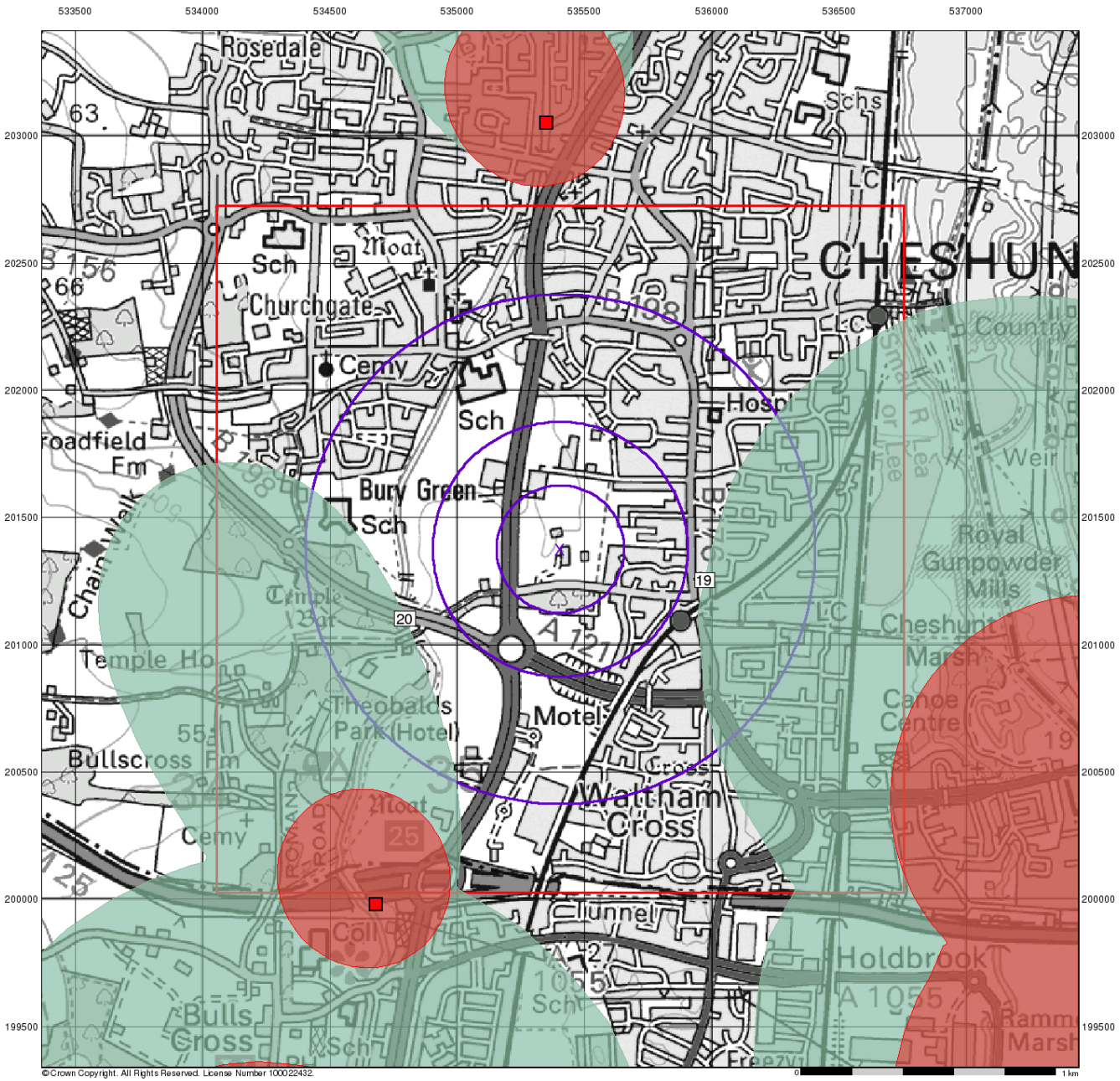


Source Protection Zones

General

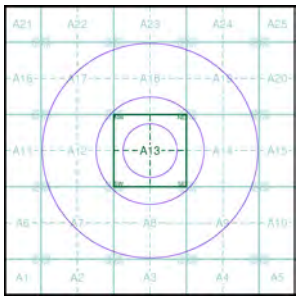
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | 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 Borehole

Site Sensitivity Context Map - Slice A



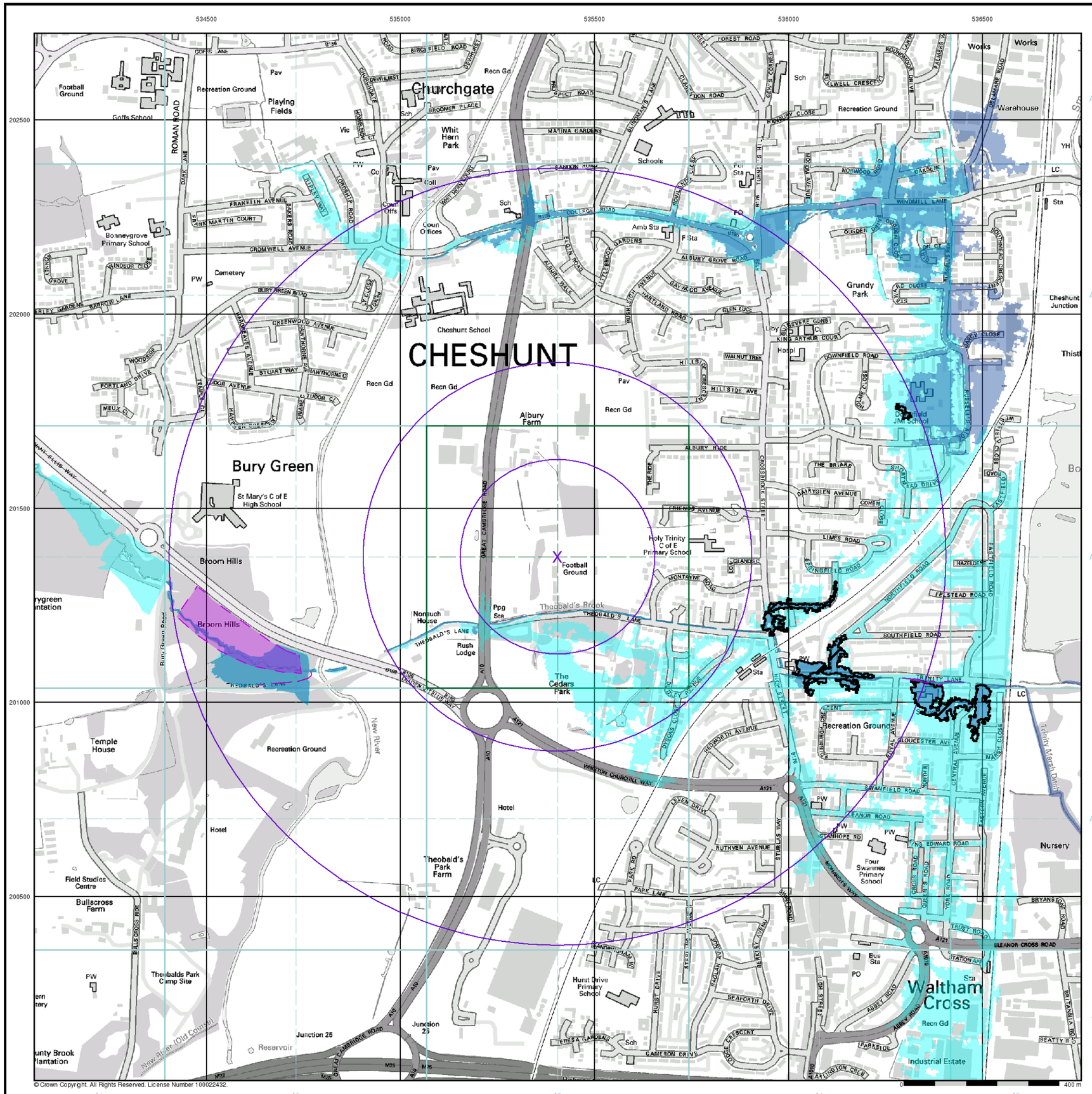
Order Details

Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



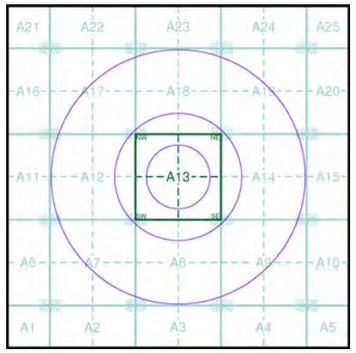
General

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

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

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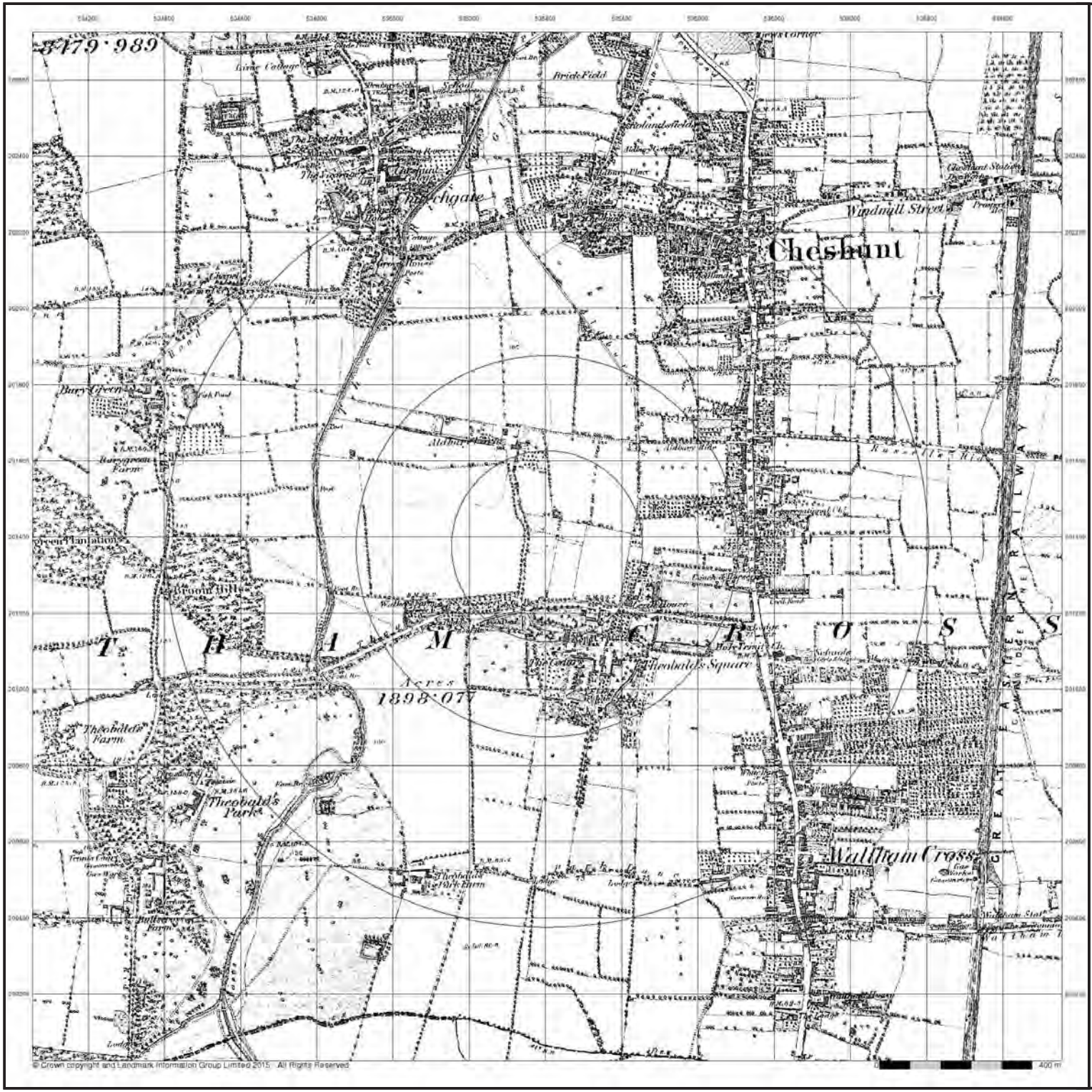
APPENDIX F

A Selection of Historic Maps



Middlesex

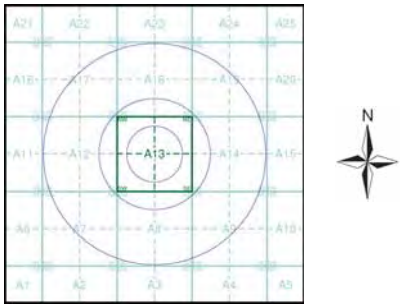
Published 1882

Source map scale - 1:10,560

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; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, 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. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

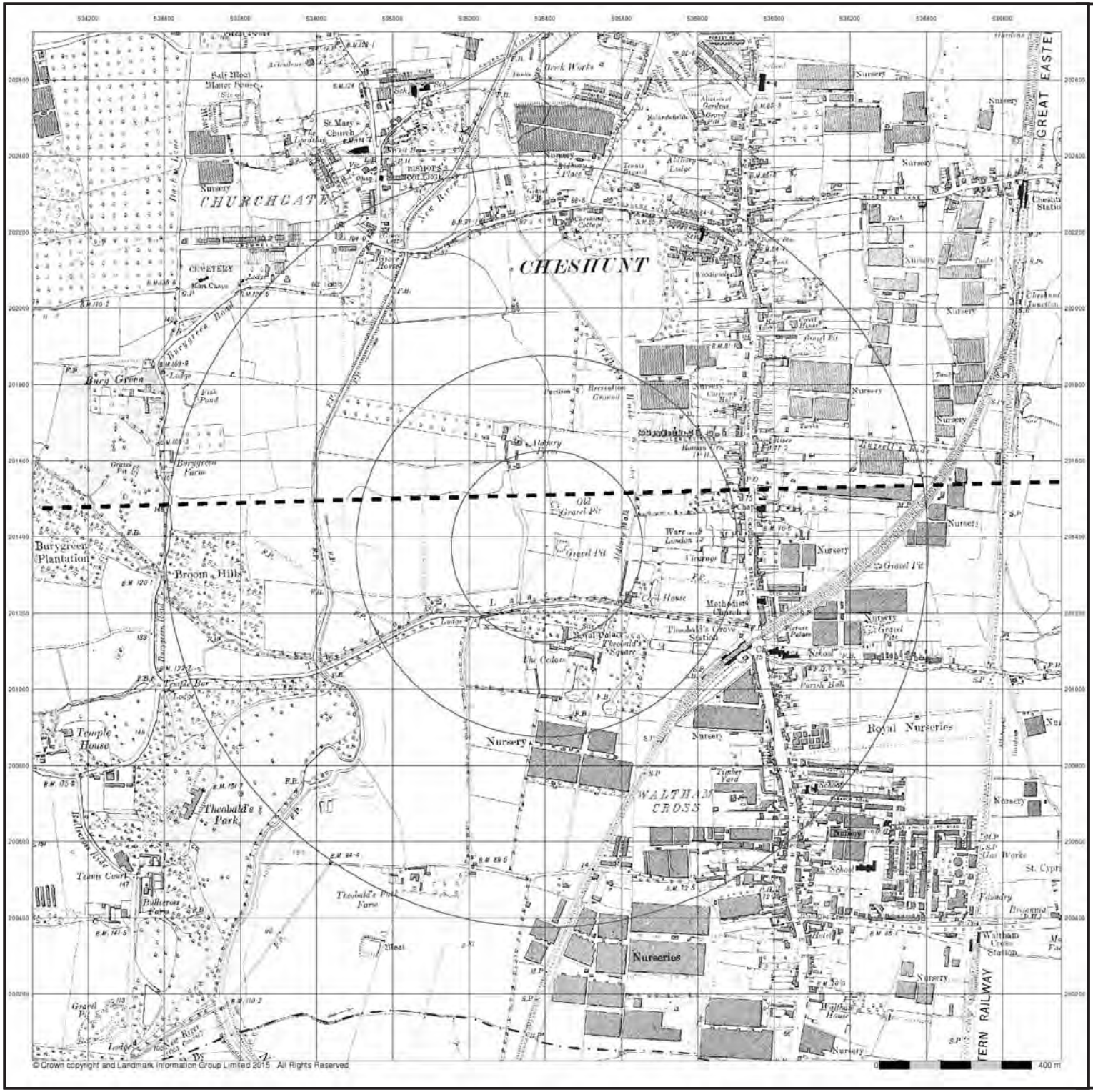
Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



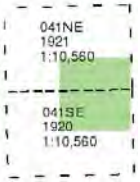
Hertfordshire

Published 1920 - 1921

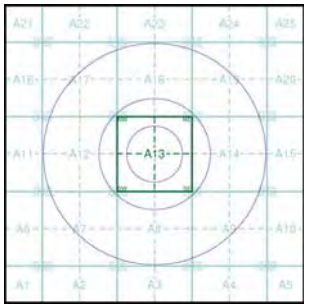
Source map scale - 1:10,560

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; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, 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. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

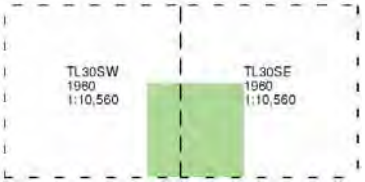
Ordnance Survey Plan

Published 1960

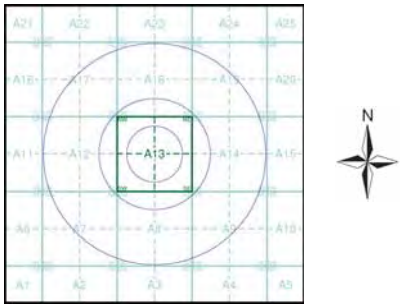
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, 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. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

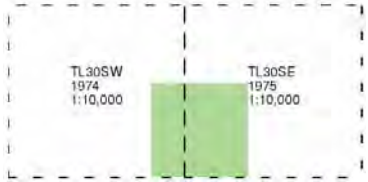
Ordnance Survey Plan

Published 1974 - 1975

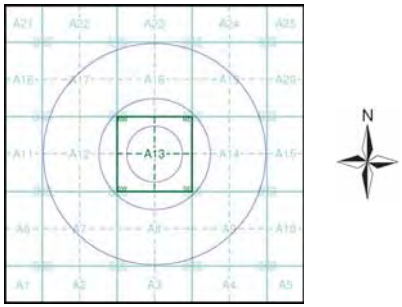
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, 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. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

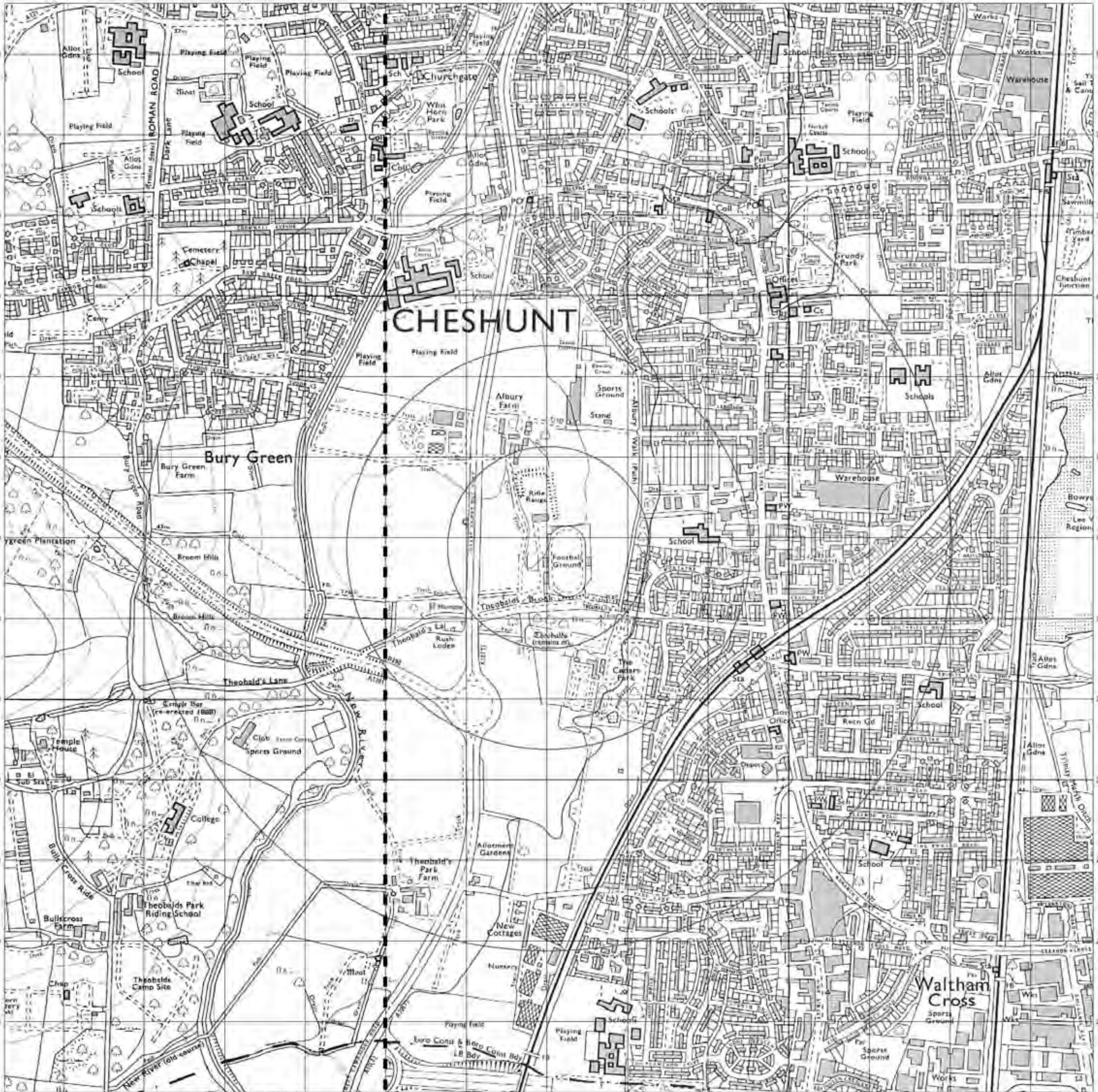
Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



eps

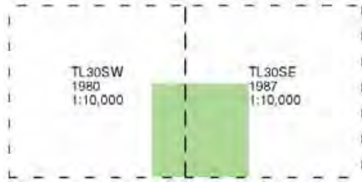
Ordnance Survey Plan

Published 1980 - 1987

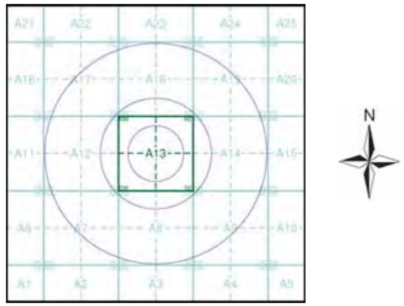
Source map scale - 1:10,000

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; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, 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. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

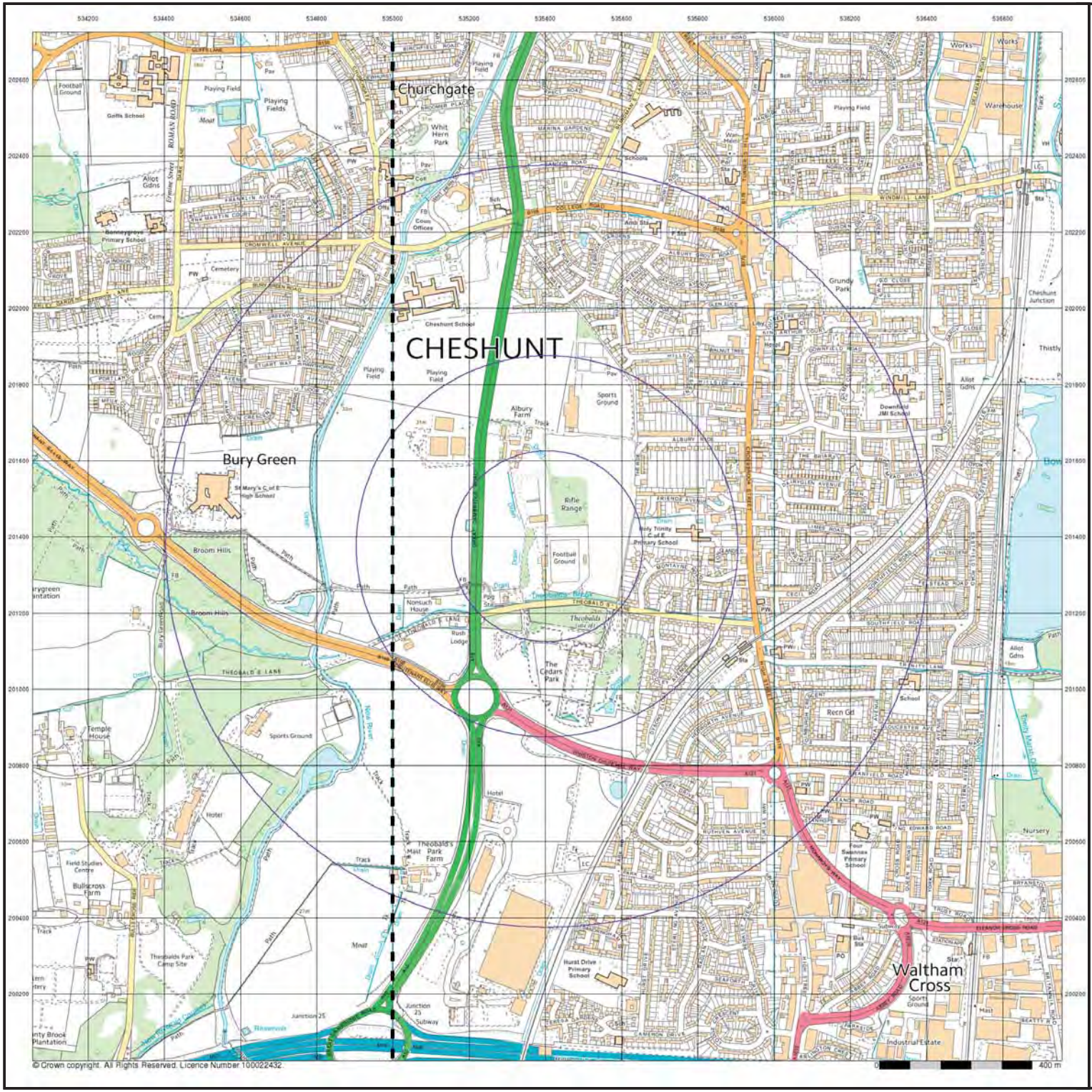
Order Number: 88157315_1_1
Customer Ref: UK16.2295
National Grid Reference: 535400, 201380
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



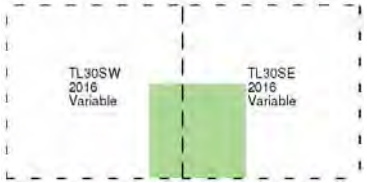
VectorMap Local

Published 2016

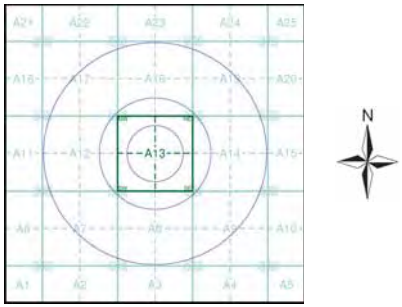
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	88157315_1_1
Customer Ref:	UK16.2295
National Grid Reference:	535400, 201380
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Proposed Cheshunt Sports Village, Cheshunt, Herts, EN8 8RX

Landmark Information Group

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

APPENDIX G

Trial Pit Logs

Borehole Log

Borehole No. **BH1**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Brown silty sandy clayey TOPSOIL
		0.40 - 0.80	B					MADE GROUND: Mottled brown-black silty sandy GRAVEL with brick and concrete
		1.20		N=19 (2,2/5,6,4,4)				
		1.20 - 1.60	B					
		2.00		N=15 (2,3/4,3,4,4)				
		2.00 - 2.40	B					
		2.50	D		2.40			Brown, black and white silty very sandy GRAVEL
		3.00		53 (13,13/22,31,,)				
		3.00 - 3.40	B					
		4.00		61 (12,12/18,19,24,)				
		4.00 - 4.40	B					
		5.00		51 (13,13/14,14,23,)				
		5.00 - 5.40	B					
	▼							
		6.00	D					
		6.50		N=43 (8,8/11,10,10,12)				
		6.50 - 6.90	B		6.80			Stiff brown CLAY
		6.90	D					
		7.20	D		7.20			Stiff dark grey CLAY
		8.00		N=16 (2,3/4,4,4,4)				
		8.00	D					
		9.00	D					
		9.50 - 9.90	U					
		9.95	D					

Continued on next sheet

Remarks

Borehole Log

Borehole No. **BH1**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50	D						
		11.00		N=21 (3,3/4,5,5,7)					11
		11.00	D						
		12.00	D						12
		12.50 - 12.90	U						
		12.95	D						13
		13.50	D						
		14.00		N=24 (4,4/5,6,6,7)					14
		14.00	D						
		15.00	D						15
		15.50 - 15.90	U						
		15.95	D						16
		16.50	D						
		17.00		N=29 (4,4/6,7,7,9)					17
		17.00	D						
		18.00	D						18
		18.50 - 18.90	U						
		18.95	D						19
		19.50		N=35 (5,5/7,9,9,10)					
		19.50	D						
					20.00			End of borehole at 20.00 m	20

Remarks

AGS

Borehole Log

Borehole No. **BH2**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10 - 0.50	B		0.10			Brown silty sandy clayey TOPSOIL
		0.50 - 1.20	B					MADE GROUND: Dark brown silty gravelly SAND
		1.20		N=29 (1,2/3,3,4,19)				
		1.20 - 1.70	B					
		1.50	D		1.60			
		2.00		25 (25,/25,,,)				MADE GROUND: Black and brown concrete / stone
		2.00 - 2.50	B		2.20			MADE GROUND: Dense black-brown silty gravelly SAND with ash, brick, and glass
		2.70	D		2.70			MADE GROUND: Loose black-brown silty gravelly SAND with ash, brick and glass
		3.00		N=3 (1,1/1,1,1,0)				
		3.00 - 3.50	B					
		3.70	D					
		4.00		N=1 (1,0/1,0,0,0)				
		4.00 - 4.50	B					
		4.80	D		4.80			Firm brown gravelly silty CLAY
		5.00		N=15 (1,0/1,1,12,1)				
		5.00 - 5.50	B		5.30			Dense brown very sandy GRAVEL
		5.70	D					
		6.00		N=37 (9,10/9,11,9,8)				
		6.00 - 6.50	B					
		6.70	D		6.70			Stiff brown CLAY
		7.20	D		7.20			Stiff dark grey CLAY
		7.50		N=17 (1,2/4,4,4,5)				
		7.80 - 7.95	D					
		8.50	D					
		9.00 - 9.50	U					
		9.50	D					
		10.00	D					

Continued on next sheet

Remarks

AGS

Borehole Log

Borehole No. **BH2**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50		N=28 (3,4/5,7,8,8)				
		10.50 - 10.95	D					
		11.50	D					
		12.00 - 12.50	U					
		12.50	D					
		13.00	D					
		13.50		N=36 (4,4/8,9,9,10)				
		13.50 - 13.95	D					
		14.50	D					
		15.50	D					
		16.00	D					
		16.50		N=38 (5,5/8,9,10,11)				
		16.50 - 16.95	D					
		17.50	D					
		18.50	D					
		19.00	D					
		19.50		N=38 (6,6/7,8,10,13)				
		19.50	D					
					20.00			End of borehole at 20.00 m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Borehole Log

Borehole No. **BH3**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40 - 0.80	B		0.10			Brown silty sandy clayey TOPSOIL MADE GROUND: Brown-black silty gravelly SAND with ash, brick, and glass
		1.20 1.20 - 1.60	B	N=6 (1,1/1,1,2,2)				
		2.00 2.00 - 2.40	B	N=3 (1,0/1,1,1,0)				
	▼	3.00 3.00 - 3.40	B	N=2 (1,0/1,1,0,0)	3.30			Soft brown-grey SILT
		4.00 4.00	D	N=1 (1,0/1,0,0,0)				
		5.00 5.00 - 5.40 5.30	B D	N=27 (5,5/7,6,7,7)	4.90			Dense brown sandy GRAVEL
					5.70			Stiff brown CLAY
		6.20	D		6.20			Stiff dark grey CLAY
		6.50 - 6.90	U					
		6.95	D					
		7.50	D					
		8.00 8.00	D	N=14 (2,2/3,3,4,4)				
		9.00	D					
		9.50 - 9.90	U					
		9.95	D					

Continued on next sheet

Remarks

AGS

Borehole Log

Borehole No. **BH3**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50	D						
		11.00		N=17 (2,3/4,4,4,5)					11
		11.00	D						
		12.00	D						12
		12.50 - 12.90	U						
		12.95	D						13
		13.50	D						
		14.00		N=20 (3,4/4,5,5,6)					14
		14.00	D						
		15.00	D						15
		15.50 - 15.90	U						
		15.95	D						16
		16.50	D						
		17.00		N=31 (4,5/6,8,8,9)					17
		17.00	D						
		18.00	D						18
		18.50 - 18.90	U						
		18.95	D						19
		19.50		N=32 (4,5/6,8,8,10)					
		19.50	D						
					20.00			End of borehole at 20.00 m	20

Remarks

AGS

Borehole Log

Borehole No. **BH4**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10 - 0.60	B		0.20			Brown silty sandy clayey TOPSOIL
		0.60 - 1.20	B					MADE GROUND: Loose brown-black silty gravelly SAND with brick, ash and glass
		1.20		N=1 (1,0/1,0,0,0)				
		1.20 - 1.70	B					
		2.00		N=1 (1,0/1,0,0,0)				
		2.00 - 2.50	B					
		3.00		N=1 (1,0/1,0,0,0)				
		3.00 - 3.50	B					
		3.70	D		3.70			Firm brown-grey silty CLAY
		4.00		N=2 (1,0/1,0,1,0)				
		4.00 - 4.50	B					
		4.60	D					
		5.00		N=2 (1,0/1,1,0,0)				
		5.00 - 5.50	B					
	▼	5.80	D		5.80			Firm brown gravelly silty CLAY
		6.10	D		6.10			Stiff brown CLAY
		6.50 - 6.80	U		6.50			Stiff dark grey CLAY
		6.80	D					
		7.50	D					
		8.00		N=19 (1,2/4,4,5,6)				
		8.00	D					
		9.00	D					
		9.50 - 10.00	U					
		10.00	D					

Continued on next sheet

Remarks

Borehole Log

Borehole No. **BH4**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50	D						
		11.00		N=27 (3,4/6,6,7,8)					11
		11.00 - 11.45	D						
		12.00	D						12
		12.50 - 13.00	U						
		13.00	D						13
		13.50	D						
		14.00		N=32 (4,4/6,8,9,9)					14
		14.00 - 14.45	D						
		15.00	D						15
		15.50 - 16.00	U						
		16.00	D						16
		16.50	D						
		17.00		N=24 (4,5/3,4,8,9)					17
		17.00 - 17.45	D						
		18.00	D						18
		18.50 - 19.00	U						
		19.00	D						19
		19.30	D						
		19.50		N=40 (6,6/9,9,10,12)					
		19.50 - 19.95	D						
					20.00			End of borehole at 20.00 m	20

Remarks

AGS

Borehole Log

Borehole No. **BH5**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 29/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Brown silty sandy clayey TOPSOIL
		0.40 - 0.80	B					MADE GROUND: Brown-black silty gravelly SAND with ash, brick, glass and metal
		1.20		N=6 (1,2/1,2,2,1)				
		1.20 - 1.60	B					
		2.00		N=7 (1,1/1,2,2,2)	2.00			MADE GROUND: Soft brown silty CLAY with brick
		2.00 - 2.40	B					
	▽				2.60			MADE GROUND: Loose brown-black silty gravelly SAND with brick, ash, glass, plastic and metal
		3.00		N=5 (1,2/1,1,2,1)				
		3.00 - 3.40	B					
		4.00		N=10 (1,2/2,2,4,2)				
		4.00 - 4.40	B					
		5.00		N=10 (2,2/3,2,2,3)				
		5.00 - 5.40	B					
		5.60	D		5.60			Stiff brown CLAY
		6.10	D		6.10			Stiff dark grey CLAY
		6.50		N=12 (1,2/3,3,3,3)				
		6.50	D					
		7.50	D					
		8.00 - 8.40	U					
		8.45	D					
		9.00	D					
		9.50		N=18 (2,3/4,4,5,5)				
		9.50	D					
								Continued on next sheet

Remarks

Borehole Log

Borehole No. **BH5**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 29/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	D					
		11.00 - 11.40	U					
		11.45	D					
		12.00	D					
		12.50		N=22 (3,4/5,5,6,6)				
		12.50	D					
		13.50	D					
		14.00 - 14.40	U					
		14.45	D					
		15.00	D					
		15.50		N=25 (4,4/5,6,6,8)				
		15.50	D					
		16.50	D					
		17.00 - 17.40	U					
		17.45	D					
		18.00	D					
		18.50		N=33 (5,5/7,8,8,10)				
		18.50	D					
		19.50 - 19.90	U					
		20.00	D		20.00			End of borehole at 20.00 m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Borehole Log

Borehole No. **BH6**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 30/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40 - 0.80	B					MADE GROUND: Brick and Concrete Fill
		1.20		N=20 (4,4/4,3,7,6)				
		1.20 - 1.60	B					
		1.90	D		1.90			
		2.00		N=8 (2,2/1,2,2,3)				MADE GROUND: Brown-black silty gravelly SAND with brick, ash, glass and wood
		2.00 - 2.40	B					
		3.00		N=6 (1,2/2,1,1,2)				
	▼	3.00 - 3.40	B					
		4.00		N=7 (1,2/1,1,1,4)				
		4.00 - 4.40	B					
		5.00		N=8 (1,1/3,2,2,1)				
		5.00 - 5.40	B					
		5.40	D		5.40			MADE GROUND: Soft slightly gravelly SILT
		6.50		N=13 (3,3/4,3,3,3)				
		6.50 - 6.90	B		6.60			MADE GROUND: Silt and Gravel FILL
		7.30	D		7.20			Stiff brown CLAY
		7.50	D		7.50			Stiff dark grey CLAY
		8.00		N=17 (2,3/4,4,4,5)				
		8.00	D					
		9.00	D					
		9.50 - 9.90	U					
		9.95	D					

Continued on next sheet

Remarks

Borehole Log

Borehole No. **BH6**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 30/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50	D						
		11.00		N=18 (3,3/4,4,5,5)					11
		11.00	D						
		12.00	D						12
		12.50 - 12.90	U						
		12.95	D						13
		13.50	D						
		14.00		N=22 (4,4/5,5,5,7)					14
		14.00	D						
		15.00	D						15
		15.50 - 15.90	U						
		15.95	D						16
		16.50	D						
		17.00		N=27 (4,4/5,7,7,8)					17
		17.00	D						
		18.00	D						18
		18.50 - 18.90	U						
		18.95	D						19
		19.50		N=31 (4,5/6,8,8,9)					
		19.50	D						
					20.00			End of borehole at 20.00 m	20

Remarks

AGS

Borehole Log

Borehole No. **BH7**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 01/07/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40 - 0.80	B					MADE GROUND: Brick and concrete fill.
		1.20		N=21 (4,4/6,6,5,4)				
		1.20 - 1.60	B					
		2.00		N=20 (3,4/3,7,6,4)				
		2.00 - 2.40	B					
		3.00		N=16 (2,3/3,5,4,4)				
		3.00 - 3.40	B					
		3.60	D		3.50			MADE GROUND: Clay and brick fill.
		4.00		N=13 (2,2/3,3,4,3)				
		4.00 - 4.40	B					
	▼	5.00		N=11 (2,2/2,3,2,4)	4.90			MADE GROUND: Silty Gravel
		5.00 - 5.40	B					
		5.60	D		5.40			Dense brown sandy GRAVEL
		6.00	D					
		6.50		N=15 (4,4/4,4,4,3)				
		6.50 - 6.90	B					
		6.80	D		6.80			Stiff brown CLAY
		7.00	D		7.00			Stiff dark grey CLAY
		7.50 - 7.90	U					
		7.95	D					
		8.50	D					
		9.00		N=17 (2,2/4,4,4,5)				
		9.00	D					
		10.00	D					

Continued on next sheet

Remarks

Borehole Log

Borehole No. **BH7**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 01/07/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50 - 10.90	U						
		10.95	D						11
		11.50	D						
		12.00		N=19 (3,3/4,5,5,5)					12
		12.00	D						
		13.00	D						13
		13.50 - 13.90	U						
		13.95	D						14
		14.50	D						
		15.00		N=22 (4,4/5,5,6,6)					15
		15.00	D						
		16.00	D						16
		16.50 - 16.90	U						
		16.95	D						17
		17.50	D						
		18.00		N=32 (5,6/7,7,9,9)					18
		18.00	D						
		19.00	D						19
		19.50 - 19.90	U						
		20.00	D		20.00			End of borehole at 20.00 m	20

Remarks

AGS

Borehole Log

Borehole No. **BH8**

Sheet 1 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 04/07/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.40 - 0.80	B					MADE GROUND: Very soft mottled black and dark yellowish brown CLAY with occasional glass, coke, cinder and coal fragments
		1.20		N=16 (3,3/4,4,2,6)				
		1.20 - 1.60	B					
		2.00		N=19 (2,3/5,6,6,2)				
		2.00 - 2.40	B					
		3.00		N=16 (2,2/4,4,5,3)				
		3.00 - 3.40	B					
		4.00		N=10 (1,2/3,2,2,3)				
	▽	4.00 - 4.40	B					
		4.50	D		4.40			Dense brown silty very gravelly SAND: Gravel is black, brown and white, subangular and subrounded
		5.00		N=10 (2,3/3,2,2,3)				
		5.00 - 5.40	B					
		5.90	D		5.90			Soft grey-brown SILT
		6.30	D		6.30			Stiff brown CLAY
		6.40	D		6.40			Stiff dark grey CLAY
		6.50		N=11 (1,2/2,3,3,3)				
		6.50	D					
		7.50	D					
		8.00 - 8.40	U					
		8.45	D					
		9.00	D					
		9.50		N=16 (2,2/4,4,4,4)				
		9.50	D					

Continued on next sheet

Remarks

AGS

Borehole Log

Borehole No. **BH8**

Sheet 2 of 2

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type CP
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 04/07/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	D					
		11.00 - 11.40	U					
		11.45	D					
		12.00	D					
		12.50		N=18 (2,3/4,4,5,5)				
		12.50	D					
		13.50	D					
		14.00 - 14.40	U					
		14.50	D					
		15.00	D					
		15.50		N=22 (4,4/5,5,5,7)				
		15.50	D					
		16.50	D					
		17.00 - 17.40	U					
		17.45	D					
		18.00	D					
		18.50		N=29 (5,5/6,7,7,9)				
		18.50	D					
		19.50 - 19.90	U					
		20.00	D		20.00			End of borehole at 20.00 m

11 12 13 14 15 16 17 18 19 20

Remarks

AGS

Borehole Log

Borehole No. **WS01**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Brown silty sandy clayey TOPSOIL MADE GROUND: Mottled brown-orange silty gravelly SAND with concrete, glass, plastic, metal and brick
		1.00		N=4 (1,1/1,1,1,1)	1.00			MADE GROUND: Brown silty sandy CLAY with brick, glass and plastic
					1.40			MADE GROUND: Mottled brown-black slightly clayey gravelly SAND with ash, brick, metal, glass and plastic
		2.00		N=4 (0,1/1,1,1,1)	2.00			MADE GROUND: Brown-grey gravelly sandy CLAY
	▼				2.75			Soft becoming Stiff grey silty sandy CLAY
		3.50		N=2 (2,2/1,0,0,1)				*Band of yellow SAND.*
		4.50		N=28 (1,2/4,7,9,8)				
					5.00			End of borehole at 5.00 m

Remarks

AGS

Borehole Log

Borehole No. **WS02**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Brown silty clayey TOPSOIL MADE GROUND: Brown silty gravelly SAND with brick, metal, plastic and glass
		1.00		N=4 (0,1/1,1,1,1)				
					1.20			MADE GROUND: Dark brown-black gravelly SAND with ash, glass and plastic
		2.00		N=1 (2,2/1,0,0,0)	2.00			No Recovery
	▼							
					2.80			MADE GROUND: Brown sandy gravelly CLAY
					3.30			Soft becoming firm to Stiff brown (becoming greyer with depth) silt sandy CLAY
		3.50		N=2 (1,2/1,1,0,0)				
		4.80		0 (0 for 2mm/0 for 153mm)	5.00			End of borehole at 5.00 m

Remarks

AGS

Borehole Log

Borehole No. **WS03**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL MADE GROUND: Light brown sandy CLAY with brick, concrete and glass
		1.00		N=4 (1,1/1,1,1,1)				
		2.00		N=2 (0,1/0,1,0,1)	2.00			MADE GROUND: Mottled brown-black gravelly SAND with ash, brick, concrete, metal, glass and plastic
								No Recovery
	▼	3.50		N=7 (1,1/2,2,1,2)				
		4.50		N=20 (1,2/3,5,4,8)	4.50			Soft-very soft grey CLAY
					5.00			End of borehole at 5.00 m

Remarks

AGS

Borehole Log

Borehole No. **WS04**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 27/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL
					0.50			MADE GROUND: Brown-grey occasionally clayey silty gravelly SAND with brick
		1.00		N=7 (1,1/2,1,2,2)	1.00			MADE GROUND: Brown occasionally clayey silty gravelly SAND with brick
					1.35			MADE GROUND: Light brown silty sandy CLAY
		2.00		N=3 (1,0/0,1,1,1)				MADE GROUND: Brown gravelly silty very sandy CLAY with brick
					2.30			Soft brown silty sandy CLAY
	▼	3.00		N=32 (5,6/8,7,8,9)	2.80			Dense sandy medium GRAVEL. Sand is medium to coarse
		4.00		N=38 (10,10/11,10,9,8)	4.00			End of borehole at 4.00 m

Remarks

AGS

Borehole Log

Borehole No. **WS05**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL MADE GROUND: Soft-firm brown silty sandy CLAY with brick and various coloured sands and rock
		1.00		N=4 (3,3/2,1,1,0)				
					1.60			Very dense yellow-brown silty gravelly SAND
		2.00		N=12 (1,1/1,3,4,4)				
		3.00		N=51 (25 for 100mm/51 for 150mm)	3.00			End of borehole at 3.00 m

Remarks

Borehole Log

Borehole No. **WS06**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.15			MADE GROUND: Grey GRAVEL
					0.60			MADE GROUND: Dense brown cobbly sandy GRAVEL with brick
		1.00		N=19 (2,2/2,2,6,9)	0.90			MADE GROUND: Firm brown sandy CLAY with large amounts of brick
		2.00		50 (25 for 70mm/50 for 90mm)	2.00			Medium dense becoming dense to very dense brown-yellow-orange silty gravelly medium to coarse SAND. Gravel is fine to coarse
								End of borehole at 2.00 m

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Borehole Log

Borehole No. **WS07**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Made Ground: Gravel Hardstanding
					0.40			MADE GROUND: Dark grey sandy GRAVEL
		1.00		N=14 (1,2/1,1,3,9)	1.10			MADE GROUND: Brown-grey silty sandy CLAY with brick
					1.40			MADE GROUND: Brown-yellow sandy slightly gravelly CLAY
		2.00		N=6 (1,1/2,2,1,1)	2.00			Light brown slightly clayey cobbly gravelly SAND with brick and concrete
		3.00		N=6 (1,1/1,1,2,2)				MADE GROUND: Brown silty sandy gravelly CLAY with brick and concrete
	▼	4.00		N=10 (1,2/2,2,3,3)	4.00			Soft-firm brown silty sandy CLAY
					4.50			Firm grey silty sandy CLAY
					5.00			End of borehole at 5.00 m

Remarks

Borehole Log

Borehole No. **WS08**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL MADE GROUND: Firm brown silty sandy very gravelly CLAY with brick and concrete
		1.00		N=8 (0,1/2,2,2,2)				
		2.00		N=6 (1,2/1,2,2,1)				
								Band of Sand
		3.00		N=8 (1,2/2,1,2,3)				
	▼							
					5.00			End of borehole at 5.00 m

Remarks

AGS

Borehole Log

Borehole No. **WS09**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 28/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			Brown silty sandy clayey TOPSOIL
					1.00			MADE GROUND: Light grey silty gravelly SAND with some orange mottling and brick, concrete, glass and plastic
	▼				3.00			MADE GROUND: Loose dark brown-black silty gravelly SAND with brick and glass
					4.00			MADE GROUND: Very soft brown gravelly very sandy CLAY
					5.00			Soft grey silty CLAY
								End of borehole at 5.00 m

Remarks

Borehole Log

Borehole No. **WS10**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 29/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10			Brown silty sandy clayey TOPSOIL MADE GROUND: Dark brown silty slightly clayey gravelly SAND with glass and brick
		1.00		N=7 (1,1/2,1,2,2)	1.00			Soft-firm light brown silty sandy CLAY
		2.00		N=5 (1,1/1,1,1,2)	2.00			Firm mottled brown-grey silty CLAY
		3.00		52 (10,11/52 for 225mm)	3.20			Dense brown-yellow silty gravelly SAND
	▼				4.00			End of borehole at 4.00 m

Remarks

Borehole Log

Borehole No. **WS11**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 29/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL MADE GROUND: Light brown silty sandy gravelly CLAY with brick
		1.00		N=3 (1,2/1,1,1,0)				
					1.30			MADE GROUND: Dark brown-black silty gravelly SAND with clay bands and ash, glass, brick and plastic
		2.00		N=2 (0,1/1,0,1,0)				
		3.60		N=2 (0,1/1,0,1,0)				
					4.50			Very soft brown-grey silty sandy CLAY
					5.00			End of borehole at 5.00 m

1 2 3 4 5 6 7 8 9 10

Remarks

AGS

Borehole Log

Borehole No. **WS12**

Sheet 1 of 1

Project Name: Cheshunt Football Club	Project No. UK16.2295	Co-ords: -	Hole Type WLS
Location: Cheshunt Football Club, Waltham Cross		Level:	Scale 1:50
Client: LW Developments Ltd		Dates: 29/06/2016 -	Logged By

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.05			Brown silty sandy clayey TOPSOIL MADE GROUND: Brown silty gravelly SAND with brick, plastic and glass
		1.00		N=1 (1,0/1,0,0,0)	1.00			MADE GROUND: Brown-black silty gravelly SAND with ash, brick, concrete, plastic and glass
	▼	2.00		N=1 (1,0/1,0,0,0)				
					2.80			MADE GROUND: Black clayey sandy GRAVEL
		3.00		N=1 (1,0/1,0,0,0)	3.00			No Recovery
		4.20		N=3 (1,2/1,1,0,1)				End of borehole at 4.00 m
					5.00			

Remarks

AGS

APPENDIX H

Laboratory Results – Environmental

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781

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

Attention :	Michael Judson
Date :	11th July, 2016
Your reference :	UK16.2295
Our reference :	Test Report 16/11052 Batch 1 Schedule B
Location :	LW Developments Ltd
Date samples received :	1st July, 2016
Status :	Final report
Issue :	1

Four samples were received for analysis on 1st July, 2016 of which four 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:

Bruce Leslie
Project Co-ordinator

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	4-5	8-9	15-16	24-25							LOD/LOR	Units	Method No.
Sample ID	WS1	WS2	WS4	WS7									
Depth	3.20-3.40	1.40-1.70	3.30-3.50	2.20-2.40									
COC No / misc													
Containers	V J	V J	V J	V J									
Sample Date	27/06/2016	27/06/2016	27/06/2016	28/06/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016									
Arsenic #M	13.3	84.4	5.6	12.5							<0.5	mg/kg	TM30/PM15
Cadmium #M	<0.1	<0.1	<0.1	<0.1							<0.1	mg/kg	TM30/PM15
Chromium #M	89.1	74.6	108.1	63.6							<0.5	mg/kg	TM30/PM15
Copper #M	16	259 AA	5	27							<1	mg/kg	TM30/PM15
Lead #M	18	3759 AA	5	76							<5	mg/kg	TM30/PM15
Mercury #M	<0.1	<0.1	<0.1	<0.1							<0.1	mg/kg	TM30/PM15
Nickel #M	44.4	134.9	18.6	32.1							<0.7	mg/kg	TM30/PM15
Selenium #M	<1	1	<1	2							<1	mg/kg	TM30/PM15
Zinc #M	72	679	36	71							<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #M	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.15	<0.03	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03	0.05	0.03	<0.03							<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	0.14	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	0.06	0.04	<0.03							<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	0.05	0.03	<0.03							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	0.09	<0.06	<0.06							<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	0.06	0.02	<0.02							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	0.24	<0.07	<0.07							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	0.12	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	0.21	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	0.26	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Coronene	<0.04	0.11	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	1.4	<0.6	<0.6							<0.6	mg/kg	TM4/PM8
PAH 17 Total	<0.64	1.54	<0.64	<0.64							<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.17	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.07	<0.02	<0.02							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	104	101	102							<0	%	TM4/PM8
EPH >C8-C10 #M	<5	<5	<5	<5							<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	42	<10	<10							<10	mg/kg	TM5/PM8
EPH >C21-C25	<10	109	<10	<10							<10	mg/kg	TM5/PM8
EPH >C25-C35	<10	156	<10	<10							<10	mg/kg	TM5/PM8
EPH >C8-C35	<30	307	<30	<30							<30	mg/kg	TM5/PM8
Mineral Oil (C10-C40)	<30	320	<30	<30							<30	mg/kg	TM5/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	4-5	8-9	15-16	24-25							LOD/LOR	Units	Method No.
Sample ID	WS1	WS2	WS4	WS7									
Depth	3.20-3.40	1.40-1.70	3.30-3.50	2.20-2.40									
COC No / misc													
Containers	V J	V J	V J	V J									
Sample Date	27/06/2016	27/06/2016	27/06/2016	28/06/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016									
GRO (>C5-C6) #M	<0.1	<0.1 SV	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
GRO (>C6-C7)	<0.1	<0.1 SV	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
GRO (>C7-C8)	<0.1	<0.1 SV	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
GRO (>C8-C10) #M	0.4	<0.1 SV	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
GRO (>C5-C10)	0.4	<0.1 SV	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
MTBE #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
Benzene #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
Toluene #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5 SV	<5	<5							<5	ug/kg	TM31/PM12
PCB 28 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 52 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 101 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 118 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 138 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 153 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
PCB 180 #	<5	<5	<5	<5							<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	<35	<35	<35							<35	ug/kg	TM17/PM8
Natural Moisture Content	26.7	34.1	3.3	21.7							<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Chromium III	89.1	74.6	108.1	63.6							<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	0.21	23.31	<0.02	0.35							<0.02	%	TM21/PM24
Loss on Ignition #	9.8	32.7	1.0	9.0							<1.0	%	TM22/PM0
Sample Type	Clay	Sandy Loam	Clay	Clay								None	PM13/PM0
Sample Colour	Medium Grey	Dark Brown	Medium Brown	Medium Brown								None	PM13/PM0
Other Items	stones, sand	stones, roots, clinker	stones, sand	stones, brick								None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	35.0
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	74.1
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**16/11052**			
Sample No	**5**			
Client Sample No	**WS1**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**3.20-3.40**			
Sample Date	**27/06/2016**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.21	3	5	6
Loss on Ignition (%)	9.8	-	-	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)	-	-	>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**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.074	0.74	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.014	0.14	0.5	10	30
Nickel	0.003	0.03	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	<0.003	<0.03	4	50	200
Chloride	1.8	18	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	71.54	715.8	1000	20000	50000
Total Dissolved Solids	245	2451	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	4	40	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	48.8
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	67.2
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**16/11052**			
Sample No	**9**			
Client Sample No	**WS2**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**1.40-1.70**			
Sample Date	**27/06/2016**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	23.31	3	5	6
Loss on Ignition (%)	32.7	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	320	500	-	-
PAH Sum of 17(mg/kg)	1.54	100	-	-
pH (pH Units)	-	-	>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**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.070	0.70	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.017	0.17	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.011	0.11	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.007	0.07	4	50	200
Chloride	0.4	4	800	15000	25000
Fluoride	0.3	<3	10	150	500
Sulphate as SO4	25.90	259.0	1000	20000	50000
Total Dissolved Solids	122	1220	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	4	40	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	28.4
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	77.9
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**16/11052**			
Sample No	**25**			
Client Sample No	**WS7**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**2.20-2.40**			
Sample Date	**28/06/2016**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.35	3	5	6
Loss on Ignition (%)	9.0	-	-	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)	8.07	-	>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**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.016	0.16	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.005	0.05	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	0.009	0.09	4	50	200
Chloride	1.9	19	800	15000	25000
Fluoride	0.8	8	10	150	500
Sulphate as SO4	101.19	1011.4	1000	20000	50000
Total Dissolved Solids	287	2869	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	5	50	500	800	1000

All solid results are expressed on a dry weight basis unless stated otherwise.

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	4.5
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	95.7
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**16/11052**			
Sample No	**16**			
Client Sample No	**WS4**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**3.30-3.50**			
Sample Date	**27/06/2016**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	<0.02	3	5	6
Loss on Ignition (%)	1.0	-	-	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)	-	-	>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**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	<0.003	<0.03	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	<0.002	<0.02	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.003	0.03	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.003	0.03	4	50	200
Chloride	0.5	5	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	4.82	48.2	1000	20000	50000
Total Dissolved Solids	48	480	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	4	40	500	800	1000

Client Name: EPS Ltd **Matrix : Solid**
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	EPH Interpretation
16/11052	1	WS1	3.20-3.40	4-5	No interpretation possible
16/11052	1	WS2	1.40-1.70	8-9	Possible trace of degraded diesel
16/11052	1	WS4	3.30-3.50	15-16	No interpretation possible
16/11052	1	WS7	2.20-2.40	24-25	No interpretation possible

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

Note:

Analysis was 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. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions 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
16/11052	1	WS1	3.20-3.40	5	06/07/2016	**General Description (Bulk Analysis)**	soil/stones
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS2	1.40-1.70	9	06/07/2016	**General Description (Bulk Analysis)**	soil/stones
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS4	3.30-3.50	16	06/07/2016	**General Description (Bulk Analysis)**	Sand/Stones
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS7	2.20-2.40	25	06/07/2016	**General Description (Bulk Analysis)**	Soil/Stone
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD

Client Name: EPS Ltd

Matrix : Solid

Reference: UK16.2295

Location: LW Developments Ltd

Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
16/11052	1	WS1	3.20-3.40	4-5	GRO	Solid Samples were received at a temperature above 9°C.
16/11052	1	WS2	1.40-1.70	8-9	GRO	Solid Samples were received at a temperature above 9°C.
16/11052	1	WS4	3.30-3.50	15-16	GRO	Solid Samples were received at a temperature above 9°C.
16/11052	1	WS7	2.20-2.40	24-25	GRO	Solid Samples were received at a temperature above 9°C.

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.: 16/11052

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.

WATERS

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

ISO17025 (UKAS) accreditation applies to surface water and groundwater and 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.

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.
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	x5 Dilution

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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.	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	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	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			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.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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	CWG GC-FID			AR	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	Gravimetric determination of Total Dissolved Solids/Total Solids based on BS 1377-3:1990 and BSEN 15126	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.	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
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.	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
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.			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
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.			AR	Yes

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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 and 6010B	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 and 6010B	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
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	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 and 6010B	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.			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.			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.	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 samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital 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 CO2 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.			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.			AR	
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	
TM73	Modified US EPA methods 150.1 and 9045D. 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.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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	

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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

Attention :	Michael Judson
Date :	12th July, 2016
Your reference :	UK16.2295
Our reference :	Test Report 16/11052 Batch 1 Schedule A 16/11052 Batch 1 Schedule C 16/11052 Batch 1 Schedule E
Location :	LW Developments Ltd
Date samples received :	1st July, 2016
Status :	Final report
Issue :	1

Twenty seven samples were received for analysis on 1st July, 2016 of which sixteen 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:

Phil Sommerton BSc
Project Manager

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	1-2	3	10	11-12	13	14	17-18	19	20	23	LOD/LOR	Units	Method No.
Sample ID	WS1	WS1	WS2	WS3	WS3	WS4	WS5	WS5	WS6	WS7			
Depth	0.10-0.40	1.30-1.50	2.60-2.80	0.30-0.50	0.90-1.00	1.10-1.30	0.50-0.60	1.70-1.80	1.10-1.30	0.80-1.00			
COC No / misc													
Containers	V J	T	T	V J	T	T	V J	T	T	T			
Sample Date	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	28/06/2016	28/06/2016	28/06/2016	28/06/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016			
Arsenic #M	40.2	-	-	-	-	-	12.2	-	-	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	18.6	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	0.5	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	129.4	-	-	-	-	-	44.4	-	-	-	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	38.5	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	1053	-	-	-	-	-	34	-	-	-	<1	mg/kg	TM30/PM15
Copper	-	-	-	66	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	812	-	-	-	-	-	114	-	-	-	<5	mg/kg	TM30/PM15
Lead	-	-	-	275	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	1.8	-	-	-	-	-	0.3	-	-	-	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	0.3	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	75.2	-	-	-	-	-	16.0	-	-	-	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	30.9	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	-	-	-	-	-	<1	-	-	-	<1	mg/kg	TM30/PM15
Selenium	-	-	-	<1	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Sulphur	-	0.04	0.18	-	0.19	0.01	-	<0.01	0.01	0.08	<0.01	%	TM30/PM15
Total Sulphate #M	1046	366	2849	-	3859	272	233	96	218	1777	<50	mg/kg	TM50/PM29
Total Sulphate	-	-	-	3456	-	-	-	-	-	-	<50	mg/kg	TM50/PM29
Zinc #M	1155	-	-	-	-	-	236	-	-	-	<5	mg/kg	TM30/PM15
Zinc	-	-	-	258	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	1-2	3	10	11-12	13	14	17-18	19	20	23	LOD/LOR	Units	Method No.
Sample ID	WS1	WS1	WS2	WS3	WS3	WS4	WS5	WS5	WS6	WS7			
Depth	0.10-0.40	1.30-1.50	2.60-2.80	0.30-0.50	0.90-1.00	1.10-1.30	0.50-0.60	1.70-1.80	1.10-1.30	0.80-1.00			
COC No / misc													
Containers	V J	T	T	V J	T	T	V J	T	T	T			
Sample Date	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	28/06/2016	28/06/2016	28/06/2016	28/06/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016			
PAH MS													
Naphthalene #M	<0.04	-	-	<0.04	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.13	-	-	0.08	-	-	0.04	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	-	-	<0.05	-	-	<0.05	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	-	-	0.05	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.21	-	-	0.48	-	-	0.19	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene #	0.10	-	-	0.16	-	-	0.06	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.62	-	-	0.92	-	-	0.44	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene #	0.58	-	-	0.83	-	-	0.37	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.44	-	-	0.52	-	-	0.19	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.39	-	-	0.44	-	-	0.17	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.96	-	-	0.76	-	-	0.35	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.41	-	-	0.43	-	-	0.20	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.34	-	-	0.29	-	-	0.14	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.08	-	-	0.05	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.34	-	-	0.29	-	-	0.13	-	-	-	<0.04	mg/kg	TM4/PM8
Coronene	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	4.6	-	-	5.3	-	-	2.3	-	-	-	<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	-	-	-	-	-	-	-	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.69	-	-	0.55	-	-	0.25	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.27	-	-	0.21	-	-	0.10	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103	-	-	104	-	-	99	-	-	-	<0	%	TM4/PM8
Mineral Oil (C10-C40)	-	-	-	-	-	-	-	-	-	-	<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #M	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	44	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	44	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	1-2	3	10	11-12	13	14	17-18	19	20	23	LOD/LOR	Units	Method No.
Sample ID	WS1	WS1	WS2	WS3	WS3	WS4	WS5	WS5	WS6	WS7			
Depth	0.10-0.40	1.30-1.50	2.60-2.80	0.30-0.50	0.90-1.00	1.10-1.30	0.50-0.60	1.70-1.80	1.10-1.30	0.80-1.00			
COC No / misc													
Containers	V J	T	T	V J	T	T	V J	T	T	T			
Sample Date	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	28/06/2016	28/06/2016	28/06/2016	28/06/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016			
TPH CWG													
Aromatics													
>C5-EC7	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<1.0 AA	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35	72	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35	72	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	116	-	-	-	-	-	-	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
GRO (>C5-C6) #M	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
GRO (>C6-C7)	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
GRO (>C7-C8)	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
GRO (>C8-C10) #M	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
GRO (>C5-C10)	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
MTBE #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Benzene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Toluene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Ethylbenzene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
m/p-Xylene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
o-Xylene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Total Phenols HPLC	<0.15	-	-	<0.15	-	-	<0.15	-	-	-	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	9.3	-	-	-	-	-	9.9	-	-	-	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	26.5	-	-	-	-	-	-	<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	0.0623	0.0320	0.2612	-	1.7056	0.0962	0.0153	0.0134	0.0728	0.1156	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	0.1714	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60
Chromium III	129.4	-	-	-	-	-	44.4	-	-	-	<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	38.5	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Total Cyanide #M	9.2	-	-	<0.5	-	-	<0.5	-	-	-	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM24
Organic Matter	16.3	-	-	NDP	-	-	2.0	-	-	-	<0.2	%	TM21/PM24
pH #M	8.02	8.29	7.55	10.57	8.03	8.11	8.32	8.64	8.29	8.54	<0.01	pH units	TM73/PM11
Sample Type	Sandy Loam	Clay	Clay	Clay	Clay	Clay	Clayey Loam	Clayey Sand	Clayey Sand	Sand		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, glass, vegetation	stones, sand	stones, sand, clinker	stones, sand, clinker, brick	stones, sand, clinker, brick	stones	stones, sand, vegetation, clinker	stones	stones	stones, brick, clinker		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	24-25	28-30	33-34	35	38	41-42					LOD/LOR	Units	Method No.
Sample ID	WS7	WS8	WS9	WS9	WS10	WS11							
Depth	2.20-2.40	2.80-3.00	1.30-1.50	1.40-1.60	1.70-1.80	1.40-1.70							
COC No / misc													
Containers	V J	V J T	V J	T	T	V J							
Sample Date	28/06/2016	28/06/2016	28/06/2016	28/06/2016	29/06/2016	29/06/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016							
Arsenic #M	12.5	-	61.7	-	-	97.5					<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1	-	0.3	-	-	2.6					<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM62
Chromium #M	63.6	-	50.2	-	-	51.2					<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM62
Copper #M	27	-	217	-	-	212					<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-					<1	mg/kg	TM30/PM62
Lead #M	76	-	632	-	-	622					<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-					<5	mg/kg	TM30/PM62
Mercury #M	<0.1	-	0.3	-	-	0.6					<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM62
Nickel #M	32.1	-	100.3	-	-	138.3					<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-					<0.7	mg/kg	TM30/PM62
Selenium #M	2	-	1	-	-	<1					<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-					<1	mg/kg	TM30/PM62
Sulphur	-	0.48	-	0.13	<0.01	-					<0.01	%	TM30/PM15
Total Sulphate #M	1929	13160$_{AA}$	1495	1785	156	2940					<50	mg/kg	TM50/PM29
Total Sulphate	-	-	-	-	-	-					<50	mg/kg	TM50/PM29
Zinc #M	71	-	459	-	-	967					<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-					<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	24-25	28-30	33-34	35	38	41-42					LOD/LOR	Units	Method No.
Sample ID	WS7	WS8	WS9	WS9	WS10	WS11							
Depth	2.20-2.40	2.80-3.00	1.30-1.50	1.40-1.60	1.70-1.80	1.40-1.70							
COC No / misc													
Containers	V J	V J T	V J	T	T	V J							
Sample Date	28/06/2016	28/06/2016	28/06/2016	28/06/2016	29/06/2016	29/06/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016							
PAH MS													
Naphthalene #M	<0.04	-	<0.04	-	-	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	-	0.06	-	-	0.19					<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	-	<0.03	-	-	0.77					<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	-	<0.04	-	-	0.29					<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	-	0.04	-	-	1.53					<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	-	<0.03	-	-	1.29					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	-	0.11	-	-	0.79					<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	-	0.07	-	-	0.90					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	-	0.28	-	-	1.79					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	-	0.13	-	-	0.95					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	-	0.15	-	-	0.75					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	-	<0.04	-	-	0.19					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	-	0.18	-	-	0.80					<0.04	mg/kg	TM4/PM8
Coronene	<0.04	-	-	-	-	-					<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	-	1.0	-	-	10.3					<0.6	mg/kg	TM4/PM8
PAH 17 Total	<0.64	-	-	-	-	-					<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	-	0.20	-	-	1.29					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	-	0.08	-	-	0.50					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	102	-	101	-	-	113					<0	%	TM4/PM8
Mineral Oil (C10-C40)	<30	-	-	-	-	-					<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	-	<0.1 SV	-	-	<0.1 SV					<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	-	<0.1 SV	-	-	<0.1 SV					<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	-	<0.1 SV	-	-	<0.1 SV					<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	9	-	38	-	-	39					<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	-	38	-	-	39					<19	mg/kg	TM5/TM36/PM12/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson
JE Job No.: 16/11052

Report : Solid

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

J E Sample No.	24-25	28-30	33-34	35	38	41-42					LOD/LOR	Units	Method No.
Sample ID	WS7	WS8	WS9	WS9	WS10	WS11							
Depth	2.20-2.40	2.80-3.00	1.30-1.50	1.40-1.60	1.70-1.80	1.40-1.70							
COC No / misc													
Containers	V J	V J T	V J	T	T	V J							
Sample Date	28/06/2016	28/06/2016	28/06/2016	28/06/2016	29/06/2016	29/06/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016	01/07/2016							
TPH CWG													
Aromatics													
>C5-EC7	<0.1	-	<0.1 SV	-	-	<0.1 SV					<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	-	<0.1 SV	-	-	<0.1 SV					<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	-	<0.1 SV	-	-	<0.1 SV					<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	-	<7	-	-	<7					<7	mg/kg	TM5/PM16
>EC21-EC35	<7	-	<7	-	-	98					<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	-	<19	-	-	98					<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	-	38	-	-	137					<38	mg/kg	TM5/TM36/PM12/PM16
GRO (>C5-C6) #M	<0.1	-	-	-	-	-					<0.1	mg/kg	TM36/PM12
GRO (>C6-C7)	<0.1	-	-	-	-	-					<0.1	mg/kg	TM36/PM12
GRO (>C7-C8)	<0.1	-	-	-	-	-					<0.1	mg/kg	TM36/PM12
GRO (>C8-C10) #M	<0.1	-	-	-	-	-					<0.1	mg/kg	TM36/PM12
GRO (>C5-C10)	<0.1	-	-	-	-	-					<0.1	mg/kg	TM36/PM12
MTBE #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
Benzene #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
Toluene #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
o-Xylene #	<5	-	<5 SV	-	-	<5 SV					<5	ug/kg	TM31/PM12
Total Phenols HPLC	<0.15	-	<0.15	-	-	<0.15					<0.15	mg/kg	TM26/PM21
Natural Moisture Content	21.7	-	23.3	-	-	13.8					<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-					<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	0.8723	1.6129	0.2174	0.1108	0.0241	0.3161					<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-					<0.0015	g/l	TM38/PM60
Chromium III	63.6	-	50.2	-	-	51.2					<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-	-					<0.5	mg/kg	NONE/NONE
Total Cyanide #M	<0.5	-	<0.5	-	-	2.4					<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	0.35	-	-	-	-	-					<0.02	%	TM21/PM24
Organic Matter	0.6	-	41.1	-	-	59.0					<0.2	%	TM21/PM24
pH #M	8.07	6.49	8.11	7.61	7.50	7.80					<0.01	pH units	TM73/PM11
Sample Type	Clay	Clayey Silt	Clayey Sand	Sandy Loam	Clay	Clay						None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Dark Brown	Dark Brown	Medium Brown	Dark Brown						None	PM13/PM0
Other Items	stones, brick	stones, sand	stones, clinker	stones, clinker, brick	stones	stones, sand, brick, clinker						None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: EPS Ltd **Matrix : Solid**
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	EPH Interpretation
16/11052	1	WS1	0.10-0.40	1-2	Possible trace of lubricating oil
16/11052	1	WS7	2.20-2.40	24-25	No interpretation possible
16/11052	1	WS9	1.30-1.50	33-34	Possible trace of tarmac/bitumen
16/11052	1	WS11	1.40-1.70	41-42	PAH's & Possible trace of lubricating oil

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

Note:

Analysis was 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. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions 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
16/11052	1	WS1	0.10-0.40	2	06/07/2016	**General Description (Bulk Analysis)**	soil/stones
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS3	0.30-0.50	12	06/07/2016	**General Description (Bulk Analysis)**	Soil/Stones
					06/07/2016	**Asbestos Fibres**	Fibre Bundles
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos Type**	Chrysotile
					06/07/2016	**Asbestos Level Screen**	<0.1%
					12/07/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					12/07/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/11052	1	WS5	0.50-0.60	18	06/07/2016	**General Description (Bulk Analysis)**	soil/stones
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS7	2.20-2.40	25	06/07/2016	**General Description (Bulk Analysis)**	Soil/Stone
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS9	1.30-1.50	34	06/07/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD

Client Name: EPS Ltd
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/11052	1	WS9	1.30-1.50	34	06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD
16/11052	1	WS11	1.40-1.70	42	06/07/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					06/07/2016	**Asbestos Fibres**	NAD
					06/07/2016	**Asbestos Fibres (2)**	NAD
					06/07/2016	**Asbestos ACM**	NAD
					06/07/2016	**Asbestos ACM (2)**	NAD
					06/07/2016	**Asbestos Type**	NAD
					06/07/2016	**Asbestos Type (2)**	NAD
					06/07/2016	**Asbestos Level Screen**	NAD

Client Name: EPS Ltd **Matrix : Solid**
Reference: UK16.2295
Location: LW Developments Ltd
Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/11052	1	WS3	0.30-0.50	11-12	Asbestos detected in sample

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/11052

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.

WATERS

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

ISO17025 (UKAS) accreditation applies to surface water and groundwater and 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.

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.
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	x10 Dilution

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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.	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	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	
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	CWG GC-FID			AR	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	

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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 CO2 generated is quantified using infra-red detection.	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
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.	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
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 and 6010B	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 and 6010B	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
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	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.			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.			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

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital 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 samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen. Samples are extracted using an orbital 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
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.			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.			AR	
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	
TM73	Modified US EPA methods 150.1 and 9045D. 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.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

JE Job No: 16/11052

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
NONE	No Method Code	NONE	No Method Code			AR	Yes

Jones Environmental Laboratory

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EPS Ltd
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Broad Street
Cambourne
Cambridgeshire
CB23 6JN

Attention :	Michael Judson
Date :	15th July, 2016
Your reference :	UK16.2295
Our reference :	Test Report 16/11389 Batch 1
Location :	Cheshunt Football Club
Date samples received :	9th July, 2016
Status :	Final report
Issue :	1

Nine samples were received for analysis on 9th July, 2016 of which nine 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:

Phil Sommerton BSc
Project Manager

Client Name: EPS Ltd
Reference: UK16.2295
Location: Cheshunt Football Club
Contact: Michael Judson
JE Job No.: 16/11389

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36		LOD/LOR	Units	Method No.
Sample ID	WS1	WS2	WS4	WS7	WS8	WS9	WS10	WS11	BH8				
Depth										Please see attached notes for all abbreviations and acronyms			
COC No / misc													
Containers	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G				
Sample Date	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016				
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016				
Dissolved Arsenic #	33.0	11.1	11.6	15.6	7.0	3.5	9.6	6.9	4.5		<2.5	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM30/PM14
Total Dissolved Chromium #	<1.5	<1.5	<1.5	2.3	<1.5	<1.5	<1.5	<1.5	<1.5		<1.5	ug/l	TM30/PM14
Dissolved Copper #	13	<7	<7	<7	<7	9	<7	9	<7		<7	ug/l	TM30/PM14
Dissolved Lead #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM30/PM14
Dissolved Mercury #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM30/PM14
Dissolved Nickel #	10	14	16	4	5	21	10	30	5		<2	ug/l	TM30/PM14
Dissolved Selenium #	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM30/PM14
Dissolved Zinc #	78	1156	167	<3	43	1593	275	2345	37		<3	ug/l	TM30/PM14
PAH MS													
Naphthalene #	0.3	0.4	0.5	0.1	0.4	0.1	<0.1	2.3	13.7 AA		<0.1	ug/l	TM4/PM30
Acenaphthylene #	<0.013	<0.013	0.260	<0.013	0.030	<0.013	<0.013	0.110	0.210		<0.013	ug/l	TM4/PM30
Acenaphthene #	0.030	0.060	0.870	0.300	0.060	<0.013	<0.013	0.040	0.040		<0.013	ug/l	TM4/PM30
Fluorene #	0.020	0.040	0.840	0.050	0.020	<0.014	<0.014	0.020	0.030		<0.014	ug/l	TM4/PM30
Phenanthrene #	0.090	0.110	3.160	0.100	0.070	0.020	0.040	0.020	0.070		<0.011	ug/l	TM4/PM30
Anthracene #	0.020	0.020	0.520	0.020	0.020	<0.013	<0.013	<0.013	0.020		<0.013	ug/l	TM4/PM30
Fluoranthene #	0.050	0.050	1.140	0.060	0.050	0.020	0.050	0.020	0.090		<0.012	ug/l	TM4/PM30
Pyrene #	0.040	0.040	0.790	0.040	0.040	0.020	0.060	0.020	0.080		<0.013	ug/l	TM4/PM30
Benzo(a)anthracene #	<0.015	<0.015	0.140	0.020	<0.015	0.020	0.040	<0.015	0.040		<0.015	ug/l	TM4/PM30
Chrysene #	<0.011	<0.011	0.120	0.020	<0.011	<0.011	0.030	<0.011	0.040		<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene #	<0.018	<0.018	0.090	0.030	<0.018	0.030	0.050	0.020	0.040		<0.018	ug/l	TM4/PM30
Benzo(a)pyrene #	<0.016	<0.016	0.060	0.020	<0.016	0.020	0.030	<0.016	0.020		<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene #	<0.011	<0.011	<0.011	<0.011	<0.011	0.020	<0.011	<0.011	<0.011		<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene #	<0.011	<0.011	0.030	<0.011	<0.011	0.020	<0.011	<0.011	<0.011		<0.011	ug/l	TM4/PM30
PAH 16 Total #	0.550	0.720	8.520	0.760	0.690	0.270	0.300	2.550	14.380		<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01	<0.01	0.06	0.02	<0.01	0.02	0.04	0.01	0.03		<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.01	<0.01	0.01		<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	79	82	80	77	88	81	83	87	91		<0	%	TM4/PM30
TPH CWG													
Aliphatics													
>C5-C6 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>C6-C8 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>C8-C10 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM5/PM30
>C12-C16 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
>C16-C21 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/TM36/PM30

Client Name: EPS Ltd
Reference: UK16.2295
Location: Cheshunt Football Club
Contact: Michael Judson
JE Job No.: 16/11389

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36		LOD/LOR	Units	Method No.
Sample ID	WS1	WS2	WS4	WS7	WS8	WS9	WS10	WS11	BH8				
Depth													
COC No / misc													
Containers	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G				
Sample Date	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016				
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016				
TPH CWG													
Aromatics													
>C5-EC7 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>EC7-EC8 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>EC8-EC10 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM5/PM30
>EC12-EC16 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
>EC16-EC21 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
>EC21-EC35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
Total aromatics C5-35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM30
Total aliphatics and aromatics(C5-35) #	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/TM36/PM30
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM36/PM12
Total Phenols HPLC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	mg/l	TM26/PM0
Sulphate #	1032.00	1400.87	440.29	778.24	834.42	759.24	562.55	1165.75	111.51		<0.05	mg/l	TM38/PM0
Total Cyanide #	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	mg/l	TM89/PM0
Hexavalent Chromium #	<6	<6	<6	<6	<6	<6	<6	<6	<6		<6	ug/l	TM38/PM0
Total Dissolved Chromium III	<6	<6	<6	<6	<6	<6	<6	<6	<6		<6	ug/l	NONE/NONE
pH #	6.79	6.96	7.07	7.19	7.41	6.98	7.22	6.93	7.31		<0.01	pH units	TM73/PM0
Total Organic Carbon #	37	31	38	46	11	12	35	30	4		<2	mg/l	TM60/PM0

Client Name: EPS Ltd
Reference: UK16.2295
Location: Cheshunt Football Club
Contact: Michael Judson
JE Job No.: 16/11389

SVOC Report : **Liquid**

J E Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36				
Sample ID	WS1	WS2	WS4	WS7	WS8	WS9	WS10	WS11	BH8				
Depth										Please see attached notes for all abbreviations and acronyms			
COC No / misc													
Containers	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G	V HN G				
Sample Date	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016	07/07/2016				
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016	09/07/2016		LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Phenol	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5		<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1	<1	<1	4	18	<1	<1	<1		<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	91	89	88	79	78	74	92	96	79		<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	97	96	97	89	86	82	100	105	86		<0	%	TM16/PM30

Client Name: EPS Ltd **Matrix : Liquid**
Reference: UK16.2295
Location: Cheshunt Football Club
Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	EPH Interpretation
16/11389	1	WS1		1-4	No interpretation possible
16/11389	1	WS2		5-8	No interpretation possible
16/11389	1	WS4		9-12	No interpretation possible
16/11389	1	WS7		13-16	No interpretation possible
16/11389	1	WS8		17-20	No interpretation possible
16/11389	1	WS9		21-24	No interpretation possible
16/11389	1	WS10		25-28	No interpretation possible
16/11389	1	WS11		29-32	No interpretation possible
16/11389	1	BH8		33-36	No interpretation possible

Client Name: EPS Ltd

Matrix : Liquid

Reference: UK16.2295

Location: Cheshunt Football Club

Contact: Michael Judson

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
16/11389	1					Liquid Samples were received at a temperature above 9°C.

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.: 16/11389

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.

WATERS

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

ISO17025 (UKAS) accreditation applies to surface water and groundwater and 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.

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.
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	x5 Dilution

JE Job No: 16/11389

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			
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	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	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			

JE Job No: 16/11389

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	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			
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 CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	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.	PM0	No preparation is required.	Yes			
NONE	No Method Code	NONE	No Method Code				

APPENDIX I

Laboratory Results - Geotechnical

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : 27/07/16 **PAGE 1 of 32 Pages**

Contract — UK16.2295 - Proposed Cheshunt Sports Village

Serial No. — S30215

UKAS TESTING 0998

CLIENT:

Environmental Protection
Strategies Ltd
7B Caxton House
Broad Street
CAMBOURNE
CAMBRIDGE
CB23 6JN

Soil Property Testing Ltd.

15,16 & 18 Halcyon Court, St Margarets Way,
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Telephone (01480) 455579 Fax (01480) 453619
Email enquiries@soilpropertytesting.com

SAMPLES SUBMITTED BY:

Environmental Protection

APPROVED SIGNATORIES:

☑ **J.C.GARNER B.Eng (Hons.) FGS**
Technical Director

☐ **S.P.TOWNEND FGS**
Quality Manager

☐ **W.JOHNSTONE**
Materials Lab Manager

SAMPLES LABELLED:

UK16.2295 - Proposed Cheshunt Sports Village

DATE RECEIVED: 06/07/16

SAMPLES TESTED BETWEEN 06/07/16 **and** 27/07/16

REMARKS: For the attention of Mr M Judson

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.

ISSUED BY : SOIL PROPERTY TESTING LTD.

DATE OF ISSUE : As page 1 **PAGE** 2 of 32

Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215

SCHEDULE OF LABORATORY TESTS

Bh./ Tp No.	Sample Ref	Depth (from)	1:Moisture Content Determination	4:Liquid/Plastic limit 1 point	13:Triaxial Test single stage	5:Wet Sieve Preparation for Limi	7:PSD by Wet Sieve BS1377	Remarks
BH1	D5	8.00	*	*				
	U1	9.50			*			
	U3	15.50			*			
BH2	U1	9.00			*			
	D11	10.00	*	*				
	U2	12.00			*			
BH3	U1	6.50			*			
	D15	15.00	*	*				
	U5	18.50			*			
BH4	D1	3.70	*	*		*		
	U2	9.50			*			
	U3	12.50			*			
BH5	D3	6.50	*	*				
	U1	8.00			*			
	U3	14.00			*			
BH6	D9	11.00	*	*				
	U2	12.50			*			
	U3	15.50			*			
BH7	U1	7.50			*			
	D16	15.00	*	*				
	U4	16.50			*			
BH8	D6	7.50	*	*				
	U1	8.00			*			
	U3	14.00			*			
WS4	D4.5	4.50				*		
-	-	-	8	8	16	1	1	<— Total Number of Tests ——

Scheduled by: Environmental Protection

Target Date: 20/07/16

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : As page 1 **PAGE** 3 of 12

Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215

UKAS TESTING 0998

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

Borehole/ Pit No.	Depth m.	Sample	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)	SAMPLE PREPARATION				Description	CLASS
								Method S/N	Ret'd 0.425mm (%)	Corr'd M/C <0.425mm	Curing Time (hrs.)		
BH1	8.00	D5	27	72	25	47	0.04	N	0(A)		71	Stiff dark grey CLAY	CV
BH2	10.00	D11	26	73	24	49	0.04	N	0(A)		72	Stiff dark grey CLAY	CV
BH3	15.00	D15	25	58	22	36	0.08	N	0(A)		71	Stiff dark grey CLAY	CH
BH4	3.70	D1	59	70	27	43		S	30(M)		70	Very soft mottled black and dark yellowish brown CLAY with occasional glass, coke, cinder and coal fragments from medium sand to coarse gravel size	CH/ CV
BH5	6.50	D3	29	75	26	49	0.06	N	0(A)		72	Stiff dark grey CLAY	CV
BH6	11.00	D9	25	65	24	41	0.02	N	0(A)		71	Stiff dark grey CLAY with rare fine sand/silt partings	CH
BH7	15.00	D16	26	69	24	45	0.04	N	0(A)		72	Stiff dark grey CLAY with rare fine sand/silt partings	CH
BH8	7.50	D6	29	75	28	47	0.02	N	0(A)		71	Stiff dark grey CLAY	CV

METHOD OF PREPARATION : BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2 S = Wet Sieved Specimen N = prepared from Natural

METHOD OF TEST : BS 1377: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. A = Assumed, M = Measured

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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Contract
UK16.2295 - Proposed Cheshunt Sports Village

Serial No.
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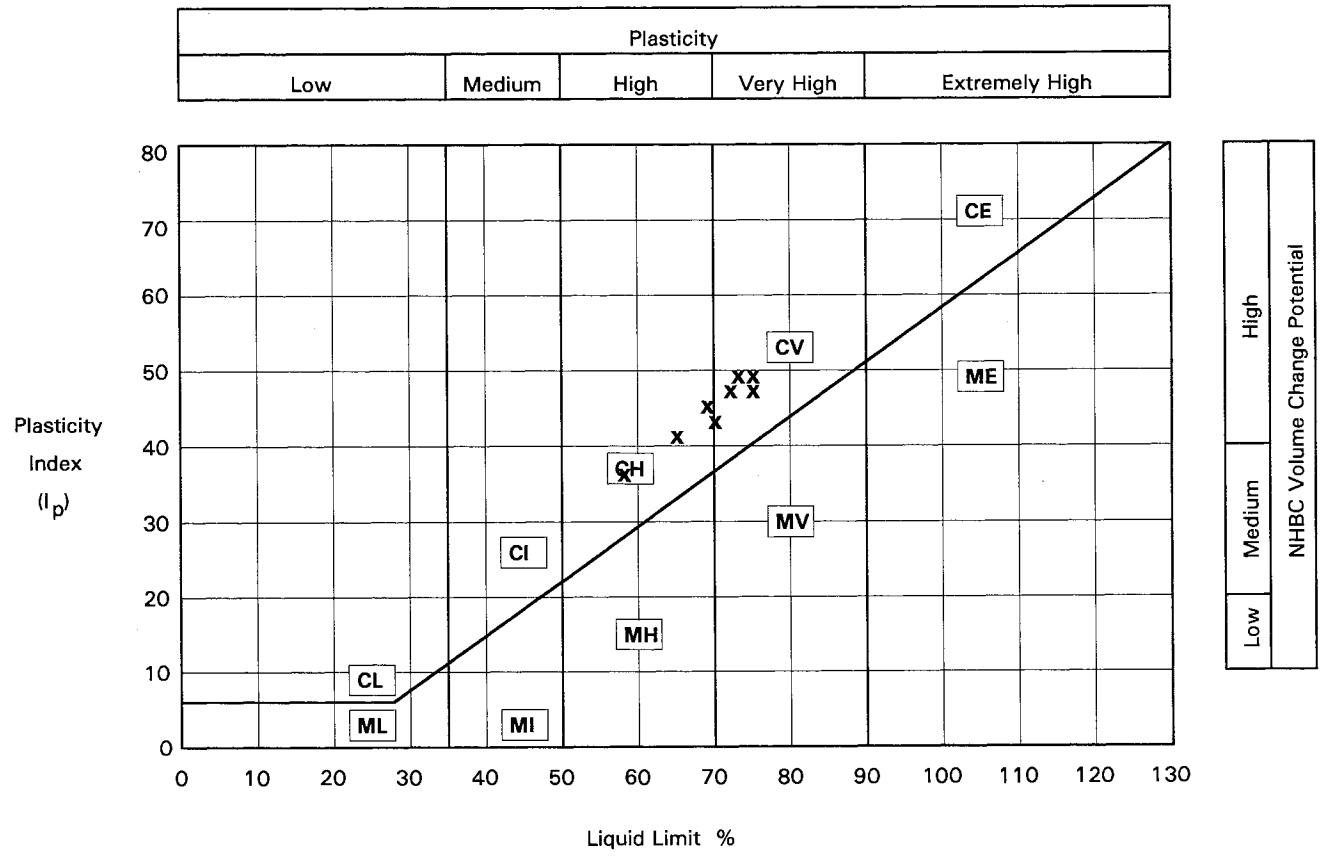
PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT USING CASAGRANDE CLASSIFICATION CHART



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index PLASTICITY CHART BS5930:1999:Figure 18

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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UKAS TESTING 0998

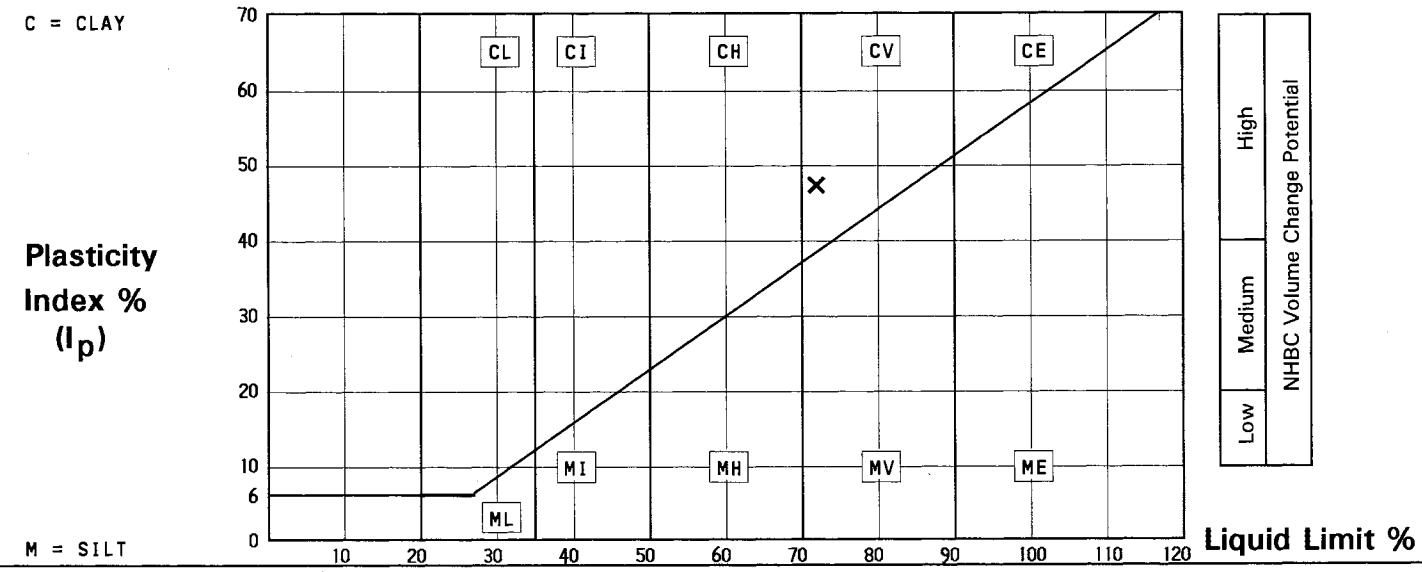
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH1	8.00	D5	27	Stiff dark grey CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil		
Sample retained 0.425 sieve	(Assumed)	0	%
Corrected moisture content for material passing 0.425mm			%
Curing Time		71 Hours	

Liquid Limit	72	%
Plastic Limit	25	%
Plasticity Index	47	%
Liquidity Index	0.04	
Clay Content	Not analysed.	%
Derived Activity (PI/CC)	Not analysed.	



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215

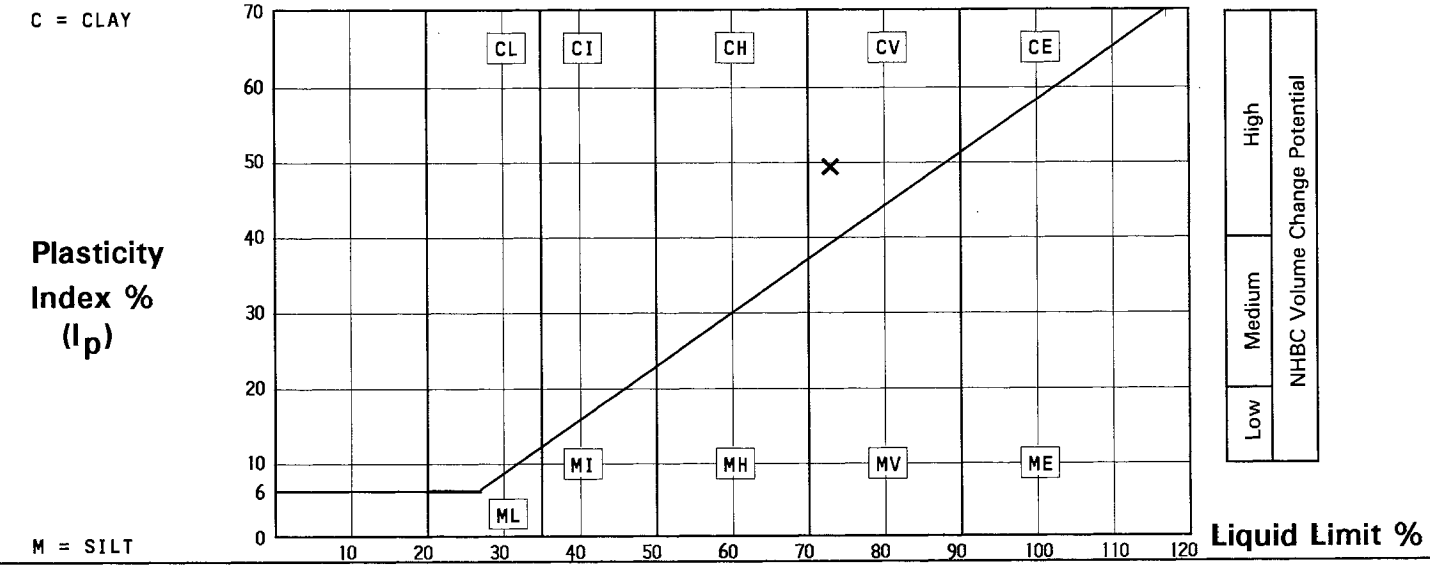
UKAS TESTING 0998

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

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH2	10.00	D11	26	Stiff dark grey CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil	Liquid Limit	73 %
Sample retained 0.425 sieve	(Assumed) 0 %	Plastic Limit	24 %
Corrected moisture content for material passing 0.425mm	%	Plasticity Index	49 %
Curing Time	72 Hours	Liquidity Index	0.04
		Clay Content	Not analysed. %
		Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

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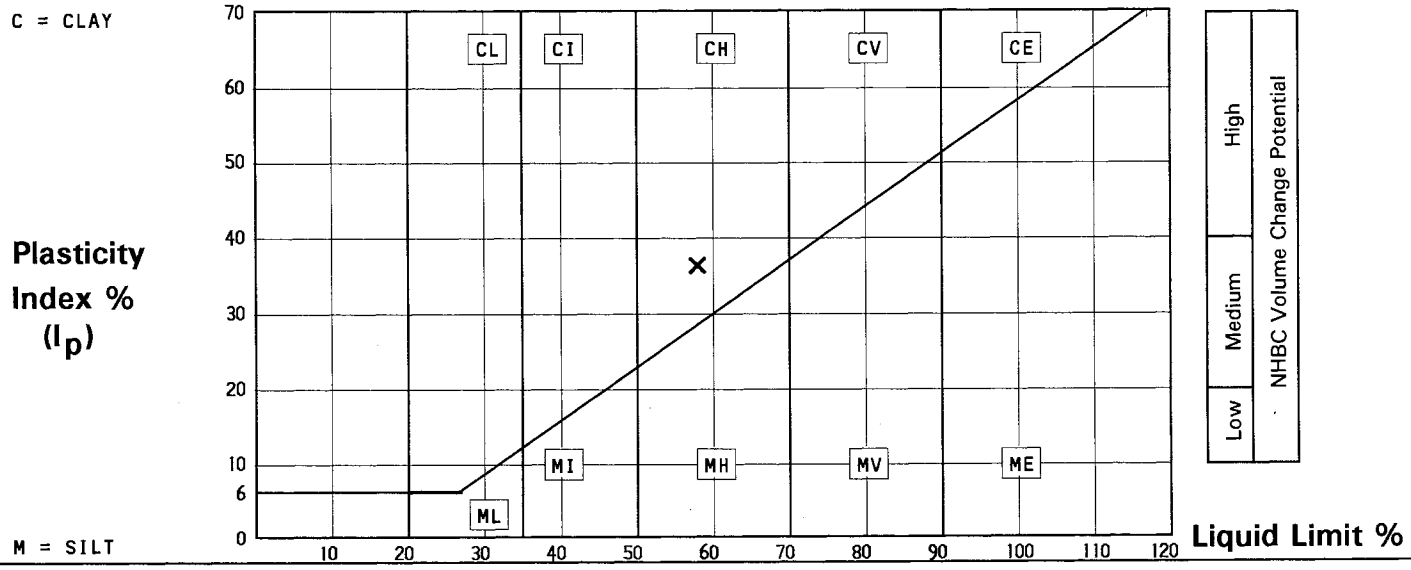
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH3	15.00	D15	25	Stiff dark grey CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve	(Assumed) 0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	71 Hours

Liquid Limit	58 %
Plastic Limit	22 %
Plasticity Index	36 %
Liquidity Index	0.08
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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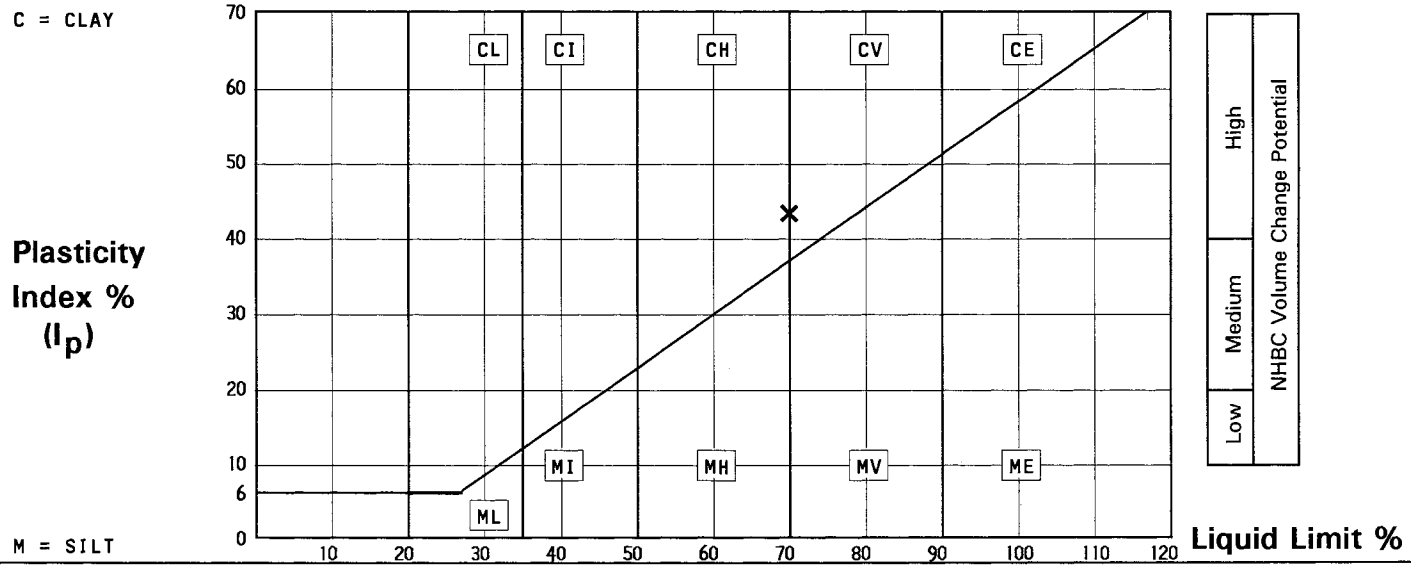
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH4	3.70	D1	59	Very soft mottled black and dark yellowish brown CLAY with occasional glass, coke, cinder and coal fragments from medium sand to coarse gravel size	

PREPARATION

Method of Preparation	Sieved Specimen	Liquid Limit	70 %
Sample retained 0.425 sieve	(Measured) 30 %	Plastic Limit	27 %
Corrected moisture content for material passing 0.425mm	%	Plasticity Index	43 %
Curing Time	70 Hours	Liquidity Index	
		Clay Content	Not analysed. %
		Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)
Corrected moisture content and liquidity index not reported due to material type - 28% retained on 2mm sieve.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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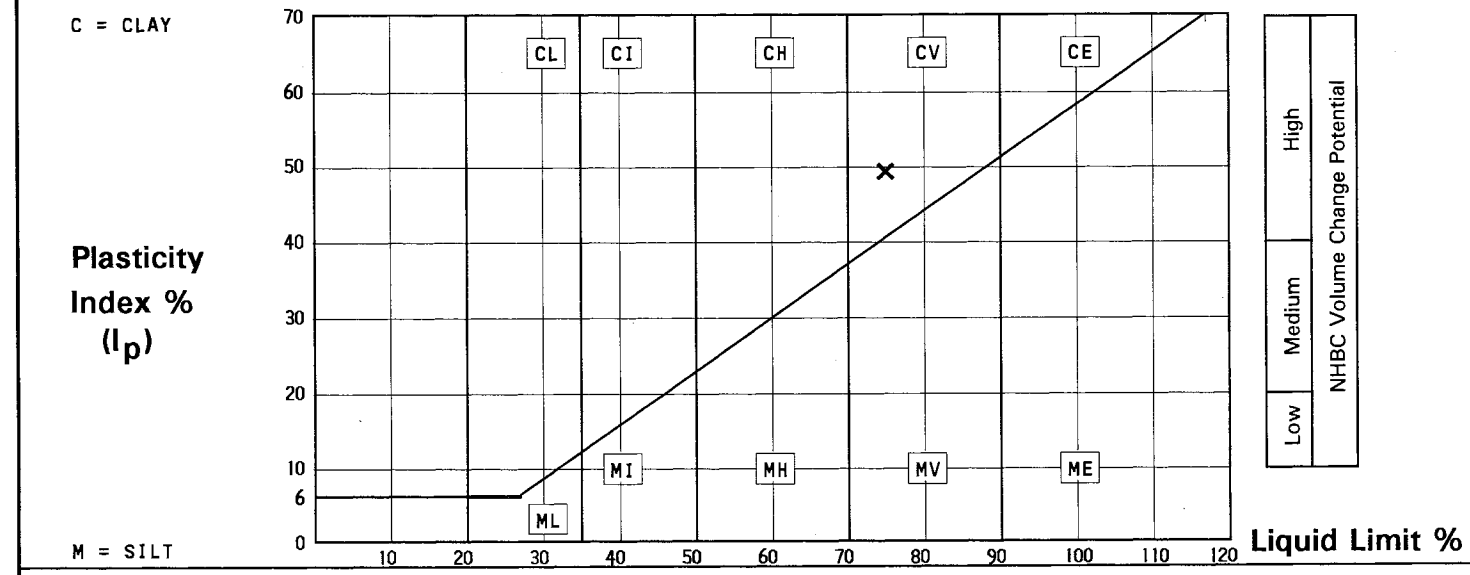
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH5	6.50	D3	29	Stiff dark grey CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve	(Assumed) 0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	72 Hours

Liquid Limit	75 %
Plastic Limit	26 %
Plasticity Index	49 %
Liquidity Index	0.06
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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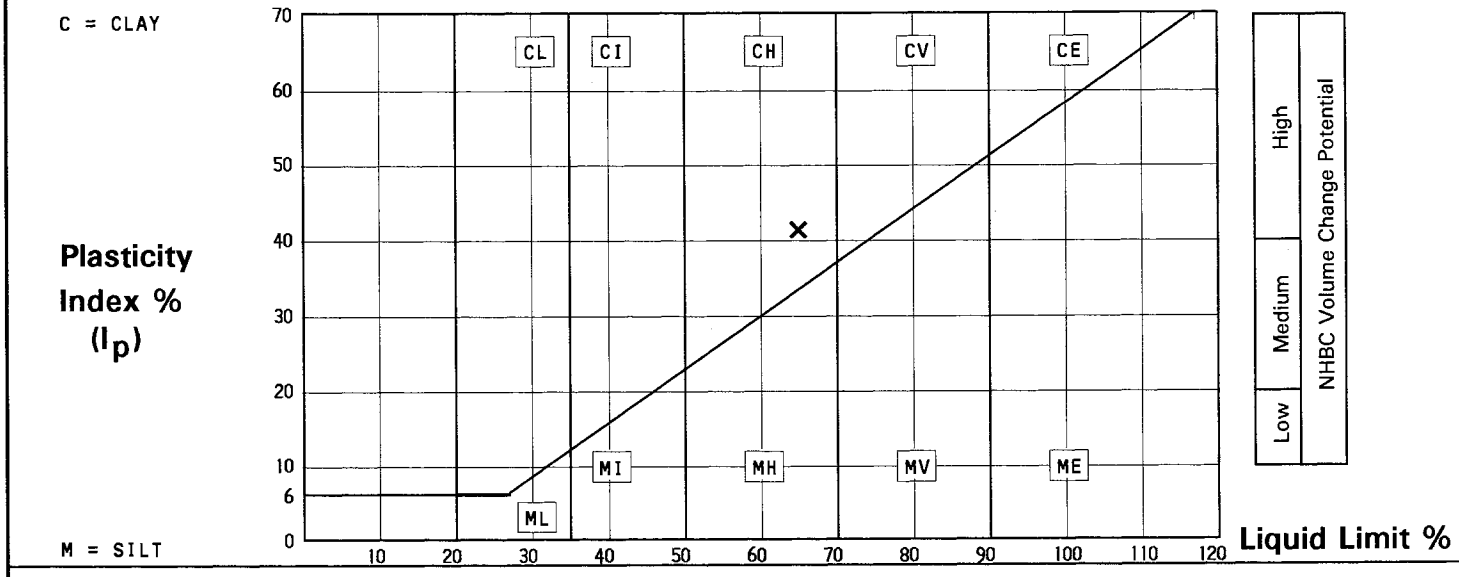
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH6	11.00	D9	25	Stiff dark grey CLAY with rare fine sand/silt partings	

PREPARATION

Method of Preparation	Specimen from Natural Soil	Liquid Limit	65 %
Sample retained 0.425 sieve	(Assumed) 0 %	Plastic Limit	24 %
Corrected moisture content for material passing 0.425mm	%	Plasticity Index	41 %
Curing Time	71 Hours	Liquidity Index	0.02
		Clay Content	Not analysed. %
		Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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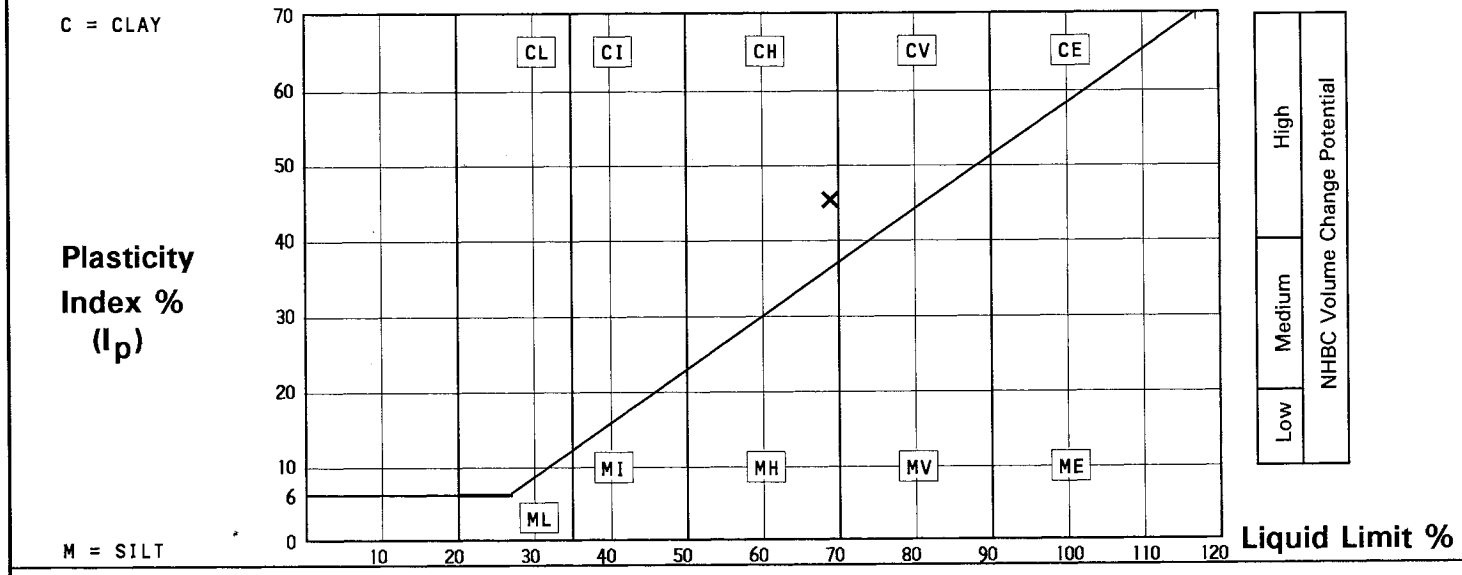
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH7	15.00	D16	26	Stiff dark grey CLAY with rare fine sand/silt partings	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	72 Hours

Liquid Limit	69 %
Plastic Limit	24 %
Plasticity Index	45 %
Liquidity Index	0.04
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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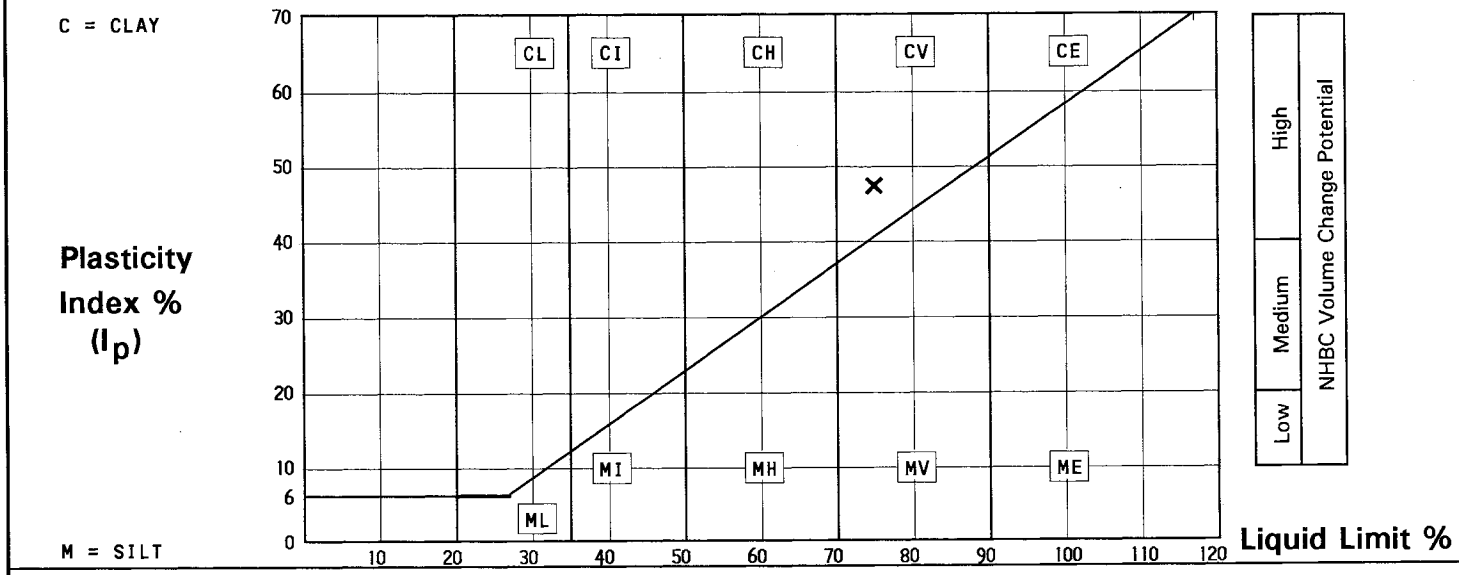
DETERMINATION OF MOISTURE CONTENT, LIQUID LIMIT AND PLASTIC LIMIT AND DERIVATION OF PLASTICITY INDEX AND LIQUIDITY INDEX

Borehole/ Pit No.	Depth m.	Sample	Moisture Content %	Description	Remarks
BH8	7.50	D6	29	Stiff dark grey CLAY	

PREPARATION

Method of Preparation	Specimen from Natural Soil
Sample retained 0.425 sieve (Assumed)	0 %
Corrected moisture content for material passing 0.425mm	%
Curing Time	71 Hours

Liquid Limit	75 %
Plastic Limit	28 %
Plasticity Index	47 %
Liquidity Index	0.02
Clay Content	Not analysed. %
Derived Activity (PI/CC)	Not analysed.



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.4 & PART 2:1990:4.2

METHOD OF TEST : BS 1377: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 : PLASTICITY CHART BS5930:1999:Figure 18
VOLUME CHANGE POTENTIAL: NHBC Standards Chapter 4.2 Unmodified Plasticity Index
NOTE: Modified Plasticity Index I'p = Ip x (% less than 425 microns/100)

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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Contract **Serial No.**
UK16.2295 - Proposed Cheshunt Sports Village S30215

UKAS TESTING 0998

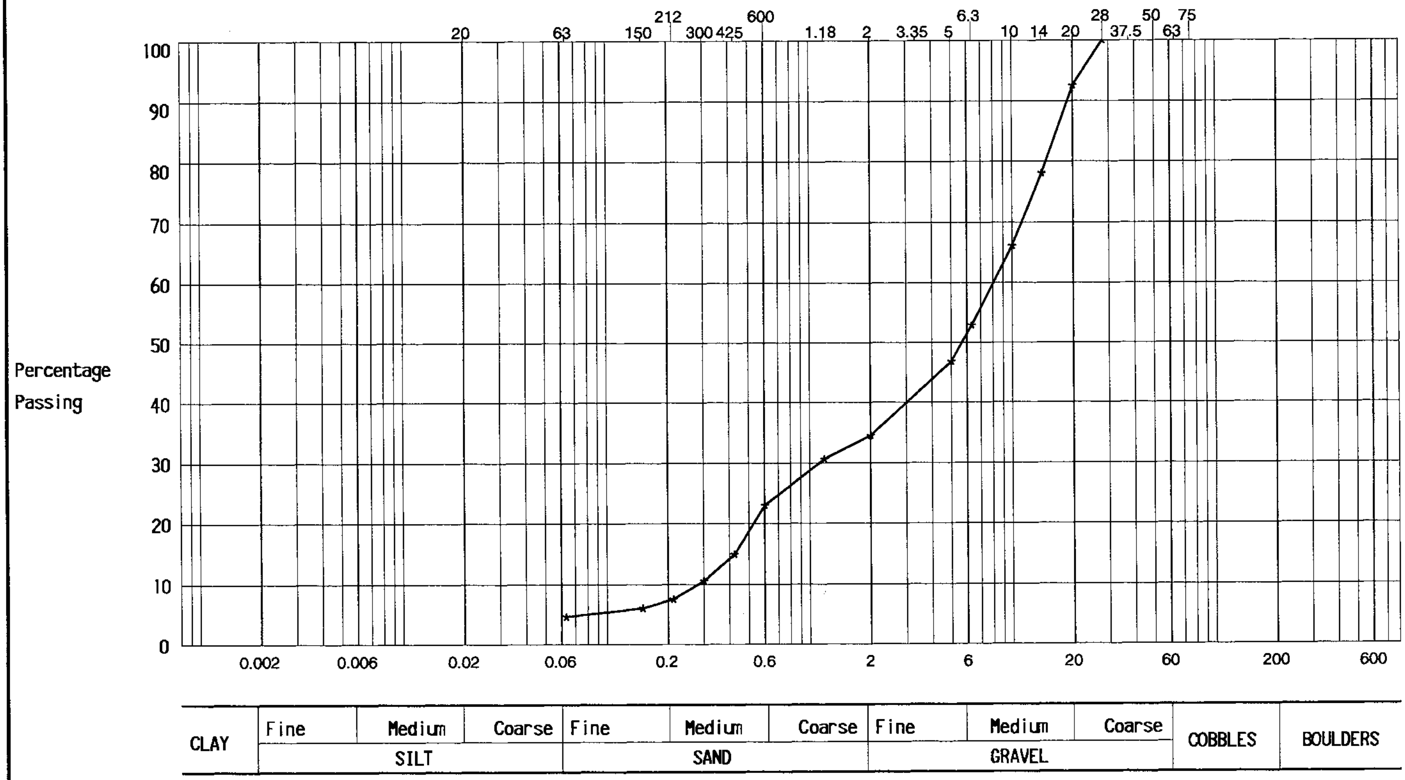
DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
WS4	4.50 -4.70	D4.5	Black, brown and white silty very sandy subangular and subrounded flint GRAVEL. Sand is dark yellowish brown	

Method of Test: Wet Sieve

Method of pre-treatment:

	Size (microns)						Size (mm)											
Sieve Size	63	150	212	300	425	600	1.18	2	5	6.3	10	14	20	28	37.5	50	75
Percentage by Mass passing Sieve	5	6	8	10	15	23	31	34	47	53	66	78	92	100	-	-	-



METHOD OF PREPARATION: BS 1377:PART 1:1990:7.3 & 7.4.5

METHOD OF TEST : BS 1377:PART 2:1990:9.2

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

DATE OF ISSUE : As page 1 **PAGE** 14 of 32

Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215

UKAS TESTING 0998

DETERMINATION OF DENSITY, MOISTURE CONTENT AND UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Moisture Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Lateral Pressure (kPa)	Deviator Stress (kPa)	Shear Stress (kPa)	MOHRS CIRCLE ANALYSIS Cu (kPa)	MOHRS CIRCLE ANALYSIS ∅ (degrees)	Description
BH1	9.50	U1	27	2.00	1.57	194	277	138			Stiff (High strength) fissured dark grey CLAY with rare silt partings
BH1	15.50	U3	23	2.06	1.67	308	484	242			Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings
BH2	9.00	U1	28	2.00	1.56	179	231	116			Stiff (High strength) fissured dark grey CLAY with rare silt partings
BH2	12.00	U2	27	1.98	1.56	239	348	174			Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings
BH3	6.50	U1	32	1.96	1.48	130	181	91			Stiff (High strength) fissured dark grey CLAY
BH3	18.50	U5	22	2.05	1.68	371	435	217			Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings
BH4	9.50	U2	28	1.98	1.55	189	283	142			Stiff (High strength) fissured dark grey CLAY with rare black speckling and pyrite fragments
BH4	12.50	U3	26	2.00	1.59	249	281	141			Stiff (High strength) fissured dark grey CLAY with rare silt partings
BH5	8.00	U1	29	1.97	1.53	164	172	86			Stiff (High strength) fissured dark grey CLAY
BH5	14.00	U3	27	2.00	1.57	280	254	127			Stiff (High strength) fissured dark grey CLAY with rare silt partings
BH6	12.50	U2	28	1.97	1.54	250	258	129			Stiff (High strength) fissured dark grey CLAY with rare silt partings
BH6	15.50	U3	26	1.98	1.57	311	215	107			Stiff (High strength) fissured dark grey CLAY with rare silt partings

METHOD OF PREPARATION : BS 1377:PART 1:1990:7.4.2 & 8 PART 2:1990:7.2 PART 7:1990:8.3

METHOD OF TEST : BS 1377:PART 2:1990:3 Determination of Moisture Content 1990:7 Determination of Density
:PART 7:1990:8 Undrained Shear Strength 1990:9 Multi-stage test
Note Multi-stage test used when specimen has granular content / behaviour and length of specimen precludes the taking of 3 x 100mm dia by 200mm long specimens.

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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UKAS TESTING 0998

DETERMINATION OF DENSITY, MOISTURE CONTENT AND UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Moisture Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Lateral Pressure (kPa)	Deviator Stress (kPa)	Shear Stress (kPa)	MOHRS CIRCLE ANALYSIS Cu (kPa)	MOHRS CIRCLE ANALYSIS ∅ (degrees)	Description
BH7	7.50	U1	26	2.01	1.60	151	212	106			Stiff (High strength) fissured dark grey CLAY with occasional fine sand/silt pockets and rare black speckling
BH7	16.50	U4	27	2.00	1.57	330	338	169			Very stiff (Very high strength) fissured dark grey CLAY with rare pyrite fragments
BH8	8.00	U1	29	1.97	1.53	162	175	87			Stiff (High strength) fissured dark grey CLAY with rare black speckling
BH8	14.00	U3	26	1.99	1.58	279	255	127			Stiff (High strength) fissured dark grey CLAY with rare black speckling

METHOD OF PREPARATION : BS 1377:PART 1:1990:7.4.2 & 8 PART 2:1990:7.2 PART 7:1990:8.3

METHOD OF TEST : BS 1377:PART 2:1990:3 Determination of Moisture Content 1990:7 Determination of Density
:PART 7:1990:8 Undrained Shear Strength 1990:9 Multi-stage test
Note Multi-stage test used when specimen has granular content / behaviour and length of specimen precludes the taking of 3 x 100mm dia by 200mm long specimens.

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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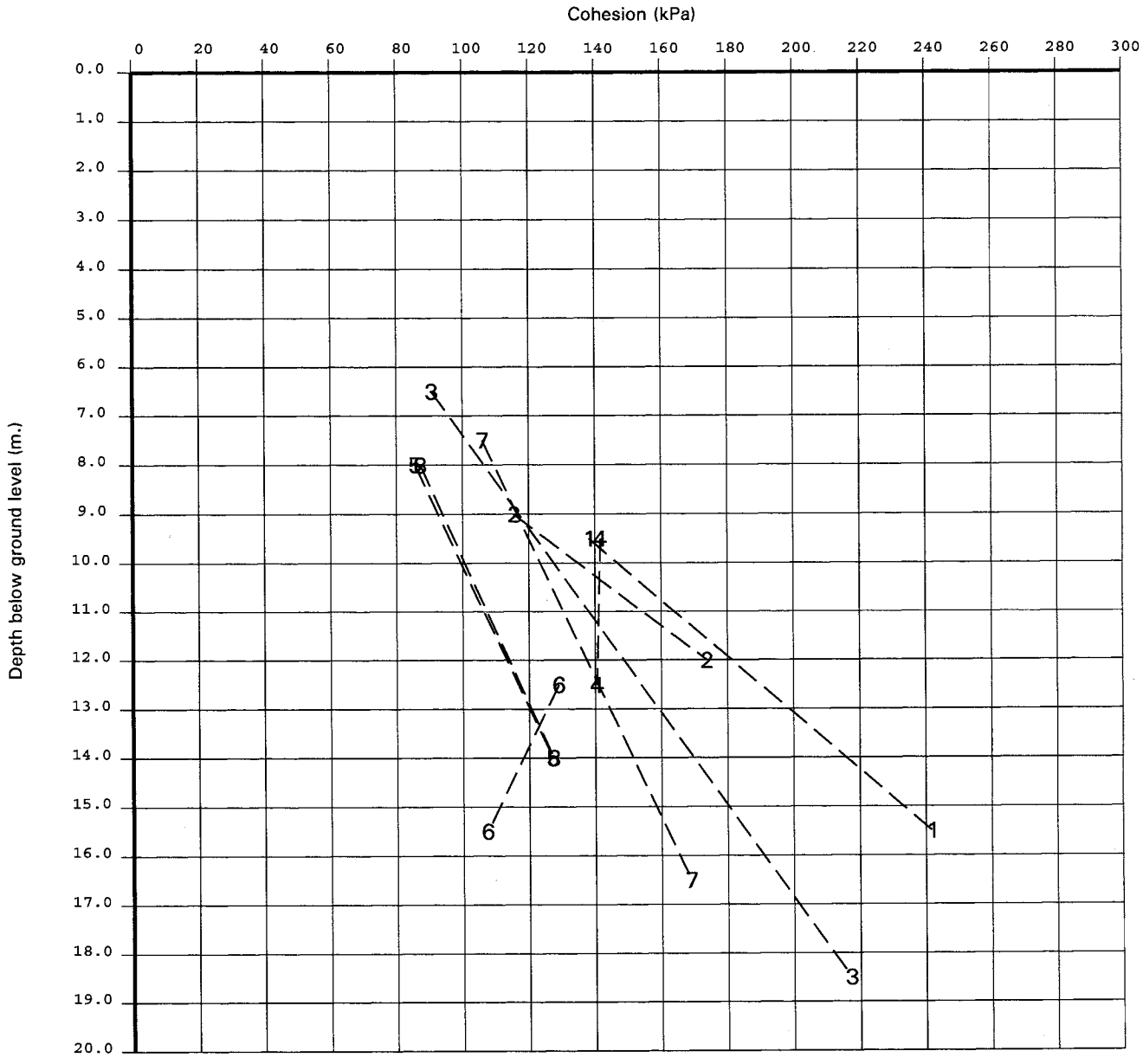
Cohesion (kPa) vs Depth below ground level (m.).



Key to Data Points	1 : BH1	2 : BH2	3 : BH3	4 : BH4	5 : BH5	6 : BH6	7 : BH7	8 : BH8

SPTPLOT

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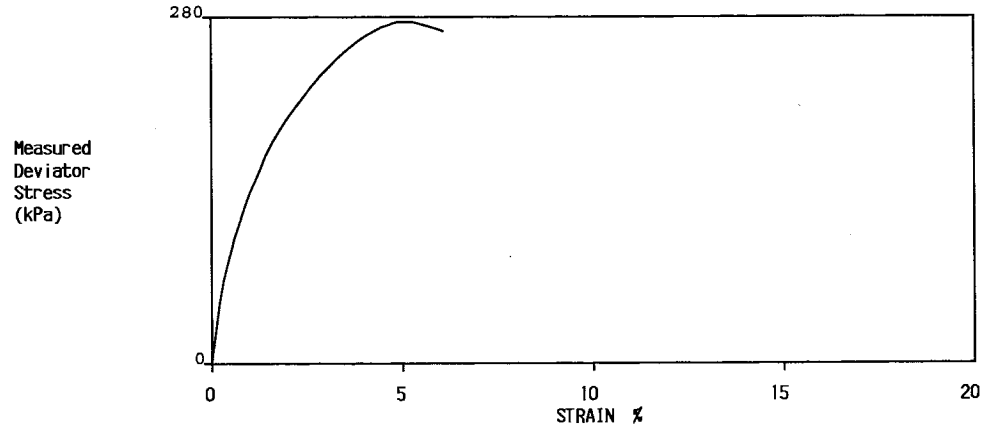
UKAS TESTING 0998

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH1	9.50	U1	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 9.53	199.4	103.0	3316	27	2.00	1.57

TEST INFORMATION — Rate of Strain 0.9 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	194	5.1	0.4	/	277	138		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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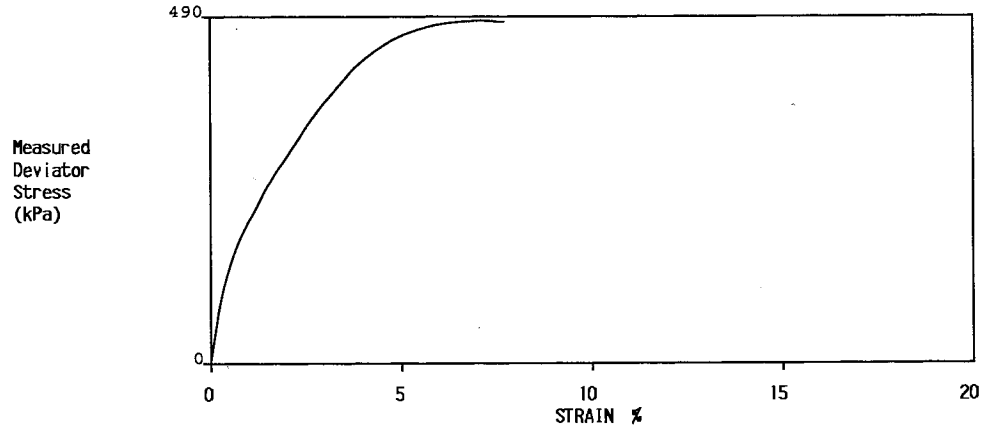
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH1	15.50	U3	Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 15.50	199.5	103.0	3429	23	2.06	1.67

TEST INFORMATION — Rate of Strain 0.9 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	308	6.9	0.4	/	484	242		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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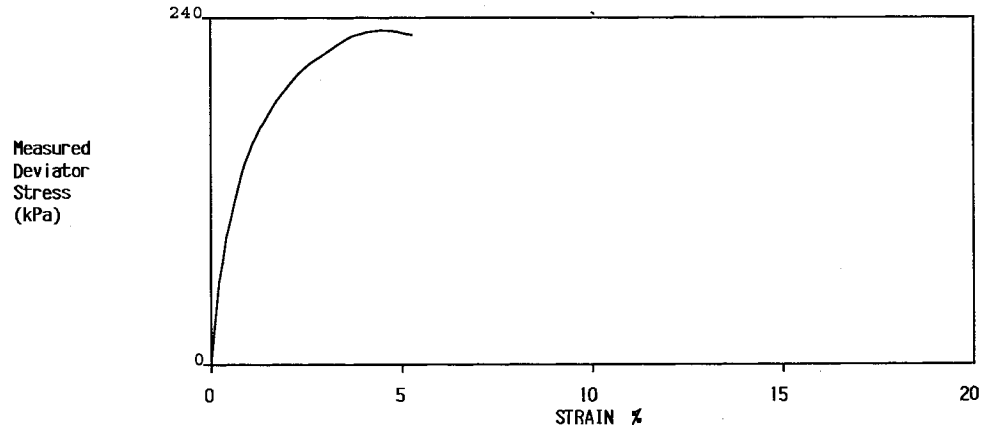
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH2	9.00	U1	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 9.14	199.5	101.1	3206	28	2.00	1.56

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	179	4.5	0.4	/	231	116		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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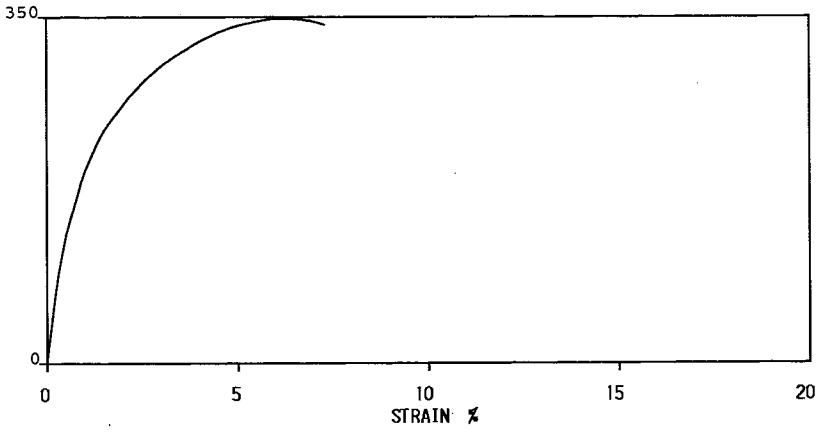
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH2	12.00	U2	Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 12.02	199.4	103.1	3291	27	1.98	1.56

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	239	6.1	0.4	/	348	174		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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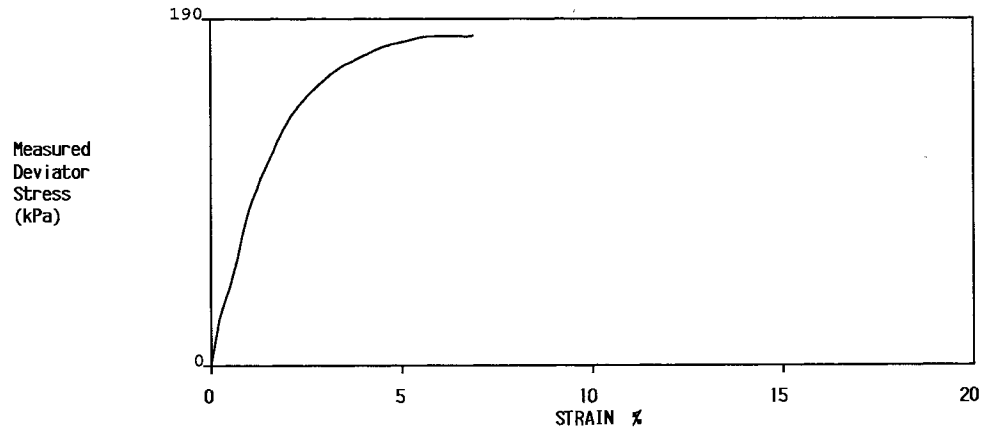
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH3	6.50	U1	Stiff (High strength) fissured dark grey CLAY	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m³	Dry Density Mg/m³
Depth of Top of Specimen (m) 6.53	199.5	103.0	3258	32	1.96	1.48

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	130	7.1	0.4	/	181	91		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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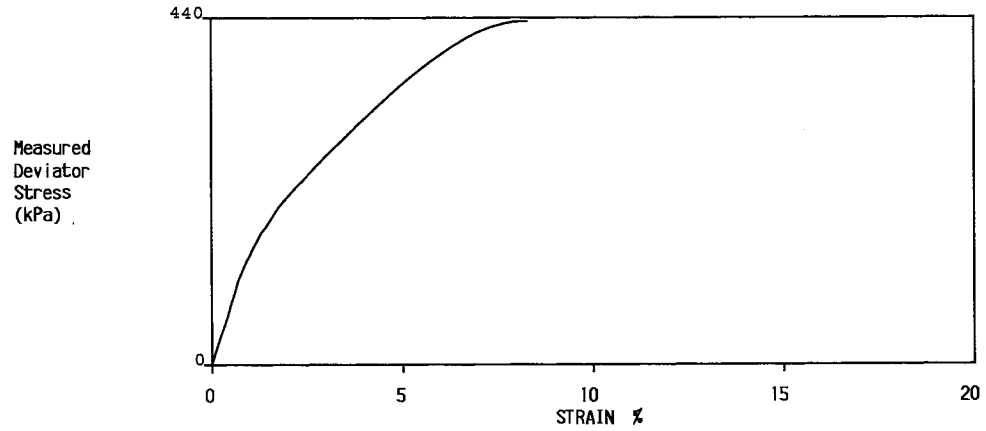
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH3	18.50	U5	Very stiff (Very high strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 18.56	199.8	102.1	3347	22	2.05	1.68

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	371	8.3	0.6	/	435	217		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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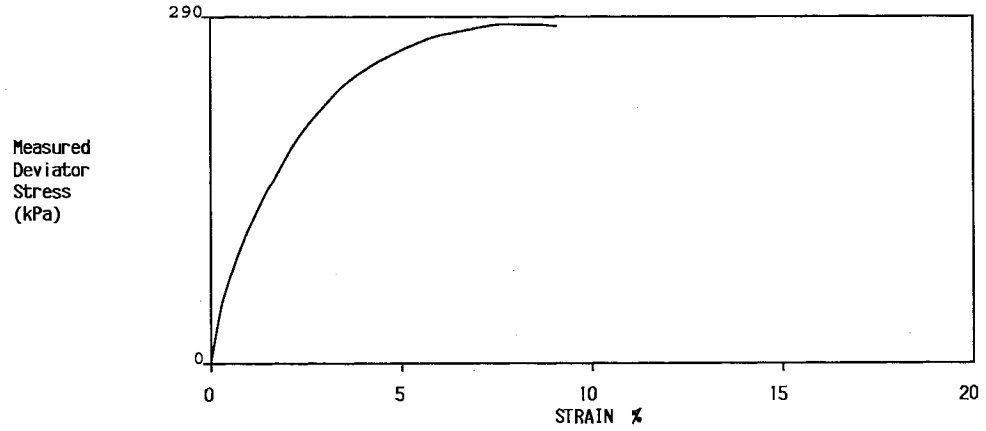
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH4	9.50	U2	Stiff (High strength) fissured dark grey CLAY with rare black speckling and pyrite fragments	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 9.53	199.6	102.0	3230	28	1.98	1.55

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	189	8.5	0.6	/	283	142		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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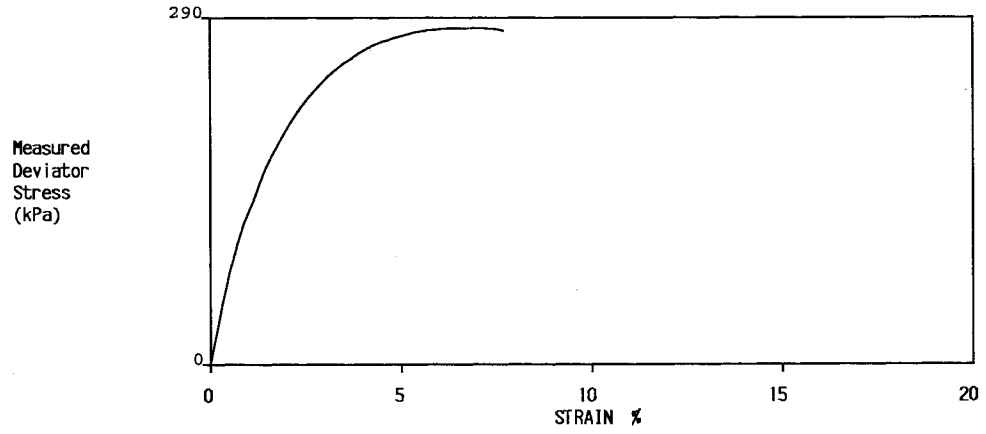
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH4	12.50	U3	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 12.53	199.6	103.1	3341	26	2.00	1.59

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	249	6.9	0.4	/	281	141		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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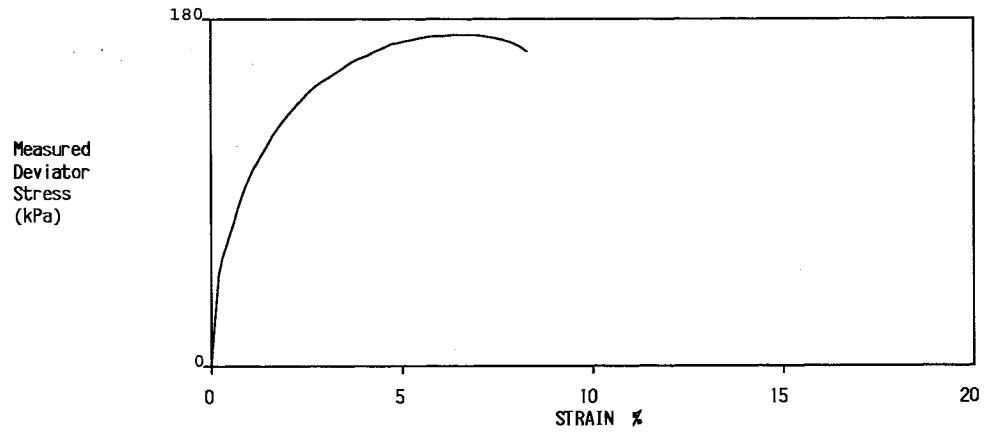
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH5	8.00	U1	Stiff (High strength) fissured dark grey CLAY	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 8.03	199.8	101.9	3208	29	1.97	1.53

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	164	6.5	0.4	/	172	86		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

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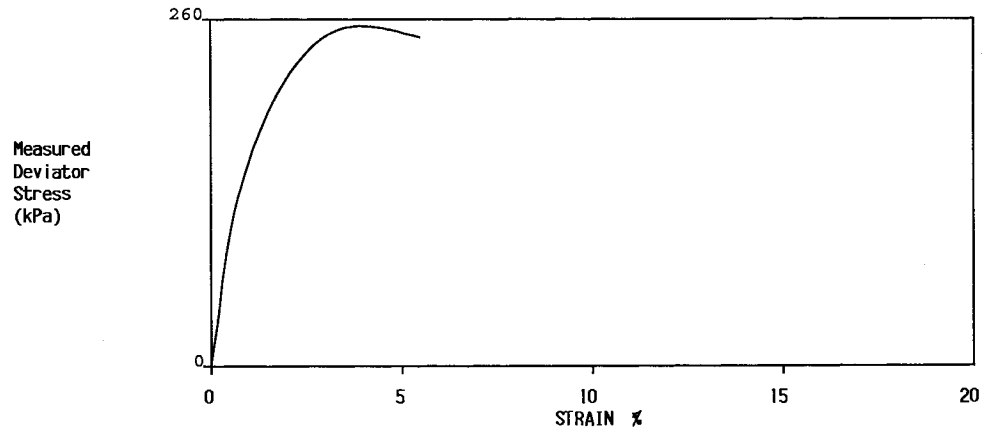
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH5	14.00	U3	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 14.02	199.6	102.9	3311	27	2.00	1.57

TEST INFORMATION — Rate of Strain 0.9 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	280	3.9	0.3	/	254	127		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215

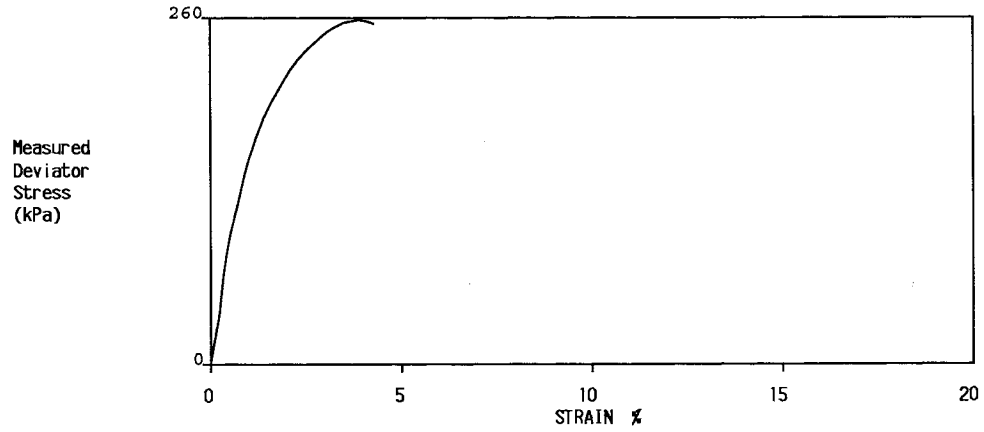
UKAS TESTING 0998

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH6	12.50	U2	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 12.54	199.5	102.6	3250	28	1.97	1.54

TEST INFORMATION — Rate of Strain 0.9 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	250	4.1	0.3	/	258	129		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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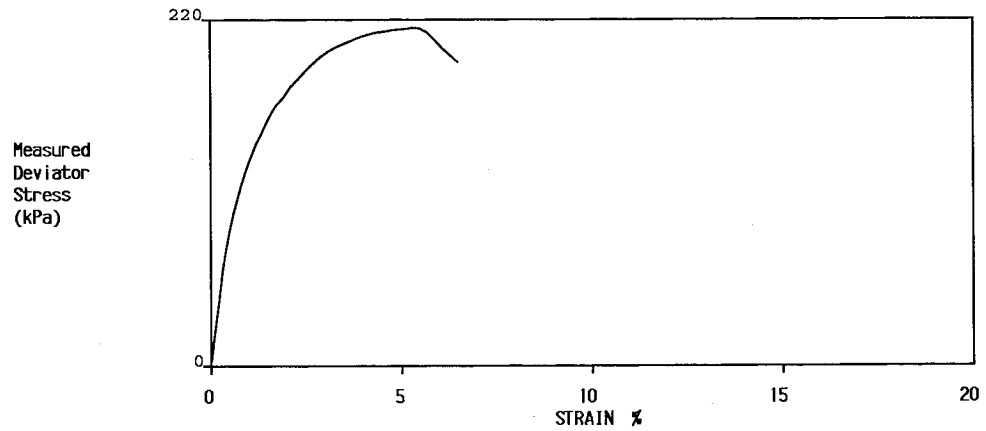
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH6	15.50	U3	Stiff (High strength) fissured dark grey CLAY with rare silt partings	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 15.53	199.5	103.1	3306	26	1.98	1.57

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	311	5.5	0.4	/	215	107		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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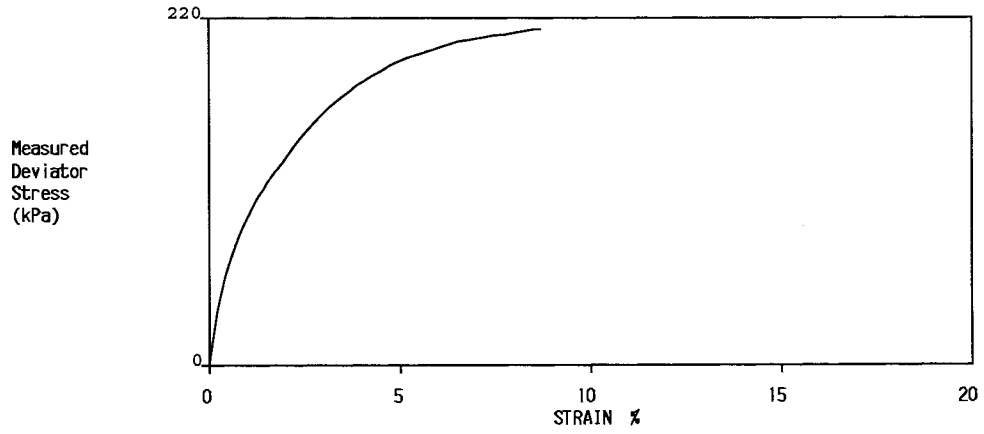
UKAS TESTING 0998

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH7	7.50	U1	Stiff (High strength) fissured dark grey CLAY with occasional fine sand/silt pockets and rare black speckling	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 7.52	199.4	102.4	3304	26	2.01	1.60

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	151	8.7	0.6	/	212	106		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

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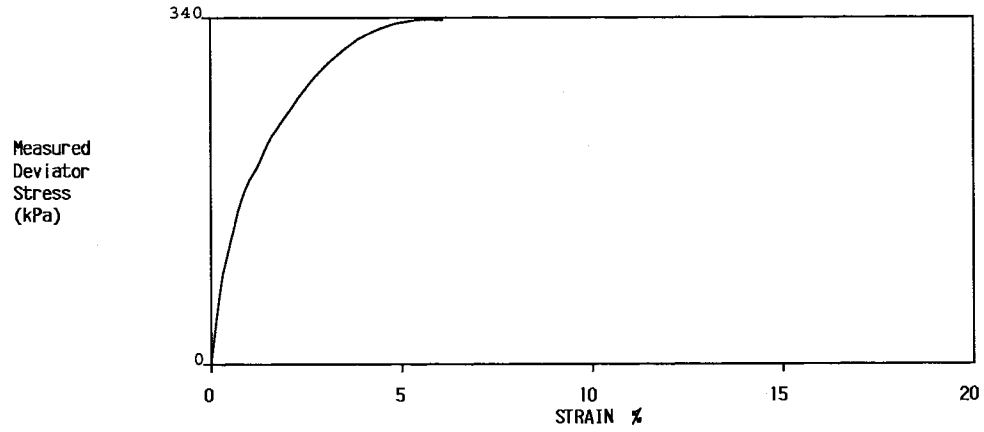
UKAS TESTING 0998

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH7	16.50	U4	Very stiff (Very high strength) fissured dark grey CLAY with rare pyrite fragments	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 16.54	199.6	102.9	3321	27	2.00	1.57

TEST INFORMATION — Rate of Strain 0.9 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	330	5.5	0.4	/	338	169		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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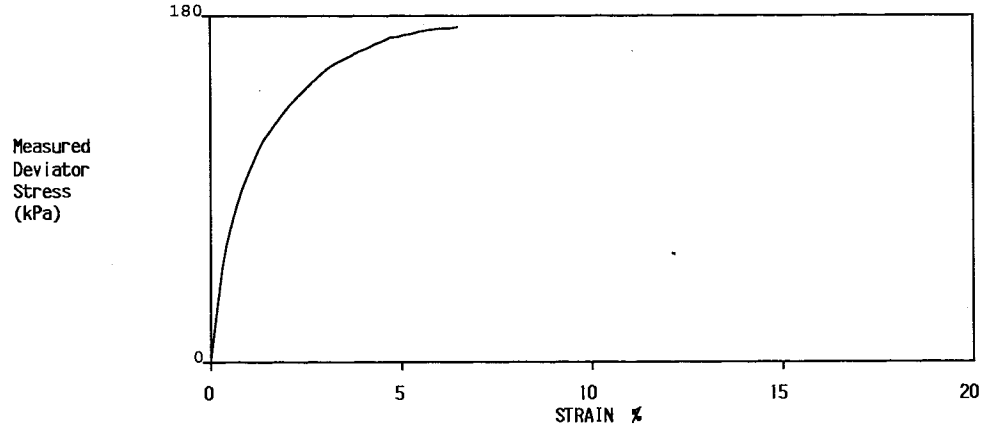
DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH8	8.00	U1	Stiff (High strength) fissured dark grey CLAY with rare black speckling	

Initial Specimen	Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
Depth of Top of Specimen (m) 8.03	199.4	102.5	3242	29	1.97	1.53

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	162	6.7	0.4	/	175	87		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

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TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

DATE OF ISSUE : As page 1 **PAGE** 32 of 32

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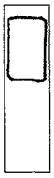
UKAS TESTING 0998

DETERMINATION OF UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH8	14.00	U3	Stiff (High strength) fissured dark grey CLAY with rare black speckling	

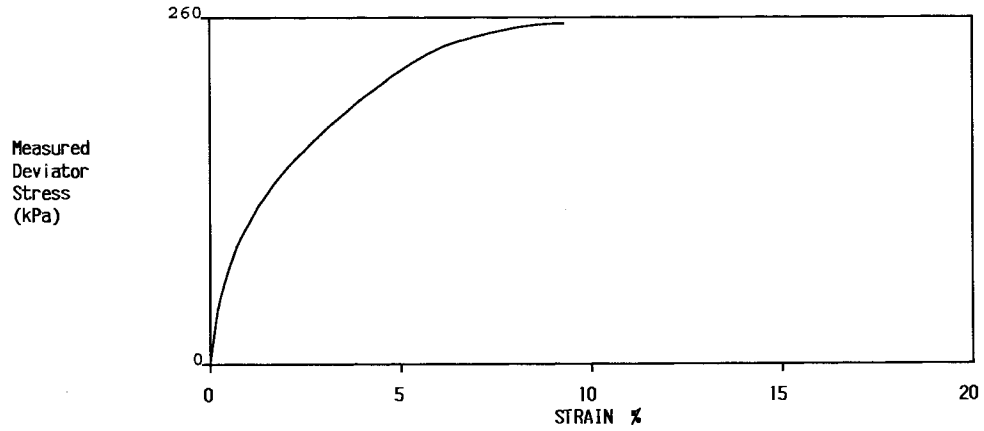
Initial Specimen



Depth of Top of Specimen (m) 14.03

Height mm	Diameter mm	Weight g	Moisture Content %	Wet Density Mg/m^3	Dry Density Mg/m^3
199.6	103.0	3310	26	1.99	1.58

TEST INFORMATION — Rate of Strain 1.0 % per Min — Rubber Membrane Thickness 0.3 mm



Specimen at Failure	Measured Cell Pressure $\sigma 3$ (kPa)	Strain at Failure (%)	Stress Corrections (kPa)		Corrected Max. Deviator Stress $\sigma 1 - \sigma 3$ (kPa)	Shear Stress Cu $\frac{1}{2}(\sigma 1 - \sigma 3)_f$ (kPa)	Mohrs Circle Analysis	
			Rubber Membrane	Piston Friction			Cu (kPa)	PHI °
	279	9.3	0.6	/	255	127		

METHOD OF PREPARATION: BS 1377:PART 1:1990:

METHOD OF TEST : BS 1377:PART 7:1990:8 Definitive Method. 1990:9 Multi-stage loading

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS : Tested in Vertical Orientation.
UKAS Calibration - loads from 0.2 to 10kN.

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

TEST REPORT.

ISSUED BY : **SOIL PROPERTY TESTING LTD.**

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UK16.2295 - Proposed Cheshunt Sports Village	S30215-2

UKAS TESTING 0998

CLIENT:

Environmental Protection
Strategies Ltd
7B Caxton House
Broad Street
CAMBOURNE
CAMBRIDGE
CB23 6JN

Soil Property Testing Ltd.

15,16 & 18 Halcyon Court, St Margarets Way,
Stukeley Meadows, Huntingdon,
Cambs. PE29 6DG.

Telephone (01480) 455579 Fax (01480) 453619
Email enquiries@soilpropertytesting.com

SAMPLES SUBMITTED BY:

Environmental Protection

APPROVED SIGNATORIES:

☑ **J.C.GARNER B.Eng (Hons.) FGS**
Technical Director

☐ **S.P.TOWNEND FGS**
Quality Manager

☐ **W.JOHNSTONE**
Materials Lab Manager

SAMPLES LABELLED:

UK16.2295 - Proposed Cheshunt Sports Village

DATE RECEIVED: 06/07/16 **SAMPLES TESTED BETWEEN** 06/07/16 **and** 30/07/16

REMARKS: For the attention of Mr M Judson

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.

ISSUED BY : SOIL PROPERTY TESTING LTD.

DATE OF ISSUE : As page 1 **PAGE** 2 of 3

Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215-2

SCHEDULE OF LABORATORY TESTS

Bh./ Tp No.	Sample Ref	Depth (from)	7:PSD by Wet Sieve BS1377	Remarks
BH8	B6	5.00	*	
-	-	-	1	<— Total Number of Tests ——

Scheduled by: Environmental Protection

Target Date: 03/08/16

TEST REPORT.

ISSUED BY : SOIL PROPERTY TESTING LTD.

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Contract UK16.2295 - Proposed Cheshunt Sports Village

Serial No. S30215-2

UKAS TESTING 0998

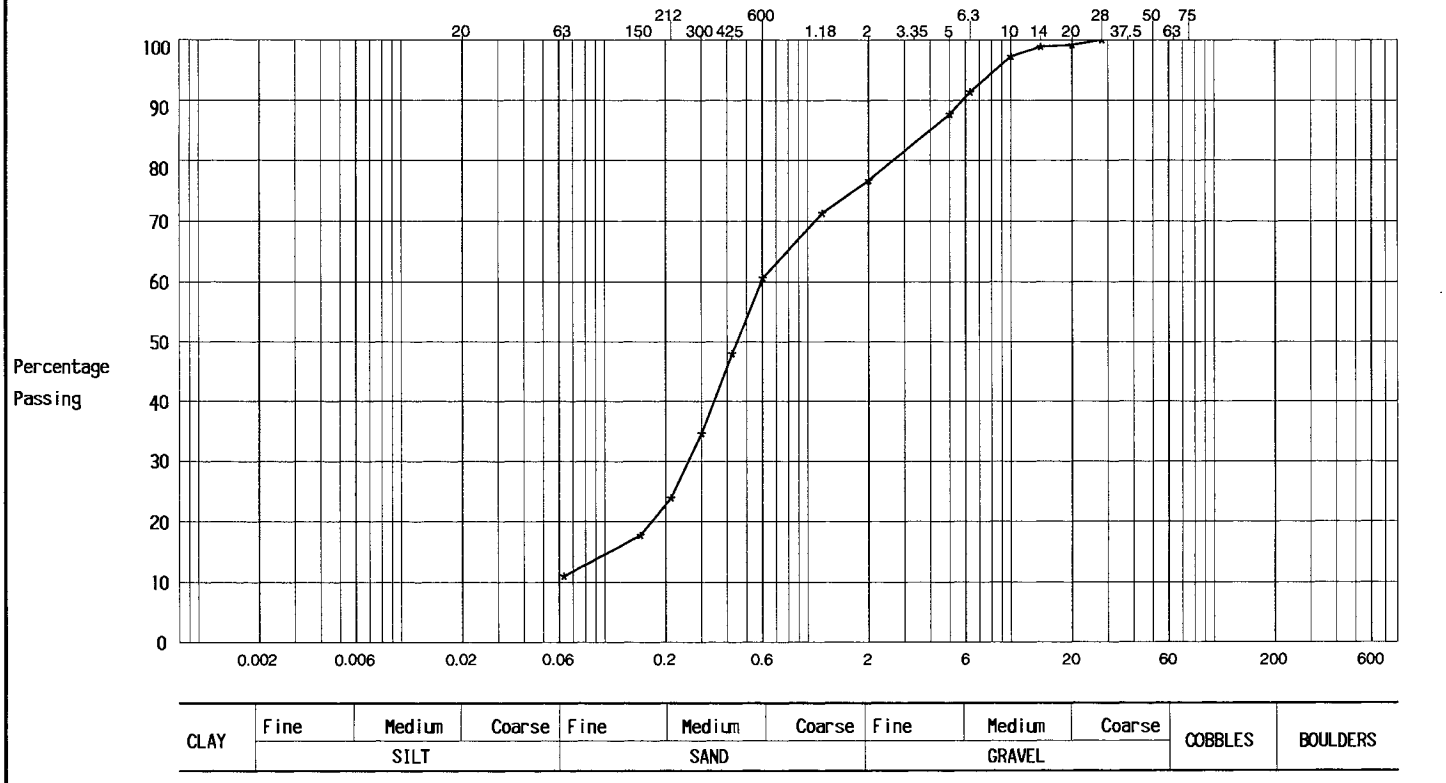
DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole/ Pit No.	Depth m.	Sample	Description	Remarks
BH8	5.00	B6	Brown silty very gravelly SAND. Gravel is black, brown and white subangular and subrounded	

Method of Test: Wet Sieve

Method of pre-treatment:

Size (microns)												Size (mm)										
Sieve Size	63	150	212	300	425	600	1.18	2	5	6.3	10	14	20	28	37.5	50	75
Percentage by Mass passing Sieve	11	18	24	35	48	61	71	77	88	91	97	99	99	100	-	-	-



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

METHOD OF PREPARATION: BS 1377:PART 1:1990:7.3 & 7.4.5

METHOD OF TEST : BS 1377:PART 2:1990:9.2

TYPE OF SAMPLE KEY : U = Undisturbed, B = Bulk, D = Disturbed, J = Jar, W = Water, SPT = Split Spoon Sample, C = Core Cutter

COMMENTS :

REMARKS TO INCLUDE : Sample disturbance, loss of moisture, variation from test procedure, location and origin of test specimen within original sample. Oven drying temperature if not 105-110 deg C.

APPENDIX J

Generic Screening Criteria

EPS Generic Quantitative Risk Assessment

Low Risk Generic Screening Criteria - All Land Uses

Contaminant	Soil Targets					
	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.

EPS Generic Quantitative Risk Assessment

Minimal Risk Generic Screening Criteria - Residential Land Use

Contaminant	Soil Targets			Groundwater Targets	
	Human Health	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 repectively.
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 Ethlylbenzene 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.

APPENDIX K

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:

Giles Lock	Director	Tel: 0781 253 9656
Will Evans	Director	Tel: 0781 253 9655
Steve Bullock	Director	Tel: 0786 694 9221

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