FILE 2461/03.

JPA
JOYNES PIKE
& ASSOCIATES LTD
CONSULTING ENGINEERS

1-2 Aire House
Richmond Business Park
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Doncaster DN4 5NL
Tel: +44(0)1302 322295
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info@joynespike.co.uk
www.joynespike.co.uk

Your Ref:

Our Ref: DRS/DRS/232095.20061515

1 November 2006

Barnsley Metropolitan Borough Council
Regulatory Services
Central Offices
Kendray Street
Barnsley
S70 2TN

For the Attention of Dr James Fox

Dear James

Re: Wombwell Foundry, Hough Lane, Wombwell S73 0

Further to ongoing bulk fill works at the above site, we are pleased to enclose analysis and test results for imported material from other Ben Bailey Homes Ltd. sites at; Bramley, Grimethorpe/Manvers and Mexborough. The above testing is in accordance with our approved Reclamation and Remediation Method Statement.

The results of the analysis have been assessed using statistical analysis as outlined in CLR 7. Appropriate US_{95} values have been calculated for each determinand and all values are below the limits set in our Remediation Method Statement for the site.

We trust that the above and enclosed is satisfactory for your current needs and we look forward to receiving your written approval on this matter. These details will be incorporated into our final validation report. Should you have any queries please do not hesitate to contact the undersigned.

Yours sincerely
For and on behalf of Joynes Pike & Associates Limited

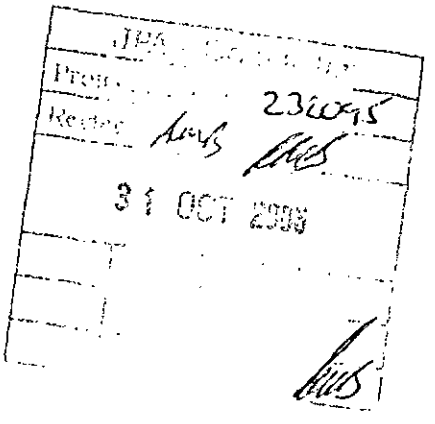
D R Sykes MSc BSc (Hons) FGS
Senior Geo-Environmental Engineer
dskyes@joynespike.co.uk

R M Butterworth BSc(Hons) Grad IMMM FGS
Principal Geotechnical Engineer
rbutterworth@joynespike.co.uk

Enc
Cc: J Booth Ben Bailey Homes Ltd.

Client: **Joynes Pike & Associates Ltd.**
1-2 Aire House
Sidings Court
Richmond Business Park
Doncaster
South Yorkshire
DN4 5NL

FAO: Mr D Sykes



Analytical Report Number: R06/1868

Client Project Name:	**Hough Lane, Wombwell**
Client Project Number:	**232095**
Your Order Number:	**22782**
Order Receipt Date:	**26/10/06**
Reporting Date:	**Tuesday 31 October 2006**

If you have any queries regarding this report please contact our Customer Services Manager

ECōS Environmental Limited
Low Moor Business Park, Common Road, Bradford BD12 0NB
Tel: 01274 691122 Fax: 01274 606100

Client Project Name: Hough Lane, Wombwell

Project Number: 232095

Client: Joynes Pike & Associates Ltd.

Reporting Date: Tuesday 31 October 2006

Comments

All analyses are carried out using the laboratory's standard methods unless otherwise agreed.

The test results in this report refer only to the actual samples on which testing has been performed.

Any opinions and/or interpretations expressed herein are outside the scope of the testing laboratory's UKAS accreditation.

The test report shall not be reproduced, except in full, without the testing laboratory's written approval.

This testing laboratory cannot be held responsible for the condition or suitability of samples submitted for testing by a third party or for the competency of personnel other than its own staff.

Soil Samples

Results are expressed based on air dried mass @ 40°C unless otherwise stated.

See key in Notes section for explanation of numerical categories for asbestos results, if applicable.

Stones (for example inert flints and inorganic minerals) >10mm are removed prior to analysis. Unless otherwise stated, results have not been corrected for this loss.

Samples submitted for leachate determination were prepared using agreed procedures and analysed using UKAS accredited methodology where appropriate.

Results are expressed without correction for recovery factors.

Key:

Accreditation:

MCERTS = This test is accredited to the British Standard BS EN ISO/IEC 17025:2000 and the Environment Agency MCERTS for soil standard.

17025 = This test is accredited to the British Standard BS EN ISO/IEC 17025:2000.

None = This test is currently not on our scope of accreditation.

Sample Pretreatment (Appended to Method of Detection)

D = Air Dried @ 40°C

R = As Received

Sample Type

B = Bulk disturbed sample
C = Core Sample
D = Small disturbed sample
P = Piston sample
U = Undisturbed sample - open drive
W = Water Sample

Sample Results

Analysis not requested
*** Test not completed. Please see notes on last page

Signed: _____

For and on behalf of ECõS Environmental Limited

Approved signatories:

Name	Position
J R Brown	Business Development Manager
L Dewell	Production Manager
P Richardson	Section Head
J Stoddart	Technical Manager

Client Project Name: Hough Lane, Wombwell

Project Number: 232095

Client: Joynes Pike & Associates Ltd.

Reporting Date: Tuesday 31 October 2006

Soil Samples

Method Statement

Determinand	Method of Detection	Sample Pretreatment	Limit of Detection	Accredi-tation	Sub-Contracted	Result Date
PAH (sum of EPA 16)	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Naphthalene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Acenaphthylene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Acenaphthene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Fluorene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Phenanthrene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Anthracene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Pyrene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Benzo(a)anthracene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Chrysene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Benzo(b)fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Benzo(k)fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Benzo(a)pyrene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Indeno(1,2,3-cd)pyrene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Dibenz(a,h)anthracene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Benzo(g,h,i)perylene	GC-MS	D	0.1 mg/kg	17025	No	31/10/06
Fraction Organic Carbon	Titration	D	0.001	None	No	30/10/06

Client Project Name: Hough Lane, Wombwell

Client: Joynes Pike & Associates Ltd.

Project Number: 232095

Reporting Date: Tuesday 31 October 2006

	BH/TP					
	Top Depth / m					
	Bottom Depth / m					
	Customer ID	Bramley D1	Bramley D2	Bramley D3	Bramley D4	Bramley D5
	Sample Type					
	Date Sampled					
	Receipt Date	26/10/06	26/10/06	26/10/06	26/10/06	26/10/06
	ECõS Sample ID	S0613881	S0613882	S0613883	S0613884	S0613885
	Matrix Type	Soil	Soil	Soil	Soil	Soil
Determinand	Units					
PAH (sum of EPA 16)	mg/kg	1.3	6.3	1.4	0.7	1.2
Naphthalene	mg/kg	0.2	0.3	0.3	0.3	0.3
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.7	0.2	<0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.3	1.6	0.3	0.2	0.3
Pyrene	mg/kg	0.3	1.4	0.3	0.2	0.3
Benzo(a)anthracene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	mg/kg	0.2	0.6	0.2	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.2	0.4	<0.1	<0.1	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Fraction Organic Carbon	N/A	0.003	#	#	#	#

Client Project Name: Hough Lane, Wombwell

Client: Joynes Pike & Associates Ltd.

Project Number: 232095

Reporting Date: Tuesday 31 October 2006

Notes and Preservation Details

None

ALcontrol Geochem

Unit 7-8 Hawarden Business Park
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email: mkt@alcontrol.co.uk
website: www.alcontrol.co.uk

Encia Consulting
Encia House
Audby Lane
Wetherby
West Yorkshire
LS22 7RD

ATTN: Simon Hinkins

CERTIFICATE OF ANALYSIS

Date:	08 August, 2006
Our Reference:	06/08539/02/08
Your Reference:	85086
Location:	STONEGATE/BRAMLEY

A total of 86 samples was received for analysis between Tuesday, 23 May 2006 and Friday, 09 June 2006 and completed on Wednesday, 28 June 2006. Accredited laboratory tests are defined in the log sheet, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation. We are pleased to enclose our final report, it was a pleasure to be of service to you, and we look forward to our continuing association. This report contains results for samples TP213 to TP225.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Signed

Diane Whittlestone Customer Services
Jane Seymour Customer Services
David O'Hare Customer Services
Caroline Suttie Customer Services

Valid if signed by any of the above signatories.

Compiled By

Paul Armitage

1291 GROUP

ALcontrol Geochem is a trading division of ALcontrol UK Limited.
Registered Office: Templeborough House, Mill Close, Rotherham, S60 1BZ. Registered in England and Wales No. 4057291

ALcontrol Geochem
TEST SCHEDULE

JOB NUMBER : 06/8539/02
CLIENT : Encia Consulting
CONTACT : Simon Hinkins
DATE OF RECEIPT : 02/06/06
LOCATION : STONEGATE/BRAMLEY

BATCH NUMBER : 3
CLIENT REF/CODE : 85086
ORDER NUMBER : 85086-AB2-5270
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	pH (S)	Sulphate Soluble Kone 2:1 (S)
	UKAS Accredited ?				✓	✓	✓	✓
43	TP213 J1	JAR	1.00	SOIL	X	X	X	X
44	TP214 J1	JAR	0.80	SOIL	X	X	X	X
45	TP215 J1	JAR	1.00	SOIL	X	X	X	X
46	TP216 J1	JAR	0.40	SOIL	X	X	X	X
47	TP217 J1	JAR	0.60	SOIL	X	X	X	X
48	TP218 J1	JAR	0.50	SOIL				
49	TP219 J1	JAR	0.30	SOIL	X	X	X	X
50	TP220 J1	JAR	0.50	SOIL	X	X	X	X
51	TP222 J1	JAR	0.50	SOIL	X	X	X	X
52	TP223 J1	JAR	0.50	SOIL	X	X	X	X
53	TP224 J1	JAR	0.30	SOIL				
54	TP225 J1	JAR	0.50	SOIL	X	X	X	X
	Total Number of Tests				10	10	10	10

Printed : 08/06/06 11:34:25

ALcontrol Geochem Analytical Services
Sample Descriptions

Job Number: 06/08539/02/08
Client: Encia Consulting
Client Ref: 85086

Grain sizes	
<0.063mm	Very Fine
0.1mm - 0.063mm	Fine
0.1mm - 2mm	Medium
2mm - 10mm	Coarse
>10mm	Very Coarse

Sample Identity	Depth (m)	Colour	Grain Size	Description	Batch
TP213 J1	1.0	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	3
TP214 J1	0.8	Brown	0.1mm - 0.063mm	Silty Clay	3
TP215 J1	1.0	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	3
TP216 J1	0.4	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	3
TP217 J1	0.6	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	3
TP219 J1	0.3	Light Grey	0.1mm - 0.063mm	Silt with some Stones	3
TP220 J1	0.5	Brown	0.1mm - 0.063mm	Sand	3
TP222 J1	0.5	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	3
TP223 J1	0.5	Brown	0.1mm - 0.063mm	Silty Clay	3
TP225 J1	0.5	Brown	0.1mm - 0.063mm	Clay	3

* 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 occurring 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.
[1] Sample Description supplied by client

Validated ☑
Preliminary ☐

ALcontrol Geochem Analytical Services
Table Of Results

ISO 17025 accredited
M MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 06/08539/02/08 Matrix: SOLID
Client: Encia Consulting Location: STONEGATE/BRAMLEY
Client Ref. No.: 85086 Client Contact: Simon Hinkins

Sample Identity	TP213 J1	TP214 J1	TP215 J1	TP216 J1	TP217 J1	TP219 J1	TP220 J1	TP222 J1	TP223 J2	Method Code	LoD/Units
Depth (m)	1.0	0.8	1.0	0.4	0.6	0.3	0.5	0.5	0.5		
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
Sampled Date	31.05.06	31.05.06	31.05.06	31.05.06	31.05.06	31.05.06	31.05.06	31.05.06	31.05.06		
Sample Received Date	02.06.06	02.06.06	02.06.06	02.06.06	02.06.06	02.06.06	02.06.06	02.06.06	02.06.06		
Batch	3	3	3	3	3	3	3	3	3		
Sample Number(s)	43	44	45	46	47	49	50	51	52		
Boron Water Soluble	<1	<1	<1	<1	<1	<1	<1	1	<1	TM129#M	<1 mg/kg
Arsenic	1	<1	2	<1	<1	<1	<1	2	12	TM129#M	<1 mg/kg
Cadmium	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM129#M	<1 mg/kg
Chromium	8	11	7	20	7	4	8	9	10	TM129#M	<1 mg/kg
Copper	<1	<1	7	3	3	6	<1	3	4	TM129#M	<1 mg/kg
Lead	21	27	67	25	18	6	26	36	50	TM129#M	<1 mg/kg
Mercury	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	TM129#M	<1.2 mg/kg
Nickel	11	16	9	8	10	<1	12	12	13	TM129#M	<1 mg/kg
Selenium	<3	<3	<3	<3	<3	<3	<3	<3	<3	TM129#M	<3 mg/kg
Zinc	31	74	163	44	31	160	61	63	62	TM129#M	<1 mg/kg
Water Soluble Sulphate as SO4 2:1 Extract	0.013	0.012	0.007	0.046	0.015	0.036	0.038	0.013	0.026	TM098#M	<0.003 g/l
pH Value	8.12	7.90	7.86	8.39	8.18	8.84	7.53	7.75	8.00	TM133#M	<1.00 pH Units

All results expressed on a dry weight basis.

Date 08.08.2006

Validated ☑
Preliminary ☐

ALcontrol Geochem Analytical Services
Table Of Results

\# ISO 17025 accredited
M MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 06/08539/02/08 **Matrix:** SOLID
Client: Encia Consulting **Location:** STONEGATE/BRAMLEY
Client Ref. No.: 85086 **Client Contact:** Simon Hinkins

Sample Identity	TP225 J1										Method Code	LoD/Units
Depth (m)	0.5											
Sample Type	SOIL											
Sampled Date	31.05.06											
Sample Received Date	02.06.06											
Batch	3											
Sample Number(s)	54											
Boron Water Soluble	<1										TM129$^{\#}_{M}$	<1 mg/kg
Arsenic	2										TM129$^{\#}_{M}$	<1 mg/kg
Cadmium	<1										TM129$^{\#}_{M}$	<1 mg/kg
Chromium	10										TM129$^{\#}_{M}$	<1 mg/kg
Copper	<1										TM129$^{\#}_{M}$	<1 mg/kg
Lead	30										TM129$^{\#}_{M}$	<1 mg/kg
Mercury	<1.2										TM129$^{\#}_{M}$	<1.2 mg/kg
Nickel	11										TM129$^{\#}_{M}$	<1 mg/kg
Selenium	<3										TM129$^{\#}_{M}$	<3 mg/kg
Zinc	38										TM129$^{\#}_{M}$	<1 mg/kg
Water Soluble Sulphate as SO4 2:1 Extract	0.021										TM098$^{\#}_{M}$	<0.003 g/l
pH Value	7.79										TM133$^{\#}_{M}$	<1.00 pH Units

All results expressed on a dry weight basis.

Date 08.08.2006

ALcontrol Geochem Analytical Services
Table Of Results - Appendix

Job Number: 06/08539/02/08
Client: Encia Consulting
Client Ref. No.: 85086

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	*ISO 17025 accredited*	M	*MCERTS Accredited*
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	✓	✓	DRY	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer	✓	✓	DRY	
TM133	BS 1377: Part 3 1990	Determination of pH in Soil and Water using the GLpH pH Meter	✓	✓	WET	

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

ALcontrol Geochem Analytical Services
Table Of Results - Appendix

Job Number: 06/08539/02/08
Client: Encia Consulting
Client Ref. No.: 85086

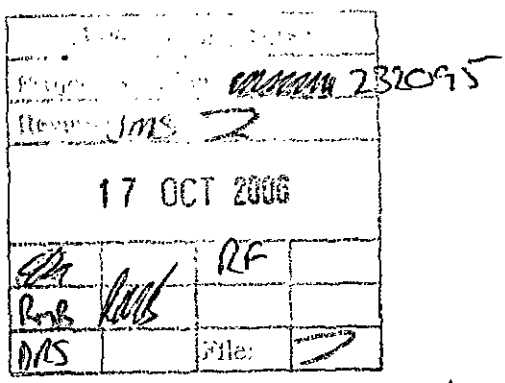
Summary of Coolbox temperatures

Batch No.	Coolbox Temperature (°C)
3	13

ECoS REPORT NO.		R06/8492	Grimethorpe / Manvers 222133	
DATE ISSUED		13/10/06		
BH/TP				
SAMPLE DEPTH				
YOUR ID REF.		Sample 11	Sample 12	Sample 13
SAMPLE TYPE				
DATE SAMPLED				
RECEIPT DATE		28/09/06	28/09/06	28/09/06
OUR REF.		S0683954	S0683955	S0683956
MATRIX		Soil	Soil	Soil
Arsenic	mg/kg	16.1	17.4	13.3
Cadmium	mg/kg	<0.2	<0.2	<0.2
Chromium (total)	mg/kg	17.9	19.4	19.1
Lead	mg/kg	27.4	21.5	20.6
Mercury	mg/kg	1.7	1.5	1.3
Selenium	mg/kg	<1.0	<1.0	<1.0
Boron (water soluble)	mg/kg	<0.5	<0.5	<0.5
Copper	mg/kg	23.6	23.1	22.8
Nickel	mg/kg	23.3	23.1	23.5
Zinc	mg/kg	61.6	66.2	70.7
Sulphide	mg/kg	<2.0	<2.0	<2.0
pH	N/A	7	7	7.5
PAH (sum of EPA 16)	mg/kg	3.9	5.1	5.3
Naphthalene	mg/kg	3.5	4.9	4.8
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.2	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	0.1	0.2
Pyrene	mg/kg	0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
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Benzo(k)fluoranthene	mg/kg	<0.1	<0.1	<0.1
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Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Chromium (hexavalent)	mg/kg	<1.0	<1.0	<1.0

Client: Joynes Pike & Associates Ltd.
1-2 Aire House
Sidings Court
Richmond Business Park
Doncaster
South Yorkshire
DN4 5NL

FAO: Mr J Fox



Analytical Report Number: R06/1682

Client Project Name:	Land at Fitzwilliam Fields, Manvers Way
Client Project Number:	222133
Your Order Number:	23349
Order Receipt Date:	10/10/06
Reporting Date:	Monday 16 October 2006

If you have any queries regarding this report please contact our Customer Services Manager

ECôS Environmental Limited
Low Moor Business Park, Common Road, Bradford BD12 0NB
Tel: 01274 691122 Fax: 01274 608100

Client Project Name: Land at Fitzwilliam Fields, Manvers Way
Project Number: 222133

Client: Joynes Pike & Associates Ltd.
Reporting Date: Monday 16 October 2006

Comments

All analyses are carried out using the laboratory's standard methods unless otherwise agreed.

The test results in this report refer only to the actual samples on which testing has been performed.

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Soil Samples

Results are expressed based on air dried mass @ 40°C unless otherwise stated.

See key in Notes section for explanation of numerical categories for asbestos results, if applicable.

Stones (for example inert flints and inorganic minerals) >10mm are removed prior to analysis. Unless otherwise stated, results have not been corrected for this loss.

Samples submitted for leachate determination were prepared using agreed procedures and analysed using UKAS accredited methodology where appropriate.

Results are expressed without correction for recovery factors.

Key:

Accreditation:

MCERTS = This test is accredited to the British Standard BS EN ISO/IEC 17025:2000 and the Environment Agency MCERTS for soil standard.

17025 = This test is accredited to the British Standard BS EN ISO/IEC 17025:2000.

None = This test is currently not on our scope of accreditation.

Sample Pretreatment (Appended to Method of Detection)

D = Air Dried @ 40°C
R = As Received

Sample Type

B = Bulk disturbed sample
C = Core Sample
D = Small disturbed sample
P = Piston sample
U = Undisturbed sample - open drive
W = Water Sample

Sample Results

Analysis not requested
*** Test not completed. Please see notes on last page

Signed:

For and on behalf of ECõS Environmental Limited

Approved signatories:

Name	Position
J R Brown	Business Development Manager
L Dewell	Production Manager
P Richardson	Section Head
J Stoddart ✓	Technical Manager

Client Project Name: Land at Fitzwilliam Fields, Manvers Way
Project Number: 222133

Client: Joynes Pike & Associates Ltd.
Reporting Date: Monday 16 October 2006

Soil Samples

Method Statement

Determinand	Method of Detection	Sample Pretreatment	Limit of Detection	Accredi-tation	Sub-Contracted	Result Date
Arsenic	ICP-OES	D	0.1 mg/kg	17025	No	13/10/06
Cadmium	ICP-OES	D	0.2 mg/kg	17025	No	13/10/06
Chromium (total)	ICP-OES	D	0.2 mg/kg	17025	No	13/10/06
Lead	ICP-OES	D	0.5 mg/kg	17025	No	13/10/06
Mercury	ICP-OES	D	0.1 mg/kg	17025	No	13/10/06
Selenium	ICP-OES	D	1.0 mg/kg	17025	No	13/10/06
Boron (water soluble)	ICP-OES	D	0.5 mg/kg	17025	No	13/10/06
Copper	ICP-OES	D	0.2 mg/kg	17025	No	13/10/06
Nickel	ICP-OES	D	0.2 mg/kg	17025	No	13/10/06
Zinc	ICP-OES	D	0.2 mg/kg	17025	No	13/10/06
PAH (sum of EPA 16)	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Sulphide	Colorimetry	R	2.0 mg/kg	17025	No	10/10/06
pH	pH-meter	D	N/A	17025	No	12/10/06
Naphthalene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Acenaphthylene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Acenaphthene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Fluorene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Phenanthrene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Anthracene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Pyrene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Benzo(a)anthracene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Chrysene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Benzo(b)fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Benzo(k)fluoranthene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Benzo(a)pyrene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Indeno(1,2,3-cd)pyrene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Dibenz(a,h)anthracene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Benzo(g,h,i)perylene	GC-MS	D	0.1 mg/kg	17025	No	13/10/06
Chromium (hexavalent)	ICP-OES	D	1.0 mg/kg	17025	No	13/10/06
Fraction Organic Carbon	Titration	D	0.001 N/A	None	No	12/10/06

Client Project Name: Land at Fitzwilliam Fields, Manvers Way
Project Number: 222133

Client: Joynes Pike & Associates Ltd.
Reporting Date: Monday 16 October 2006

	BH/TP			
	Top Depth / m			
	Bottom Depth / m			
	Customer ID	Mexborough SPO1	Mexborough SPO2	Mexborough SPO3
	Sample Type	Clay	Clay	Clay
	Date Sampled			
	Receipt Date	10/10/06	10/10/06	10/10/06
	ECõS Sample ID	S0612698	S0612699	S0612700
	Matrix Type	Soil	Soil	Soil
Determinand	Units			
Arsenic	mg/kg	9.9	8.9	10.0
Cadmium	mg/kg	<0.2	<0.2	<0.2
Chromium (total)	mg/kg	17.6	19.5	18.4
Lead	mg/kg	24.0	21.5	23.3
Mercury	mg/kg	<0.1	<0.1	<0.1
Selenium	mg/kg	<1.0	<1.0	<1.0
Boron (water soluble)	mg/kg	<0.5	<0.5	<0.5
Copper	mg/kg	20.0	20.3	19.5
Nickel	mg/kg	24.4	26.9	24.6
Zinc	mg/kg	69.9	74.4	73.8
PAH (sum of EPA 16)	mg/kg	0.3	<0.1	<0.1
Sulphide	mg/kg	<2.0	<2.0	<2.0
pH	N/A	7.4	7.5	7.4
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	mg/kg	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Chromium (hexavalent)	mg/kg	<1.0	<1.0	<1.0
Fraction Organic Carbon	N/A	#	0.013	#

Client Project Name: Land at Fitzwilliam Fields, Manvers Way
Project Number: 222133

Client: Joynes Pike & Associates Ltd.
Reporting Date: Monday 16 October 2006

Notes and Preservation Details

None

Maximum Value Test

232095
SAND
Stonegate Foods, Bramley
Former Foundry off Hough Lane, Wombwell

Log 10 concentrations

Key

may be an outlier

Insert extra columns using the button as with the *Mean Value sheet. Then copy across the formulas* from column E.

CAS REG	Determinand	Units	Sample Ref	43	44	45	46	47	48	50	51	54	52	LEVEL 1 TEST									
			trial pit / borehole ref	TP213	TP214	TP215	TP216	TP217	TP219	TP220	TP222	TP225	TP223										
			Depth	1	0.8	1	0.4	0.8	0.3	0.5	0.5	0.5	0.5										
0	Arsenic	mg/kg		0	0	0.301	0	0	0	0	0.301	0.301	0.2553	0.198	0.341	2.587	10	10	2.036	12.00		Maximum value *may be* an outlier	7.79
0	Cadmium	mg/kg												0.000	0.000	#DIV/0!	10	10	2.036	1.00	#DIV/0!	#DIV/0!	1.00
0	Chromium	mg/kg		0.9031	1.0414	0.8451	0.9085	0.8451	0.8021	0.9031	0.9542	1	1	0.940	0.177	2.039	10	10	2.036	20.00		Maximum value may be an outlier	19.06
0	Lead	mg/kg		1.3222	1.4314	1.8261	1.3979	1.2553	0.7782	1.415	1.5563	1.4771	1.699	1.418	0.282	1.457	10	10	2.036	87.00	YES	Assume *maximum* value is not an outlier	97.54
0	Mercury	mg/kg		0.0792	0.0792	0.0792	0.0792	0.0792	0.0792	0.0792	0.0792	0.0792	0.0792	0.079	0.000	0.000	10	10	2.036	1.20	YES	Assume *maximum* value is not an outlier	1.20
0	Nickel	mg/kg		1.0414	1.2041	0.9542	0.9031	1	0	1.0792	1.0792	1.0414	1.1139	0.842	0.341	0.789	10	10	2.036	16.00	YES	Assume *maximum* value is not an outlier	43.29
0	Selenium	mg/kg		0.4771	0.4771	0.4771	0.4771	0.4771	0.4771	0.4771	0.4771	0.4771	0.4771	0.477	0.000	#DIV/0!	10	10	2.036	3.00	#DIV/0!	#DIV/0!	3.00
0	Copper	mg/kg		0	0	0.8451	0.4771	0.4771	0.7782	0	0.4771	0	0.6021	0.366	0.338	1.419	10	10	2.036	2.00	YES	Assume *maximum* value is not an outlier	11.32
0	Boron	mg/kg												0.000	0.000	#DIV/0!	10	10	2.036	1.00	#DIV/0!	#DIV/0!	1.00
0	Zinc	mg/kg		1.4914	1.8692	2.2122	1.8435	1.4914	2.2041	1.7853	1.7993	1.5798	1.7924	1.787	0.258	4.641	10	10	2.036	183.00	YES	Assume *maximum* value is not an outlier	205.39

Mean Value Test

Key:	
	exceeds screen and is potential outlier
	Does not exceed screen but may be outlier
	Exceeds screen but is not an outlier

232095
SAND
Stonegate Foods, Bramley
Former Foundry off Hough Lane, Wombwell

To enter results into this table, click on column G and click the Insert Columns button, entering the number of columns needed. Then either type in the results, or paste them in. DO NOT try the 'Insert Copied Cells' option, as this loses the formatting links.

CAS REG No	Determinand	Units	*Screening Value	*Source of screening value	Sample Ref	Bramley D1	Bramley D2	Bramley D3	Bramley D4	Bramley D5													LEVEL 1 CHECK	
					Trial pit / borehole ref	N/A	N/A	N/A	N/A	N/A														
					Depth	N/A	N/A	N/A	N/A	N/A														
	Benzo (a) pyrene	mg/kg	0.75	IHSV Version 6 December 2005		0.20	0.40	0.10	0.10	0.10	5	4	0.18	0.13	0.32	95	2.132	1.681	0.30	0.75	IHSV Version 6 December 2006	YES	No action warranted
	benz (a) anthracene	mg/kg	5.4	IHSV Version 6 December 2005		0.10	0.40	0.10	0.10	0.10	5	4	0.16	0.13	0.38	95	2.132	1.789	0.29	8.4	IHSV Version 6 December 2006	YES	No action warranted
	benz (b) fluoranthene	mg/kg	8.8	IHSV Version 6 December 2005		0.20	0.60	0.20	0.10	0.10	5	4	0.24	0.21	0.38	95	2.132	1.824	0.44	8.8	IHSV Version 6 December 2006	YES	No action warranted
	benz (k) fluoranthene	mg/kg	88	IHSV Version 6 December 2005		0.10	0.20	0.10	0.10	0.10	5	4	0.12	0.04	0.17	95	2.132	1.355	0.16	88	IHSV Version 6 December 2006	YES	No action warranted
	chrysene	mg/kg	880	IHSV Version 6 December 2005		0.10	0.30	0.10	0.10	0.10	5	4	0.14	0.09	0.29	95	2.132	1.609	0.23	880	IHSV Version 6 December 2006	YES	No action warranted
	dibenz (a,h) anthracene	mg/kg	0.92	IHSV Version 6 December 2005		0.10	0.20	0.10	0.10	0.10	5	4	0.10	0.00	0.00	95	2.132	1.000	0.18	0.92	IHSV Version 6 December 2006	YES	No action warranted
	indeno (1,2,3-cd) pyrene	mg/kg	7.8	IHSV Version 6 December 2005		0.10	0.30	0.10	0.10	0.10	5	4	0.14	0.09	0.29	95	2.132	1.609	0.23	7.8	IHSV Version 6 December 2006	YES	No action warranted
	Naphthalene	mg/kg	7	Draft SGV		0.20	0.30	0.30	0.30	0.30	5	4	0.28	0.04	0.07	95	2.132	1.152	0.32	7	Draft SGV	YES	No action warranted
	Acenaphthene	mg/kg	330	IHSV Version 6 December 2005		0.10	0.30	0.10	0.10	0.10	5	4	0.10	0.00	0.00	95	2.132	1.000	0.18	330	IHSV Version 6 December 2006	YES	No action warranted
	Fluorene	mg/kg	250	IHSV Version 6 December 2005		0.10	0.30	0.10	0.10	0.10	5	4	0.10	0.0067	0.00	95	2.132	1.000	0.18	250	IHSV Version 6 December 2006	YES	No action warranted
	Anthracene	mg/kg	2000	IHSV Version 6 December 2005		0.10	0.10	0.10	0.10	0.10	5	4	0.10	0.00	0.00	95	2.132	1.000	0.18	2000	IHSV Version 6 December 2006	YES	No action warranted
	Fluoranthene	mg/kg	310	IHSV Version 6 December 2005		0.30	1.00	0.30	0.20	0.30	5	4	0.54	0.50	0.49	95	2.132	2.049	1.11	310	IHSV Version 6 December 2006	YES	No action warranted
	Pyrene	mg/kg	230	IHSV Version 6 December 2005		0.30	1.40	0.30	0.20	0.30	5	4	0.50	0.50	0.45	95	2.132	1.983	0.98	230	IHSV Version 6 December 2006	YES	No action warranted

Maximum Value Test

232085
SAND
Stonegate Foods, Bramley
Former Foundry off Hough Lane, Wombwell

Log 10 concentrations

Key

may be an outlier

Insert extra columns using the button as with the Mean Value sheet. Then copy across the formulas from column E.

CAS REG	Determinand	Units		Sample Ref	Bramley	Bramley	Bramley	Bramley	Bramley	LEVEL 1 TEST									
				trial pit / borehole ref	N/A	N/A	N/A	N/A	N/A	Mean of Log10 of values	Unbiased standard deviation of log10 values	Outlier Test	% critical value		Critical Value for Test	Max. Value	Is maximum value less than the selected critical value?		Approx Value of an Outlier @ 1 in Xcrit
				Depth	N/A	N/A	N/A	N/A	N/A										
0	0	0			#NUMI	#NUMI	#NUMI	#NUMI	#NUMI	#NUMI	#NUMI	#NUMI	10%	5%	Insert valu	0.00	#NUMI	#NUMI	#VALUE!
0	Benzo (a)pyrene	mg/kg			-0.699	-0.398	-1	-1	-1	-0.819	0.269	1.565	10%	5%	1.602	0.40	YES	Assume maximum value is not an outlier	0.41
0	benz (a) anthracene	mg/kg			-1	-0.398	-1	-1	-1	-0.880	0.269	1.789	10%	5%	1.602	0.40	YES	Maximum value may be an outlier	0.36
0	benz (b) fluoranthene	mg/kg			-0.699	-0.222	-0.699	-1	-1	-0.724	0.318	1.578	10%	5%	1.602	0.60	YES	Assume maximum value is not an outlier	0.61
0	benz (k) fluoranthene	mg/kg			-1	-0.699	-1	-1	-1	-0.940	0.135	1.789	10%	5%	1.602	0.20	YES	Maximum value may be an outlier	0.19
0	chrysene	mg/kg			-1	-0.523	-1	-1	-1	-0.905	0.213	1.789	10%	5%	1.602	0.30	YES	Maximum value may be an outlier	0.27
0	dibenz (a,h) anthracene	mg/kg			-1	-1	-1	-1	-1	1.000	0.000	#DIV/0!	10%	5%	1.602	0.10	#DIV/0!	#DIV/0!	0.10
0	indeno (1,2,2.c,d) pyrene	mg/kg			-1	-0.523	-1	-1	-1	-0.905	0.213	1.789	10%	5%	1.602	0.30	YES	Maximum value may be an outlier	0.27
0	Naphthalene	mg/kg			-0.699	-0.523	-0.523	-0.523	-0.523	-0.558	0.079	0.447	10%	5%	1.602	0.30	YES	Assume maximum value is not an outlier	0.37
0	Acenapthene	mg/kg			-1	-1	-1	-1	-1	1.000	0.000	#DIV/0!	10%	5%	1.602	0.10	#DIV/0!	#DIV/0!	0.10
0	Fluorene	mg/kg			-1	-1	-1	-1	-1	1.000	0.000	#DIV/0!	10%	5%	1.602	0.10	#DIV/0!	#DIV/0!	0.10
0	Anthracene	mg/kg			-1	-1	-1	-1	-1	1.000	0.000	#DIV/0!	10%	5%	1.602	0.10	#DIV/0!	#DIV/0!	0.10
0	Flouranthene	mg/kg			-0.523	-0.398	-0.523	-0.699	-0.523	-0.413	0.353	1.747	10%	5%	1.602	1.60	NO	Maximum value may be an outlier	1.42
0	Pyrene	mg/kg			-0.523	-0.398	-0.523	-0.699	-0.523	-0.424	0.328	1.740	10%	5%	1.602	1.40	NO	Maximum value may be an outlier	1.26

Mean Value Test

Key:	
	exceeds screen and is potential outlier
	Does not exceed screen but may be outlier
	Exceeds screen but is not an outlier

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232095
Bulk Fill
Grimethorpe/Manvers
Former Foundry off Hough Lane, Wombwell

CAS RBO No	Determinand	Units	*Screening Value	*Source of screening value	Sample 11	Sample 12	Sample 13	LEVEL 1 CHECK													
				trial pit / borehole ref	N/A	N/A	N/A														
				Depth	N/A	N/A	N/A														
	Arsenic	mg/kg	20	SGV	16.10	17.40	13.30														
	Cadmium	mg/kg	2	SGV	1.99	1.99	1.99														
	Chromium	mg/kg	130	SGV	17.90	19.40	19.10														
	Lead	mg/kg	450	SGV	27.40	21.40	20.60														
	Mercury	mg/kg	8	SGV	1.70	1.50	1.30														
	Nickel	mg/kg	50	SGV	23.30	23.10	23.50														
	Selenium	mg/kg	35	SGV	34.90	34.90	34.90														
	Copper	mg/kg	5000	BRV Version 6 Dec 2006	23.60	23.10	22.80														
	Boron	mg/kg	130	BRV Version 6 Dec 2006	129.90	129.90	129.90														
	Zinc	mg/kg	8500	BRV Version 6 Dec 2006	61.60	66.20	70.70														

Maximum Value Test

232095
Bulk Fill
Grimethorpe/Manvers
Former Foundry off Hough Lane, Wombwell

Log 10 concentrations

Key: may be an outlier

Insert extra columns using the button as with the Mean Value sheet. Then copy across the formulas from column E.

CAS REG	Determinand	Units	Sample Ref	Sample 11	Sample 12	Sample 13	LEVEL 1 TEST									
			trial pit / borehole ref	N/A	N/A	N/A	Mean of Log10 of values	Unbiased standard deviation of log10 values	Outlier Test	5% critical value (1 tailed)		Critical value Test	Mean value	Is maximum value less than or equal to critical value?		Approx Value of Outlier @ 5% Test
			Depth	N/A	N/A	N/A										
0	Arsenic	mg/kg		1.206826	1.240549	1.1238516	1.190	0.060	0.836	1.10	3	1:148	17.40	YES	Assume maximum value is not an outlier	18.17
0	Cadmium	mg/kg		0.299	0.000	#DIV/0!	1.10	3	1:148	1.99	#DIV/0!	#DIV/0!				
0	Chromium	mg/kg		1.252853	1.287802	1.2810334	1.274	0.019	0.750	1.10	3	1:148	19.40	YES	Assume maximum value is not an outlier	19.73
0	Lead	mg/kg		1.437751	1.330414	1.3138672	1.361	0.067	1:148	1.10	3	1:148	27.40	YES	Assume maximum value is not an outlier	27.41
0	Mercury	mg/kg		0.230449	0.176091	0.1139434	0.173	0.058	0.977	1.10	3	1:148	1.70	YES	Assume maximum value is not an outlier	1.74
0	Nickel	mg/kg		1.367356	1.363612	1.3710679	1.367	0.004	0.999	1.10	3	1:148	23.50	YES	Assume maximum value is not an outlier	23.53
0	Selenium	mg/kg		1.543	0.000	#DIV/0!	1.10	3	1:148	34.90	#DIV/0!	#DIV/0!				
0	Copper	mg/kg		1.372912	1.363612	1.3579348	1.365	0.008	1.070	1.10	3	1:148	23.60	YES	Assume maximum value is not an outlier	23.63
0	Boron	mg/kg		2.113609	2.113609	2.1136092	2.114	0.000	0.000	1.10	3	1:148	129.90	YES	Assume maximum value is not an outlier	129.90
0	Zinc	mg/kg		1.789581	1.820858	1.8494194	1.820	0.030	0.985	1.10	3	1:148	70.70	YES	Assume maximum value is not an outlier	71.50

Mean Value Test

Key:	
	exceeds screen and is potential outlier
	Does not exceed screen but may be outlier
	Exceeds screen but is not an outlier

To enter results into this table, click on column G and click the Insert Columns button, entering the number of columns needed. Then either type in the results, or paste them in. DO NOT try the 'Insert Copied Cells' option, as this loses the formatting lines.

232005
Bulk Fill
Mapvern/Grimethorpe
Former Foundry off Haugh Lane, Wombwell

CAS REG No	Determinand	Units	*Screening Value	*Source of screening value	Sample 11	Sample 12	Sample 13										LEVEL 1 CHECK				
	Trial pit / borehole ref				N/A	N/A	N/A														
	Depth				N/A	N/A	N/A														
	Benzo (a) pyrene	mg/kg	0.3	BSV Version 6 December 2005	0.10	0.10	0.10														
	benz (a) anthracene	mg/kg	9.4	BSV Version 6 December 2005	0.10	0.10	0.10														
	benz (b) fluoranthene	mg/kg	3.8	BSV Version 6 December 2005	0.10	0.10	0.10														
	benz (k) fluoranthene	mg/kg	88	BSV Version 6 December 2005	0.10	0.10	0.10														
	chrysene	mg/kg	850	BSV Version 6 December 2005	0.10	0.10	0.10														
	dibenz (a,h) anthracene	mg/kg	0.92	BSV Version 6 December 2005	0.10	0.10	0.10														
	indeno (1,2,3-c,d) pyrene	mg/kg	58	BSV Version 6 December 2005	0.10	0.10	0.10														
	Naphthalene	mg/kg	-	Draft SGV	3.50	4.90	4.80														
	Acenaphene	mg/kg	330	BSV Version 6 December 2005	0.10	0.10	0.10														
	Fluorene	mg/kg	210	BSV Version 6 December 2005	0.10	0.10	0.10														
	Anthracene	mg/kg	2000	BSV Version 6 December 2005	0.10	0.10	0.10														
	Flouranthene	mg/kg	310	BSV Version 6 December 2005	0.20	0.10	0.10														
	Pyrene	mg/kg	240	BSV Version 6 December 2005	0.10	0.10	0.20														

Maximum Value Test

232095
Bulk Fill
Manvers/Grimethorpe
Former Foundry off Hough Lane, Wombwell

Log 10 concentrations

Key	
#N/A	may be an outlier

Insert extra columns using the button as with the Mean Value sheet. Then copy across the formulas from column E.

CAS REG	Determinand	Units		Sample Ref	Sample 11	Sample 12	Sample 13	LEVEL 1 TEST											
				trial pit / borehole ref	N/A	N/A	N/A	Mean of Log10 data values	Unbiased standard deviation of log 10 values	Outlier Test	Critical value required	n	Critical value Test	Test Value	Is maximum value less than the selected critical Value ?			Approx Value of Outlier @ Test
				Depth	N/A	N/A	N/A												
0	Benzo (a)pyrene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	benz (a) anthracene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	benz (b) fluoranthene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	*benz (k) fluoranthene*	*mg/kg*						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	chrysene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	dibenz (a,h) anthracene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	*Indeno (1,2,3,c,d) pyrene*	*mg/kg*						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	Naphthalene	mg/kg			0.544068	0.6901961	0.6812412	-0.639	0.082	0.631	1.10	3	1.148	4.90	YES	Assume maximum value is not an outlier		5.40
0	Acenapthene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	Fluorene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	Anthracene	mg/kg						-1.000	0.000	#DIV/0!	1.10	3	1.148	0.10	#DIV/0!	#DIV/0!		0.10
0	Flouranthene	mg/kg			-0.69897	-1	-0.69897	-0.799	0.174	0.577	1.10	3	1.148	0.20	YES	Assume maximum value is not an outlier		0.25
0	Pyrene	mg/kg			-1	-1		-0.900	0.174	1.155	1.10	3	1.148	0.20	Maximum value may be an outlier			0.20

Mean Value Test

Key:	
	exceeds screen and is potential outlier
	Does not exceed screen but may be outlier
	Exceeds screen but is not an outlier

To enter results into this table, click on column G and click the 'Insert Columns' button, entering the number of columns needed. Then either type in the results, or paste them in. DO NOT try the 'Insert Copied Cells' option, as this loses the formating links.

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CAS REG No	Determinand	Units	*Screening Value	*Source of screening value	Sample Ref	SP01	SP02	SP03	LEVEL 1 CHECK											
					trial pit / borehole ref	N/A	N/A	N/A	No of samples in the average	Degree of freedom	Arithmetic Mean	Standard deviation	Coefficient of variation	Student's t-value	Confidence limit	Mean value	Upper bound (95% confidence limit)	Max value	Check	Source for SGV
					Depth	N A	N A	N A												
	Arsenic	mg/kg	20	SGV		9.90	8.90	10.00	3	2	9.60	0.61	0.04	95	2.920	1.107	10.61	20	SGV	
	Cadmium	mg/kg	2	SGV		0.20	0.20	0.20	3	2	0.20	0.00	0.00	95	2.920	1.000	0.20	2	SGV	
	Chromium	mg/kg	130	SGV		17.60	19.50	18.40	3	2	18.50	0.95	0.05	95	2.920	1.087	20.11	130	SGV	
	Lead	mg/kg	450	SGV		24.00	21.50	23.30	3	2	22.93	1.29	0.06	95	2.920	1.096	25.08	450	SGV	
	Mercury	mg/kg	8	SGV		0.10	0.10	0.10	3	2	0.10	0.00	0.00	95	2.920	1.000	0.10	8	SGV	
	Nickel	mg/kg	50	SGV		24.40	26.90	24.60	3	2	25.30	1.39	0.05	95	2.920	1.093	27.64	50	SGV	
	Selenium	mg/kg	35	SGV		1.00	1.00	1.00	3	2	1.00	0.00	0.00	95	2.920	1.000	1.00	35	SGV	
	Copper	mg/kg	8000	BRSV Version 6 Dec 2006		20.00	20.30	19.50	3	2	19.93	0.40	0.01	95	2.920	1.034	20.81	8000	BRSV Version 6 Dec 2006	
	Boron	mg/kg	130	BRSV Version 6 Dec 2006		0.50	0.50	0.50	3	2	0.50	0.00	0.00	95	2.920	1.000	0.50	130	BRSV Version 6 Dec 2006	
	Zinc	mg/kg	8500	BRSV Version 6 Dec 2006		69.90	74.40	73.80	3	2	72.70	2.44	0.02	95	2.920	1.057	76.82	8500	BRSV Version 6 Dec 2006	

CAS REG No	Determinand	Units	*Screening Value	*Source of screening value	Level 1 check: Is mean less than screening value?	Action - note if no further action indicated still do maximum value test
	Arsenic	mg/kg	20	SGV	YES	No action warranted
	Cadmium	mg/kg	2	SGV	YES	No action warranted
	Chromium	mg/kg	130	SGV	YES	No action warranted
	Lead	mg/kg	450	SGV	YES	No action warranted
	Mercury	mg/kg	8	SGV	YES	No action warranted
	Nickel	mg/kg	50	SGV	YES	No action warranted
	Selenium	mg/kg	35	SGV	YES	No action warranted
	Copper	mg/kg	8000	BRSV Version 6 Dec 2006	YES	No action warranted
	Boron	mg/kg	130	BRSV Version 6 Dec 2006	YES	No action warranted
	Zinc	mg/kg	8500	BRSV Version 6 Dec 2006	YES	No action warranted

Maximum Value Test

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Log 10 concentrations

Key

may be an outlier

Insert extra columns using the button as with the Mean Value sheet. Then copy across the formulas from column E.

CAS REG	Determinand	Units		Sample Ref	SP01	SP02	SP03	LEVEL 1 TEST										
				trial pit / borehole ref	N/A	N/A	N/A	Mean of Log10 values	Unbiased standard deviation of log10 values	Outlier?	5% Critical value	Number of values	Critical value	Max Value	Is maximum value less than calculated critical value?		Approx Value of Outlier @ 1st Test
				Depth	N/A	N/A	N/A											
0	Arsenic	mg/kg			0.9956	0.9494	1	0.982	0.028	0.653	2.410	3	1.148	10.00	YES	Assume maximum value is not an outlier		10.32
0	Cadmium	mg/kg			-0.699	-0.699	-0.699	-0.699	0.000	0.000	2.410	3	1.148	0.20	YES	Assume maximum value is not an outlier		0.20
0	Chromium	mg/kg			1.2455	1.29	1.2648	1.267	0.022	1.041	2.410	3	1.148	19.50	YES	Assume maximum value is not an outlier		19.61
0	Lead	mg/kg			1.3802	1.3324	1.3674	1.360	0.025	0.818	2.410	3	1.148	24.00	YES	Assume maximum value is not an outlier		24.46
0	Mercury	mg/kg						1.000	0.000	#DIV/0!	2.410	3	1.148	0.10		#DIV/0!		0.10
0	Nickel	mg/kg			1.3874	1.4298	1.3909	1.403	0.024	1.115	2.410	3	1.148	26.90	NO	Maximum value may be an outlier		26.90
0	Selenium	mg/kg						0.000	0.000	#DIV/0!	2.410	3	1.148	1.00	#DIV/0!	#DIV/0!		1.00
0	Copper	mg/kg			1.301	1.3075	1.29	1.300	0.009	0.903	2.410	3	1.148	20.30	YES	Assume maximum value is not an outlier		20.40
0	Boron	mg/kg			-0.301	-0.301	-0.301	-0.301	0.000	0.000	2.410	3	1.148	0.50	YES	Assume maximum value is not an outlier		0.50
0	Zinc	mg/kg			1.8445	1.8716	1.8681	1.861	0.015	0.693	2.410	3	1.148	74.40	YES	Assume maximum value is not an outlier		75.58

Mean Value Test

Key:	
	exceeds screen and is potential outlier
	Does not exceed screen but may be outlier
	Exceeds screen but is not an outlier

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CAS REG No	Determinand	Units	*Screening Value	*Source of screening value	Sample Ref	SP01	SP02	SP03	LEVEL 1 CHECK
					trial pit / borehole ref	N/A	N/A	N/A	
					Depth	N/A	N/A	N/A	
	Benzo (a)pyrene	mg/kg	0.73	IHSV Version 6 December 2005					
	benz (a) anthracene	mg/kg	8.4	IHSV Version 6 December 2005					
	benz (b) fluoranthene	mg/kg	8.8	IHSV Version 6 December 2005					
	benz (k) fluoranthene	mg/kg	88	IHSV Version 6 December 2005					
	chrysene	mg/kg	880	IHSV Version 6 December 2005					
	dibenz (a,h) anthracene	mg/kg	0.92	IHSV Version 6 December 2005					
	indeno (1,2,3-c,d) pyrene	mg/kg	7.8	IHSV Version 6 December 2005					
	Naphthalene	mg/kg	-	Draft SGV					
	Acenapthene	mg/kg	330	IHSV Version 6 December 2005					
	Fluorene	mg/kg	250	IHSV Version 6 December 2005					
	Anthracene	mg/kg	2000	IHSV Version 6 December 2005					
	Flouranthene	mg/kg	310	IHSV Version 6 December 2005					
	Pyrene	mg/kg	230	IHSV Version 6 December 2005					

Maximum Value Test

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Former Foundry off Hough Lane, Wombwell

Log 10 concentrations

Key	
	may be an outlier

Insert extra columns using the button as with the Mean Value sheet. Then copy across the formulas from column E.

Sample Ref			SP01	SP02	SP03	LEVEL 1 TEST										
trial pit / borehole ref			N/A	N/A	N/A	Mean of Log10 of values	Unbiased standard deviation of log 10 values	Outlier Test T	95% critical Value for selected n	99% critical value	n	95% critical value Tcrit	Max X Value	Is maximum value less than selected critical value?		Approx Value of Outlier @ T = Tcrit
Depth			N/A	N/A	N/A											
CAS REG	Determinand	Units														
0	Benzo (a)pyrene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	benz (a) anthracene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	benz (b) fluoranthene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	benz (k) fluoranthene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	chrysene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	dibenz (a,h) anthracene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	indeno (1,2,2,c,d) pyrene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Naphthalene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Acenapthene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Fluorene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Anthracene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Flouranthene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10
0	Pyrene	mg/kg				1.000	0.000	#DIV/0!	1.10		3	1.148	0.10	#DIV/0!	#DIV/0!	0.10