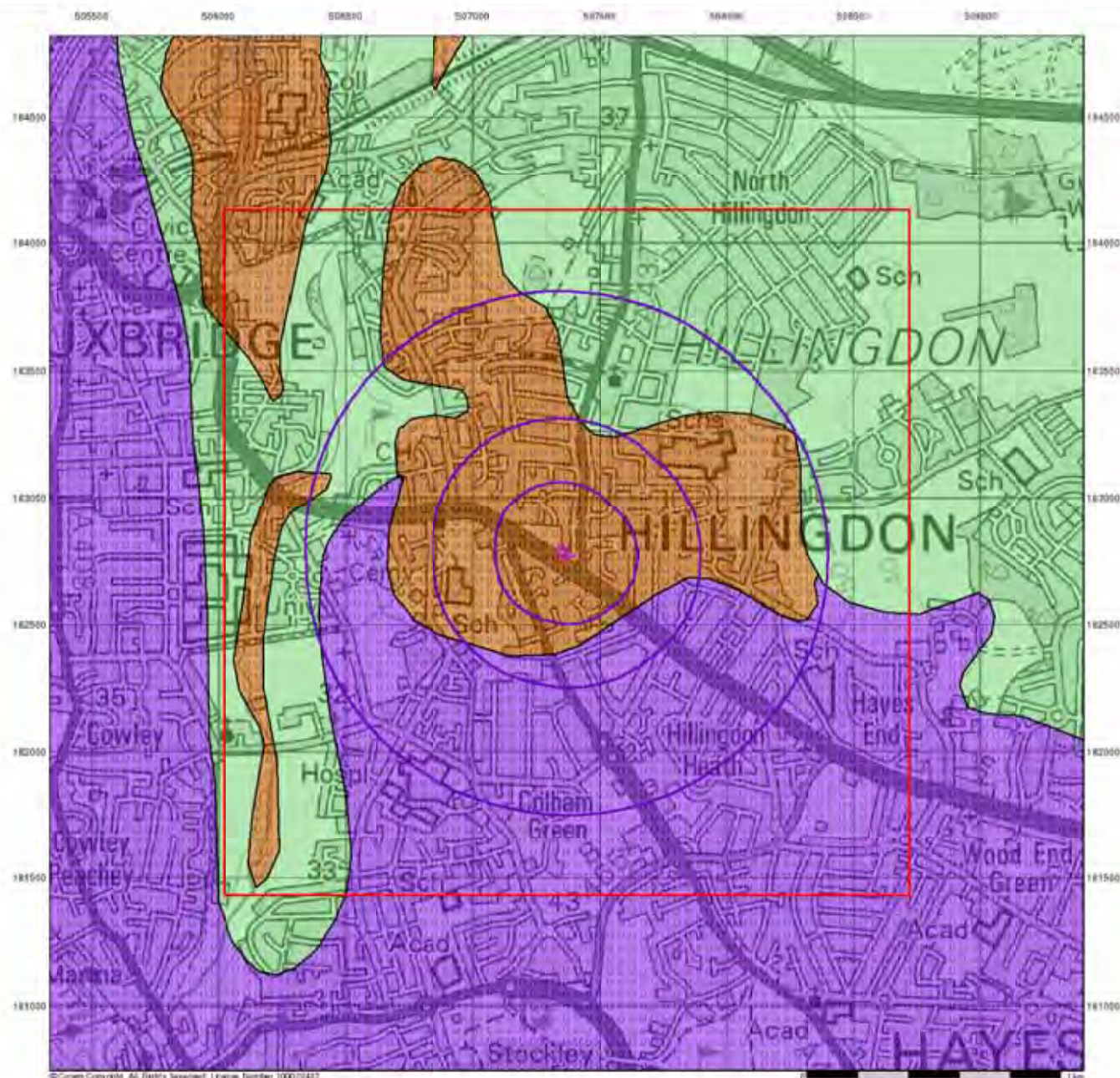


APPENDIX E

Groundwater Vulnerability and Flood Maps



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Groundwater Vulnerability

General

- Gravelled Area
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

Agency and Hydrological

Geological Classes

Major Aquifer
(Highly Permeable)

Minor Aquifer
(Variably Permeable)

Non Aquifer
(Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice A



Order Details

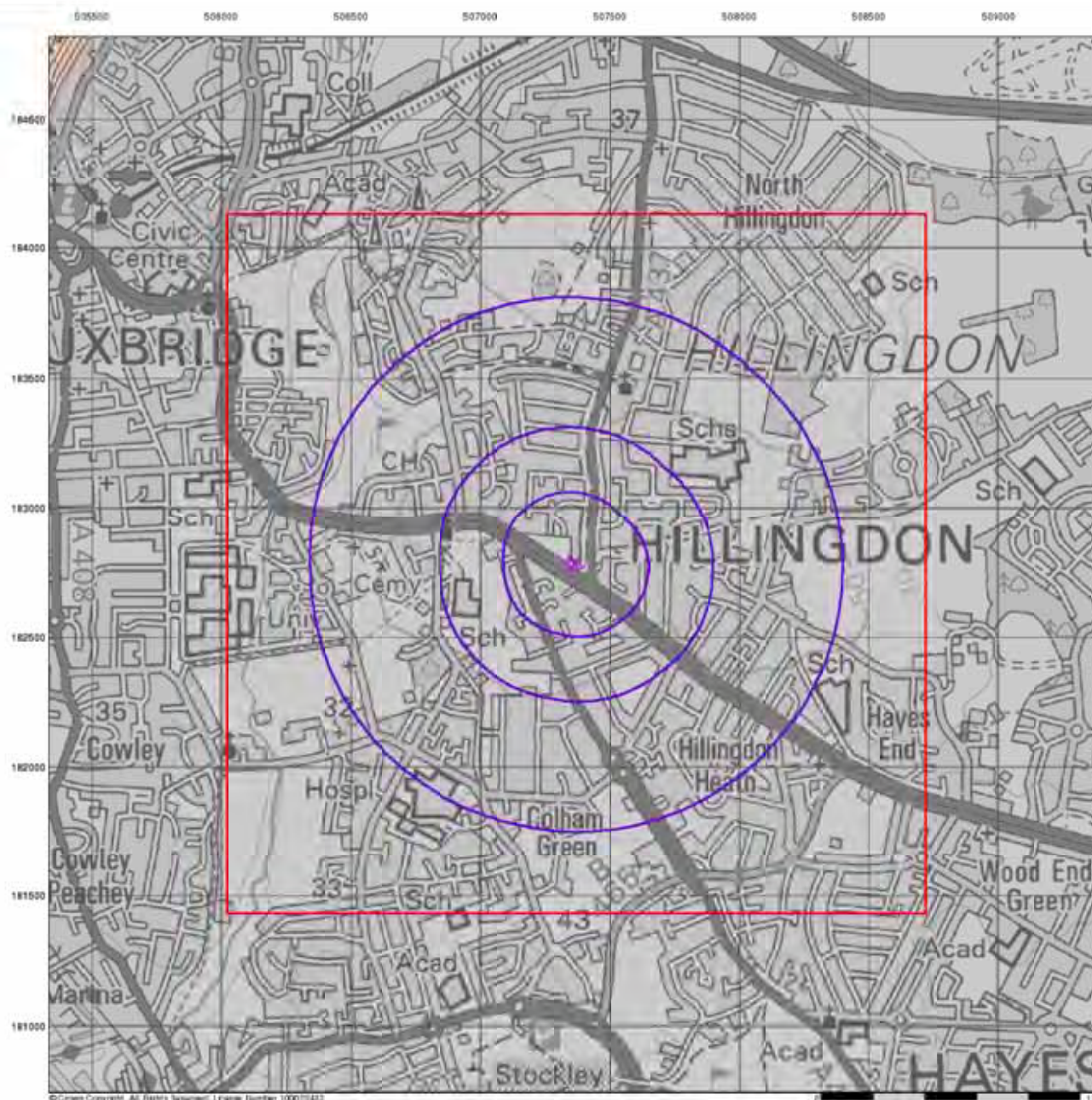
Order Number: 135986925_1_1
 Customer Ref: UK17 2816
 National Grid Reference: 507360, 182780
 Slice: A
 Site Area (Ha): 0.14
 Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

Landmark
 INFORMATION GROUP

Tel: 01895 826100
 Fax: 01895 826101
 Email: info@landmark-ig.co.uk
 Website: www.landmark-ig.co.uk



Bedrock Aquifer Designation

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

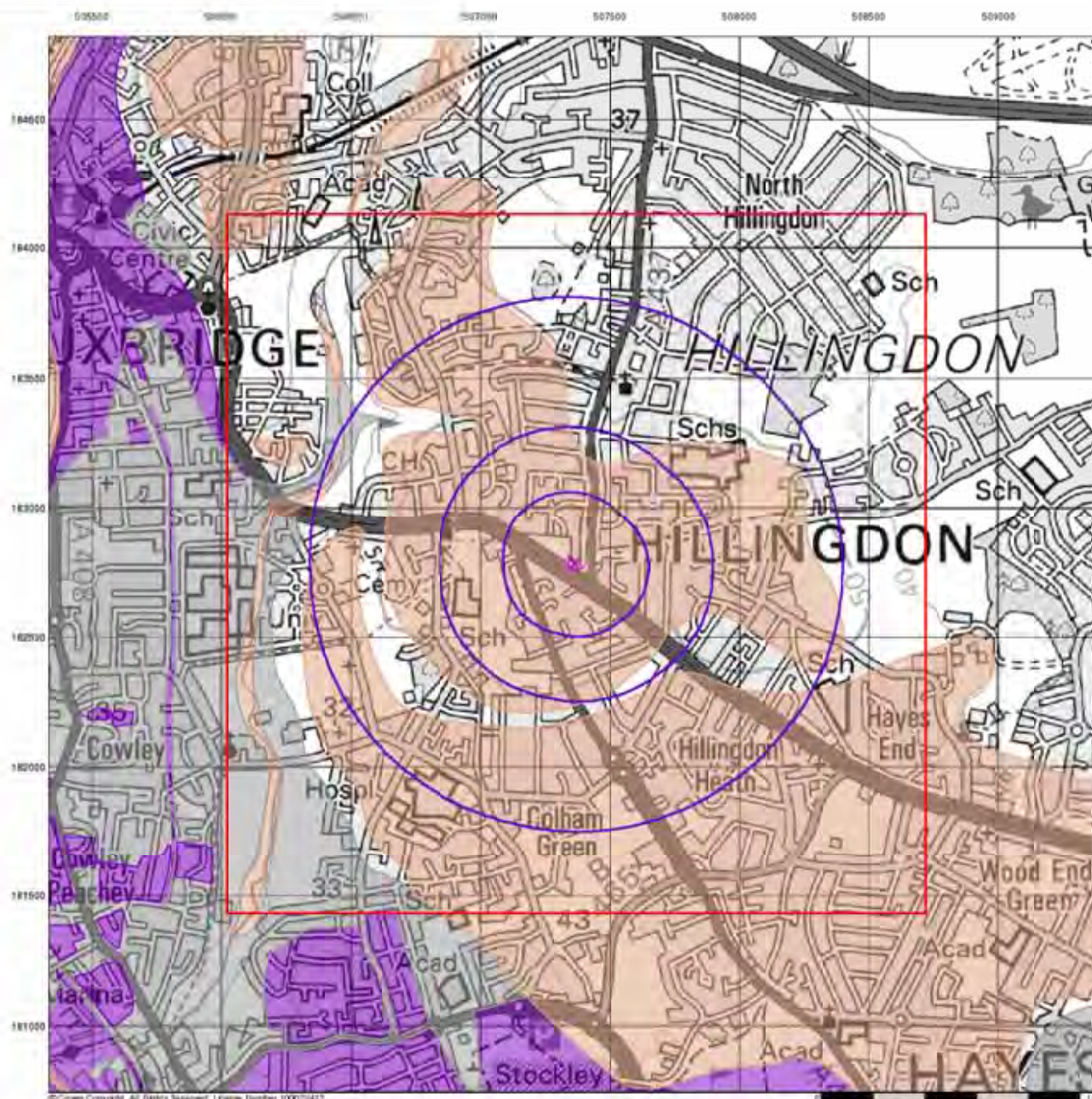
Order Number: 135986925_1_1
 Customer Ref: UK17 2816
 National Grid Reference: 507360, 182780
 Slice: A
 Site Area (Ha): 0.14
 Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

Landmark
 INFORMATION GROUP

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 Fax: 01875 826001
 Email: info@landmark-ig.co.uk



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Superficial Aquifer Designation

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

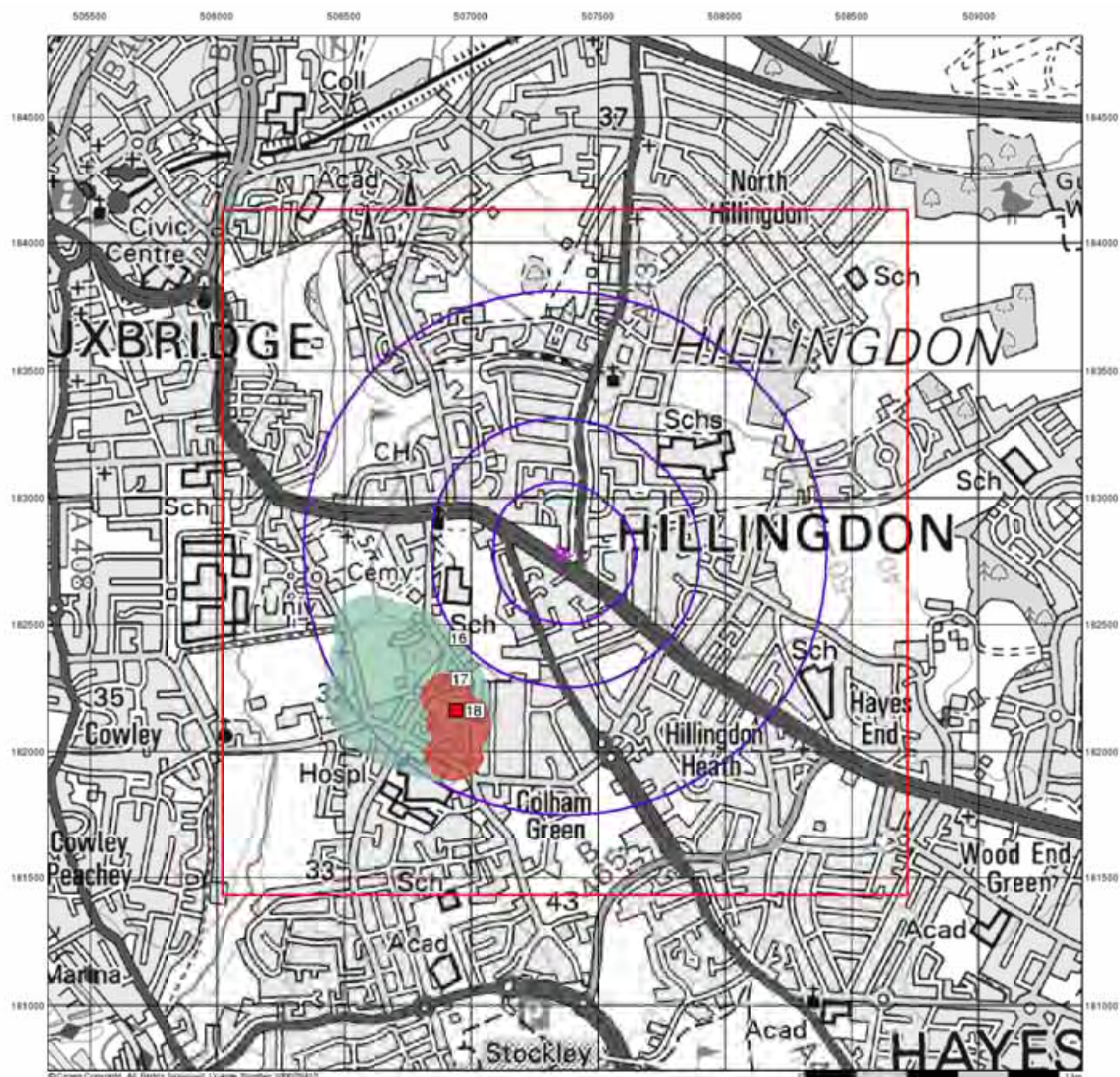
Order Number: 135986925_1_1
 Customer Ref: UK17.2816
 National Grid Reference: 507360, 182780
 Slice: A
 Site Area (Ha): 0.14
 Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

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 INFORMATION GROUP

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Source Protection Zones

General

- Spreading Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Boundary

Site Sensitivity Context Map - Slice A



Order Details

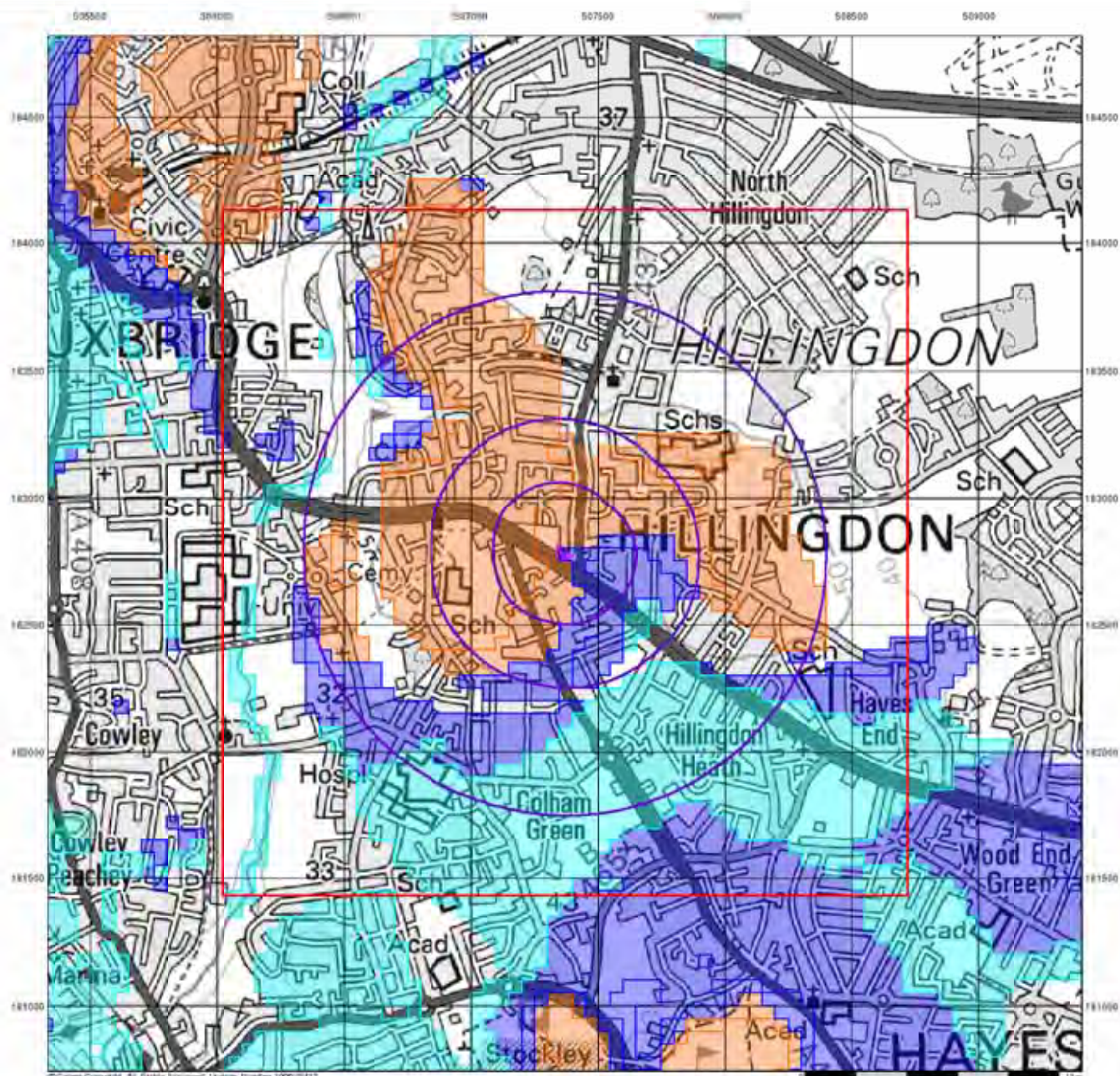
Order Number: 135986925_1_1
 Customer Ref: UK17.2816
 National Grid Reference: 507360, 182780
 Slice: A
 Site Area (Ha): 0.14
 Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

Landmark
 INFORMATION GROUP

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 Email: info@landmark-ig.co.uk
 Website: www.landmark-ig.co.uk



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BGS Flood GFS Data

General

- Specified Site
- Standard Buffer (m)
- Rising Reference Point
- Site

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 135986925_1_1
 Customer Ref: UK17.2816
 National Grid Reference: 507360, 182780
 Slice: A
 Site Area (Ha): 0.14
 Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

Landmark
 INFORMATION GROUP

Tel: 01895 836100
 Fax: 01895 836101
 Email: info@landmark-ig.co.uk
 Website: www.landmark-ig.co.uk



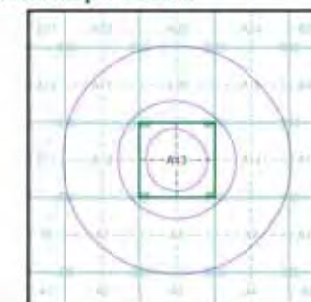
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extraneous Flooding from River/Sea Flow without Defences (Zone 2)
- Flooding from Rivers or Seas without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Slice: A
Site Area (Ha): 0.14
Search Buffer (m): 1000

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

Landmark
Environmental Risk Analysts

Tel: 0844 844 0002
Fax: 0844 844 0001
Email: info@landmark.co.uk

APPENDIX F

A Selection of Historic Maps



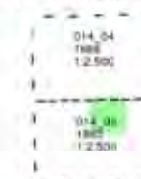
Middlesex

Published 1865 - 1886

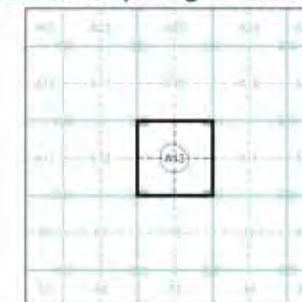
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in hilly areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Slice: A
Site Area (Ha): 0.14
Search Buffer (m): 100

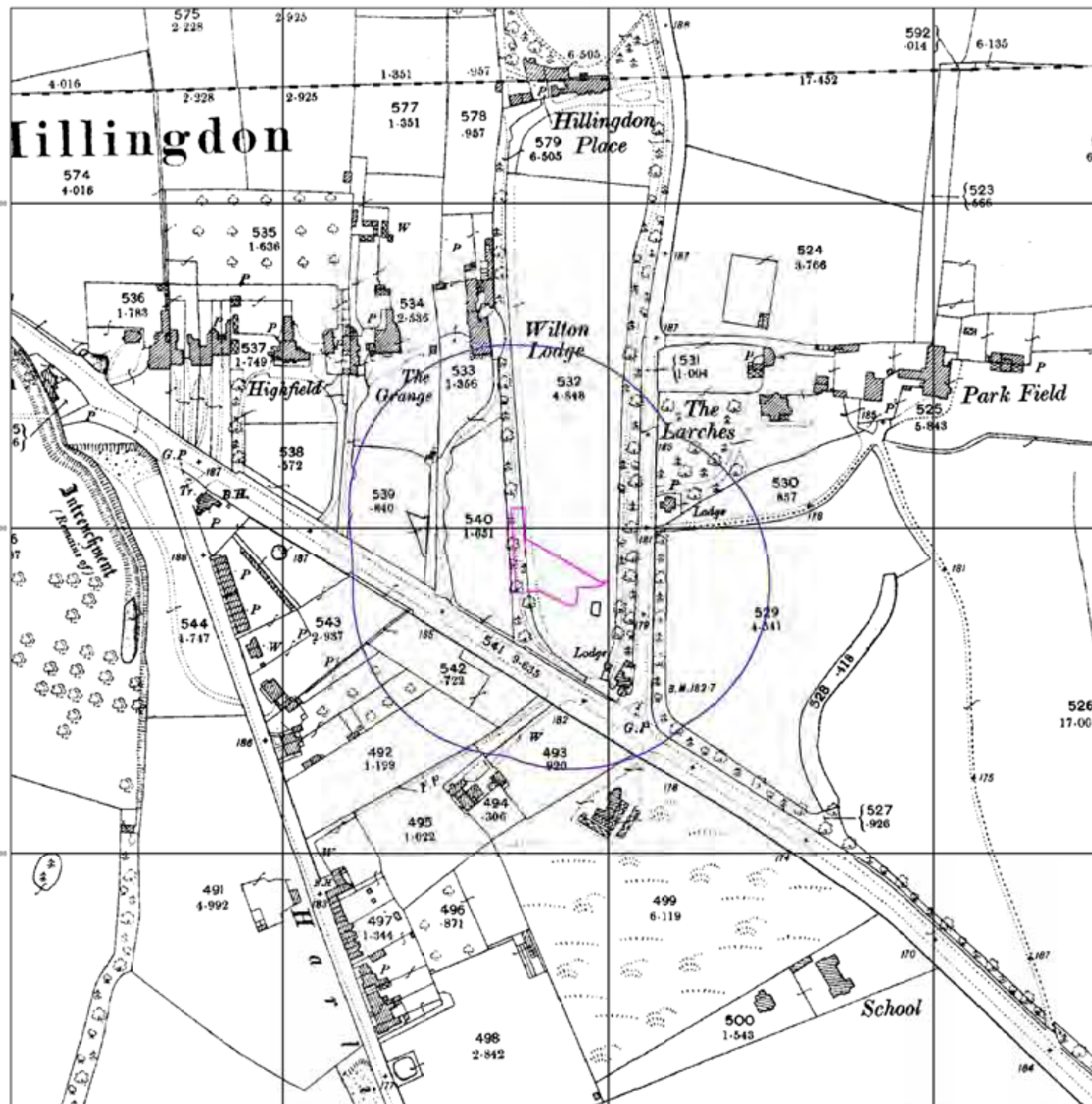
Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB8 0LG

Landmark

Phone: 01844 944 990
Fax: 01844 944 991
Email: info@landmark.co.uk





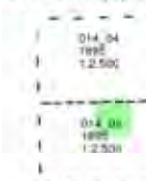
Middlesex

Published 1895

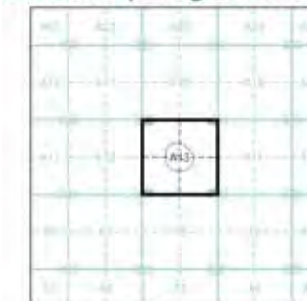
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Site: A
Site Area (Ha): 0.14
Search Buffer (m): 100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB8 0LG

Landmark

File: PMA 004 0002
Date: 04/04/2017
User: www.landmark.co.uk



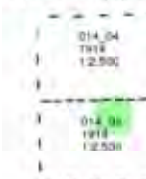
Middlesex

Published 1914

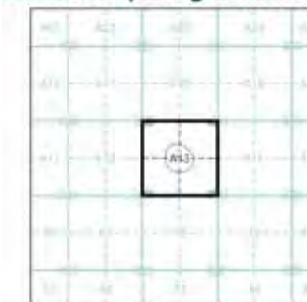
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1929, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in hilly areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Site: A
Site Area (Ha): 0.14
Search Buffer (m): 100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

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File: PMA 044 0001
Page: 0004 044 0001
Date: 15-Aug-2017



Ordnance Survey Plan

Published 1964 - 1965

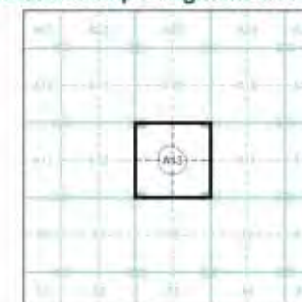
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1935, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

Ordnance Survey	Ordnance Survey
1854	1854
1:250	1:250
Ordnance Survey	Ordnance Survey
1854	1854
1:250	1:250
Ordnance Survey	Ordnance Survey
1854	1854
1:250	1:250

Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Slice: A
Site Area (Ha): 0.14
Search Buffer (m): 100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

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File: PMA 044 0001
Page: 004 0001
Date: 15-Aug-2017



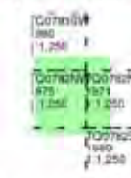
Ordnance Survey Plan

Published 1971 - 1989

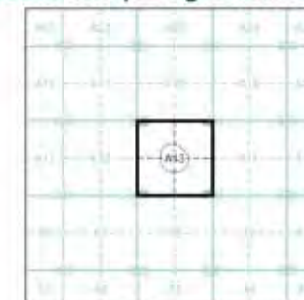
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1935, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in hilly areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Site: A
Site Area (Ha): 0.14
Search Buffer (m): 100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB10 0LG

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File: PMA 004 0002
Page: 004 0001
Date: 15-Aug-2017



Supply of Unpublished Survey Information

Published 1975

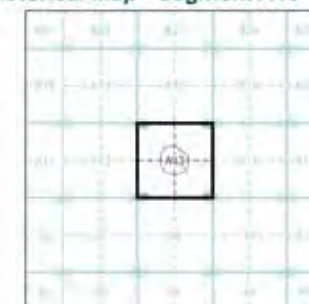
Source map scale - 1:1,250

SUGI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

100703W G076300	1975	1975
1:1,250	1:1,250	1:1,250
100703W G076300	1975	1975
1:1,250	1:1,250	1:1,250
100703W G076300	1975	1975
1:1,250	1:1,250	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 135986925_1_1
Customer Ref: UK17.2816
National Grid Reference: 507360, 182780
Site: A
Site Area (Ha): 0.14
Search Buffer (m): 100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road, Uxbridge, UB8 0LG

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File: PMS4 004 V002
Date: 04/08/17
User: www.landmark.co.uk



Historical Aerial Photography - Segment A13



Order Details

Order Number:	135986925_1_1
Customer Ref:	UK17.2816
National Grid Reference:	507360, 182780
Site:	A
Site Area (Ha):	0.14
Search Buffer (m)	100

Site Details

Crescent Building Supplies, Crescent Parade, Uxbridge Road,
Uxbridge, UB8 3LG

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INFORMATION GROUP

Year	1964-66 (1965)
Page	1044-46 (1045)
ISBN	none assigned (see 1001)

APPENDIX G

Site Specific Borehole Logs



Borehole Log

Borehole No.

WS1

Sheet 1 of 1

Project Name: Crescent Parade, Hillingdon

Project No.
UK17.2816

Co-ords:

Hole Type
WLS

Location: Crescent Parade, Hillingdon

Level:

Scale
1:30

Client: Planning & Consulting Ltd

Dates: 11/09/2017

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.50	ES		0.10			Concrete	1
								Soft, medium brown, sandy, gravelly CLAY	
		0.80 - 1.00	D						2
		1.00	SPT	N=14 (1,0/1,3,4,6)	1.00			Soft, grey, sandy, gravelly CLAY	
		1.60 - 1.80	D						3
		1.80 - 2.00	ES		1.70			Medium-dense, brown, sandy GRAVEL	
		2.00	SPT	N=15 (3,4/4,3,4,4)					4
		2.00 - 2.30	D		2.30			Firm to stiff, reddish-brown, silty CLAY	
		2.50	PP	105.00					5
		2.80	PP	138.00					
		2.80 - 3.00	D						6
		3.00	SPT	N=17 (3,3/4,4,4,5)	3.00			Firm to stiff, grey CLAY	
		3.20	PP	163.00					7
		3.50	PP	113.00					
		3.80	PP	163.00					8
		4.00	SPT	N=15 (2,2/2,4,4,5)	4.00			End of Borehole at 4.00m	

Remarks





Borehole Log

Borehole No.

WS2

Sheet 1 of 1

Project Name: Crescent Parade, Hillingdon

Project No.
UK17.2816

Co-ords:

Hole Type
WLS

Location: Crescent Parade, Hillingdon

Level:

Scale
1:30

Client: Planning & Consulting Ltd

Dates: 11/09/2017

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 - 0.50	ES		0.10			Concrete	1
					0.40			MADE GROUND: Beige-brown, gravelly SAND with small brick fragments	
					0.80			MADE GROUND: Brown, sandy, gravelly CLAY	
		1.00	SPT	N=10 (1,2/3,2,3,2)				Soft-firm, brown-grey, silty, gravelly, sandy CLAY	2
		1.20 - 1.30	D		1.60			Medium-dense, yellowish-brown, sandy GRAVEL	
		2.00	SPT	N=13 (4,4/4,3,3,3)				Firm to stiff, light brown, silty CLAY	
		2.20 - 2.30	D		2.50			Firm to stiff, grey CLAY	3
		2.50	PP	200.00					
		2.80	PP	88.00					
		3.00	SPT	N=17 (2,3/4,4,4,5)	3.00				4
		3.30	PP	65.00					
		3.30 - 3.50	D						
		3.80	PP	105.00					5
		4.00	SPT	N=12 (1,2/2,3,3,4)					
		4.20	PP	175.00					
		4.80	PP	160.00	5.00				6
								End of Borehole at 5.00m	

Remarks





Borehole Log

Borehole No.

WS3

Sheet 1 of 1

Project Name: Crescent Parade, Hillingdon

Project No.
UK17.2816

Co-ords:

Hole Type
WLS

Location: Crescent Parade, Hillingdon

Level:

Scale
1:30

Client: Planning & Consulting Ltd

Dates: 11/09/2017

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 - 0.50	ES		0.15			Concrete	
					0.50			MADE GROUND: Soft, black, slightly gravelly, sandy CLAY with a slight organic odour	
								Soft, grey, sandy, gravelly CLAY with slight organic odour	
		1.00	SPT	N=7 (1,1/1,2,2,2)					1
		1.30 - 1.50	D						
					1.80			Medium-dense, yellow-brown, sandy GRAVEL	
		2.00	SPT	N=15 (2,2/3,4,4,4)	2.00			Firm, brown, silty CLAY	2
		2.40 - 2.50	D		2.50			Firm to stiff, grey CLAY	
		3.00	SPT	N=16 (2,3/3,4,4,5)					3
		3.20	PP	213.00					
		3.50	PP	163.00					
		3.80	PP	163.00					
		4.00	SPT	N=19 (3,3/4,5,5,5)					4
					5.00			End of Borehole at 5.00m	5
									6

Remarks





Borehole Log

Borehole No.

WS4

Sheet 1 of 1

Project Name: Crescent Parade, Hillingdon

Project No.
UK17.2816

Co-ords:

Hole Type
WLS

Location: Crescent Parade, Hillingdon

Level:

Scale
1:30

Client: Planning & Consulting Ltd

Dates: 11/09/2017

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.30	ES		0.10			Concrete	
					0.40			MADE GROUND: Grey, sandy, very clayey GRAVEL	
		0.80 - 1.00	D					Soft, grey, sandy, gravelly CLAY	
		1.00	SPT	N=9 (1,0/1,2,3,3)					
		1.30 - 1.50	D					Medium-dense, yellowish-brown, sandy GRAVEL	
		1.30 - 1.50	ES					Firm, brown, silty CLAY	
		1.80 - 2.00	D		1.90				
		2.00	SPT	N=11 (2,2/2,2,3,4)	2.10				
		2.80 - 3.00	D		2.80			Stiff, grey CLAY	
		3.00	SPT	N=23 (3,3/10,6,3,4)					
		3.20	PP	113.00					
		3.50	PP	100.00					
		3.80	PP	113.00					
		4.00	SPT	N=21 (3,4/5,5,5,6)					
					5.00			End of Borehole at 5.00m	

Remarks



APPENDIX H

Laboratory Results – Environmental



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

EPS Ltd
7B Caxton House
Broad Street
Cambourne
Cambridgeshire
CB23 6JN

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention :	Michael Judson
Date :	9th October, 2017
Your reference :	UK17.2816
Our reference :	Test Report 17/15222 Batch 1
Location :	Crescent Building Supplies Hillingdon
Date samples received :	13th September, 2017
Status :	Final report
Issue :	1.1 v2

Thirteen samples were received for analysis on 13th September, 2017 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Lucas Halliwell
Project Co-ordinator

Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson
JE Job No.: 17/15222

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3	9	13-14	15	19-20	24				Please see attached notes for all abbreviations and acronyms		
Sample ID	WS1	WS1	WS2	WS3	WS3	WS4	WS4						
Depth	0.20-0.50	0.80-1.00	1.20-1.30	0.30-0.50	1.30-1.50	0.20-0.30	1.80-2.00						
COC No / misc													
Containers	V J	T	T	V J	T	V J	T						
Sample Date	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017				LOD/LOR	Units	Method No.
Arsenic ^{#M}	10.5	-	-	11.1	-	-	-				<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	<0.1	-	-	0.1	-	-	-				<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	100.3	-	-	108.6	-	-	-				<0.5	mg/kg	TM30/PM15
Copper ^{#M}	8	-	-	42	-	-	-				<1	mg/kg	TM30/PM15
Lead ^{#M}	17	-	-	248	-	-	-				<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	-	-	<0.1	-	-	-				<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	15.9	-	-	10.8	-	-	-				<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	-	-	2	-	-	-				<1	mg/kg	TM30/PM15
Sulphur as S	-	0.01	0.04	-	0.06	-	0.01				<0.01	%	TM30/PM15
Total Sulphate as SO4 ^{#M}	74	127	214	231	196	-	163				<50	mg/kg	TM50/PM29
Zinc ^{#M}	22	-	-	111	-	-	-				<5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	15.8	-				<0.5	mg/kg	TM30/PM62
Cadmium	-	-	-	-	-	0.6	-				<0.1	mg/kg	TM30/PM62
Chromium	-	-	-	-	-	25.5	-				<0.5	mg/kg	TM30/PM62
Copper	-	-	-	-	-	63	-				<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	511	-				<5	mg/kg	TM30/PM62
Mercury	-	-	-	-	-	<0.1	-				<0.1	mg/kg	TM30/PM62
Nickel	-	-	-	-	-	20.5	-				<0.7	mg/kg	TM30/PM62
Selenium	-	-	-	-	-	<1	-				<1	mg/kg	TM30/PM62
Total Sulphate as SO4	-	-	-	-	-	1197	-				<50	mg/kg	TM50/PM29
Zinc	-	-	-	-	-	489	-				<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene ^{#M}	<0.04	-	-	<0.04	-	0.06	-				<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	-	-	0.16	-	0.23	-				<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	-	-	<0.05	-	<0.05	-				<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	-	-	<0.04	-	0.06	-				<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	<0.03	-	-	0.88	-	0.90	-				<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	-	-	0.25	-	0.17	-				<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	<0.03	-	-	2.39	-	2.01	-				<0.03	mg/kg	TM4/PM8
Pyrene [#]	<0.03	-	-	1.94	-	1.68	-				<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	-	-	1.34	-	1.13	-				<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	<0.02	-	-	1.29	-	0.90	-				<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	<0.07	-	-	2.07	-	1.76	-				<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	-	-	1.10	-	0.96	-				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	<0.04	-	-	0.81	-	0.69	-				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	-	-	0.12	-	0.12	-				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	-	-	0.84	-	0.74	-				<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	-	-	13.2	-	11.4	-				<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	-	-	1.49	-	1.27	-				<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	-	-	0.58	-	0.49	-				<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	93	-	-	92	-	91	-				<0	%	TM4/PM8

Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson
JE Job No.: 17/15222

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3	9	13-14	15	19-20	24				Please see attached notes for all abbreviations and acronyms		
Sample ID	WS1	WS1	WS2	WS3	WS3	WS4	WS4						
Depth	0.20-0.50	0.80-1.00	1.20-1.30	0.30-0.50	1.30-1.50	0.20-0.30	1.80-2.00						
COC No / misc													
Containers	V J	T	T	V J	T	V J	T						
Sample Date	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017	11/09/2017						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017	13/09/2017				LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	-	-	<0.2	-	<0.2	-				<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	-	-	<4	-	<4	-				<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	<7	-	-	<7	-	<7	-				<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	<7	-	-	21	-	20	-				<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	-	-	21	-	20	-				<19	mg/kg	TM5/PM16/PM12/PM15
Aromatics													
>C5-EC7 [#]	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	-	-	<0.1	-	<0.1	-				<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	-	-	<0.2	-	<0.2	-				<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	-	-	<4	-	<4	-				<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	<7	-	-	27	-	21	-				<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	<7	-	-	148	-	96	-				<7	mg/kg	TM5/PM16
Total aromatics C5-35 [#]	<19	-	-	175	-	117	-				<19	mg/kg	TM5/PM16/PM12/PM15
Total aliphatics and aromatics(C5-35)	<38	-	-	196	-	137	-				<38	mg/kg	TM5/PM16/PM12/PM15
MTBE [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
Benzene [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
Toluene [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	-	-	<5	-	<5	-				<5	ug/kg	TM31/PM12
Total Phenols HPLC	<0.15	-	-	<0.15	-	<0.15	-				<0.15	mg/kg	TM26/PM21
Natural Moisture Content	11.6	-	-	12.8	-	-	-				<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	15.3	-				<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	-	-	<0.3	-	<0.3	-				<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) ^{#M}	0.0135	0.0189	0.0247	0.0089	0.0152	-	0.0398				<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	0.0347	-				<0.0015	g/l	TM38/PM60
Chromium III	100.3	-	-	108.6	-	-	-				<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-	25.5	-				<0.5	mg/kg	NONE/NONE
Total Cyanide ^{#M}	<0.5	-	-	0.8	-	<0.5	-				<0.5	mg/kg	TM89/PM45
Organic Matter	1.9	-	-	1.9	-	NDP	-				<0.2	%	TM21/PM24
pH ^{#M}	7.78	6.92	6.81	7.50	7.28	8.93	7.72				<0.01	pH units	TM73/PM11

Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson
JE Job No.: 17/15222

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	10-12	16-18	25-27								Please see attached notes for all abbreviations and acronyms		
Sample ID	WS2	WS3	WS4										
Depth													
COC No / misc													
Containers	V G	V G	V G										
Sample Date	11/09/2017	11/09/2017	11/09/2017										
Sample Type	Ground Water	Ground Water	Ground Water										
Batch Number	1	1	1										
Date of Receipt	13/09/2017	13/09/2017	13/09/2017								LOD/LOR	Units	Method No.
Dissolved Arsenic #	<2.5	-	-								<2.5	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	-	-								<0.5	ug/l	TM30/PM14
Total Dissolved Chromium #	<1.5	-	-								<1.5	ug/l	TM30/PM14
Dissolved Copper #	<7	-	-								<7	ug/l	TM30/PM14
Dissolved Lead #	<5	-	-								<5	ug/l	TM30/PM14
Dissolved Mercury #	<1	-	-								<1	ug/l	TM30/PM14
Dissolved Nickel #	9	-	-								<2	ug/l	TM30/PM14
Dissolved Selenium #	<3	-	-								<3	ug/l	TM30/PM14
Dissolved Zinc #	4	-	-								<3	ug/l	TM30/PM14
PAH MS													
Naphthalene #	4.3	-	-								<0.1	ug/l	TM4/PM30
Acenaphthylene #	0.658	-	-								<0.013	ug/l	TM4/PM30
Acenaphthene #	0.274	-	-								<0.013	ug/l	TM4/PM30
Fluorene #	1.090	-	-								<0.014	ug/l	TM4/PM30
Phenanthrene #	2.865	-	-								<0.011	ug/l	TM4/PM30
Anthracene #	0.776	-	-								<0.013	ug/l	TM4/PM30
Fluoranthene #	1.349	-	-								<0.012	ug/l	TM4/PM30
Pyrene #	0.923	-	-								<0.013	ug/l	TM4/PM30
Benzo(a)anthracene #	0.377	-	-								<0.015	ug/l	TM4/PM30
Chrysene #	0.329	-	-								<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	0.332	-	-								<0.018	ug/l	TM4/PM30
Benzo(a)pyrene #	0.148	-	-								<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene #	0.062	-	-								<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	0.02	-	-								<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene #	0.050	-	-								<0.011	ug/l	TM4/PM30
PAH 16 Total #	13.553	-	-								<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	0.24	-	-								<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	0.09	-	-								<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	96	-	-								<0	%	TM4/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5								<5	ug/l	TM5/PM30
>C12-C16 #	<10	<10	<10								<10	ug/l	TM5/PM30
>C16-C21 #	<10	<10	<10								<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10	<10								<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10	<10	<10								<10	ug/l	TM5/PM30/PM12

Matrix : Solid

[illegible]

Matrix : Liquid

[illegible]

Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/15222	1	WS1	0.20-0.50	2	14/09/2017	General Description (Bulk Analysis)	soil/stones
					14/09/2017	Asbestos Fibres	NAD
					14/09/2017	Asbestos Fibres (2)	NAD
					14/09/2017	Asbestos ACM	NAD
					14/09/2017	Asbestos ACM (2)	NAD
					14/09/2017	Asbestos Type	NAD
					14/09/2017	Asbestos Type (2)	NAD
					14/09/2017	Asbestos Level Screen	NAD
17/15222	1	WS3	0.30-0.50	14	14/09/2017	General Description (Bulk Analysis)	soil/stones
					14/09/2017	Asbestos Fibres	NAD
					14/09/2017	Asbestos Fibres (2)	NAD
					14/09/2017	Asbestos ACM	NAD
					14/09/2017	Asbestos ACM (2)	NAD
					14/09/2017	Asbestos Type	NAD
					14/09/2017	Asbestos Type (2)	NAD
					14/09/2017	Asbestos Level Screen	NAD
17/15222	1	WS4	0.20-0.30	20	14/09/2017	General Description (Bulk Analysis)	Soil/Stone
					14/09/2017	Asbestos Fibres	Fibre Bundles
					14/09/2017	Asbestos ACM	NAD
					14/09/2017	Asbestos Type	Chrysotile
					14/09/2017	Asbestos Level Screen	less than 0.1%
					21/09/2017	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					21/09/2017	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					21/09/2017	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

Matrix : Solid

[illegible]

Client Name: EPS Ltd **Matrix : Solid**

Reference: UK17.2816

Location: Crescent Building Supplies Hillingdon

Contact: Michael Judson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

Client Name: EPS Ltd **Matrix : Liquid**

Reference: UK17.2816

Location: Crescent Building Supplies Hillingdon

Contact: Michael Judson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/15222

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.			AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	Dried and ground solid sample is boiled with dilute hydrochloric acid, the resulting liquor is then analysed.	Yes	Yes	AD	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	Dried and ground solid sample is boiled with dilute hydrochloric acid, the resulting liquor is then analysed.			AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.	Yes			
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM131	Quantification of Asbestos Fibres and ACM, based on HSG248 and SCA method.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code				
NONE	No Method Code	NONE	No Method Code			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Exova Jones Environmental

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Attention :	Michael Judson
Date :	9th October, 2017
Your reference :	UK17.2816
Our reference :	Test Report 17/15222 Batch 1
Location :	Crescent Building Supplies Hillingdon
Date samples received :	13th September, 2017
Status :	Final report
Issue :	1.2 v2

Two samples were received for analysis on 13th September, 2017 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Lucas Halliwell
Project Co-ordinator

Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson
JE Job No.: 17/15222

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	7-8	22-23									Please see attached notes for all abbreviations and acronyms		
Sample ID	WS2	WS4											
Depth	0.30-0.50	1.30-1.50											
COC No / misc													
Containers	V J	V J											
Sample Date	11/09/2017	11/09/2017											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	13/09/2017	13/09/2017									LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10	0.3	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>C12-C16 ^{#M}	<4	<4									<4	mg/kg	TM5/PM16
>C16-C21 ^{#M}	14	<7									<7	mg/kg	TM5/PM16
>C21-C35 ^{#M}	36	<7									<7	mg/kg	TM5/PM16
Total aliphatics C5-35	50	<19									<19	mg/kg	TM5/PM16/PM12/PM10
Aromatics													
>C5-EC7 [#]	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	<4	<4									<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	19	<7									<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	109	<7									<7	mg/kg	TM5/PM16
Total aromatics C5-35 [#]	128	<19									<19	mg/kg	TM5/PM16/PM12/PM10
Total aliphatics and aromatics(C5-35)	178	<38									<38	mg/kg	TM5/PM16/PM12/PM10
MTBE [#]	<5	<5									<5	ug/kg	TM31/PM12
Benzene [#]	<5	<5									<5	ug/kg	TM31/PM12
Toluene [#]	<5	<5									<5	ug/kg	TM31/PM12
Ethylbenzene [#]	<5	<5									<5	ug/kg	TM31/PM12
m/p-Xylene [#]	<5	<5									<5	ug/kg	TM31/PM12
o-Xylene [#]	<5	<5									<5	ug/kg	TM31/PM12
PCB 28 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 52 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 101 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 118 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 138 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 153 [#]	<5	<5									<5	ug/kg	TM17/PM8
PCB 180 [#]	<5	<5									<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35	<35									<35	ug/kg	TM17/PM8
Natural Moisture Content	25.4	11.6									<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3									<0.3	mg/kg	TM38/PM20
Chromium III	23.1	22.7									<0.5	mg/kg	NONE/NONE
Total Organic Carbon [#]	NDP	NDP									<0.02	%	TM21/PM24
Total Organic Carbon	1.92	0.91									<0.02	%	TM21/PM89

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	17.6					
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	85.1					
Particle Size <4mm =	>95%							
JEFL Job No	17/15222		Landfill Waste Acceptance Criteria Limits					
Sample No	8							
Client Sample No	WS2							
Depth/Other	0.30-0.50							
Sample Date	11/09/2017							
Batch No	1							
Solid Waste Analysis			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill			
Total Organic Carbon (%)	1.92					3	5	6
Loss on Ignition (%)	5.3					-	-	10
Sum of BTEX (mg/kg)	<0.025					6	-	-
Sum of 7 PCBs (mg/kg)	<0.035					1	-	-
Mineral Oil (mg/kg)	50					500	-	-
PAH Sum of 17(mg/kg)	43.80					100	-	-
pH (pH Units)	8.52					-	>6	-
ANC to pH 7 (mol/kg)	-					-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	-					-	to be evaluated	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg					
	C ₁₀	A ₁₀						
	mg/l	mg/kg						
Arsenic	<0.0025	<0.025	0.5	2	25			
Barium	0.010	0.10	20	100	300			
Cadmium	<0.0005	<0.005	0.04	1	5			
Chromium	0.0030	0.030	0.5	10	70			
Copper	0.012	0.12	2	50	100			
Mercury	<0.001	<0.01	0.01	0.2	2			
Molybdenum	0.006	0.06	0.5	10	30			
Nickel	<0.002	<0.02	0.4	10	40			
Lead	<0.005	<0.05	0.5	10	50			
Antimony	0.002	<0.02	0.06	0.7	5			
Selenium	<0.003	<0.03	0.1	0.5	7			
Zinc	0.008	0.08	4	50	200			
Chloride	3.2	32	800	15000	25000			
Fluoride	1.0	10	10	150	500			
Sulphate as SO4	94.90	948.8	1000	20000	50000			
Total Dissolved Solids	268	2680	4000	60000	100000			
Phenol	<0.01	<0.1	1	-	-			
Dissolved Organic Carbon	13	130	500	800	1000			

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	14.9
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	87.1
Particle Size <4mm =	>95%		
JEFL Job No	17/15222	Landfill Waste Acceptance Criteria Limits	
Sample No	23		
Client Sample No	WS4		
Depth/Other	1.30-1.50		
Sample Date	11/09/2017		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.91	3	5
Loss on Ignition (%)	2.5	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg)	<30	500	-
PAH Sum of 17(mg/kg)	<0.64	100	-
pH (pH Units)	7.48	-	>6
ANC to pH 7 (mol/kg)	-	-	to be evaluated
ANC to pH 4 (mol/kg)	-	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.004	0.04	20
Cadmium	<0.0005	<0.005	0.04
Chromium	0.0018	0.018	0.5
Copper	<0.007	<0.07	2
Mercury	<0.001	<0.01	0.01
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	0.4
Lead	<0.005	<0.05	0.5
Antimony	<0.002	<0.02	0.06
Selenium	<0.003	<0.03	0.1
Zinc	0.005	0.05	4
Chloride	1.3	13	800
Fluoride	<0.3	<3	10
Sulphate as SO ₄	1.55	15.5	1000
Total Dissolved Solids	160	1601	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	9	90	500

Matrix : Solid

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Client Name: EPS Ltd
Reference: UK17.2816
Location: Crescent Building Supplies Hillingdon
Contact: Michael Judson

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
17/15222	1	WS2	0.30-0.50	8	14/09/2017	General Description (Bulk Analysis)	soil/stones
					14/09/2017	Asbestos Fibres	Fibre Bundles
					14/09/2017	Asbestos ACM	NAD
					14/09/2017	Asbestos Type	Chrysotile
					14/09/2017	Asbestos Level Screen	less than 0.1%
					21/09/2017	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					21/09/2017	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					21/09/2017	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
17/15222	1	WS4	1.30-1.50	23	14/09/2017	General Description (Bulk Analysis)	Soil/Stone
					14/09/2017	Asbestos Fibres	Fibre Bundles
					14/09/2017	Asbestos ACM	NAD
					14/09/2017	Asbestos Type	Chrysotile
					14/09/2017	Asbestos Level Screen	less than 0.1%
					21/09/2017	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					21/09/2017	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					21/09/2017	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					21/09/2017	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

Matrix : Solid

9 of 18

Matrix : Solid

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/15222

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.			AD	Yes
TM22	Modified USEPA 160.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 17/15222

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM17	Modified method EN12457-2 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	Dried and ground solid sample is boiled with dilute hydrochloric acid, the resulting liquor is then analysed.	Yes	Yes	AD	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	Dried and ground solid sample is boiled with dilute hydrochloric acid, the resulting liquor is then analysed.			AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.	Yes			
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO ₂ and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 17/15222

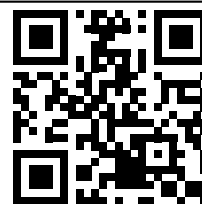
Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM131	Quantification of Asbestos Fibres and ACM, based on HSG248 and SCA method.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code				
NONE	No Method Code	NONE	No Method Code			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	

APPENDIX I

Waste Classification Report



Waste Classification Report



T23VN-HJW4H-6JLYX

Job name

Crescent Parade, Hillingdon

Description/Comments

Project

UK17.2816

Site

Waste Stream Template

EPS Waste Stream

Classified by

Name:
Michael Judson
Date:
20/10/2017 10:15:50 UTC
Telephone:
01954 710666

Company:
EPS
Unit 7B, Caxton House
Broad Street, Great Cambourne
Cambridge
CB23 6JN

Report

Created by: Michael Judson
Created date: 20/10/2017 10:15 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS1	0.20-0.50	Non Hazardous		2
2	WS3	0.30-0.50	Non Hazardous		4
3	WS4	0.20-0.30	Non Hazardous		7
4	WS2	0.30-0.50	Non Hazardous		10
5	WS4[1]	1.30-1.50	Non Hazardous		13

Appendices

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Appendix B: Rationale for selection of metal species	17
Appendix C: Version	17



Classification of sample: WS1

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS1	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
11.6%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 11.6% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2	10.5 mg/kg	1.534	14.432	mg/kg	0.00144 %	✓	
2	cadmium { cadmium compounds, with the exception of cadmium sulphoselenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex }	048-001-00-5			<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide }	215-160-9	1308-38-9		100.3 mg/kg	1.462	131.357	mg/kg	0.0131 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	8 mg/kg	1.126	8.071	mg/kg	0.000807 %	✓	
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			17 mg/kg		15.233	mg/kg	0.00152 %	✓	
6	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6	<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7	nickel { nickel }	028-002-00-7	231-111-4	7440-02-0	15.9 mg/kg		14.247	mg/kg	0.00142 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
9	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	22 mg/kg	1.245	24.537	mg/kg	0.00245 %	✓	
10	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
11	acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
12	acenaphthene	201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
13	fluorene	201-695-5	86-73-7		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
14	phenanthrene	201-581-5	85-01-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
15	anthracene	204-371-1	120-12-7		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
16	fluoranthene	205-912-4	206-44-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	pyrene	204-927-3	129-00-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	benzo[a]anthracene	601-033-00-9	200-280-6		<0.06 mg/kg		<0.06 mg/kg	<0.000006 %			<LOD
19	chrysene	601-048-00-0	205-923-4		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
21	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
23	benzo[ghi]perylene	205-883-8	191-24-2		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
24	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
25	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
26	TPH (C6 to C40) petroleum group		TPH		<38 mg/kg		<38 mg/kg	<0.0038 %			<LOD
27	benzene	601-020-00-8	200-753-7		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
28	toluene	601-021-00-3	203-625-9		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
29	ethylbenzene	601-023-00-4	202-849-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
30	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
31	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<0.3 mg/kg	1.923	<0.577 mg/kg	<0.0000577 %			<LOD
32	pH		PH		7.78 pH		7.78 pH	7.78 pH			
Total:									0.025 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification



Classification of sample: WS3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30-0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
12.8%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12.8% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2	11.1 mg/kg	1.534	15.094	mg/kg	0.00151 %	✓	
2	cadmium { cadmium compounds, with the exception of cadmium sulphoselenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex }	048-001-00-5			0.1 mg/kg		0.0887	mg/kg	0.00000887 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide }	215-160-9	1308-38-9		108.6 mg/kg	1.462	140.714	mg/kg	0.0141 %	✓	
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	42 mg/kg	1.126	41.921	mg/kg	0.00419 %	✓	
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			248 mg/kg		219.858	mg/kg	0.022 %	✓	
6	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6	<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
7	nickel { nickel }	028-002-00-7	231-111-4	7440-02-0	10.8 mg/kg		9.574	mg/kg	0.000957 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			2 mg/kg	2.554	4.528	mg/kg	0.000453 %	✓	
9	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	111 mg/kg	1.245	122.485	mg/kg	0.0122 %	✓	
10	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
11	acenaphthylene		205-917-1	208-96-8	0.16 mg/kg		0.142	mg/kg	0.0000142 %	✓	



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
12	acenaphthene	201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
13	fluorene	201-695-5	86-73-7		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
14	phenanthrene	201-581-5	85-01-8		0.88 mg/kg		0.78 mg/kg	0.000078 %	✓		
15	anthracene	204-371-1	120-12-7		0.25 mg/kg		0.222 mg/kg	0.0000222 %	✓		
16	fluoranthene	205-912-4	206-44-0		2.39 mg/kg		2.119 mg/kg	0.000212 %	✓		
17	pyrene	204-927-3	129-00-0		1.94 mg/kg		1.72 mg/kg	0.000172 %	✓		
18	benzo[a]anthracene	601-033-00-9	200-280-6		1.34 mg/kg		1.188 mg/kg	0.000119 %	✓		
19	chrysene	601-048-00-0	205-923-4		1.29 mg/kg		1.144 mg/kg	0.000114 %	✓		
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.1 mg/kg		0.975 mg/kg	0.0000975 %	✓		
21	indeno[123-cd]pyrene	205-893-2	193-39-5		0.81 mg/kg		0.718 mg/kg	0.0000718 %	✓		
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.12 mg/kg		0.106 mg/kg	0.0000106 %	✓		
23	benzo[ghi]perylene	205-883-8	191-24-2		0.84 mg/kg		0.745 mg/kg	0.0000745 %	✓		
24	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.49 mg/kg		1.321 mg/kg	0.000132 %	✓		
25	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.58 mg/kg		0.514 mg/kg	0.0000514 %	✓		
26	TPH (C6 to C40) petroleum group		TPH		196 mg/kg		173.759 mg/kg	0.0174 %	✓		
27	benzene	601-020-00-8	200-753-7		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
28	toluene	601-021-00-3	203-625-9		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
29	ethylbenzene	601-023-00-4	202-849-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
30	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
31	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<0.3 mg/kg	1.923	<0.577 mg/kg	<0.0000577 %			<LOD
32	pH		PH		7.5 pH		7.5 pH	7.5 pH			
Total:									0.0741 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this Hazardous property to non hazardous because WM3 states that the Hazard Statement HP 3 (first and fourth indents) can be discounted as this is a solid waste without a free draining liquid phase

Classification of sample: WS4

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS4	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.20-0.30 m		
Moisture content:		
15.3%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 15.3% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic pentoxide }				15.8 mg/kg	1.534	21.019 mg/kg	0.0021 %	✓		
	033-004-00-6	215-116-9	1303-28-2								
2	cadmium { cadmium compounds, with the exception of cadmium sulposelenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex }			1	0.6 mg/kg		0.52 mg/kg	0.000052 %	✓		
	048-001-00-5										
3	chromium in chromium(III) compounds { chromium(III) oxide }				25.5 mg/kg	1.462	32.324 mg/kg	0.00323 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				63 mg/kg	1.126	61.519 mg/kg	0.00615 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	511 mg/kg		443.192 mg/kg	0.0443 %	✓		
	082-001-00-6										
6	mercury { mercury }				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	080-001-00-0	231-106-7	7439-97-6								
7	nickel { nickel }				20.5 mg/kg		17.78 mg/kg	0.00178 %	✓		
	028-002-00-7	231-111-4	7440-02-0								
8	selenium { selenium compounds with the exception of cadmium sulposelenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc oxide }				489 mg/kg	1.245	527.897 mg/kg	0.0528 %	✓		
	030-013-00-7	215-222-5	1314-13-2								
10	naphthalene				0.06 mg/kg		0.052 mg/kg	0.0000052 %	✓		
	601-052-00-2	202-049-5	91-20-3								
11	acenaphthylene				0.23 mg/kg		0.199 mg/kg	0.0000199 %	✓		
		205-917-1	208-96-8								



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
12	acenaphthene	201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
13	fluorene	201-695-5	86-73-7		0.06	mg/kg		0.052	mg/kg	0.0000052 %	✓	
14	phenanthrene	201-581-5	85-01-8		0.9	mg/kg		0.781	mg/kg	0.0000781 %	✓	
15	anthracene	204-371-1	120-12-7		0.17	mg/kg		0.147	mg/kg	0.0000147 %	✓	
16	fluoranthene	205-912-4	206-44-0		2.01	mg/kg		1.743	mg/kg	0.000174 %	✓	
17	pyrene	204-927-3	129-00-0		1.68	mg/kg		1.457	mg/kg	0.000146 %	✓	
18	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	1.13	mg/kg		0.98	mg/kg	0.000098 %	✓	
19	chrysene	601-048-00-0	205-923-4	218-01-9	0.9	mg/kg		0.781	mg/kg	0.0000781 %	✓	
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.96	mg/kg		0.833	mg/kg	0.0000833 %	✓	
21	indeno[123-cd]pyrene	205-893-2	193-39-5		0.69	mg/kg		0.598	mg/kg	0.0000598 %	✓	
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.12	mg/kg		0.104	mg/kg	0.0000104 %	✓	
23	benzo[ghi]perylene	205-883-8	191-24-2		0.74	mg/kg		0.642	mg/kg	0.0000642 %	✓	
24	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	1.27	mg/kg		1.101	mg/kg	0.00011 %	✓	
25	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.49	mg/kg		0.425	mg/kg	0.0000425 %	✓	
26	TPH (C6 to C40) petroleum group		TPH		137	mg/kg		118.82	mg/kg	0.0119 %	✓	
27	benzene	601-020-00-8	200-753-7	71-43-2	<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
28	toluene	601-021-00-3	203-625-9	108-88-3	<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
29	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
30	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
31	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.3	mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD
32	pH		PH		8.93	pH		8.93	pH	8.93 pH		
Total:										0.124 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this Hazardous property to non hazardous because WM3 states that the Hazard Statement HP 3 (first and fourth indents) can be discounted as this is a solid waste without a free draining liquid phase

Classification of sample: WS2

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	WS2	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.30-0.50 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content:	25.4%			
	(dry weight correction)			

Hazard properties

None identified

Determinands

Moisture content: 25.4% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2	27.1 mg/kg	1.534	33.148 mg/kg	0.00331 %	✓		
2	cadmium { cadmium compounds, with the exception of cadmium sulphoselenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex }	048-001-00-5			0.4 mg/kg		0.319 mg/kg	0.0000319 %	✓		
3	chromium in chromium(III) compounds { chromium(III) oxide }	215-160-9	1308-38-9		23.1 mg/kg	1.462	26.923 mg/kg	0.00269 %	✓		
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	65 mg/kg	1.126	58.359 mg/kg	0.00584 %	✓		
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			466 mg/kg		371.611 mg/kg	0.0372 %	✓		
6	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
7	nickel { nickel }	028-002-00-7	231-111-4	7440-02-0	40 mg/kg		31.898 mg/kg	0.00319 %	✓		
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			1 mg/kg	2.554	2.036 mg/kg	0.000204 %	✓		
9	zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	366 mg/kg	1.245	363.29 mg/kg	0.0363 %	✓		
10	naphthalene	601-052-00-2	202-049-5	91-20-3	0.3 mg/kg		0.239 mg/kg	0.0000239 %	✓		
11	acenaphthylene		205-917-1	208-96-8	0.45 mg/kg		0.359 mg/kg	0.0000359 %	✓		



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
12	acenaphthene		201-469-6	83-32-9		0.15	mg/kg		0.12	mg/kg	0.000012 %	✓		
13	fluorene		201-695-5	86-73-7		0.21	mg/kg		0.167	mg/kg	0.0000167 %	✓		
14	phenanthrene		201-581-5	85-01-8		4.98	mg/kg		3.971	mg/kg	0.000397 %	✓		
15	anthracene		204-371-1	120-12-7		0.73	mg/kg		0.582	mg/kg	0.0000582 %	✓		
16	fluoranthene		205-912-4	206-44-0		8.5	mg/kg		6.778	mg/kg	0.000678 %	✓		
17	pyrene		204-927-3	129-00-0		7	mg/kg		5.582	mg/kg	0.000558 %	✓		
18	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.85	mg/kg		2.273	mg/kg	0.000227 %	✓		
19	chrysene	601-048-00-0	205-923-4	218-01-9		3.19	mg/kg		2.544	mg/kg	0.000254 %	✓		
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.37	mg/kg		2.687	mg/kg	0.000269 %	✓		
21	indeno[123-cd]pyrene		205-893-2	193-39-5		2.42	mg/kg		1.93	mg/kg	0.000193 %	✓		
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.24	mg/kg		0.191	mg/kg	0.0000191 %	✓		
23	benzo[ghi]perylene		205-883-8	191-24-2		2.37	mg/kg		1.89	mg/kg	0.000189 %	✓		
24	coronene		205-881-7	191-07-1		0.54	mg/kg		0.431	mg/kg	0.0000431 %	✓		
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		4.68	mg/kg		3.732	mg/kg	0.000373 %	✓		
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.82	mg/kg		1.451	mg/kg	0.000145 %	✓		
27	TPH (C6 to C40) petroleum group			TPH		178	mg/kg		141.946	mg/kg	0.0142 %	✓		
28	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD	
29	benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD	
30	toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD	
31	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD	
32	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
33	 chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.3	mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD	
34	pH			PH		8.52	pH		8.52	pH	8.52 pH			
Total:											0.107 %			

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

HP 3(i) on Flam. Liq. 1; H224, Flam. Liq. 2; H225, Flam. Liq. 3; H226: Force this Hazardous property to non hazardous because WM3 states that the Hazard Statement HP 3 (first and fourth indents) can be discounted as this is a solid waste without a free draining liquid phase

Classification of sample: WS4[1]

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS4[1]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.30-1.50 m		
Moisture content:		
11.6%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 11.6% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic pentoxide }				11.5 mg/kg	1.534	15.806 mg/kg	0.00158 %	✓		
	033-004-00-6	215-116-9	1303-28-2								
2	cadmium { cadmium compounds, with the exception of cadmium sulphoselenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex }			1	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	048-001-00-5										
3	chromium in chromium(III) compounds { chromium(III) oxide }				22.7 mg/kg	1.462	29.729 mg/kg	0.00297 %	✓		
		215-160-9	1308-38-9								
4	copper { dicopper oxide; copper (I) oxide }				6 mg/kg	1.126	6.053 mg/kg	0.000605 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	23 mg/kg		20.609 mg/kg	0.00206 %	✓		
	082-001-00-6										
6	mercury { mercury }				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	080-001-00-0	231-106-7	7439-97-6								
7	nickel { nickel }				34.1 mg/kg		30.556 mg/kg	0.00306 %	✓		
	028-002-00-7	231-111-4	7440-02-0								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	034-002-00-8										
9	zinc { zinc oxide }				37 mg/kg	1.245	41.267 mg/kg	0.00413 %	✓		
	030-013-00-7	215-222-5	1314-13-2								
10	naphthalene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
11	acenaphthylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		205-917-1	208-96-8								



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
12	acenaphthene	201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
13	fluorene	201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
14	phenanthrene	201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
15	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
16	fluoranthene	205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
17	pyrene	204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
18	benzo[a]anthracene	601-033-00-9	200-280-6		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
19	chrysene	601-048-00-0	205-923-4		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
21	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
23	benzo[ghi]perylene	205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	coronene	205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
27	TPH (C6 to C40) petroleum group		TPH		<38	mg/kg		<38	mg/kg	<0.0038 %		<LOD
28	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
29	benzene	601-020-00-8	200-753-7		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
30	toluene	601-021-00-3	203-625-9		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
31	ethylbenzene	601-023-00-4	202-849-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
32	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
33	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<0.3	mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD
34	pH		PH		7.48	pH		7.48	pH	7.48 pH		
Total:										0.0186 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

■ **cadmium compounds, with the exception of cadmium sulposelenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex**

CLP index number: 048-001-00-5

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Additional Risk Phrases: None.

Additional Hazard Statement(s): Carc. 1A H350

Reason for additional Hazards Statement(s)/Risk Phrase(s):

29/09/2015 - Carc. 1A H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

■ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R20 , R22 , R36 , R37 , R38 , R42 , R43 , R50/53 , R60 , R61

Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **dicopper oxide; copper (I) oxide** (EC Number: 215-270-7, CAS Number: 1317-39-1)

CLP index number: 029-002-00-X

Data source: Regulation (EU) 2016/1179 of 19 July 2016 (ATP9)

Additional Risk Phrases: N R50/53 , N R50/53 >= 0.25 %

Additional Hazard Statement(s): None.

Reason for additional Hazards Statement(s)/Risk Phrase(s):

10/10/2016 - N R50/53 risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

10/10/2016 - N R50/53 >= 0.25 % risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

■ **lead compounds with the exception of those specified elsewhere in this Annex**

CLP index number: 082-001-00-6

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Additional Risk Phrases: None.

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s)/Risk Phrase(s):

03/06/2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

■ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R22 , R26 , R27 , R36 , R37 , R38

Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

■ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R36 , R37 , R38 , N R50/53 , N R51/53

Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

■ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: N R50/53

Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: R22 , R36 , R37 , R38 , R40 , R43 , N R50/53

Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

• **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R36 , R37 , R38 , R43 , N R50/53

Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21/08/2015

Risk Phrases: Xn R22 , N R50/53

Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21/08/2015

Risk Phrases: Xi R36/37/38 , N R50/53

Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: R40

Hazard Statements: Carc. 2 H351

• **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23/07/2015

Risk Phrases: N R50/53

Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Risk Phrases: R10 , R45 , R46 , R51/53 , R63 , R65

Hazard Statements: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Risk Phrases: None.

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s)/Risk Phrase(s):

03/06/2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

• **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Risk Phrases: None.

Hazard Statements: None.

■ **coronene** (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en>

Data source date: 16/06/2014

Risk Phrases: R68/20

Hazard Statements: STOT SE 2 H371

■ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

CLP index number: 602-039-00-4

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Additional Risk Phrases: None.

Additional Hazard Statement(s): Carc. 1A H350

Reason for additional Hazards Statement(s)/Risk Phrase(s):

29/09/2015 - Carc. 1A H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic pentoxide}

Worst Case

cadmium {cadmium compounds, with the exception of cadmium sulphoselenide (xCdS.yCdSe), reaction mass of cadmium sulphide with zinc sulphide (xCdS.yZnS), reaction mass of cadmium sulphide with mercury sulphide (xCdS.yHgS), and those specified elsewhere in this Annex}

Using elemental Cadmium with no CrVI

chromium in chromium(III) compounds {chromium(III) oxide}

Worst case species

copper {dicopper oxide; copper (I) oxide}

Worst case species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species

mercury {mercury}

Worst case species

nickel {nickel}

Worst case species

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species

zinc {zinc oxide}

Elemental Zinc with no CrVI

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition, May 2015

HazWasteOnline Classification Engine Version: 2017.269.3405.6897 (26 Sep 2017)

HazWasteOnline Database: 2017.270.3406.6898 (28 Sep 2017)



This classification utilises the following guidance and legislation:

WM3 - Waste Classification - May 2015
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

APPENDIX J

Laboratory Results – Geotechnical



TEST REPORT
ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 09/10/2017



Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon		
Serial No.	S31770		
Client: Environmental Protection Strategies Ltd Unit 7 Caxton House Broad Street Great Cambourne Cambridge CB23 6JN		Soil Property Testing Ltd 15, 16, 18 Halcyon Court, St Margaret's Way, Stukeley Meadows, Huntingdon, Cambridgeshire, PE29 6DG Tel: 01480 455579 Email: enquiries@soilpropertytesting.com Website: www.soilpropertytesting.com	
Samples Submitted By: Environmental Protection Strategies Ltd Samples Labelled: UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon		Approved Signatories: ☒ J.C. Garner B.Eng (Hons) FGS Technical Director ☐ S.P. Townend FGS Quality Manager ☐ W. Johnstone Materials Lab Manager ☐ D. Sabnis Operations Manager 	
Date Received: 12/09/2017		Samples Tested Between: 12/09/2017 and 09/10/2017	
Remarks: For the attention of Mr M Judson Your Reference No: UK17.2816 Your Order Number: 17897			
Notes: 1 All remaining samples or remnants from this contract will be disposed of after 21 days from today, unless we are notified to the contrary. 2 (a) UKAS - United Kingdom Accreditation Service (b) Opinions and interpretations expressed herein are outside the scope of UKAS accreditation 3 Tests marked "NOT UKAS ACCREDITED" in this test report are not included in the UKAS Accreditation Schedule for this testing laboratory. 4 This test report may not be reproduced other than in full except with the prior written approval of the issuing laboratory.			



TEST REPORT

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DATE ISSUED: 09/10/2017



0998

Contract		UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon																	
Serial No.		S31770										Target Date		26/09/2017					
Scheduled By		Environmental Protection Strategies Ltd																	
SCHEDULE OF LABORATORY TESTS																			
Schedule Remarks																			
Bore Hole No.	Type	Sample Ref.	Top Depth	PSD by Wet Sieve Liquid/Plastic Limits Wet Sieve Preparation Water Content BSEN															Sample Remarks
WS1	D		2.00	1															
WS1	D		2.80		1		1												
WS2	D		2.00	1															
WS3	D		1.20		1	1	1												
WS4	D		2.80		1		1												
Totals				2	3	1	3												End of Schedule



TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 09/10/2017



0998

Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

SUMMARY OF WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole /Pit No.	Depth (m)	Type	Ref.	Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquid-ity Index (%)	SAMPLE PREPARATION				Description	CLASS
									Method	Ret'd 0.425mm (%)	Corr'd W/C <0.425mm	Curing Time (hrs)		
WS1	2.80 - 3.00	D		30.2	69	26	43	0.10	From Natural	0 (A)		68	Stiff dark yellowish brown CLAY with rare reddish yellow mottling and silt pockets	CH
WS3	1.20 - 1.30	D		14.4	34	14	20	0.02	Wet Sieved	55 (M)	32.0*	26	Soft dark olive grey slightly sandy gravelly silty CLAY with occasional organic pockets with decayed plant fibres. Gravel is fine and medium flint	CL
WS4	2.80 - 3.00	D		27.7	70	25	45	0.06	From Natural	0 (A)		69	Stiff slightly fissured dark greyish brown CLAY with rare silt pockets	CH/CV

Method Of Preparation: BS EN ISO: 17892-1: 2014 & BS 1377: Part 2:1990:4.2
Method of Test: BS EN ISO: 17892-1: 2014 & BS1377:Part 2:1990:3.2, 4.4
Type of Sample Key: U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments: *Corrected water content assume material greater than 0.425mm is non-porous. See BS1377: Part 2: 1990: Clause 3 Note 1

Remarks to Include: Sample disturbance, loss of water, variation from test procedure, location and origin of test specimen within original sample, oven drying temperature if not 105-110C



TEST REPORT

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DATE ISSUED: 09/10/2017

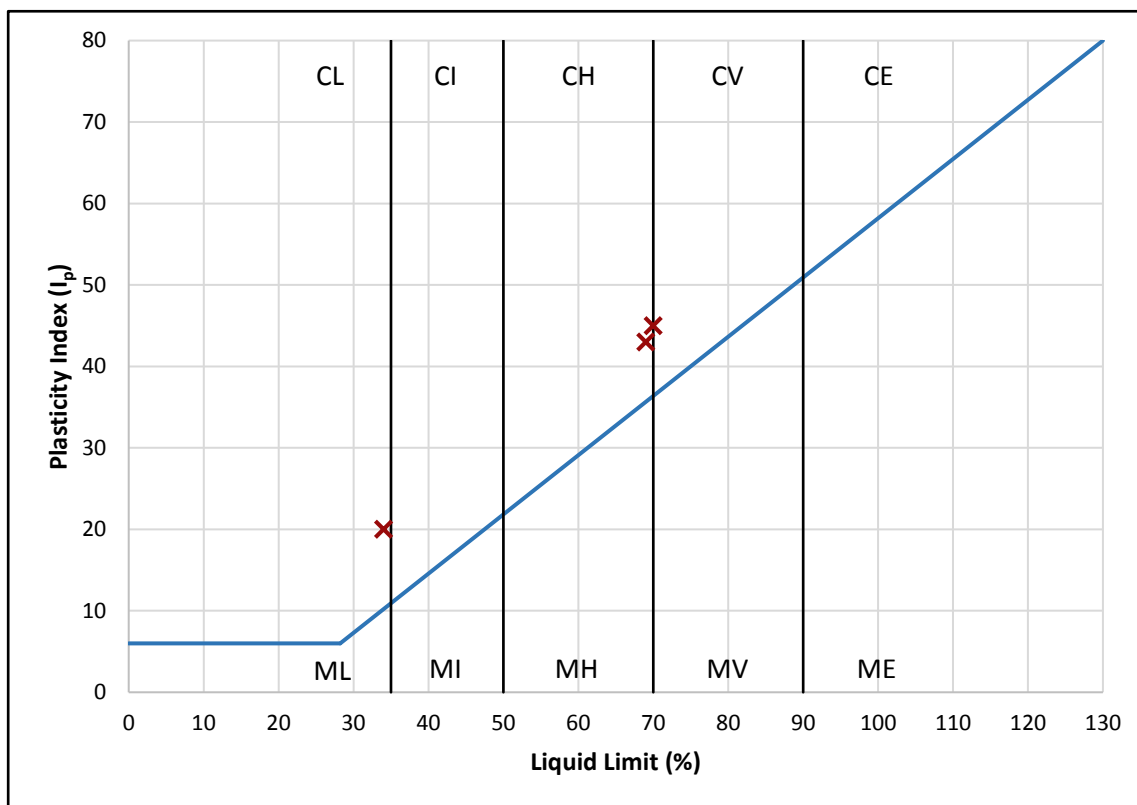


0998

Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT USING CASAGRANDE CLASSIFICATION CHART

Plasticity				
Low	Medium	High	Very High	Extremely High



Plasticity Chart BS5930: 2015: Figure 8

NHBC Volume Change Potential	
High	
Medium	
Low	

Method of Preparation:	BS EN ISO: 17892-1: 2014 & BS 1377: Part 2: 1990: 4.2
Method of Test:	BS EN ISO: 17892-1: 2014 & BS1377: Part 2: 3.2, 4.4, 5.3, 5.4
Type of Sample Key:	U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter
Comments:	Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index



TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 09/10/2017



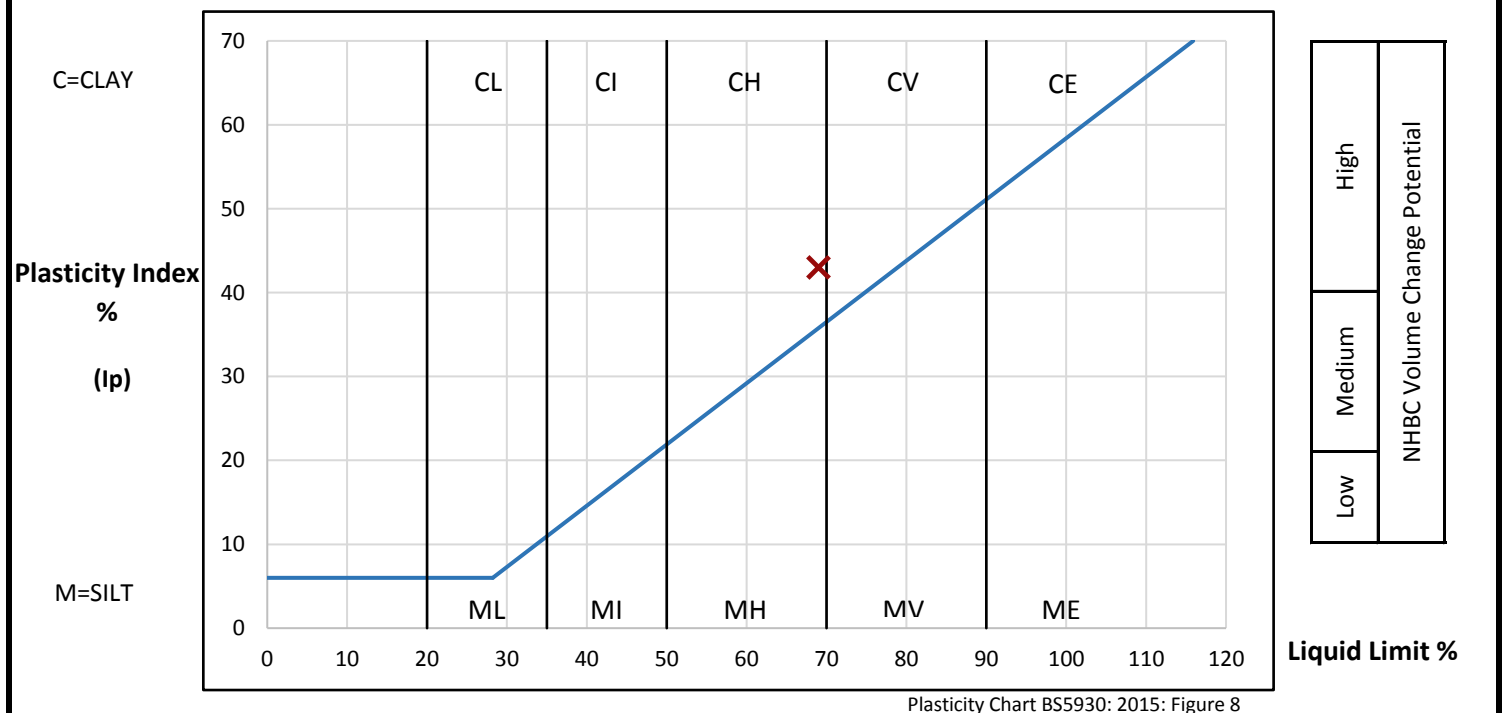
0998

Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS1	2.80 - 3.00	D		30.2	Stiff dark yellowish brown CLAY with rare reddish yellow mottling and silt pockets	

PREPARATION			Liquid Limit	69 %	
Method of preparation		From natural	Plastic Limit	26 %	
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	43 %	
Corrected water content for material passing 0.425mm			Liquidity Index	0.10	
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a	
Curing time	68 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1337: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS1377: PART 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments:



TEST REPORT

ISSUED BY SOIL PROPERTY TESTING LTD
DATE ISSUED: 09/10/2017



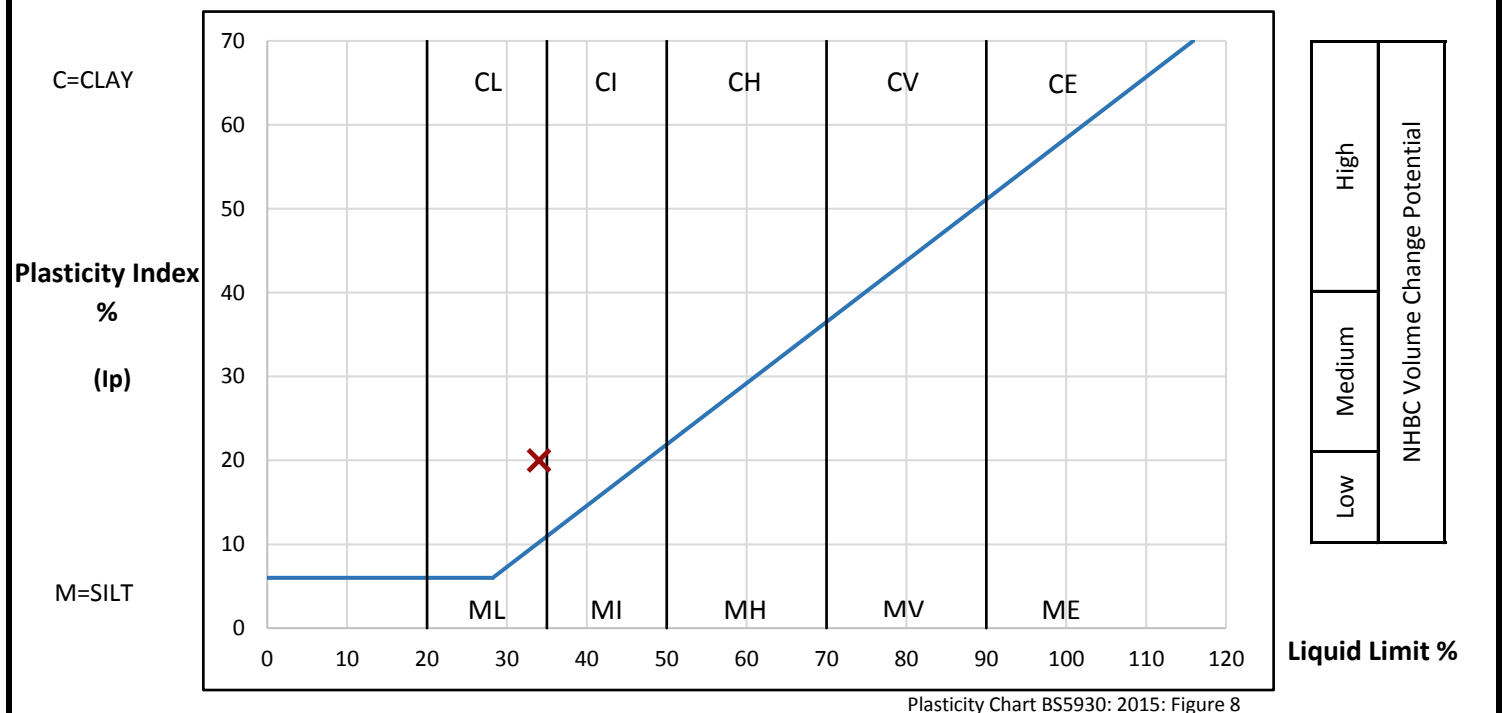
0998

Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS3	1.20 - 1.30	D		14.4	Soft dark olive grey slightly sandy gravelly silty CLAY with occasional organic pockets with decayed plant fibres. Gravel is fine and medium flint	

PREPARATION				Liquid Limit 34 %	
Method of preparation Wet sieved over 0.425mm sieve				Plastic Limit 14 %	
Sample retained 0.425mm sieve (Measured) 55 %				Plasticity Index 20 %	
Corrected water content for material passing 0.425mm 32.0 %				Liquidity Index 0.02	
Sample retained 2mm sieve (Measured) 38 %				NHBC Modified (I'p) 9 %	
Curing time 26 hrs		Clay Content Not analysed		Derived Activity Not analysed	



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1337: Part 2: 1990: 4.2

Method of Test: BS EN ISO: 17892-1: 2014 & BS1377: PART 2: 1990: 3.2, 4.4, 5.3, 5.4

Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter

Comments: Corrected water content assume material greater than 0.425mm non-porous. See BS1377: Part2: 1990 Clause 3 Note 1
Volume Change Potential: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
Note: Modified Plasticity Index I'p = Ip x (% less than 425microns/100)



TEST REPORT

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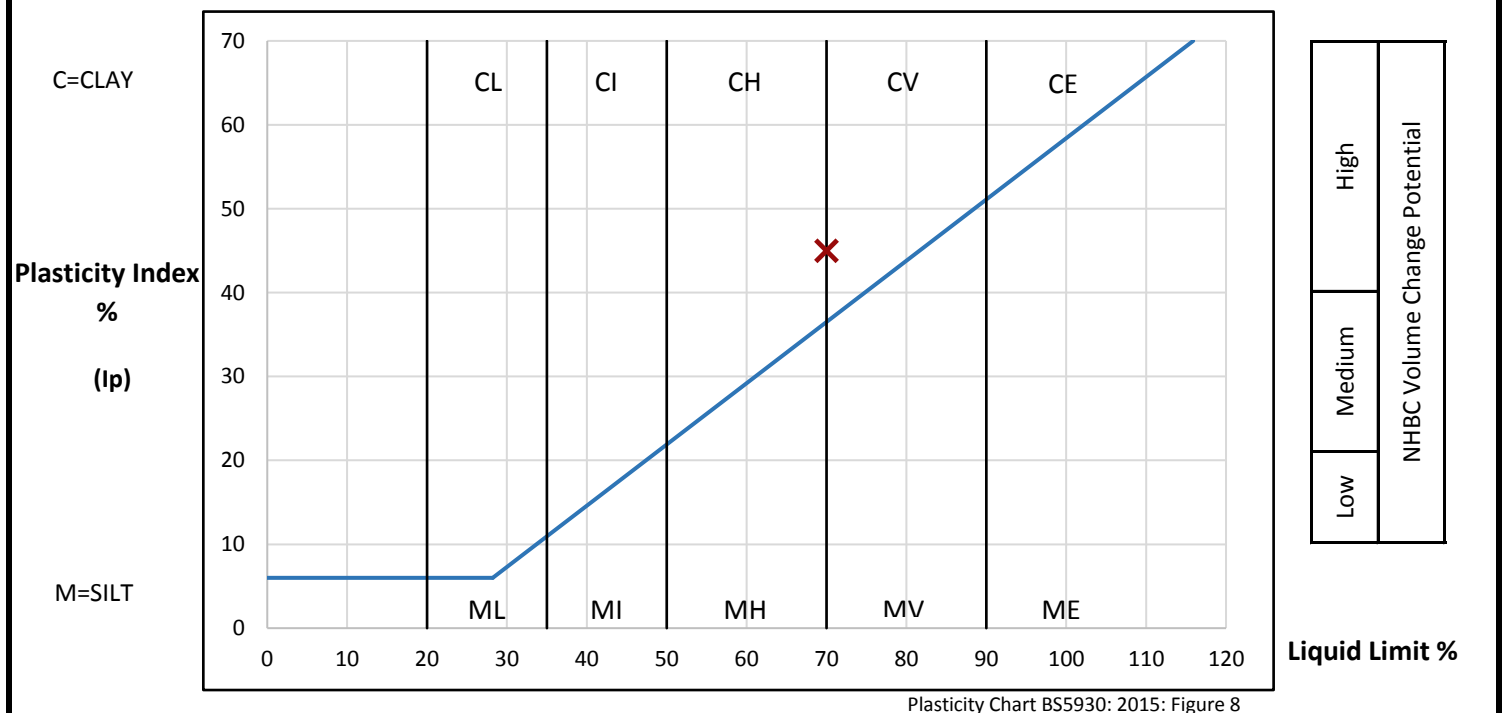
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Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

DETERMINATION OF WATER CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole / Pit No.	Depth m	Sample Type	Sample Reference	Water Content (W) %	Description	Remarks
WS4	2.80 - 3.00	D		27.7	Stiff slightly fissured dark greyish brown CLAY with rare silt pockets	

PREPARATION			Liquid Limit	70 %	
Method of preparation		From natural	Plastic Limit	25 %	
Sample retained 0.425mm sieve	(Assumed)	0 %	Plasticity Index	45 %	
Corrected water content for material passing 0.425mm			Liquidity Index	0.06	
Sample retained 2mm sieve	(Assumed)	0 %	NHBC Modified (I'p)	n/a	
Curing time	69 hrs	Clay Content	Not analysed	Derived Activity	Not analysed



Method of Preparation: BS EN ISO: 17892-1: 2014 & BS 1337: Part 2: 1990: 4.2
 Method of Test: BS EN ISO: 17892-1: 2014 & BS1377: PART 2: 1990: 3.2, 4.4, 5.3, 5.4
 Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter
 Comments:



TEST REPORT

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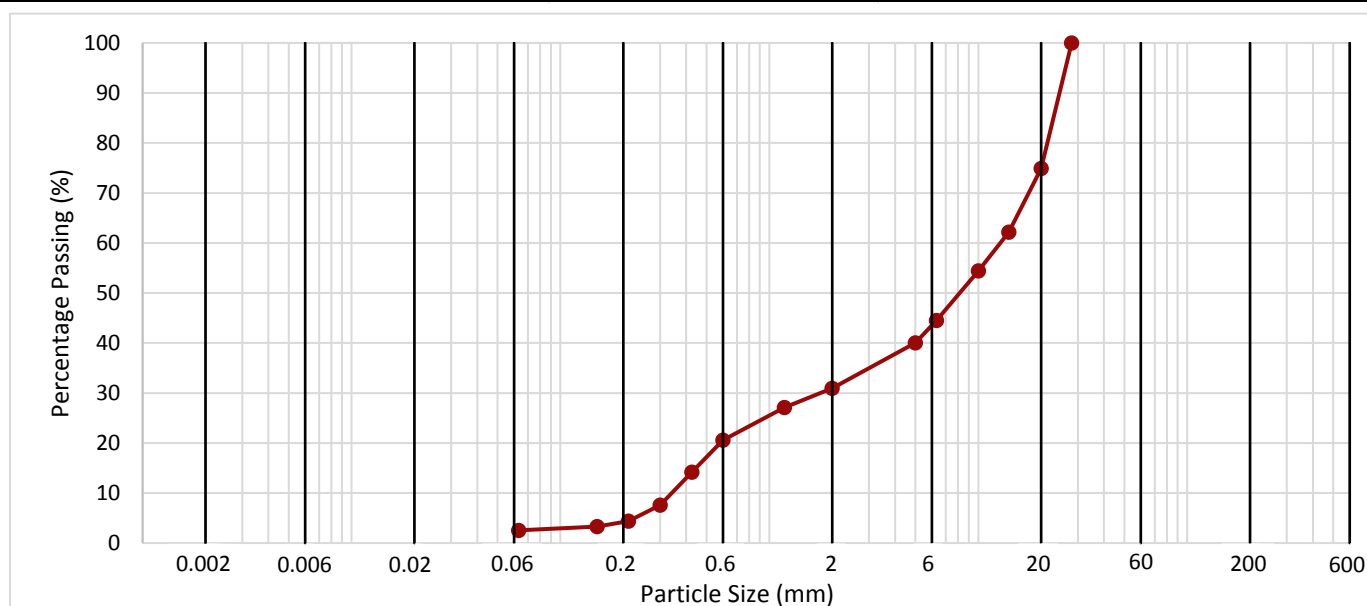
Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample		Description	Remarks
		Type	Reference		
WS1	2.00 - 2.30	D		Black, brown and white slightly silty sandy angular to subrounded flint GRAVEL. Sand is orangish brown	

Method of Test: **Wet Sieve**

Method of Pretreatment:

Not Required

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	Particle Size (mm)	Passing (%)	Clay by Dry Mass (%)

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	31	28
1.18	27	
0.600	21	
0.425	14	
0.300	8	
0.212	4	
0.150	3	
0.063	3	

Fines By Dry Mass (%)	
<0.063mm	3

Sieve Size (mm)	Passing (%)	Gravel By Dry Mass (%)
150		69
125		
90		
63		
50		
37.5		
28	100	
20	75	
14	62	
10	54	
6.3	45	
5	40	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5

Method of test: BS1377: Part2: 1990: 9.2,

Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter

Comments:



TEST REPORT

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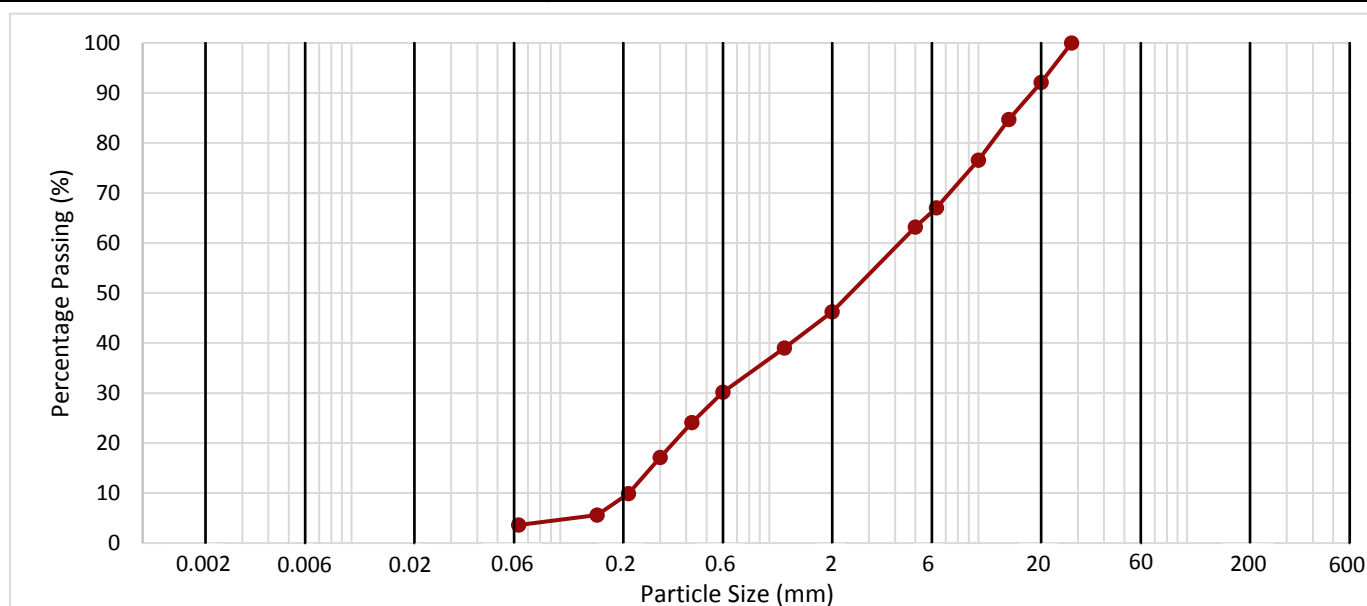
Contract	UK17.2816 - Crescent Building Supplies, Crescent Parade, Hillingdon
Serial No.	S31770

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Pit No.	Depth (m)	Sample		Description	Remarks
		Type	Reference		
WS2	2.00 - 2.30	D		Yellowish brown silty very gravelly SAND. Gravel is black, white and brown angular to subrounded flint	

Method of Test: **Wet Sieve**

Method of Pretreatment:

Not Required

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Hydrometer	Particle Size (mm)	Passing (%)	Silt by Dry Mass (%)
	Particle Size (mm)	Passing (%)	Clay by Dry Mass (%)

Sieve Size (mm)	Passing (%)	Sand By Dry Mass (%)
2.00	46	42
1.18	39	
0.600	30	
0.425	24	
0.300	17	
0.212	10	
0.150	6	
0.063	4	

Fines By Dry Mass (%)	
<0.063mm	4

Sieve Size (mm)	Passing (%)	Gravel By Dry Mass (%)
150		54
125		
90		
63		
50		
37.5		
28	100	
20	92	
14	85	
10	77	
6.3	67	
5	63	

Method of Preparation: BS1377: Part 1: 2016: 8.3 & 8.4.5

Method of test: BS1377: Part2: 1990: 9.2,

Type of Sample Key: U=Undisturbed, B=Bulk, D=Disturbed, J=Jar, W=Water, SPT=Split Spoon Sample, C=Core Cutter

Comments:

APPENDIX K

Generic Screening Criteria

EPS Generic Quantitative Risk Assessment

Minimal Risk Generic Screening Criteria - Residential Land Use

Contaminant	Human Health	Soil Targets		Groundwater Targets	
		Controlled Waters		Controlled Waters	
		LGwRP	HGwRP	LGwRP	HGwRP
Unit		mg/kg		ug/l	
Arsenic	37	n/c	n/c	50	10
Cadmium	11	n/c	n/c	5	5
Chromium III	910	n/c	n/c	250	50
Chromium VI	6	n/c	n/c	n/c	n/c
Copper	2400	n/c	n/c	28	28
Mercury (elemental)	1.2	n/c	n/c	1	1
Nickel	180	n/c	n/c	200	50
Lead	NA	n/c	n/c	250	10
Selenium	250	n/c	n/c	10	10
Zinc	3700	n/c	n/c	500	500
Benzene	0.087	0.252	0.008	30	1
Toluene	130	1.17	1.17	50	50
Ethylbenzene	47	15.0	10.0	300	200
Xylene (para)	56	0.885	0.885	30	30
MTBE#	49	0.138	0.0276	75	15
Benzo(a)Pyrene	2.2	10	1.44	0.7	0.1
Naphthalene	2.3	0.934	0.02	10	0.1
Dibenz(ah)anthracene	0.24	n/c	n/c	n/c	n/c
Aliphatic C5-C6	42	5.27	1.05	50	10
Aliphatic C6-C8	100	23.2	4.64	50	10
Aliphatic C8-C10	27	175	35.1	50	10
Aliphatic C10-C12	130(48)*	1380	276	50	10
Aliphatic C12-C16	1100(8.48)**	27500	5490	50	10
Aliphatic C16-C35	65000 (8.48)**	3.46E+06	6.91E+05	50	10
Aromatic C8-C10	34	8.74	1.75	50	10
Aromatic C10-C12	74	13.8	2.76	50	10
Aromatic C12-C16	140	27.5	5.5	50	10
Aromatic C16-C21	260	86.9	17.4	50	10
Aromatic C21-C35	1100	690	138	50	10

Notes:

LGwRP - Low Groundwater Resource Potential

HGwRP - High Groundwater Resource Potential

f = Oral, dermal and inhalation exposure compared with oral HCV N/C = Not Calculated

* = S4UL exceeds vapour saturation limit (in brackets)

** = S4UL exceeds solubility saturation limit (in brackets)

Soil Targets

Targets for Human Health have been taken from 'S4ULs Suitable For Use Levels for Human Health Risk Assessment' – LQM and CIEH (2014) derived using standard sandy loam soil with 1% SOM, except (#) = EIC/AGS/CL:AIRE GAC 'Soil Generic Assessment Criteria' (2010). For sites where ground conditions differ significantly from sandy loam or site-specific SOM and pH are available, the generic human health targets may be revised.

Targets for Controlled waters have been derived using EA Remedial Targets Worksheet (v3.1) - using standard Sandy Loam ground conditions as described in Science Report SC050021/SR3, assuming no degradation for a 10m compliance distance with criteria of EQS or UKDWS for LGwRP and HGwRP respectively (see notes for GW targets).

Groundwater Targets

For LGwRP, targets have been taken as Freshwater EQS where available. For Ethylbenzene and BaP the WHO Health limit has been used and for MTBE and individual TPH fractions a 5 times multiplier of taste threshold and UKDWS has been taken respectively.

For HGwRP, targets have been taken as UKDWS where available, with the exception of Copper and Zinc where the EQS is lower than the DWS and therefore the EQS has been used as the groundwater target. For Ethylbenzene the upper WHO ATO limit has been used. For Toluene and Xylene, the WHO ATO limit is higher than the EQS and so the lower value has been taken. For MTBE the taste threshold has been taken.

Work carried out to calculate generic screening criteria for concentrations of contaminant in groundwater with respect of risks to Human Health has generally found that criteria far exceed (by at least 2 orders of magnitude) those listed for the protection of either LGwRP and HGwRP receptors. On this basis, the above Groundwater criteria are also considered protective of human health and further evaluation of these risks should be considered alongside any detailed quantitative risk assessments carried out for groundwater on a site specific basis.



EPS Generic Quantitative Risk Assessment

Low Risk Generic Screening Criteria - All Land Uses

	Soil Targets					
Contaminant	Residential		Allotments	Commercial	Public Open Spaces	
	With Home Grown Produce	Without Home Grown Produce			Residential	Parks
Unit	mg/kg					
Arsenic	37	40	49	640	79	168
Benzene	0.87	3.3	0.18	98	140	230
Benzo(a)pyrene	5	5.3	5.7	76	10	21
Cadmium	26	149	4.9	410	220	880
Chromium (VI)	21	21	170	49	23	250
Lead	200	310	80	2330	630	1300

Notes:

Targets for Human Health have been taken from available Category 4 Screening Levels (C4SLs) for assessment of land affected by contamination issued by DEFRA in December 2013.

APPENDIX L

Method Statement for Encountering Unexpected Contamination



METHOD STATEMENT

ACTIONS TO BE TAKEN IN THE EVENT OF DISCOVERING UNEXPECTED CONTAMINATION DURING INTRUSIVE GROUNDWORKS

If at any point during intrusive groundworks at a site, evidence of unforeseen contamination is encountered in the form of significant noxious odours, discolouration, or instability within soils or sheen/ discolouration in groundwater, the following actions will be taken:

- Intrusive works in the immediate area of the impacted ground will be suspended and the continuation of work in other areas of the site will be considered within the context of the site specific health & safety plan.
- Environmental Protection Strategies Ltd (EPS) will be contacted and appraised of the situation so that arrangements can be made to characterise the impact and determine what action may be necessary in addition to the scheduled site works. Where possible / health & safety plan permits, digital photographs of the impacted ground will be taken and emailed to EPS at the address below to assist in the initial assessment.
- It may well be necessary for EPS to attend site to undertake visual inspection and obtain samples for field and/or laboratory analysis, although the actions taken will be dependent on the nature of what is encountered.
- In cases where EPS consider the unforeseen contamination likely to pose a significant risk of significant harm to adjacent site users or local environmental receptors, the local authority and the Environment Agency will be informed of the situation and the actions being taken.
- Once appropriate action has been agreed and undertaken, a written summary will be produced by EPS for submission to the Local Authority, (and where relevant, the Environment Agency) in accordance with planning requirements. The submission will include details of work undertaken, analytical results of investigative and validation samples obtained and conclusions and recommendations for any further actions considered necessary.
- Where regulatory bodies have been involved, site works should only recommence following their agreement and in all cases should only recommence when the site manager considers it safe to do so within the context of the site specific health & safety plan.

EPS Contact Details:

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Steve Bullock	Director	Tel: 0786 694 9221

Email: info@epstrategies.co.uk (Automatically forwarded to the above and office based personnel.)