product)
IP1839	0.00-0.80m	Localised free product
IP1840	0.00-0.50m	Localised pockets of black free product
IP1842	0.00-0.80m	VO 5,4 Free product observed
IP1846	1.90m	VO 5,4 Visible free product noted
	2.30m	Thick brown oily sheen on surface of water seepage
IP1847	3.70m	Visible free product in water
IP1906	0.70-2.10m	VO 2,5 Overwhelming (sweet) hydrocarbon odour
	3.30m	Thick oil sheen on surface of water
IP1928	0.70-2.80m	VO 1,5 Overwhelming hydrocarbon odour
	2.35m	Locally VO 5,4
	2.80m	Free product visible in thick oily sheen on water seepage
IP1993	3.40m	Seepage mixing with hydrocarbon product leaving an oily sheen on surface
IP1995	0.30-1.30m	VO 0,5 Overwhelming hydrocarbon odour
	1.70m	VO 5,3 Visible free product
	1.80m	Water ingress containing free product (oil)
IP1998	0.00-1.40m	VO 5,0 Localised pockets of black oily free product
IP2002	1.00-2.00m	VO 5,4 Visible free product
IP2012	0.70-1.80m	VO 2,5 Overwhelming hydrocarbon odour

Trial Pit	Depth	Visual and Olfactory Evidence of Contamination
	1.80m	Thick sheen on surface of water seepage
IP2018	2.70m	Seepage mixing with hydrocarbon product giving surface water an oily sheen
IP2019	1.90m	Seepage mixing with hydrocarbon product leaving an oily sheen on surface
IP2091	2.80-2.90m	VO 5,3 Heavily stained with free product and water seepage contains free product
IP2095	0.60-2.70m	Rare pockets of free product
IP2104	1.50m	VO 5,3 No description of visual or olfactory evidence of contamination
IP2109	0.00-0.20m	VO 5,3 No description of visual or olfactory evidence of contamination
IP2115	2.30m	Seepage mixing with hydrocarbon product giving it an oily black sheen
IP2189	0.50-1.50m	VO 5,3 No description of visual or olfactory evidence of contamination
IP2195	0.90-3.30m	VO 5,2 Boulders sized pocket of black free product
IP2203	0.60m	Thick oily film on surface of water
IP2204	0.00-0.40m	VO 5,3 Black staining
IP2205	0.00-0.40m	VO 5,3 Frequently stained black
IP2301	1.50-2.30m	VO 5,4 Thick product coating strata
IP2302	1.50m	Seepage mixing with hydrocarbon product causing a black oily sheen on water
IP2303	1.30m	Seepage mixing with hydrocarbon product giving an oily black sheen
IP2306	1.90m	Thick oily sheen and slight froth on surface of water
IP2307	2.00m	Seepage with oily black sheen
IP2390	0.00-0.90m	VO 5,3 Localised pockets of hydrocarbon product
IP2395	0.00-0.40m	VO 5,3 Water seepage mixing with black hydrocarbon product from pipes giving the water a black oily colour.
IP2402	1.80m	Seepage mixed with hydrocarbon product giving it an oily black sheen
IP2403	1.20m	Seepage mixed with hydrocarbon product giving it an oily black sheen
IP2404	0.30m	Seepage mixed with hydrocarbon product giving it an oily black sheen
IP2481	1.00-1.60m	Rare droplets of free product on gravels
IP2498	0.80-1.90m	Occasional pockets of free product
IP2500	1.00m	Seepage mixing with hydrocarbon product leaving an oily sheen
	2.00-2.50m	Visible hydrocarbon product on cobbles and boulders
IP2589	0.40-1.20m	VO 5,3 Frequently stained
IP2593	0.80m	Seepage mixing with hydrocarbon product leaving an oily sheen on its surface
IP2594	0.30-0.70m	VO 5,3 Frequently stained
IP2595	1.00m	Occasional pockets of free product
IP2601	0.00-1.00m	VO 5,0 Oil saturated
IP2687	0.00-1.60m	Free product
IP2866	0.40-2.70m	VO 4,5 No description of olfactory evidence of contamination
IP2867	2.00m	Free product seeping in
TPE0759	3.40m	Thick brown oily sheen
TPE0823	0.90m	Oily brown sheen on surface
TPE0824	2.00m	Slight oily sheen on water seepage
TPE0838	0.00-1.30m	VO 5,4 Free product seeping
TPE0839	0.30m	Oily black seepage
	0.90m	Oily black seepage
TPE0912	0.80m	Slight oily brown sheen

Trial Pit	Depth	Visual and Olfactory Evidence of Contamination
TPE0913	0.60m	Black oily water
TPE0924	0.50m	Slight oily seepage
TPE1001	2.60-2.80m	VO 5,3 Free product of oil and strong hydrocarbon odour
TPE1002	2.90-3.00m	VO 5,3 Water seepage at 3.00m contains free product
TPE1005	2.80m	Slight/thin oily sheen on surface
TPE1015	0.00-0.20m	VO 2,5 No description of olfactory evidence of contamination
TPE1016	0.00-0.30m	VO 5,5 Heavily stained
TPE1089	0.70-1.70m	VO 5,4 Visible hydrocarbon product
TPE1092	1.80-2.40m	VO 5,3 Visible free product
TPE1099	0.00-1.00m	VO 5,4 Frequent hydrocarbon product leaking out of two large metal pipes (removed)
TPE1102	0.40m	Seepage mixed with black hydrocarbon product.
	0.00-2.10m	Localised pockets of hydrocarbon product found throughout pit
TPE1172	2.80m	Product observed on water surface
TPE1173	0.50m	Water seepage mixing with hydrocarbon product, forming black oily stained water
TPE1175	1.00m	Seepage mixing with hydrocarbon product giving water an oily black sheen
TPE1183	0.00-0.20m	Hydrocarbon product found in localised pockets
TPE1188	2.30m	Steady ingress of water and product
TPE1189	2.30m	Steady ingress of water and product
TPE1190	2.30m	Steady ingress of water and product
TPE1255	1.20m	Water and product ingress
TPE1257	5.00m	Slight ingress from bottom of pit with product
TPE1258	5.00m	Steady ingress of water and free product
TPE1262	2.00m	Seepage - water mixing with hydrocarbon product leaving an oily sheen on surface
TPE1270	4.20m	Ingress at bottom of pit with product

5.4.2. Comparison with Risk Based Screening Levels

Comparison of the reported laboratory data with the RBSLs for deep soils in a commercial land use indicates an elevated concentration of benzene in one sample from IP1995, and for TPH aromatic C8-C10 in samples from IP1928 and IP1995.

Trial pits IP1928 and IP1995 lie adjacent in the south east of Monitor Phase 58, between The Barn Workshop and Benzene Tankfarm Special Process Areas.

Details of the recorded exceedances are summarised in Table 5.2.

Table 5.2 Summary of RBSL exceedances in Monitor Phase 58

Determinand	Threshold Concentration (mg/kg)	Number of exceedances	Total samples tested	Maximum recorded concentration (mg/kg)	Location of maximum recorded concentration
Benzene	5.0	1	1064	15.8	IP1995 at 1.00m
TPH Aromatic C8-C10	547	2	1064	846	IP1995 at 1.00m

No exceedances of the RBSL for deep (>1m) groundwater in a residential setting or commercial setting were recorded in the groundwater samples collected from borehole MSMW031 or borehole TFTP156.

Visible asbestos containing materials (ACMs) were recorded in trial pit IP1663, as discussed in Section 5.2. No visible ACM was recorded in any other location during the recent ground investigation works by ESG. A total of 465 samples from across Monitor Phase 58 underwent laboratory analysis for asbestos as part of the recent investigation works. Loose asbestos fibres were detected in 71 samples taken from trial pits from across Monitor Phase 58, as summarised in Table 5.3.

As previously highlighted, the following assessment is based upon the assumption that existing ground levels across Monitor Phase 58 represent 1m below FFL for the purpose of comparison with the requirements of the S106. Based on this assumption, existing soils across this area would lie at depths greater than 1m within the final development.

The S106 does not provide specific thresholds for asbestos at depths >1m below FFL and as such these soils are considered suitable for retention.

Table 5.3 - Summary of Asbestos Identified during Laboratory Analysis

Location	Depth (mbgl)	Type	Description	Quantity
IP1668	0.50	Amosite (brown) Chrysotile (white)	Loose fibres in soil	Amount not quantified
IP1908	0.50	Amosite (brown) Crocidolite (blue)	Soil containing loose fibres and ACM debris	Amount not quantified
IP1648	0.50	Chrysotile (white) Crocidolite (blue)	Soil containing loose fibres and ACM debris	Amount not quantified
TPE1003	0.50	Amosite (brown)	Loose fibres in soil	Amount not quantified
TPE759	0.90	Amosite (brown) Crocidolite (blue)	Loose fibres in soil	0.0059%
IP2769	1.00	Amosite (brown)	Soil containing loose fibres and ACM debris	0.0303%
IP1579	0.50	Amosite (brown)	Loose fibres in soil	0.0083%
IP1666	0.50	Amosite (brown)	Loose fibres in soil	<0.001%
TPE1008	0.60	Amosite (brown)	Soil containing ACM debris	0.001%
TPE0758	0.50	Amosite (brown) Chrysotile (white) Crocidolite (blue)	Soil containing loose fibres and ACM debris	Amount not quantified
IP2776	1.00	Amosite (brown) Chrysotile (white) Crocidolite (blue)	-	Amount not quantified
TPE1269	1.00	Amosite (brown) Crocidolite (blue)	-	Amount not quantified
IP1567	0.50	Amosite (brown) Chrysotile (white)	-	Amount not quantified
IP1573	0.50	Amosite (brown) Chrysotile (white)	-	Amount not quantified
IP1576	0.50	Amosite (brown)	-	Amount not quantified
TPE0737	0.50	Amosite (brown) Chrysotile (white)	-	Amount not quantified

Location	Depth (mbgl)	Type	Description	Quantity
IP2778	0.50	Amosite (brown) Chrysotile (white)	-	0.015%
TPE1268	0.50	Amosite (brown) Chrysotile (white)	-	0.0053%
TPE826	0.50	Amosite (brown)	-	0.0013%
TPE922	0.50	Amosite (brown)	-	<0.001%
IP1835	0.50	Chrysotile (white)	Loose fibres in soil	Amount not quantified
IP1920	0.50	Chrysotile (white)	Loose fibres in soil	Amount not quantified
TPE1175	0.50	Chrysotile (white)	Loose fibres in soil	<0.001%
IP2018	0.50	Chrysotile (white)	Loose fibres in soil	Amount not quantified
IP2018	1.00	Chrysotile (white)	Loose fibres in soil	Trace
TPE823	0.20	Chrysotile (white)	Loose fibres in soil	<0.001%
TPE824	0.20	Chrysotile (white)	Loose fibres in soil	<0.001%
TPE909	0.50	Chrysotile (white)	Loose fibres in soil	<0.001%
TPE1092	0.50	Chrysotile (white)	Loose fibres in soil	Amount not quantified
TPE1177	0.50	Chrysotile (white)	Loose fibres in soil	Trace
TPE1272	0.30	Chrysotile (white)	Loose fibres in soil.	Trace
TPE924	0.50	Chrysotile (white)	Loose fibres in soil	0.542%
IP2785	0.20	Chrysotile (white)	Loose fibres in soil	Trace
IP2789	1.00	Chrysotile (white)	Loose fibres in soil	<0.001%
TPE1336	0.50	Chrysotile (white)	Loose fibres in soil	<0.001%
IP1751	0.50	Chrysotile (white)	Loose fibres in soil	0.0102%
IP1752	0.50	Chrysotile (white)	Loose fibres in soil	<0.001%
IP1570	0.50	Chrysotile (white)	Loose fibres in soil	Amount not quantified
IP2094	0.40	Chrysotile (white)	Loose fibres in soil	<0.001%
IP2408	0.50	Crocidolite (blue)	Loose fibres in soil	<0.001%
IP1905	0.50	Chrysotile (white)	-	Amount not quantified
IP1994	0.50	Chrysotile (white)	-	<0.001%
IP2208	1.00	Chrysotile (white)	-	Amount not quantified
IP2309	0.50	Chrysotile (white)	-	Amount not quantified
IP2310	0.40	Chrysotile (white)	-	Amount not quantified
IP2290	0.50	Chrysotile (white)	-	0.0014%
IP2387	0.50	Chrysotile (white)	-	<0.001%
IP2779	0.50	Chrysotile (white)	-	0.0469%
IP2865	1.00	Chrysotile (white)	-	<0.001%
IP2684	1.00	Chrysotile (white)	-	Amount not quantified
TPE1261	0.40	Chrysotile (white)	-	0.0013%
TPE1266	1.00	Chrysotile (white)	-	Amount not quantified

Location	Depth (mbgl)	Type	Description	Quantity
IP1577	0.50	Chrysotile (white)	-	Amount not quantified
TPE0739	0.50	Chrysotile (white)	-	Amount not quantified
IP1663	0.50	Chrysotile (white)	-	Amount not quantified
IP2857	0.50	Chrysotile (white)	-	Amount not quantified
IP2002	0.50	Chrysotile (white)	-	<0.001%
IP2590	0.20	Chrysotile (white)	-	<0.001%
IP2591	0.20	Chrysotile (white)	-	<0.001%
IP2594	0.50	Chrysotile (white)	-	<0.001%
IP2682	1.00	Chrysotile (white)	-	<0.001%
IP2685	0.50	Chrysotile (white)	-	<0.001%
IP2686	0.50	Chrysotile (white)	-	0.288%
IP2775	0.50	Chrysotile (white)	-	0.0276%
IP2777	0.50	Chrysotile (white) Crocidolite (blue)	-	0.0492%
IP 2780	0.50	Chrysotile (white)	-	0.0077%
IP 2864	1.00	Chrysotile (white)	-	0.0118%
TPE1185	0.50	Chrysotile (white)	-	<0.001%
TPE1187	0.20	Chrysotile (white)	-	<0.001%
TPE825	0.50	Chrysotile (white)	-	0.004%
IP1664	0.50	Crocidolite (blue)	-	Amount not quantified

5.5. Relict Pipework

Relict pipework was encountered in situ in 33 locations within Monitor Phase 58, as summarised in Table 5.4.

Table 5.4 - Summary of Pipework Encountered in Monitor Phase 58

Location	Depth (mbgl)	Comments
IP1823	0.50-1.00m	Pipework and electric cable
IP2104	1.50m	Ironwork pipe
IP2195	0.30m	Rubber pipe
IP2207	1.00m	225mm diameter steel pipe
IP2209	1.00m	Metal pipe (200mm diameter)
IP2211	1.20m	Pipe
IP2287	0.50m	150mm diameter 6m long metal pipe – removed from trial pit
IP2290	1.00m	Water pipe
IP2294	0.30m	Pipe – removed from trial pit
IP2310	0.20m	250mm diameter metal pipe
IP2388	1.00m	Broken water pipe
IP2395	0.30m	Three metal pipes encountered – removed from trial pit

Location	Depth (mbgl)	Comments
IP2401	0.50m	150mm, 5m long metal pipe – removed from trial pit
IP2492	0.40m	Ceramic pipe
IP2501	0.00 – 0.10m	Metal pipes and plastic fragments
IP2503	0.60m	Drainage pipes broken during excavation
IP2592	0.40m	Metal pipe
IP2593	0.60m	Metal pipe – removed from trial pit
IP2601	1.00m	Pipe
IP2684	1.30m	Thin metal pipe
IP2791	2.60m	Large pipe
IP2792	0.50-0.60m	Metal pipes
TPE0737	0.60m	Pipe
TPE0926	0.40m	300mm diameter pipes
TPE1088	0.20m 0.50m 1.60m	100mm metal pipe encased in concrete 30mm metal pipe Terracotta pipe
TPE1089	0.50m	225mm diameter steel 'oil-coated' pipe – removed from trial pit
TPE1090	0.50m	225mm diameter pipe – removed from trial pit
TPE1093	1.70m	Metal pipe
TPE1095	2.50m	Pipe
TPE1175	0.80m	500mm diameter pipe
TPE1179	0.00 – 0.30m	Ceramic pipe encasing copper pipe
TPE1183	0.50m	50mm diameter metal pipe
TPE1254	0.90m	Pipe

Drawing 5041216-REM-DWG-1896 presents the locations of identified RBSL exceedances, recorded pipework encountered during the trial pitting, free product and elevated aesthetic criteria scores.

6. Identified Issues Requiring Further Works

Recent trial pitting works across Monitor Phase 58 has identified the following issues requiring further investigation and/or removal in order to meet with the requirements of the S106, as summarised in Section 4.

- The presence of oily sheens and free product;
- The presence of identified RBSL exceedances within existing soils;
- The presence of elevated aesthetic criteria scores; and
- The presence of pipework identified in situ during the trial pitting.
- The need for PCB testing within the vicinity of a former electrical substation shown on historical maps.

It should be noted that identified concrete, or other structural remnants such as brickwork, will be broken out and removed as part of the proposed remedial works across Monitor Phase 58 only if the presence of these materials prevent the delineation or excavation of identified contaminated material.

In the absence of a full 'turnover' of soils across Monitor Phase 58, the potential for remaining concrete/brickwork within this area exists. The removal of relict below ground structures from across this area does not form a requirement of the S106 and is, therefore, outside of the scope of these works.

Identified areas requiring further investigation and/or removal are shown on Drawing 5041216-REM-DWG-1896.

7. Validation

7.1. Requirements of the S106

The S106 (Schedule 8, Part 3, Section 8) sets out the requirements for validation testing which need to be complied with to enable Monitor sign off as part of the ongoing redevelopment of the former Llandarcy Oil Refinery.

Details of relevant frequencies relating to Monitor Phase 58 are presented in Table 7.1.

Table 7.1 - Minimum Validation Testing Frequencies - Commercial End Use

Testing for the Validation Suite[1] at the following frequency:	Deeper Soils (Commercial >1m below FFL)
Imported quarried material	1 per 1000m^3 ex situ, composite of 5 regular sub-samples.
Imported soil from verified greenfield site	1 per 500m^3 ex situ, composite of 5 regular sub-samples.
Imported soil from characterised brownfield site[1]	1 per 100m^3 ex situ, composite of 5 regular sub-samples.
0.5-1m below FFL in-situ	Regular grid of 1 per 400m^2, sample over 0.5m depth.
>1m below FFL in-situ	Regular grid of 1 per 400m^2, sample over 0.5m depth.
Stockpiled excavated site materials for re-use	1 per 400m^3 ex situ, composite of 5 sub-samples.
Face of remedial excavations <1m deep	1 per 15m^2, minimum of 1 per face, worst case VO sample.
Face of remedial excavations >1m deep	1 per 15m^2, minimum of 1 per face, worst case VO sample.
Along redundant service excavations	1 per 20m of trench, worst case VO sample.
Soil treated ex-situ and homogenised	1 per 500m^3 ex situ, composite of 5 regular sub-samples.

[1] Validation suite to reflect prior use of the originating brownfield site and the design and purpose of the relevant area of Coed Darcy.

VO = visual/olfactory (i.e. aesthetic) observation

As previously stated, in the absence of any information relating to proposed development levels for this area, it has been assumed that current ground level within Monitor Phase 58 (Drawing 5041216-REM-DWG-2025) represents a level of 1m below FFL for the purpose of comparison with the requirements of the S106.

7.2. Sampling Frequencies

7.2.1. Ground Investigation

The locations of all exploratory holes carried out as part of the recent trial pitting across Monitor Phase 58 are shown on Drawing 5041216-REM-DWG-1895. Relevant exploratory logs are presented in Appendix B.

A total of 445 no. trial pits were undertaken within Monitor Phase 58 between June 2014 and April 2015 as part of the recent ground investigation.

A total of 1064 no. environmental samples from Monitor Phase 58 have been subject to laboratory analysis (refer to Appendix C).

Based on an approximate area of 56,100m^2 considered accessible for ground investigation within Monitor Phase 58, 445 trial pits meets with the required frequency of 1 per 400m^2. A total of 1064 samples equates to an approximate sample validation frequency of 1 test per 53m^2.

A total of 465 samples from across Monitor Phase were screened for asbestos as part of this assessment. This equates to a sampling frequency of 1 test per 121m^2.

All of these validation frequencies are compliant with the adopted thresholds and S106 frequency (refer to Table 7.1).

A densely wooded, inaccessible area in the east of Monitor Phase 58 has not been investigated. The dense woodland in this area borders Monitor Phase 39 Public Open Space Zone E and, although assigned for development in the current Masterplan, it is assumed that this dense woodland is likely to remain as Public Open Space.

7.3. Follow-up Ground Investigation and Sampling

Additional ground investigation and sampling has been carried out in nine locations within Monitor Phase 58 during September 2015, where sampling was omitted during the earlier ground investigation.

Consistent with backfilling of the earlier pits, trial pits were backfilled with arisings in the reverse order to which they were excavated, then compacted with the back of the excavator bucket unless there was a requirement to keep the excavations open to enable free product inspection and/or recovery. Excess arisings were left in a mound above the level of the surrounding ground surface to allow for subsequent settlement.

The locations of these additional Atkins trial pits are shown on Drawing 5041216-REM-DWG-1895. Copies of the relevant exploratory hole logs for these pits are included in Appendix B.

7.3.1. Recorded Ground Conditions

Consistent with ground conditions elsewhere across Monitor Phase 58, Made Ground was encountered in all nine locations and is described to comprise a reworked natural material of clay and gravel with inclusions of clinker, slag, brick, ash and concrete to a maximum depth of 2.40mbgl (IP2600).

Superficial deposits were also encountered at every location and described as a sandy gravelly clay to sandy gravel, to a maximum depth of 4.85m bgl (IP2600).

Bedrock was predominantly encountered as a weathered zone comprising clayey sandy sandstone gravel and angular sandstone cobbles. All but two trial pits (IP2600, terminated following collapse and IP2695, terminated at maximum reach of excavator) were terminated in sandstone bedrock at depths ranging from 2.0m bgl to 3.20m bgl.

Water seepages were recorded in seven of the trial pits in a zone of weathered bedrock, ranging in depth between 1.0 m and 3.2 m bgl.

7.3.2. Laboratory Analysis

A total of 29 soil samples, representing soils encountered from this additional investigation, were submitted to Alcontrol Laboratories and analysed for a suite of contaminants consistent with testing across the remainder of Monitor Phase 58 (refer to Section 5.3)

7.3.3. Soil and Groundwater Contamination

7.3.3.1. Visual and Olfactory Evidence of Contamination

A review of the logs for the nine trial pits recently excavated within Monitor Phase 58 has indicated that visual and/or olfactory evidence of contamination was present at all locations. A maximum score of class 3 was assigned for both visual and olfactory evidence of contamination, in line with the classification system presented in Table 1.1.

In trial pit IP2607 a ‘slight hydrocarbon sheen’ was observed on a water seepage at 2.0m bgl. No free product was observed.

7.3.3.2. Comparison with Risk Based Screening Levels

In line with the adopted end use for Monitor Phase 58, the results of laboratory analysis from this additional investigation were compared with the RBSLs for deep soils (>1m) in a commercial land use. No exceedances of the adopted thresholds were recorded.

Laboratory analytical results are presented in Appendix C.

No visible evidence of ACMs were identified in any of the nine trial pits during the investigation. A total of 29 samples underwent laboratory analysis for asbestos and positive detections were recorded in three samples, as summarised in Table 7.2.

Table 7.2 - Summary of Asbestos Identified during Laboratory Analysis

Location	Depth (mbgl)	Type	Description	Quantity
IP2695	0.50m	Chrysotile (white)	Loose fibres in soil	<0.001%
IP2701	0.50m	Chrysotile (white)	Loose fibres in soil	Trace
TPE1256	2.50m	Chrysotile (white)	Loose fibres in soil	Trace

7.4. Further Investigation

The findings of further investigation of identified free product and aesthetic criteria scores of VO=5 are presented in Table 7.3.

Where contradictory data is identified during confirmatory investigation and suggests a reduced level of contamination than that identified by earlier trial pitting, the presence of any RBSL exceedances and the reported VO Classification are used to supplement the soil description in terms of assessment of the need for any further works at this location.

Table 7.3 – Results of Further Investigation into Visual and Olfactory Evidence of Contamination

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
IP1579	VO 3,5 No description of olfactory evidence of contamination	None recorded	No further investigation carried out – no evidence of free product recorded on the log. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
IP1648	Water seepage mixing with hydrocarbon product leaving a black oily sheen	None recorded	No further investigation carried out – oily sheen observed in gravel of weathered bedrock at 3.0m depth.	No further action proposed.
IP1663	VO 5,0 Broken oil barrel filled with bitumen/tar. Pit extended to remove in excess of 30 barrels of tar and bitumen	None recorded	Free phase bitumen and barrels has been removed from excavation. Material now temporarily stored on a lined and bunded area of Monitor Phase 58 which has been securely fenced and awaiting disposal by licensed contractor.	No further action proposed.
IP1664	VO 5,4 Frequent pockets of solid bitumen	None recorded	Free phase bitumen and barrels has been removed from excavation. Material now temporarily stored on a lined and bunded area of Monitor Phase 58 which has been securely fenced and awaiting disposal by licensed contractor.	No further action proposed.
IP1667	Pockets of black free product and thick oily film on surface of water	No samples taken	Trenched to the south west to 2.2m depth encompassing IP1736 and IP1756. Water strikes observed around 1.3m with occasional free product and slight hydrocarbon sheen on surface, not in sufficient quantities for recovery following observations.	No further action proposed.
IP1736	Free product	None recorded	Trenched to north east and south west to 2.2m depth encompassing IP1667 and IP1756. Water strikes observed around 1.3m with occasional free product and slight hydrocarbon sheen on surface, not in sufficient quantities for recovery following observations.	No further action proposed.
IP1737	Localised lenses of free product	None recorded	Free product pooled in open trench and recovered until no further recharge observed.	No further action proposed.
IP1739	VO 5,4 No description of visual or olfactory evidence of contamination	No samples taken – shallow bedrock	No free product observed, VO score of 3,3 assigned to black peat encountered in excavation. Refer to Photograph 1 in Appendix E.	No further action proposed.
IP1751	VO 5,4 No description of visual or olfactory evidence of contamination	None recorded	Free product observed pooling in base of excavation. Pumping implemented to recover free product until no obvious recharge observed,	No further action proposed.
IP1755	VO 5,3 Pockets of free product	None recorded	Oil-saturated soils encountered and removed until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
	VO 3,5 No description of olfactory evidence of contamination	None recorded	No further investigation carried out – no evidence of free product. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
IP1756	VO 5,3 No description of visual evidence of contamination	No samples taken	Trenched to north east to 2.2m depth encompassing IP1667 and IP1736. Water strikes observed around 1.3m with occasional free product and slight hydrocarbon sheen on surface, not in sufficient quantities for recovery following observations.	No further action proposed.
	Free product staining			
	Standing water with thick oily film on surface			

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
IP1757	Seepage mixing with hydrocarbon product giving it an oily black sheen	No samples taken	No further investigation carried out – oily sheen observed in gravel of weathered bedrock at 2.8m depth.	No further action proposed.
IP1758	VO 3,5 Occasional pockets of grey clay with free product	None recorded	Grey clay encountered with no pockets of free product observed.	No further action proposed.
IP1821	Slight seepage - thick oily sheen	None recorded	No further investigation carried out – oily sheen observed in bedrock.	No further action proposed.
IP1823	VO 5,5 Overwhelming odour; no description of visual evidence of contamination	None recorded	Oil-saturated soils encountered and excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP1824	Localised free product	No samples taken	Localised hydrocarbon-impacted soils directly surrounding sections of relict pipe excavated with pipe.	No further action proposed.
IP1836	Oily residue (free product)	No samples taken	Dark grey material with localised hydrocarbon staining but no free product observed,	No further action proposed.
IP1839	Localised free product	No samples taken	Localised oil-saturated soils encountered directly surrounding length of relict pipework. Soils excavated with pipework.	No further action proposed.
IP1840	Localised pockets of black free product	None recorded	Localised oil-saturated soils encountered directly surrounding length of relict pipework. Soils excavated with pipework.	No further action proposed.
IP1842	VO 5,4 Free product observed	None recorded	Pockets of free product observed and excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP1846	VO 5,4 Visible free product noted	None recorded	Oil-saturated strata encountered and excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
	Thick brown oily sheen on surface of water seepage	None recorded		
IP1847	Visible free product in water	None recorded	No further investigation carried out – free product on water encountered in weathered bedrock of sand and gravel at 3.70m depth	No further action proposed.
IP1906	VO 2,5 Overwhelming (sweet) hydrocarbon odour	None recorded	No further investigation carried out – no evidence of free product. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
	Thick oil sheen on surface of water	None recorded	No further investigation carried out – oily sheen at 3.30m depth in weathered bedrock sand and gravel.	No further action proposed.
IP1928	VO 1,5 Overwhelming hydrocarbon odour	RBSL failure in overlying stratum (TPH Aromatic C8-C10)	Material excavated as contamination hotspot.	Refer to Section 7.6.
	Free product visible in thick oily sheen on water seepage		No further investigation carried out – oily sheen at 2.80m depth in weathered bedrock sand and gravel.	No further action proposed.
IP1993	Seepage mixing with hydrocarbon product leaving an oily sheen on surface	None recorded	No further investigation carried out – oily sheen at 3.40m depth on bedrock.	No further action proposed.
IP1995	VO 0,5 Overwhelming hydrocarbon odour	RBSL failures (benzene and TPH Aromatic C8-C10)	Material excavated as contamination hotspot.	Refer to Section 7.6.
	VO 5,3 Visible free product			
	Water ingress containing free product (oil)			

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
IP1998	VO 5,0 Localised pockets of black oily free product	None recorded	Free product observed in granular material excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP2002	VO 5,4 Visible free product	None recorded	Oil-saturated material encountered from 1.0m to 2.0m excavated and removed.	No further action proposed.
IP2012	VO 2,5 Overwhelming hydrocarbon odour	None recorded	No further investigation carried out – no evidence of free product. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
	Thick sheen on surface of water seepage	None recorded		
IP2018	Seepage mixing with hydrocarbon product giving surface water an oily sheen	None recorded	Excavation terminated at 2.7m depth on bedrock. Occasional spots of free product identified on exposed surface of bedrock. No accumulation noted and no recovery undertaken.	No further action proposed.
IP2019	Seepage mixing with hydrocarbon product leaving an oily sheen on surface	None recorded	No free product encountered in excavation.	No further action proposed.
IP2091	VO 5,3 Heavily stained with free product and water seepage contains free product	None recorded	Excavation terminated on bedrock at 2.9m depth. Occasional droplets of free product in observed in bedrock. No accumulation noted and no recovery undertaken.	No further action proposed.
IP2095	Rare pockets of free product	None recorded	Peat observed with hydrocarbon staining but not free product.	No further action proposed.
IP2104	VO 5,3 No description of visual or olfactory evidence of contamination	None recorded	Localised hydrocarbon-impacted soils directly surrounding sections of relict pipe excavated with pipe.	No further action proposed.
IP2109	VO 5,3 No description of visual or olfactory evidence of contamination	No samples taken	Dark greyish brown material encountered but no free product present.	No further action proposed.
IP2115	Seepage mixing with hydrocarbon product giving it an oily black sheen	None recorded	No free product observed in soils. Occasional droplets of free product identified. No accumulation noted and no recovery undertaken.	No further action proposed.
IP2189	VO 5,3 No description of visual or olfactory evidence of contamination	None recorded	Frequent staining observed but no free product present.	No further action proposed.
IP2195	VO 5,2 Boulders sized pocket of black free product	None recorded	Oil-saturated material encountered from 1.0m to 3.5m excavated and removed until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP2203	Thick oily film on surface of water	None recorded	Hydrocarbon sheen observed but no free product encountered.	No further action proposed.
IP2204	VO 5,3 Black staining	No samples taken	Free product encountered on bedrock. Excavation left open overnight and product recovery carried out. No further product accumulated.	No further action proposed.
IP2205	VO 5,3 Frequently stained black	No samples taken	Frequent hydrocarbon staining of weathered bedrock observed but no free product identified.	No further action proposed.
IP2301	VO 5,4 Thick product coating strata	None recorded	Free product-bearing strata excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP2302	Seepage mixing with hydrocarbon product causing a black oily sheen on water	None recorded	No further investigation carried out – oily sheen in weathered bedrock gravel.	No further action proposed.

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
IP2303	Seepage mixing with hydrocarbon product giving an oily black sheen	None recorded	Occasional droplets of free product on water strike 1.3m. No accumulation occurred to enable recovery.	No further action proposed.
IP2306	Thick oily sheen and slight froth on surface of water	None recorded	No further investigation carried out – oily sheen in weathered bedrock sand and gravel.	No further action proposed.
IP2307	Seepage with oily black sheen	None recorded	No further investigation carried out – oily sheen encountered on bedrock	No further action proposed.
IP2390	VO 5,3 Localised pockets of hydrocarbon product	None recorded	Localised area excavated to remove pockets of free product until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed.
IP2395	VO 5,3 Water seepage mixing with black hydrocarbon product from pipes (removed) giving the water a black oily colour.	None recorded	Hydrocarbon-impacted soil directly surrounding relict pipework excavated with pipe	No further action proposed.
IP2402	Seepage mixed with hydrocarbon product giving it an oily black sheen	None recorded	Excavation to 2.0m depth left open but no ingress of free product was observed. Refer to Photograph 2 in Appendix E.	No further action proposed.
IP2403	Seepage mixed with hydrocarbon product giving it an oily black sheen	None recorded		
IP2404	Seepage mixed with hydrocarbon product giving it an oily black sheen	None recorded		
IP2481	Rare droplets of free product on gravels	None recorded	No further investigation carried out – droplets of free product encountered on weathered bedrock gravel	No further action proposed.
IP2498	Occasional pockets of free product	None recorded	Small volume of material removed containing globules of free product	No further action proposed.
IP2500	Seepage mixing with hydrocarbon product leaving an oily sheen Visible hydrocarbon product on cobbles and boulders	None recorded	Very rare pockets of black oil-saturated peaty clay encountered and removed.	No further action proposed.
IP2589	VO 5,3 Frequently stained	None recorded	Bitumen removed from near surface. Brick chamber and double concrete slab removed to expose bedrock	No further action proposed.
IP2593	Seepage mixing with hydrocarbon product leaving an oily sheen on its surface	None recorded	No free product encountered in excavation	No further action proposed.
IP2594	VO 5,3 Frequently stained	None recorded	No free product encountered in excavation	No further action proposed.
IP2595	Occasional pockets of free product	None recorded	No free product encountered in excavation.	No further action proposed.
IP2601	VO 5,0 Oil saturated	No samples taken	No oil-saturated soils or free product encountered in excavation	No further action proposed.
IP2687	Free product	None recorded	Hydrocarbon staining observed in excavation but no free product present.	No further action proposed.
IP2866	VO 4,5 No description of olfactory evidence of contamination	None recorded	No further investigation carried out – no evidence of free product. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
IP2867	Free product seeping in	None recorded	Oil-saturated soils removed around ingress of free product at 2.0m depth	No further action proposed.
TPE0759	Thick brown oily sheen	None recorded	No further investigation – oily sheen encountered in bedrock at 3.40m depth	No further action proposed.

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
TPE0823	Oily brown sheen on surface	None recorded	No further investigation – oily sheen observed with no evidence of free product	No further action proposed.
TPE0824	Slight oily sheen on water seepage	None recorded	No further investigation – slight oily sheen observed with no evidence of free product	No further action proposed.
TPE0838	VO 5,4 Free product seeping	No samples taken	Oil-saturated soils removed as part of pipework excavation	No further action proposed.
TPE0839	Oily black seepage	None recorded	Oil-saturated soils removed as part of pipework excavation	No further action proposed.
	Oily black seepage	None recorded		
TPE0912	Slight oily brown sheen	None recorded	No further investigation – slight oily sheen observed with no evidence of free product	No further action proposed.
TPE0913	Black oily water	None recorded	Black water attributed to ash and slag contained in Made Ground stratum. No free product present.	No further action proposed.
TPE0924	Slight oily seepage	None recorded	No further investigation – slightly oily seepage encountered but no free product present.	No further action proposed.
TPE1001	VO 5,3 Free product of oil and strong hydrocarbon odour	None recorded	No further investigation – free product encountered in bedrock at 2.60m depth	No further action proposed.
TPE1002	VO 5,3 Water seepage at 3.00m contains free product	None recorded	Droplets of free product observed in bedrock. No accumulation occurred to enable recovery.	No further action proposed
TPE1005	Slight/thin oily sheen on surface	None recorded	No further investigation – slight oily seepage encountered at 2.80m on bedrock.	No further action proposed.
TPE1015	VO 2,5 No description of olfactory evidence of contamination	No samples taken	No further investigation carried out – no evidence of free product. Olfactory evidence of contamination alone not considered to warrant further investigation.	No further action proposed.
TPE1016	VO 5,5 Heavily stained	No samples taken	Rare hydrocarbon free product identified in bedrock. No accumulation occurred to enable recovery.	No further action proposed
TPE1089	VO 5,4 Visible hydrocarbon product	None recorded	No free product encountered in excavation	No further action proposed
TPE1092	VO 5,3 Visible free product	None recorded	Oil-saturated material excavated as part of removal of relict pipework. Material excavated until VO score of 4 or lower could be assigned to the faces and base of excavation.	No further action proposed
TPE1099	VO 5,4 Frequent hydrocarbon product leaking out of two large metal pipes (removed)	No samples taken	Localised area excavated to remove hydrocarbon-impacted soils associated with leaking pipework	No further action proposed
TPE1102	Seepage mixed with black hydrocarbon product.	None recorded	Ash observed in trial pit but no pockets of free product present.	No further action proposed
	Localised pockets of hydrocarbon product found throughout pit	None recorded		
TPE1172	Product observed on water surface	None recorded	Hydrocarbon sheen observed in excavation but no free product encountered.	No further action proposed
TPE1173	Water seepage mixing with hydrocarbon product, forming black oily stained water	None recorded	Hydrocarbon sheen observed in excavation but no free product encountered.	No further action proposed

Trial Pit	Visual and Olfactory Evidence of Contamination	RBSL Failures During Recent Ground Investigation	Summary of Further Investigation	Validation
TPE1175	Seepage mixing with hydrocarbon product giving water an oily black sheen	None recorded	Hydrocarbon sheen observed in excavation but no free product encountered.	No further action proposed
TPE1183	Hydrocarbon product found in localised pockets	None recorded	Localised hydrocarbon-impacted soils excavated with section of relict pipework. Refer to Table 7.5.	No further action proposed.
TPE1188	Steady ingress of water and product	None recorded	No further investigation – free product encountered in weathered bedrock at 2.30m depth.	No further action proposed.
TPE1189	Steady ingress of water and product	No samples taken	Excavation advanced to 3.0m and no free product identified.	No further action proposed
TPE1190	Steady ingress of water and product	None recorded	No free product encountered in excavation	No further action proposed
TPE1255	Water and product ingress	None recorded	No free product encountered in excavation	No further action proposed
TPE1257	Slight ingress from bottom of pit with product	None recorded	Excavation advanced to bedrock. Water ingress recorded, no free product observed	No further action proposed
TPE1258	Steady ingress of water and free product	No samples taken	No further investigation – free product encountered on bedrock at 5.00m depth	No further action proposed.
TPE1262	Seepage - water mixing with hydrocarbon product leaving an oily sheen on surface	None recorded	Excavation advanced to bedrock and no free product encountered	No further action proposed
TPE1270	Ingress at bottom of pit with product	None recorded	Excavation advanced to 5.0m depth on to hard strata. Water ingress recorded at 4.3m, no free product observed	No further action proposed

7.5. Investigation of Historical Electricity Substation

Soil samples were taken from three additional trial pits excavated within the footprint of the former electricity substation in Monitor Phase 58 and were analysed for PCB (WHO 12).

The locations of sampling and the laboratory analytical results are summarised in Table 7.4.

Table 7.4 – Summary of Investigation of Historical Electricity Substation

Location	Sample Depths	Summary of Laboratory Analytical Results
IP2395	0.50m	All PCB congeners < laboratory MDL
	1.50m	All PCB congeners < laboratory MDL
	2.50m	All PCB congeners < laboratory MDL
	3.50m	All PCB congeners < laboratory MDL
	4.50m	All PCB congeners < laboratory MDL
IP2398	0.50m	All PCB congeners < laboratory MDL
	1.50m	All PCB congeners < laboratory MDL
	2.50m	All PCB congeners < laboratory MDL
	3.50m	All PCB congeners < laboratory MDL
TPE1103	0.30m	All PCB congeners < laboratory MDL
	1.50m	All PCB congeners < laboratory MDL
	2.50m	All PCB congeners < laboratory MDL
	3.50m	All PCB congeners < laboratory MDL

Laboratory analysis for PCBs recorded none of the congeners above the limits of detection and soils in this location are therefore considered to be suitable for retention.

Laboratory analytical results are included in laboratory batch 150613-27 in Appendix D.

7.6. Hotspot Excavation

Remedial works comprised the excavation of approximately 300m^3 of material from within Monitor Phase 58 in line with exceedances of the adopted RBSLs at adjacent trial pits IP1928 and IP1995. These soils were removed from Monitor Phase 58 as part of the works and taken elsewhere within the refinery for bioremediation.

Hotspot excavations relating to the two identified RBSL exceedances were extended laterally by approximately 5m in all directions from the location of the original sample. As a guide, visual and olfactory evidence of contamination was also used to help inform whether the excavations needed to be extended further to achieve complete removal of the hotspot.

A total of six validation samples were taken from the faces of the resultant hotspot excavation, which encompassed the locations of both IP1928 and IP1995. This is compliant with the 1 per 15m^2 frequency set out in the S106 (refer to Table 7.1). Two validation samples were taken from the base of the excavation to comply with the 1 per 400m^2 frequency set out in the S106.

Laboratory analytical results for the validation samples are included in Appendix D (refer to batch 150717-127) and confirm concentrations below the adopted RBSLs for deep soils in a commercial end use.

Formal backfill of these three remedial excavations is yet to be carried out.

Topographical survey information for Monitor Phase 58 following completion of the remedial works is shown on Drawing 5041216-ATK-DR-C-REM-0002120.

7.7. Pipework Removal

Pipework was encountered in situ in 33 trial pits during the ground investigation in Monitor Phase 58 and was removed from seven of these 33 locations during the initial trial pitting (refer to Table 5.4).

The remaining 26 locations were subject to further investigation, the results of which are summarised in Table 7.5. Photographs of selected pipework removal excavations are included in Appendix E.

Table 7.5 – Results of Relict Pipework Investigation

Location	Results of Further Pipework Investigation	Validation
IP1823	Short section of pipe encountered and removed. No samples taken	No further action proposed.
IP2104	Broken sections of pipe encountered and removed. No samples taken.	No further action proposed.
IP2195	Rubber pipes removed from near surface strata during investigation into free product in this location. No samples taken.	No further action proposed.
IP2207	Pipe encountered, excavated and removed as far north west as TPE1189. Samples taken from across this network of pipework, refer to batch 150718-67 in Appendix D and Drawing 5041216-ATK-DR-C-REM-0002110. No RBSL exceedances recorded.	No further action proposed.
IP2209	Short section of pipe encountered and removed. No samples taken.	No further action proposed.
IP2211	Short section of pipe encountered and removed. No samples taken.	No further action proposed.
IP2290	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2310	Short section of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2388	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2492	Broken section of pipe 2m in length encountered and removed from excavation. No samples taken.	No further action proposed.
IP2501	Pipe encountered, excavated and removed as far south east as IP2207. Samples taken from across this network of pipework, refer to batch 150717-126 in Appendix D and Drawing 5041216-ATK-DR-C-REM-0002110.. No RBSL exceedances recorded. Refer to Photograph 3 in Appendix E.	No further action proposed.
IP2503	Short section of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2592	Pipe section and concrete structure removed from excavation. No samples taken.	No further action proposed.
IP2601	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2684	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2791	Short section of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
IP2792	Short section of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
TPE0737	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
TPE0926	Short section of pipe encountered and removed. No samples taken.	No further action proposed.
TPE1088	Short section of pipework encountered and removed. No samples taken.	No further action proposed.

TPE1093	End of pipework aligned north east to south west encountered and removed from excavation. Samples taken from across network of pipework, refer to batch 150718-67 in Appendix D and Drawing5041216-ATK-DR-C-REM-0002110. No RBSL exceedances recorded.	No further action proposed.
TPE1095	Broken segment of pipe encountered and removed from excavation. No samples taken.	No further action proposed.
TPE1175	Pipe encountered, chased and excavated to the south east to IP2207. Samples taken from across this network of pipework, refer to batch 150718-67 in Appendix D and Drawing 5041216-ATK-DR-C-REM-0002110.. No RBSL exceedances recorded. Refer to Photograph 4 in Appendix E.	No further action proposed.
TPE1179	One section of water pipe 2m in length encountered and removed from excavation. No samples taken.	No further action proposed.
TPE1183	Broken segment of pipe encountered and removed from excavation with localised hydrocarbon-impacted soils. No samples taken.	No further action proposed.
TPE1254	Pipe aligned north west to south east encountered and removed. Samples taken from across this network of pipework, refer to batch 150612-89 in Appendix D and Drawing 5041216-ATK-DR-C-REM-0002110.. No RBSL exceedances recorded. Refer to Photograph 5 in Appendix E.	No further action proposed.

7.8. Summary

A summary of the status of Monitor Phase 58, in line with the requirements of the S106 and in line with the format of the required Monitor Certification, is presented in Table 7.6 below:

Table 7.6 – Validation Summary

Requirement	Status	Comment
Chemical quality of soils in situ	Complete	Trial pitting has been undertaken to a frequency of 1 per 126m^2 in Monitor Phase 58 which is considered suitable for an area of proposed commercial end use (refer to Section 7.2.1).
VO quality of soils in situ	Complete	A maximum recorded VO of 4 was recorded for retained soils in Monitor Phase 58. This is acceptable in line with the requirements of the S106 for 'deep' use (>1m below FFL) within a commercial area.
Observations of groundwater for the presence of free phase product	Complete	Observations of free product on ingressing water were made during the ground investigation. Locations where ingress was recorded in soils were subject to further investigation. Hydrocarbon sheens were observed but no free product was recorded to be present on perched water within soils in Monitor Phase 58.
Chemical and VO quality of imported material	N/A	No imported soils were utilised as part of the works in Monitor Phase 58.
Compliance with adopted thresholds	Complete	Remedial excavation has been carried out to remove material in the location of IP1928 and IP1995 which was shown to exceed the adopted thresholds for benzene and TPH Aromatic C8-C10 (refer to Section 4.3.2). Validation of this excavation indicates the affected material as having been removed. Laboratory analytical data has shown that remaining soils across Monitor Phase 58 are suitable for retention.
Removal of oil saturated soils	N/A	Where encountered, oil-saturated soils were excavated from Monitor Phase 58 until a VO score of 4 or lower could be assigned to surrounding material. Free phase bitumen and barrels have been removed from excavation around IP1663 and IP1664. Material

Requirement	Status	Comment
		now temporarily stored on a lined and bunded area of Monitor Phase 58 which has been securely fenced and awaiting disposal by licensed contractor.
Asbestos Assessment	Complete	Asbestos insulation was identified in trial pit IP1663 during the ground investigation and has been removed from site by a licensed contractor. Visible ACM was not identified during the works in any other location in Monitor Phase 58. Asbestos has been detected in 71 samples during laboratory analysis. The assessment which has been carried out assumes a depth >1m below FFL and the RBSL for asbestos does not apply below 1m in a commercial area.
Control of seeps, sheens and iron staining from bedrock	N/A	Interception trenches situated along the northern boundary (down hydraulic gradient) of Monitor Phase 58 associated with RAP feature 9B will serve to capture hydrocarbon seeps or sheens. No evidence of iron staining or iron precipitates was identified during trial pitting across Monitor Phase 58.

8. Summary

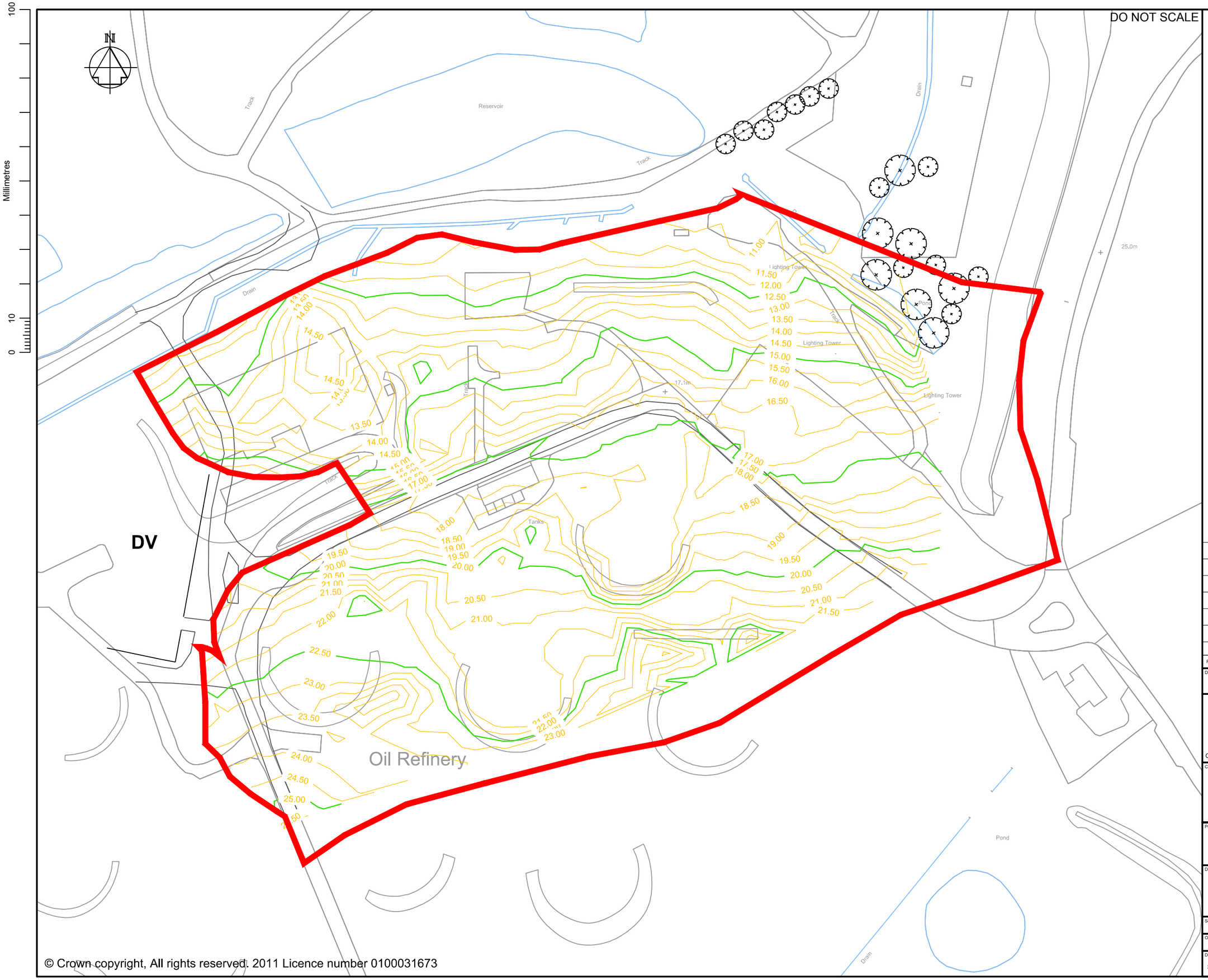
Atkins has been commissioned by St. Modwen Developments Ltd to undertake an assessment of an area of the former refinery with a view to enabling Monitor sign-off for this area in terms of a proposed commercial end use. For the purpose of Monitor Sign off, this area shall be referred to as Monitor Phase 58.

Based upon the findings of recent investigation and in line with the scope of recent remedial works undertaken, this area has been validated in accordance with the S106 and Monitor Phase 58 has been deemed to be suitable for commercial end use >1m bgl in line with the requirements of the S106.

It should be noted that recent ground investigation works focussed predominantly on contamination across this area and further assessment to assess potential geotechnical constraints within this Phase should be carried out prior to any proposed development.

Where a change in proposed end use is proposed, reassessment of the data will be required in order to confirm the need for additional investigation and/or further remediation across this area.

Drawings



© Crown copyright, All rights reserved. 2011 Licence number 0100031673

KEY:

- MONITOR PHASE BOUNDARY
- MAJOR CONTOUR
- MINOR CONTOUR

Rev.	Date	Description	By	Chk'd	App'd

Drawing Status: FOR INFORMATION

Suitability: S0

ATKINS
The Axis
10 Holliday Street
Birmingham
B1 1TF
Tel: 44 (0)1214 835000
Fax: 44 (0)1214 835252
www.atkinsglobal.com

Copyright © Atkins Limited (2015)

Client: ST.MODWEN

Project Title: COED DARCY

Drawing Title: MONITOR PHASE 58
PRE-WORKS TOPOGRAPHIC SURVEY

Scale	Designed	Drawn	Checked	Authorised
1:1250	CS	JSD	CS	MP
Original Size	Date	Date	Date	Date
A3	10/09/15	10/09/15	10/09/15	10/09/15

Drawing Number: 5041216-ATK-DR-C-REM-DWG-2025

Revision: P01