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Thorpe House
Thorpe Close
Altrincham
WA15 7WZ
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11th October 2013

Simon Devine
Taylor Wimpey Manchester Limited
George Wimpey House
1 Lumsdale Road
Stretford
Manchester
M32 0UT

Dear Simon

RE: NX131 PLOT 3, 4, 5 & 6 VALIDATION REPORT – ENGPJ/196311 CALDERSTONES PARK PHASE 3 OFF PENDLE DRIVE CLITHEROE BB7 9

An engineer from NX Consulting attended site on 2nd & 9th October 2013 and recorded the presence of a 600mm cover system, comprising up to 150mm of topsoil, imported initially by John Reilly Civil Engineering Limited overlying 400mm+ of subsoils. Subsoils comprise 'site won' cohesive soils validated as suitable for use by NX Consulting, as bulk upfill within garden areas.

The validation results of the initial topsoil source indicated that these materials were not suitable for use in garden and landscaped areas and as such were removed by John Reilly's site staff and replaced with the Taylor Wimpey stockpiled source; stored and validated by Cooper Associates at Drapers topsoil storage yard off, Stopgate Lane, Bickerstaff. A copy of the Cooper Associates validation certificate is attached to this document.

We can therefore, confirm that the above plots have been completed in line with the agreed remediation methodology agreed with Ribble Valley Council and the NHBC and these plots are considered suitable for occupation.

Please do not hesitate to call if you have any queries.

Yours sincerely
for and on behalf of NX Consulting Limited

A large black rectangular box redacting the signature of Mark Newton.

Mark Newton
(Managing Director)



Plate 1 – Removal of unsuitable Blackledge topsoil



Plate 2 – Removal of Blackledge unsuitable topsoil



Plate 3 – Plot No 3



Plate 4 – Plot No 3 Rear Garden



Plate 5 - Plot 3 Cover System Depth



Plate 6 – Plot 4



Plate 6 – Plot 4 Rear Garden



Plate 7 - Plot 4 Cover System Depth



Plate 8 - Plot 5



Plate 9 - Plot 5 Rear Garden



Plate 9 – Plot 10 Cover System Depth



Plate 11 – Plot 6



Plate 12 – Plot 6 Rear Garden



Plate 13 – Plot 6 Cover System Depth

CERTIFICATE FOR TOPSOIL

Developer	Taylor Wimpey Manchester	
Source Location	St Helens Road, Ormskirk	
Supplied by:	Drapers Topsoil	
Sampled at:	Drapers Topsoil Yard, Bickerstaffe.	
Date of Inspection:	26 November 2012	12 December 2012

This is to certify that the imported topsoil is within the Coopers generic criteria as suitable for use in private residential gardens with plant uptake.

Source Location and Stockpile Control:

The topsoil is reported to have been sourced from the stripping of topsoil from a “greenfield” source, a field adjacent to Edge Hill University in Ormskirk (refer to Figures 1 and 4). The nature of the source was verified by inspection of the first edition historical map (refer to Figure 2) and 1990 edition map (refer to Figure 3) as well as recent satellite/aerial photography confirming the site has remained undeveloped for over 118 years. Throughout its history, the site has been located within a larger field adjacent to St Helens Road, and has never seen any development. The topsoil was stripped from the source location and transported to Draper’s Topsoil storage yard off Stopgate Lane, Bickerstaffe. The material was stockpiled specifically for Taylor Wimpey and verified as suitable for use by Coopers (refer to chemical analysis section for details). Coopers visual assessment of the topsoil confirmed the material was within the textural classification as topsoil in accordance with BS3882 (2007). To ensure continued good stockpile management Coopers are to regularly inspect the stockpile with updated photographs provided in a revised certificate every 3 months.



Figure 1: Showing aerial photography of the area where topsoil was sourced, adjacent to Edge Hill University on St Helens Road. Photograph obtained from internet searches.

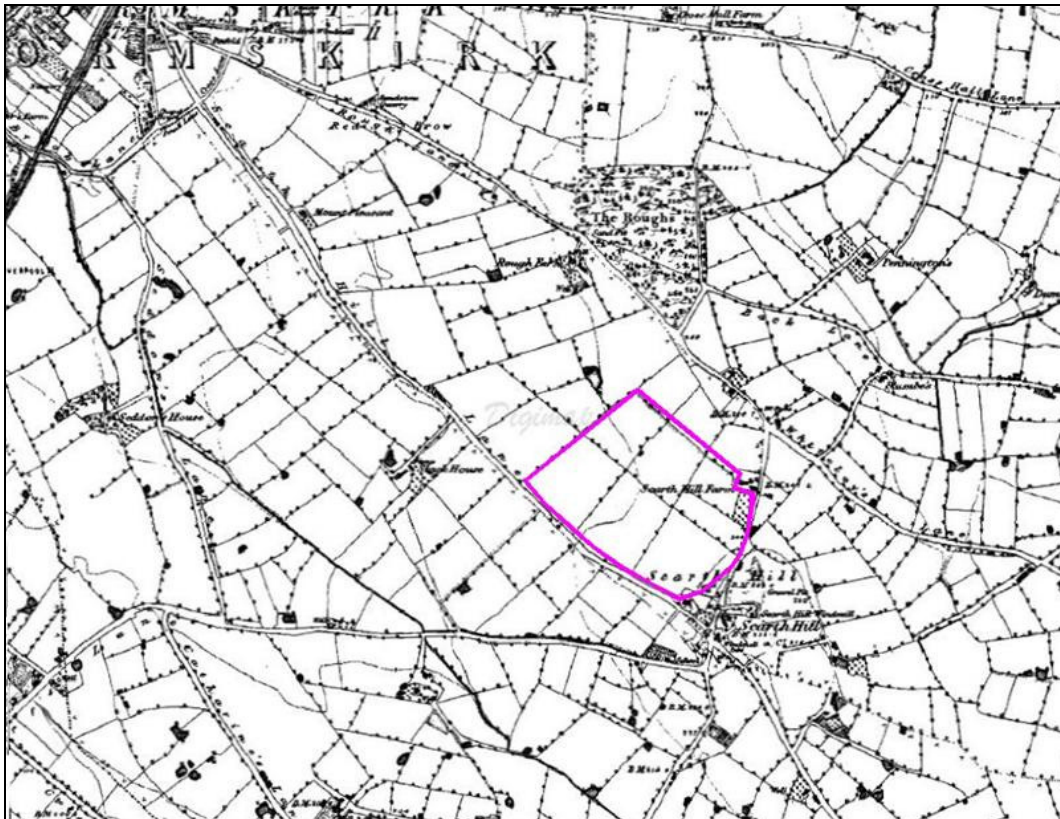


Figure 2: First Edition Historical Ordnance Survey Map from 1849 showing no development on the site at that time (Crown License No. AL 100005579).

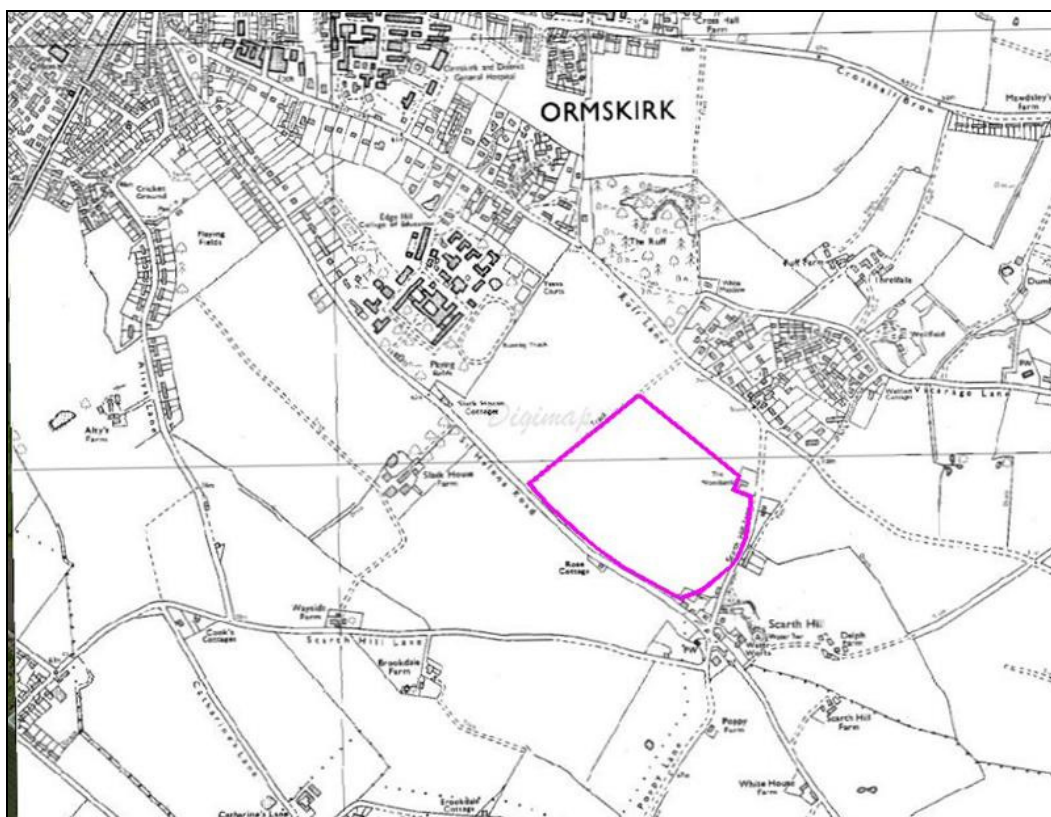


Figure 3: 1993 Edition Historical Ordnance Survey Map showing no development at that time. (Crown License No. AL 100005579).



Figure 4: Current Ordnance Survey Map showing the site location and that no development currently exists on the site (Crown License No. AL 100005579).

Coopers Tier 1 Risk Assessment Screening Values

All inert fill materials shall be in accordance with the thresholds below derived from the CLEA 1.06 Risk Assessment Model:

Compound/Element	Soil Screening Value (mg/kg)						
	Small Terrace	Med/Large Terrace	Semi-detached	Detached	Phytotoxic pH <6	Phytotoxic pH 6-7	Phytotoxic pH >7
Arsenic	32.4				N/A		
Beryllium	51				N/A		
Boron	291 (2)*				N/A		
Cadmium	11				N/A		
Copper	2330				100	135	200
Chromium (III)	3000				N/A		
Chromium (VI)	4.3				N/A		
Lead	450**				N/A		
Mercury (methyl)	7.4				N/A		
Mercury (inorganic)	169				N/A		
Nickel	127				60	75	110
Selenium	351				N/A		
Vanadium	79				N/A		
Zinc	3750				200	200	300
Benzo(a)pyrene	0.83				N/A		
Dibenzo(ah)anthracene	0.76				N/A		
Fluorene	163				N/A		
Naphthalene	1.54	1.71	1.70	1.97	N/A		
Phenol	184	207	206	224	N/A		

Generated: October 2009 using CLEA 1.06 risk assessment model.

Remarks:

- The soil organic matter has been assumed to be 1% as this is the most conservative value for organic compounds. Inorganic compounds unaffected by this parameter.
- Silty clay strata appears to prove more conservative threshold values for metals, semi-metals and several PAH compounds and therefore this scenario was used when inputting data into the CLEA model to determine the threshold values for these compounds.
- Sandy loam strata appears to prove more conservative threshold values for phenol and naphthalene. Therefore this scenario was used when inputting data into the CLEA model to determine the threshold values for these compounds.
- *Boron is a risk to groundwater and is not hazardous to human health. The threshold within the brackets represents the ecological threshold for water soluble boron, and should be adopted as the primary risk driver. The compound comes under the Water Framework Directive and its threshold to groundwater within the brackets is referenced from the Environment Agency's Environmental Quality Standards.
- Chromium is considered hazardous in the hexavalent form and when total chromium is encountered above the threshold value for chromium (VI), speciation should be completed.
- **Lead thresholds will be modified to follow the CLEA 1.06 system rather than the blood lead methodology, however until baseline data has been published, the blood lead threshold of 450mg/kg applicable to CLR will be adopted.
- All imported strata must conform to Tier 1 parameters and should not require secondary risk assessment to ensure the suitability.
- Cyanide should not be present within significant quantities, and where encountered should be speciated to determine what form the cyanide is present in.
- For the BTEX compounds and phenol, the groundwater risk will require assessing as these are based only with regards to human health.
- All imported strata must be free of deleterious odour and should not include demolition/construction wastes within garden areas. The fills must be clean of construction rubble which may be removed by the occupant. As a guide, infrequent small fragments of brick and concrete may be incorporated within the fill for garden areas. Large fragments/oversized blocks may be removed by the resident during occupation, hence compromising the integrity of the inert cover.

Chemical Analysis and Assessment

The topsoil was stripped from the source location and a portion was separated into a stockpile dedicated for use solely on Taylor Wimpey residential developments. Coopers attended Drapers compound on 26 November 2012 and paced out the stockpile to be approximately 1250m³. 13 No. samples were collected from depth and close to the surface of the stockpile. These samples were submitted to Chemtest Laboratories for chemical analysis ensuring a quota of at least 1 sample per 100m³ was achieved in testing. Samples shown in Chemtest Report No. 217128, dated 6 December 2012 relates to these samples showing them to be within the criteria for inert material as detailed in this certificate.

Upon receipt of the test results, Coopers advised Drapers Topsoil and Taylor Wimpey that the material had passed and was suitable for use and advised that the topsoil was kept separated from other materials. Additional periodic inspections were agreed to be undertaken by Coopers to ensure that good stockpile management was in place and ensure that no cross mixing of the topsoil had occurred.

This report should be updated every three months with a selection of photographs to demonstrate the periodic inspections confirming the stockpile management practices.

Stockpile Inspection – 26 November 2012



Photograph 1: Showing the Taylor Wimpey Topsoil during stockpile sampling. Photograph taken on 26 November 2012.



Photograph 2: Showing the consistency of material during sampling. Photograph taken on 26 November 2012.



Photograph 3: Showing the consistency of material during sampling. Photograph taken on 26 November 2012.

Subsequent Inspections



Photograph 4: Showing the Taylor Wimpey Topsoil during inspection. Photograph taken on 12 December 2012.

Documents appended:

1. Chemtest Report No. 217128, dated 6 December 2012.

Cooper Associates
Park House
Sandpiper Court
Chester Business Park
CH4 9QU

FAO Aled Williams
06 December 2012

Dear Aled Williams

Test Report Number **217128**
Your Project Reference **4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)**

Please find enclosed the results of analysis for the samples received 28 November 2012.

All soil samples will be retained for a period of one month and all water samples will be retained for 7 days following the date of the test report. Should you require an extended retention period then please detail your requirements in an email to customerservices@chemtest.co.uk. Please be aware that charges may be applicable for extended sample storage.

If you require any further assistance, please do not hesitate to contact the Customer Services team.

Yours sincerely



Keith Jones, Technical Manager



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Notes to accompany report:

- The sign < means 'less than'
- Tests marked 'U' hold UKAS accreditation
- Tests marked 'M' hold MCertS (and UKAS) accreditation
- Tests marked 'N' do not currently hold UKAS accreditation
- Tests marked 'S' were subcontracted to an approved laboratory
- n/e means 'not evaluated'
- i/s means 'insufficient sample'
- u/s means 'unsuitable sample'
- Comments or interpretations are beyond the scope of UKAS accreditation
- The results relate only to the items tested
- All results are expressed on a dry weight basis
- The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, phenols
- For all other tests the samples were dried at < 37°C prior to analysis
- Uncertainties of measurement for the determinands tested are available upon request
- None of the test results included in this report have been recovery corrected

Cooper Associates
Park House
Sandpiper Court
Chester Business Park
CH4 9QU

LABORATORY TEST REPORT

Results of analysis of 13 samples
received 28 November 2012



Report Date
06 December 2012

FAO Aled Williams

4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)

Login Batch No

Chemtest LIMS ID

Sample ID

Sample No

Sampling Date

Depth

Matrix

SOP↓ Determinand↓

CAS No↓

Units↓

*

					217128					
					AI00804	AI00805	AI00806	AI00807	AI00808	AI00809
					TSP1	TSP2	TSP3	TSP5	TSP6	TSP7
					Topsoil	Topsoil	Topsoil	Topsoil	Topsoil	Topsoil
					26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012
					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
2010	pH			M	7.6	7.8	7.7	7.8	7.7	7.7
2660	Toluene Extractable Material		mg kg ⁻¹	N	220	160	250	210	170	150
	Temperature on receipt		°C		9.0	9.0	9.0	9.0	9.0	9.0
2300	Cyanide (total)	57125	mg kg ⁻¹	M	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2120	Boron (hot water soluble)	7440428	mg kg ⁻¹	M	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	Sulfate (2:1 water soluble) as SO ₄	14808798	g l ⁻¹	M	0.02	0.01	0.01	<0.01	0.01	0.01
2490	Chromium (hexavalent)	18540299	mg kg ⁻¹	N	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2430	Sulfate (total BS1377 HCl extract)	14808798	%	M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2450	Arsenic	7440382	mg kg ⁻¹	M	4.9	7.7	7.4	7.8	7.5	7.2
	Beryllium	7440417	mg kg ⁻¹	M	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
	Cadmium	7440439	mg kg ⁻¹	M	<0.10	<0.10	0.24	0.19	<0.10	0.25
	Chromium	7440473	mg kg ⁻¹	M	11	14	12	11	12	12
	Copper	7440508	mg kg ⁻¹	M	27	32	29	23	24	23
	Mercury	7439976	mg kg ⁻¹	M	<0.10	0.11	<0.10	<0.10	<0.10	<0.10
	Nickel	7440020	mg kg ⁻¹	M	8.7	10	9.5	8.5	9.4	8.8
	Lead	7439921	mg kg ⁻¹	M	56	58	55	48	52	48
	Selenium	7782492	mg kg ⁻¹	M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	Vanadium	7440622	mg kg ⁻¹	M	8.2	11	11	12	12	10
	Zinc	7440666	mg kg ⁻¹	M	42	49	42	38	40	35
2800	Naphthalene	91203	mg kg ⁻¹	M	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
	Acenaphthylene	208968	mg kg ⁻¹	N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Acenaphthene	83329	mg kg ⁻¹	M	< 0.01	0.034	< 0.01	< 0.01	< 0.01	< 0.01
	Fluorene	86737	mg kg ⁻¹	M	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01

All tests undertaken between 28/11/2012 and 04/12/2012

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page.

Column page 1

Report page 1 of 2

LIMS sample ID range AI00804 to AI00816

Cooper Associates
Park House
Sandpiper Court
Chester Business Park
CH4 9QU

LABORATORY TEST REPORT

Results of analysis of 13 samples
received 28 November 2012



Report Date
06 December 2012

FAO Aled Williams

4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)

Login Batch No

Chemtest LIMS ID

Sample ID

Sample No

Sampling Date

Depth

Matrix

SOP↓ Determinand↓

CAS No↓

Units↓

*

217128

					AI00810	AI00811	AI00812	AI00813	AI00814	AI00815
					TSP8	TSP9	TSP10	TSP12	TSP13	TSP14
					Topsoil	Topsoil	Topsoil	Topsoil	Topsoil	Topsoil
					26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012
								0.60m	1.50m	1.00m
					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
2010	pH			M	7.7	7.7	7.8	7.5	7.6	7.5
2660	Toluene Extractable Material		mg kg ⁻¹	N	120	160	120	120	190	160
	Temperature on receipt		°C		9.0	9.0	9.0	9.0	9.0	9.0
2300	Cyanide (total)	57125	mg kg ⁻¹	M	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2120	Boron (hot water soluble)	7440428	mg kg ⁻¹	M	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	Sulfate (2:1 water soluble) as SO ₄	14808798	g l ⁻¹	M	<0.01	0.02	0.01	0.04	0.03	0.04
2490	Chromium (hexavalent)	18540299	mg kg ⁻¹	N	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2430	Sulfate (total BS1377 HCl extract)	14808798	%	M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2450	Arsenic	7440382	mg kg ⁻¹	M	5.8	9.2	9.0	7.7	<2.0	<2.0
	Beryllium	7440417	mg kg ⁻¹	M	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
	Cadmium	7440439	mg kg ⁻¹	M	0.14	0.29	0.16	0.17	0.10	<0.10
	Chromium	7440473	mg kg ⁻¹	M	9.0	19	12	10	11	6.5
	Copper	7440508	mg kg ⁻¹	M	18	29	28	24	26	15
	Mercury	7439976	mg kg ⁻¹	M	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Nickel	7440020	mg kg ⁻¹	M	7.1	12	8.8	8.0	6.9	<5.0
	Lead	7439921	mg kg ⁻¹	M	36	37	54	51	38	27
	Selenium	7782492	mg kg ⁻¹	M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	Vanadium	7440622	mg kg ⁻¹	M	8.5	25	10	9.7	<5.0	<5.0
	Zinc	7440666	mg kg ⁻¹	M	28	39	41	37	33	21
2800	Naphthalene	91203	mg kg ⁻¹	M	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
	Acenaphthylene	208968	mg kg ⁻¹	N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Acenaphthene	83329	mg kg ⁻¹	M	< 0.01	< 0.01	< 0.01	0.012	0.013	< 0.01
	Fluorene	86737	mg kg ⁻¹	M	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

* Accreditation status

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Column page 2

Report page 1 of 2

LIMS sample ID range AI00804 to AI00816

Cooper Associates
Park House
Sandpiper Court
Chester Business Park
CH4 9QU

LABORATORY TEST REPORT

Results of analysis of 13 samples
received 28 November 2012



Report Date
06 December 2012

FAO Aled Williams

4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)

Login Batch No

Chemtest LIMS ID

Sample ID

Sample No

Sampling Date

Depth

Matrix

SOP↓ Determinand↓

CAS No↓

Units↓

*

217128

AI00816

TSP15

Topsoil

26/11/2012

2.00m

SOIL

2010	pH			M	7.6
2660	Toluene Extractable Material		mg kg ⁻¹	N	150
	Temperature on receipt		°C		9.0
2300	Cyanide (total)	57125	mg kg ⁻¹	M	<0.50
2120	Boron (hot water soluble)	7440428	mg kg ⁻¹	M	<0.4
	Sulfate (2:1 water soluble) as SO ₄	14808798	g l ⁻¹	M	0.07
2490	Chromium (hexavalent)	18540299	mg kg ⁻¹	N	<0.5
2430	Sulfate (total BS1377 HCl extract)	14808798	%	M	<0.01
2450	Arsenic	7440382	mg kg ⁻¹	M	<2.0
	Beryllium	7440417	mg kg ⁻¹	M	<1.00
	Cadmium	7440439	mg kg ⁻¹	M	<0.10
	Chromium	7440473	mg kg ⁻¹	M	8.7
	Copper	7440508	mg kg ⁻¹	M	19
	Mercury	7439976	mg kg ⁻¹	M	<0.10
	Nickel	7440020	mg kg ⁻¹	M	5.9
	Lead	7439921	mg kg ⁻¹	M	38
	Selenium	7782492	mg kg ⁻¹	M	<0.20
	Vanadium	7440622	mg kg ⁻¹	M	<5.0
	Zinc	7440666	mg kg ⁻¹	M	27
2800	Naphthalene	91203	mg kg ⁻¹	M	< 0.01
	Acenaphthylene	208968	mg kg ⁻¹	N	< 0.01
	Acenaphthene	83329	mg kg ⁻¹	M	< 0.01
	Fluorene	86737	mg kg ⁻¹	M	< 0.01

* Accreditation status

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					217128					
					AI00804	AI00805	AI00806	AI00807	AI00808	AI00809
					TSP1	TSP2	TSP3	TSP5	TSP6	TSP7
					Topsoil	Topsoil	Topsoil	Topsoil	Topsoil	Topsoil
					26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012
					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
2800	Phenanthrene	85018	mg kg ⁻¹	M	0.02	0.33	0.094	0.031	0.25	0.15
	Anthracene	120127	mg kg ⁻¹	M	0.021	0.34	0.098	0.033	0.26	0.15
	Fluoranthene	206440	mg kg ⁻¹	M	0.51	0.49	0.33	0.59	0.48	0.33
	Pyrene	129000	mg kg ⁻¹	M	0.51	0.45	0.29	0.46	0.47	0.35
	Benzo[a]anthracene	56553	mg kg ⁻¹	M	0.28	0.17	0.11	0.23	0.17	0.14
	Chrysene	218019	mg kg ⁻¹	M	0.27	0.16	0.11	0.23	0.16	0.14
	Benzo[b]fluoranthene	205992	mg kg ⁻¹	M	0.56	0.39	0.21	0.35	0.36	0.2
	Benzo[k]fluoranthene	207089	mg kg ⁻¹	N	0.5	0.34	0.18	0.31	0.32	0.17
	Benzo[a]pyrene	50328	mg kg ⁻¹	M	0.032	0.03	< 0.01	0.029	0.024	0.019
	Dibenzo[a,h]anthracene	53703	mg kg ⁻¹	N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Indeno[1,2,3-cd]pyrene	193395	mg kg ⁻¹	M	0.091	0.05	0.033	0.047	0.054	0.014
	Benzo[g,h,i]perylene	191242	mg kg ⁻¹	M	0.097	0.077	0.034	0.061	0.07	< 0.01
	Total (of 16) PAHs		mg kg ⁻¹	N	2.9	2.9	1.5	2.4	2.6	1.7
2920	Phenols (total)		mg kg ⁻¹	N	<0.3	0.3	<0.3	<0.3	<0.3	<0.3

All tests undertaken between 28/11/2012 and 04/12/2012

* Accreditation status

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Column page 1

Report page 2 of 2

LIMS sample ID range AI00804 to AI00816

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4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)

					217128					
					AI00810	AI00811	AI00812	AI00813	AI00814	AI00815
					TSP8	TSP9	TSP10	TSP12	TSP13	TSP14
					Topsoil	Topsoil	Topsoil	Topsoil	Topsoil	Topsoil
					26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012	26/11/2012
								0.60m	1.50m	1.00m
					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
2800	Phenanthrene	85018	mg kg ⁻¹	M	0.12	0.17	0.31	0.21	0.22	0.13
	Anthracene	120127	mg kg ⁻¹	M	0.13	0.18	0.32	0.21	0.23	0.14
	Fluoranthene	206440	mg kg ⁻¹	M	0.28	0.37	0.56	0.39	0.43	0.3
	Pyrene	129000	mg kg ⁻¹	M	0.25	0.29	0.5	0.4	0.37	0.29
	Benzo[a]anthracene	56553	mg kg ⁻¹	M	0.1	0.084	0.19	0.13	0.14	0.13
	Chrysene	218019	mg kg ⁻¹	M	0.099	0.083	0.19	0.13	0.14	0.13
	Benzo[b]fluoranthene	205992	mg kg ⁻¹	M	0.17	0.19	0.34	0.2	0.27	0.19
	Benzo[k]fluoranthene	207089	mg kg ⁻¹	N	0.15	0.17	0.3	0.18	0.24	0.17
	Benzo[a]pyrene	50328	mg kg ⁻¹	M	0.075	0.012	0.024	0.12	0.018	0.014
	Dibenzo[a,h]anthracene	53703	mg kg ⁻¹	N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Indeno[1,2,3-cd]pyrene	193395	mg kg ⁻¹	M	0.017	0.012	0.033	0.029	< 0.01	0.02
	Benzo[g,h,i]perylene	191242	mg kg ⁻¹	M	< 0.01	0.035	0.064	0.029	< 0.01	< 0.01
	Total (of 16) PAHs		mg kg ⁻¹	N	1.4	1.6	2.8	2.1	2.1	1.5
2920	Phenols (total)		mg kg ⁻¹	N	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

Cooper Associates
Park House
Sandpiper Court
Chester Business Park
CH4 9QU

LABORATORY TEST REPORT

Results of analysis of 13 samples
received 28 November 2012



Report Date
06 December 2012

FAO Aled Williams

4948 - Draper Topsoil, Bickerstaff, Lancashire (P/O 5673)

					217128
					AI00816
					TSP15
					Topsoil
					26/11/2012
					2.00m
					SOIL
2800	Phenanthrene	85018	mg kg ⁻¹	M	0.26
	Anthracene	120127	mg kg ⁻¹	M	0.27
	Fluoranthene	206440	mg kg ⁻¹	M	0.41
	Pyrene	129000	mg kg ⁻¹	M	0.38
	Benzo[a]anthracene	56553	mg kg ⁻¹	M	0.12
	Chrysene	218019	mg kg ⁻¹	M	0.12
	Benzo[b]fluoranthene	205992	mg kg ⁻¹	M	0.24
	Benzo[k]fluoranthene	207089	mg kg ⁻¹	N	0.21
	Benzo[a]pyrene	50328	mg kg ⁻¹	M	0.015
	Dibenzo[a,h]anthracene	53703	mg kg ⁻¹	N	< 0.01
	Indeno[1,2,3-cd]pyrene	193395	mg kg ⁻¹	M	0.02
	Benzo[g,h,i]perylene	191242	mg kg ⁻¹	M	0.034
	Total (of 16) PAHs		mg kg ⁻¹	N	2.1
2920	Phenols (total)		mg kg ⁻¹	N	<0.3