

APPENDIX IV PHOTOGRAPHS





PLATE 1 – VIEW OF THE ACCESS LANE LEADING FROM BOWKER BANK AVENUE



PLATE 2 – VIEW OF CONCRETE SLABS FACING EAST





PLATE 3 – VIEW OF THE RETAINING STRUCTURE AND EARTH EMBANKMENT WHICH SEPERATES THE RESERVOIR (WEST) AND CONCRETE SLAB (EAST).



PLATE 4 – VIEW OF THE HISTORIC (DRAINED) RESERVOIR





PLATE 5: VIEW OF EXISTING ELECTRICAL SUBSTATION



PLATE 6: VIEW OF THE FORMER SITE OFFICE IN THE SOUTH CENTRAL SECTOR



**PLATE 7: VIEW OF A REMNANT CONCRETE BUND IN THE SOUTH CENTRAL
SECTOR**



PLATE 8: VIEW OF THE GENERIC MADE GROUND ACROSS THE SITE (TP101)

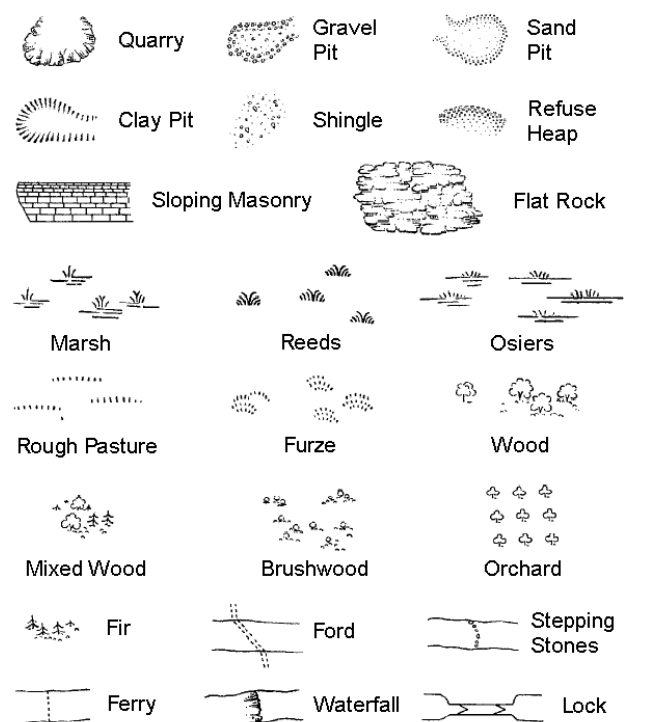


APPENDIX V HISTORICAL MAPS

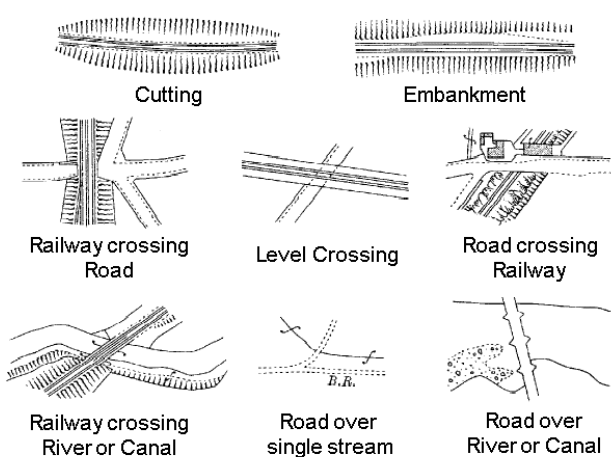


Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



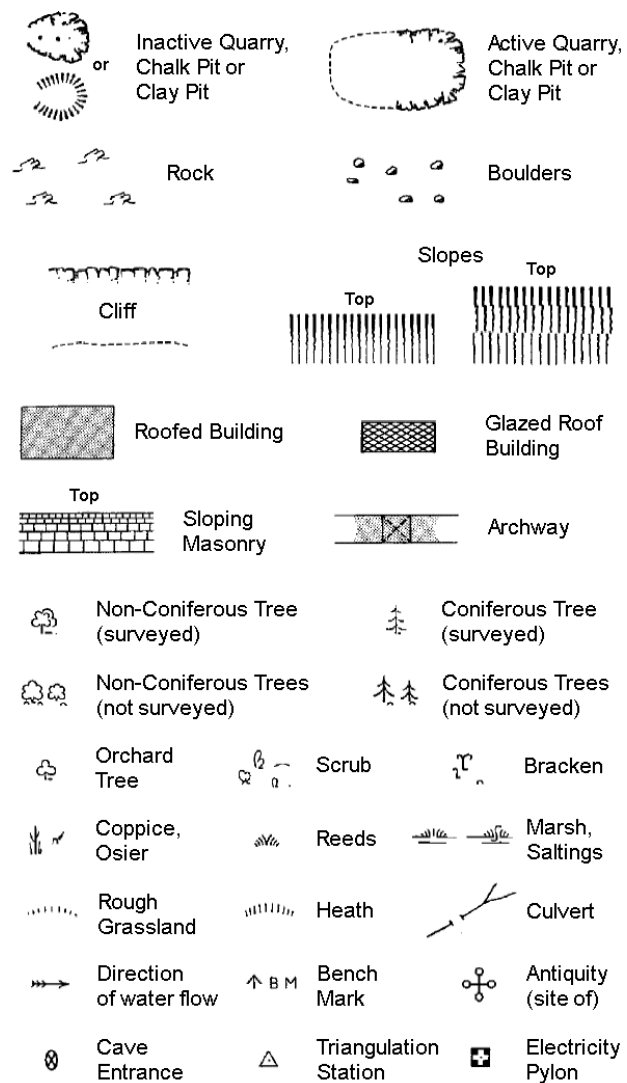
	Trig. Station	507 	Altitude at Trig. Station
<i>B.M. 325-9</i> 	Bench Mark	342 +	Surface Level
	Arrow denotes flow of water		Antiquities (site of)



-----	County Boundary (Geographical)
- . - . - .	County & Civil Parish Boundary
+ . + . + .	Administrative County & Civil Parish Boundary
-----	County Borough Boundary (England)
Co. Boro. Bdy.	
-----	County Burgh Boundary (Scotland)
Co. Burgh Bdy.	

<i>B.P. B.S.</i>	Boundary Post or Stone	<i>P.C.B.</i>	Police Call Box
<i>B.R.</i>	Bridle Road	<i>P.</i>	Pump
<i>E.P.</i>	Electricity Pylon	<i>S.P.</i>	Signal Post
<i>F.B.</i>	Foot Bridge	<i>Sl.</i>	Sluice
<i>F.P.</i>	Foot Path	<i>Sp.</i>	Spring
<i>G.P.</i>	Guide Post or Board	<i>T.C.B.</i>	Telephone Call Box
<i>M.S.</i>	Mile Stone	<i>Tr.</i>	Trough
<i>M.P. M.R.</i>	Mooring Post or Ring	<i>W.</i>	Well

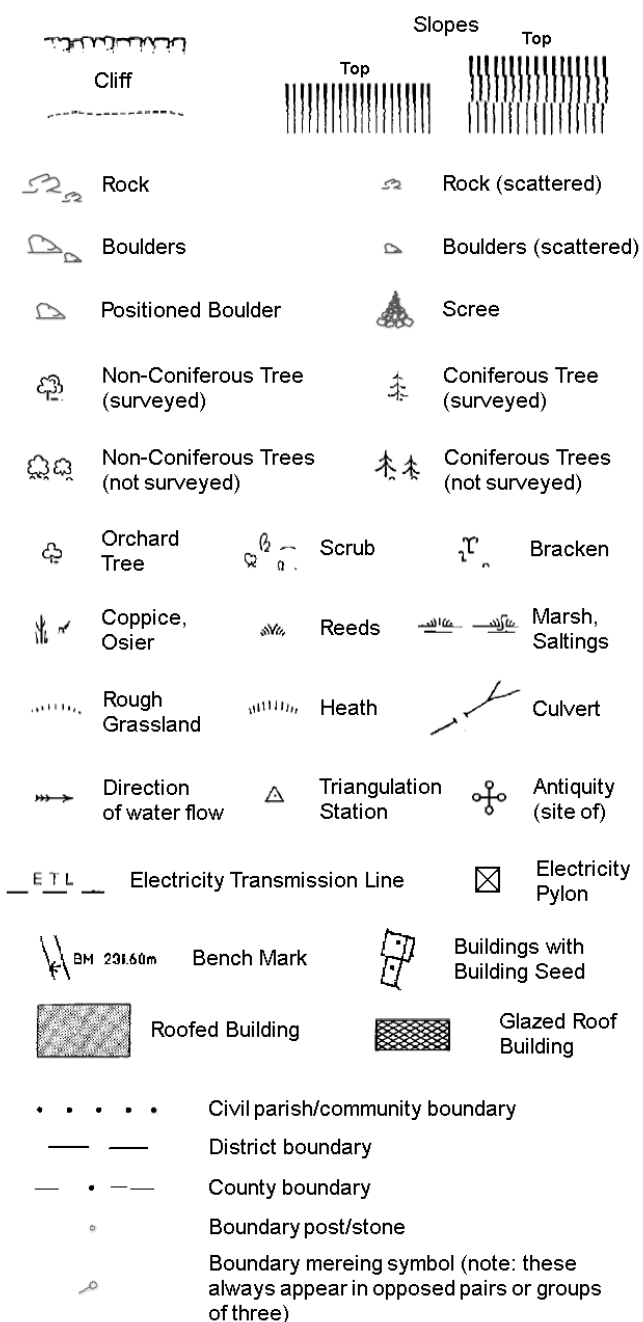
Ordinance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information



	Electricity Transmission Line
	County Boundary (Geographical)
	County & Civil Parish Boundary
	Civil Parish Boundary
	Admin. County or County Bor. Boundary
	London Borough Boundary
	Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



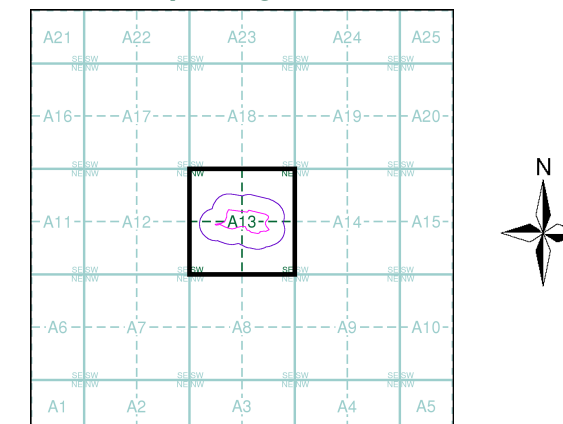
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtld Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governor	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Page
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1922	4
Ordnance Survey Plan	1:2,500	1952 - 1953	5
Ordnance Survey Plan	1:1,250	1952	6
Ordnance Survey Plan	1:1,250	1955 - 1971	7
Ordnance Survey Plan	1:2,500	1956 - 1970	8
Ordnance Survey Plan	1:1,250	1964 - 1989	9
Ordnance Survey Plan	1:2,500	1967	10
Additional SIMs	1:1,250	1978 - 1987	11
Additional SIMs	1:1,250	1986 - 1991	12
Additional SIMs	1:1,250	1991	13
Large-Scale National Grid Data	1:1,250	1992	14
Large-Scale National Grid Data	1:1,250	1996	15

Historical Map - Segment A13



Order Details

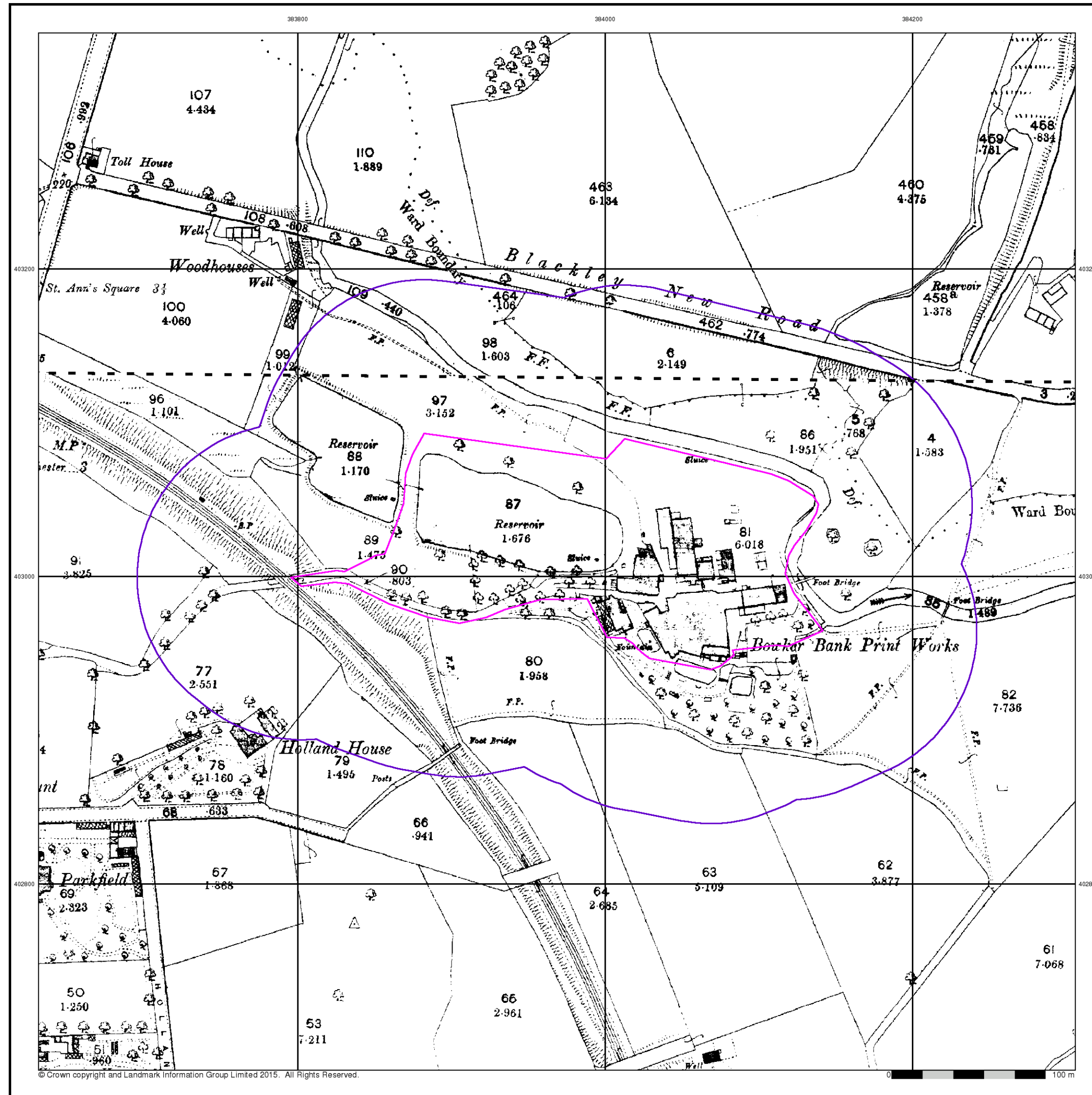
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Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

Site Details

Blackley Mere, Bowker Bank Avenue, MANCHESTER, M8 4LL



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Lancashire And Furness

Published 1893

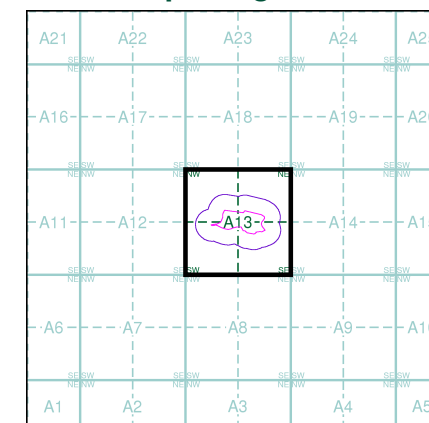
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

096_10
1893
1:2,500
096_14
1893
1:2,500

Historical Map - Segment A13



Order Details

Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

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Lancashire And Furness

Published 1909

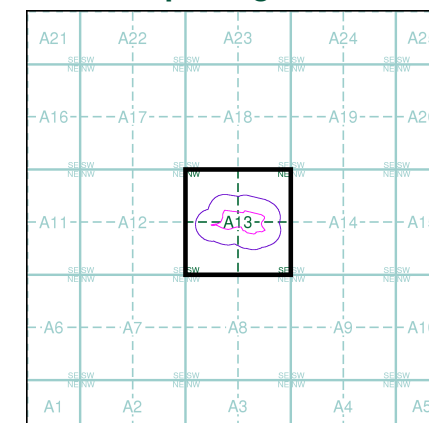
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

096_10
1909
1:2,500
096_14
1909
1:2,500

Historical Map - Segment A13



Order Details

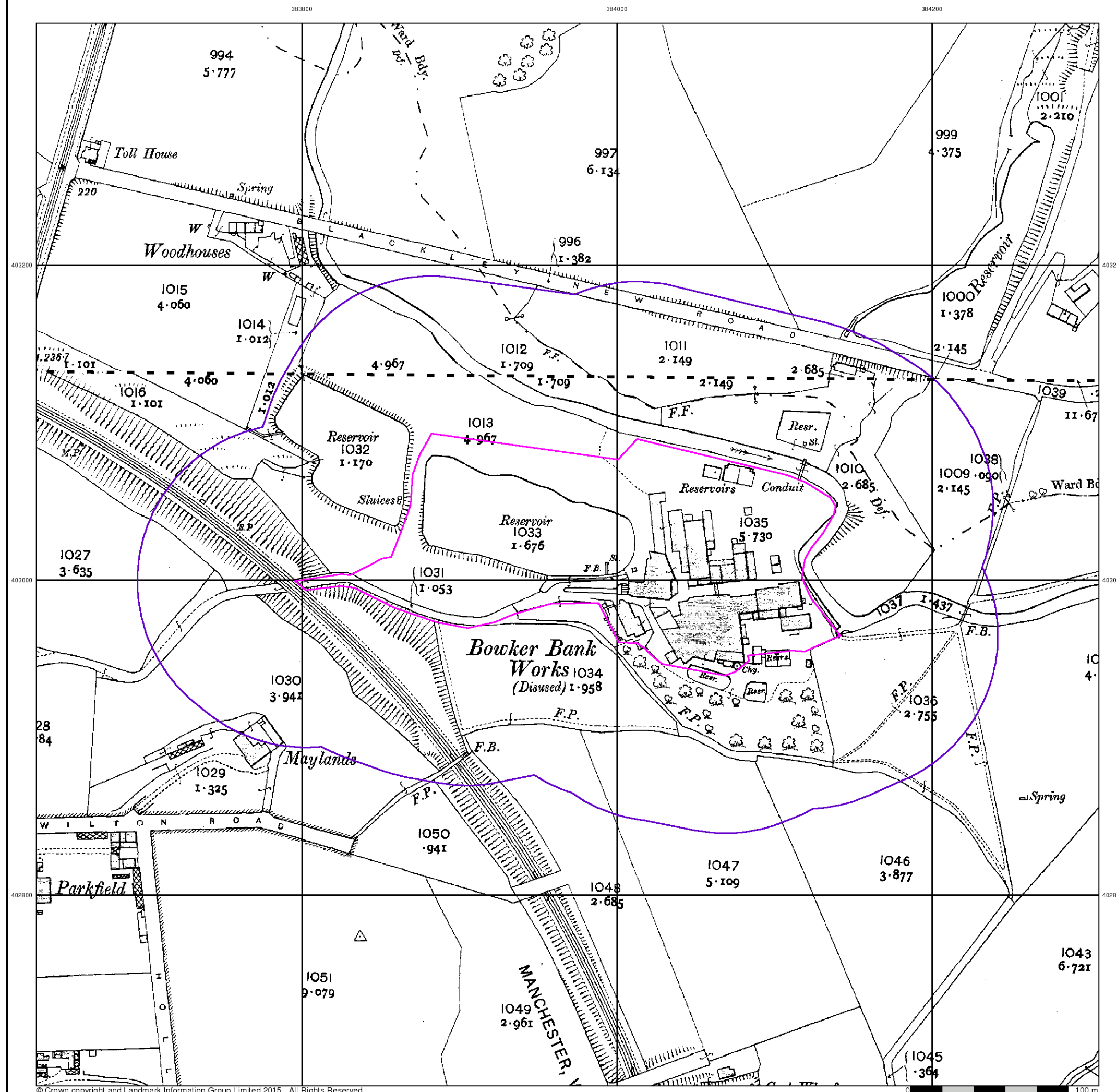
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Site Area (Ha): 3.16
Search Buffer (m): 100

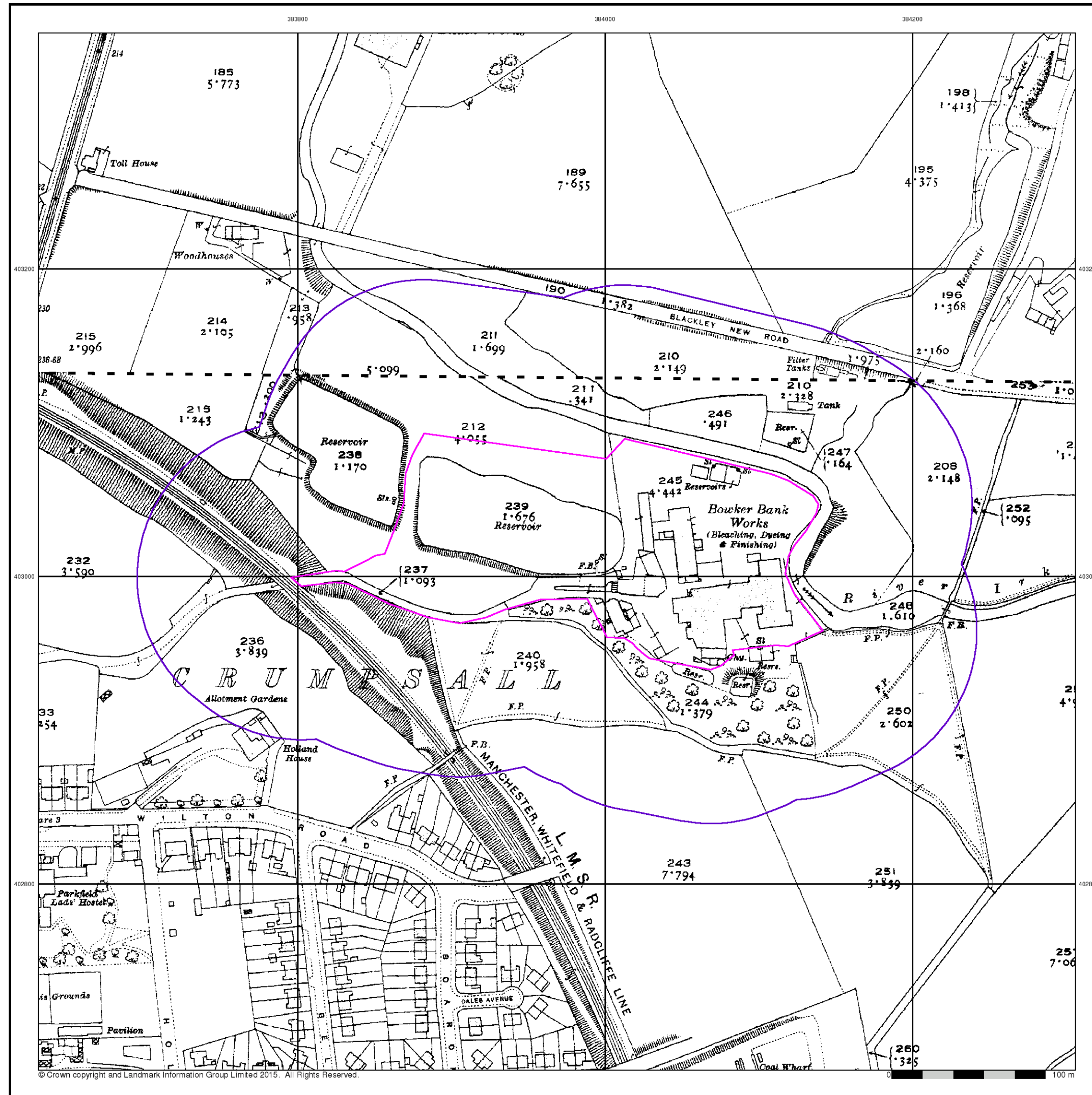
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Lancashire And Furness

Published 1922

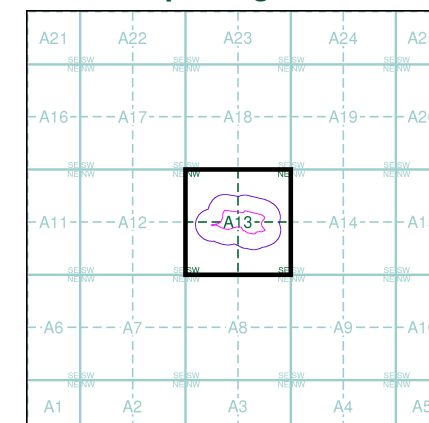
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

096_10
1922
1:2,500
096_14
1922
1:2,500

Historical Map - Segment A13



Order Details

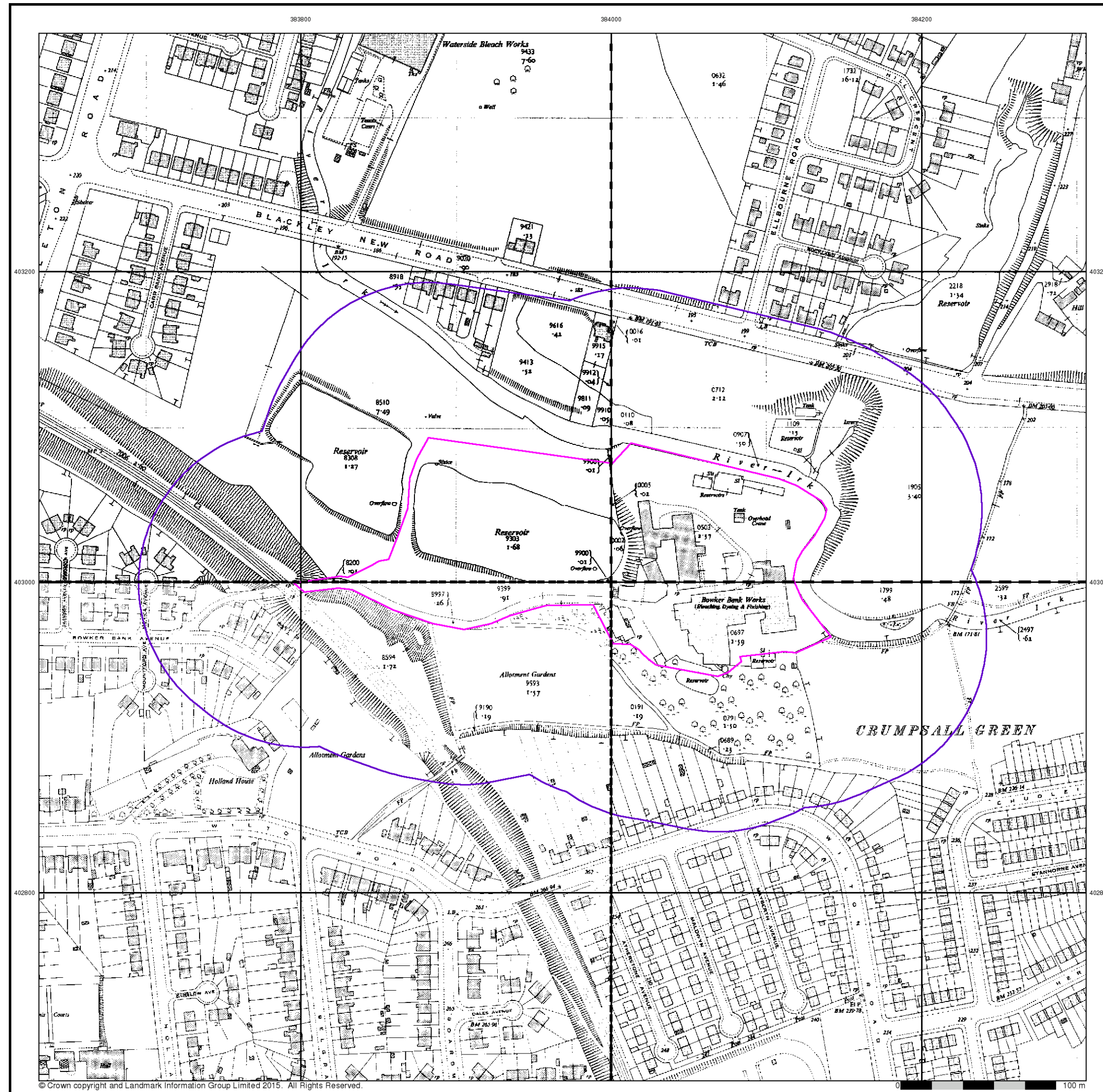
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1952 - 1953

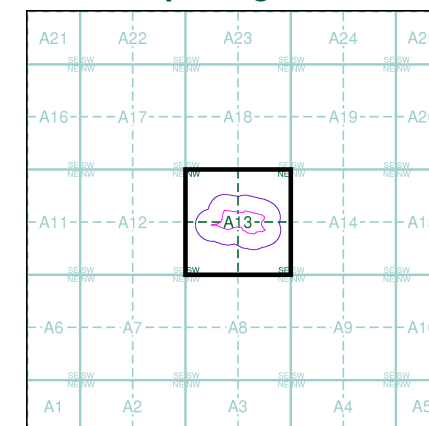
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

SD8303	SD8403
1953	1952
12,500	12,500
SD8302	SD8402
1953	1953
12,500	12,500

Historical Map - Segment A13



Order Details

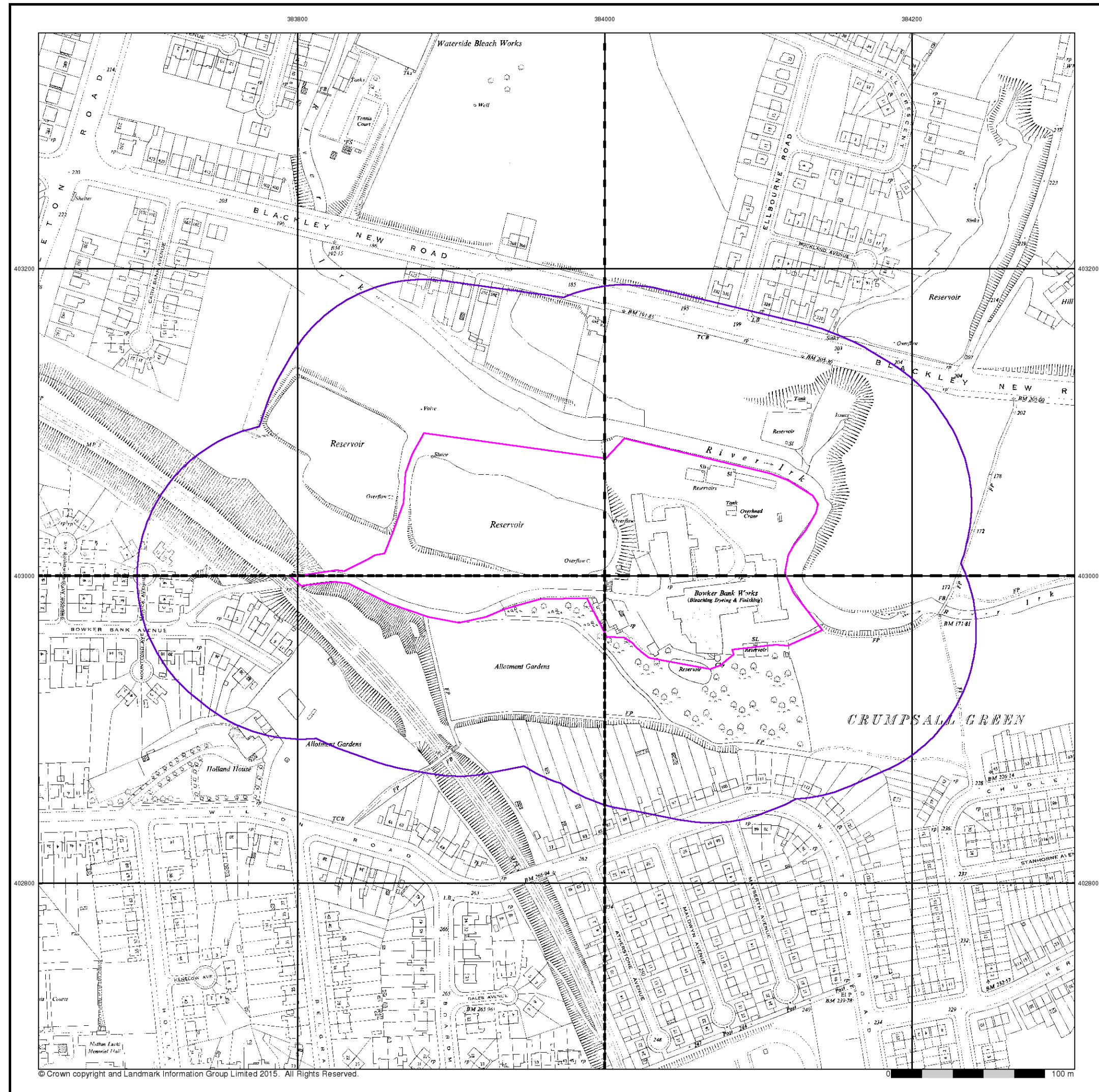
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

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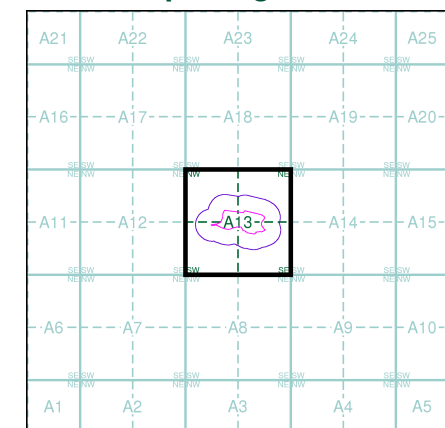
Ordnance Survey Plan
Published 1952
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

SD8303SE	SD8403SW
1952	1952
1:1,250	1:1,250
SD8302NE	SD8402NW
1952	1952
1:1,250	1:1,250

Historical Map - Segment A13



Order Details
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

Site Details
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Ordnance Survey Plan

Published 1955 - 1971

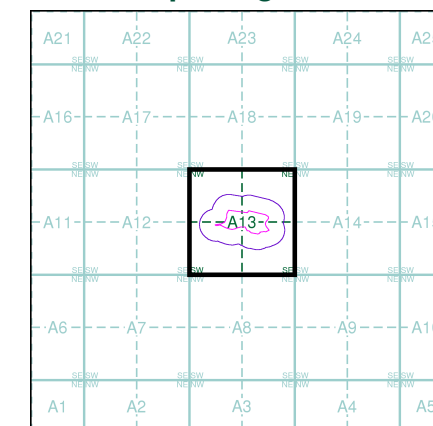
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

SD8303SE 1971 1:1,250	SD8403SW 1955 1:1,250
SD8302NE 1967 1:1,250	SD8402NW 1965 1:1,250

Historical Map - Segment A13



Order Details

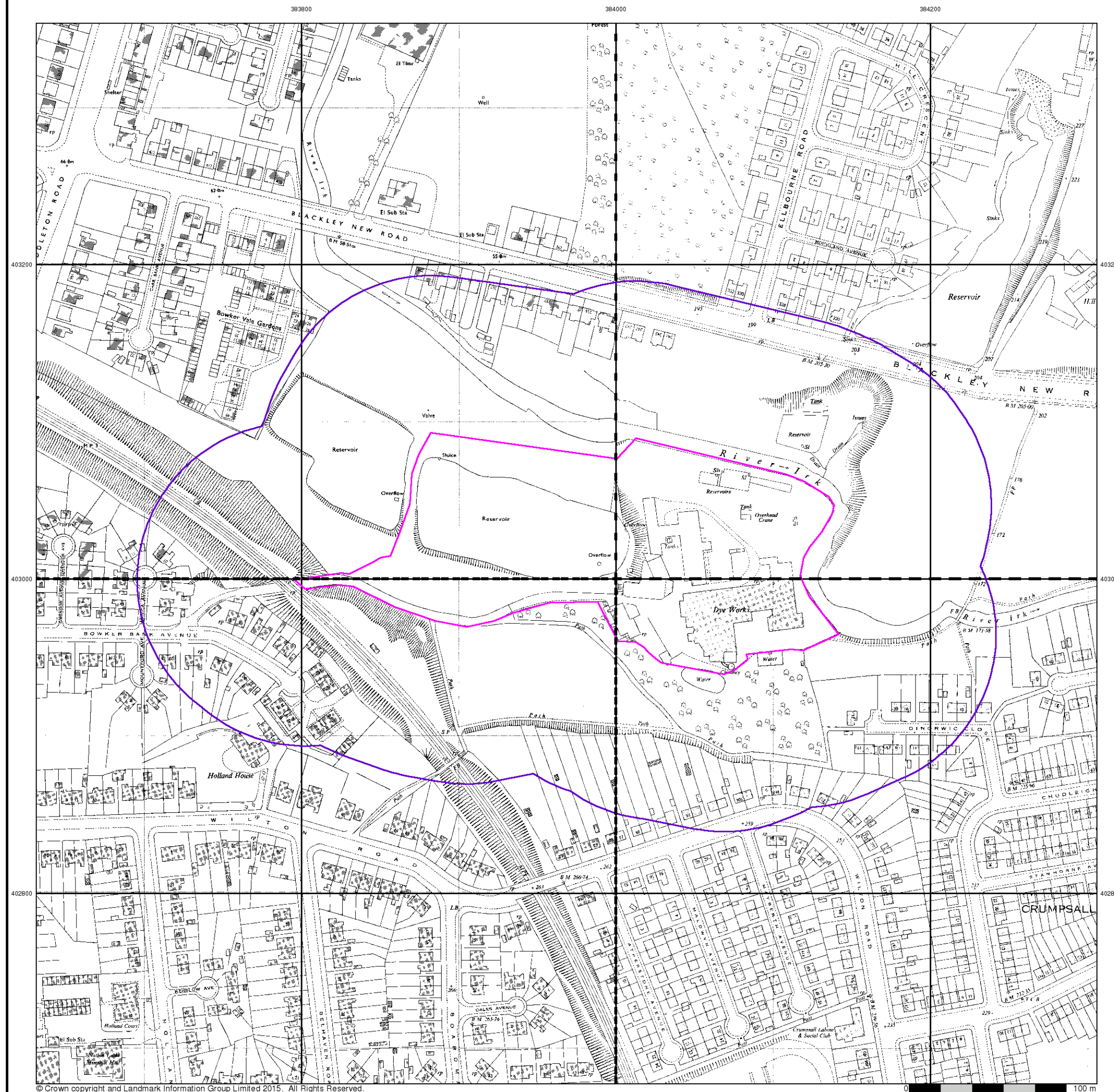
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Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

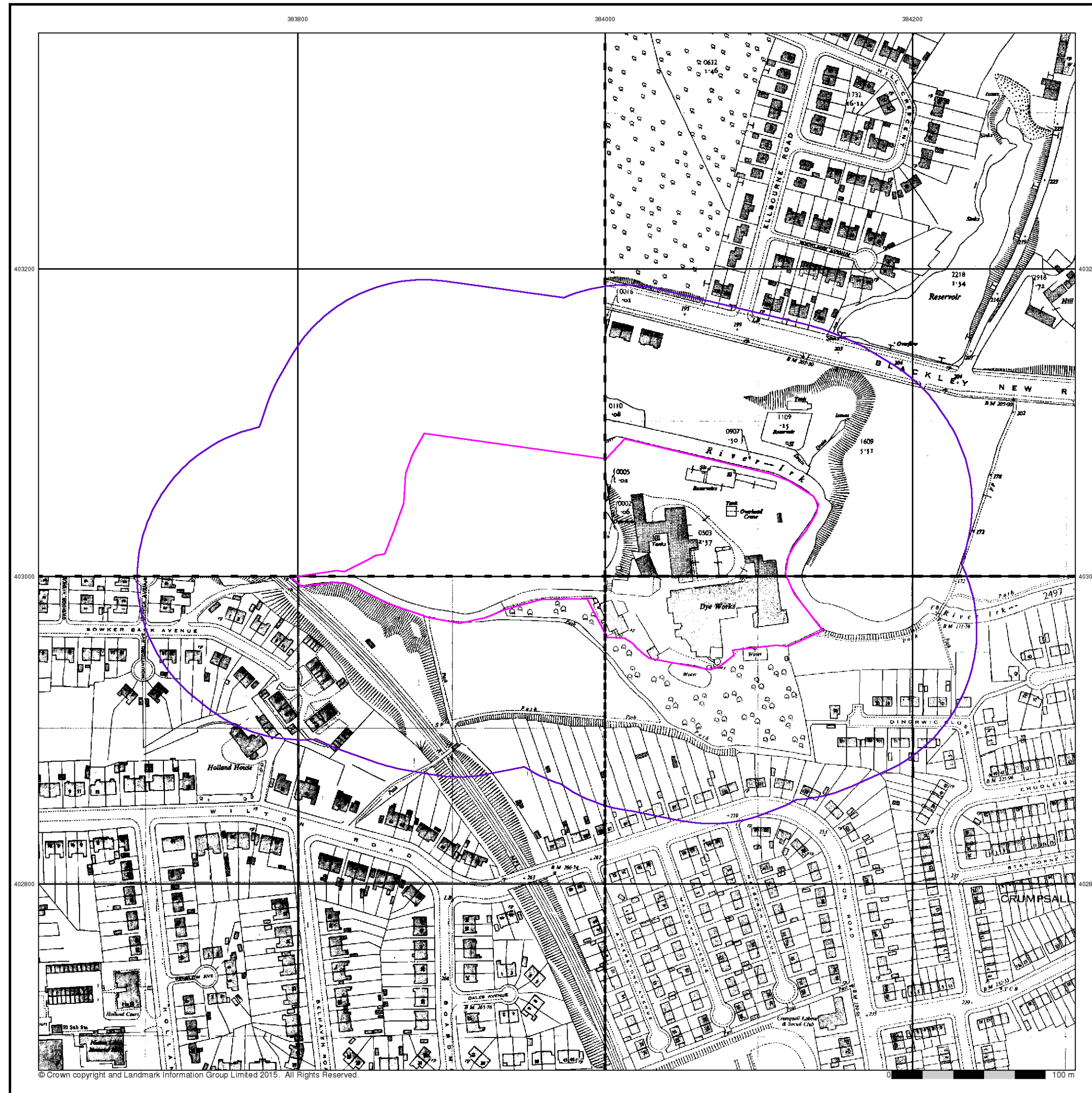
Site Details

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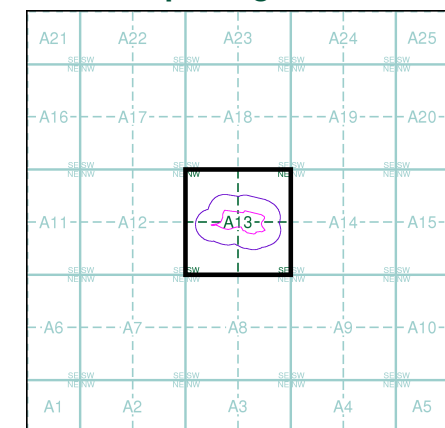
Ordnance Survey Plan
Published 1956 - 1970
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

		SD8403
		1956
		1:2,500
SD8302		SD8402
1968		1970
1:2,500		1:2,500

Historical Map - Segment A13



Order Details

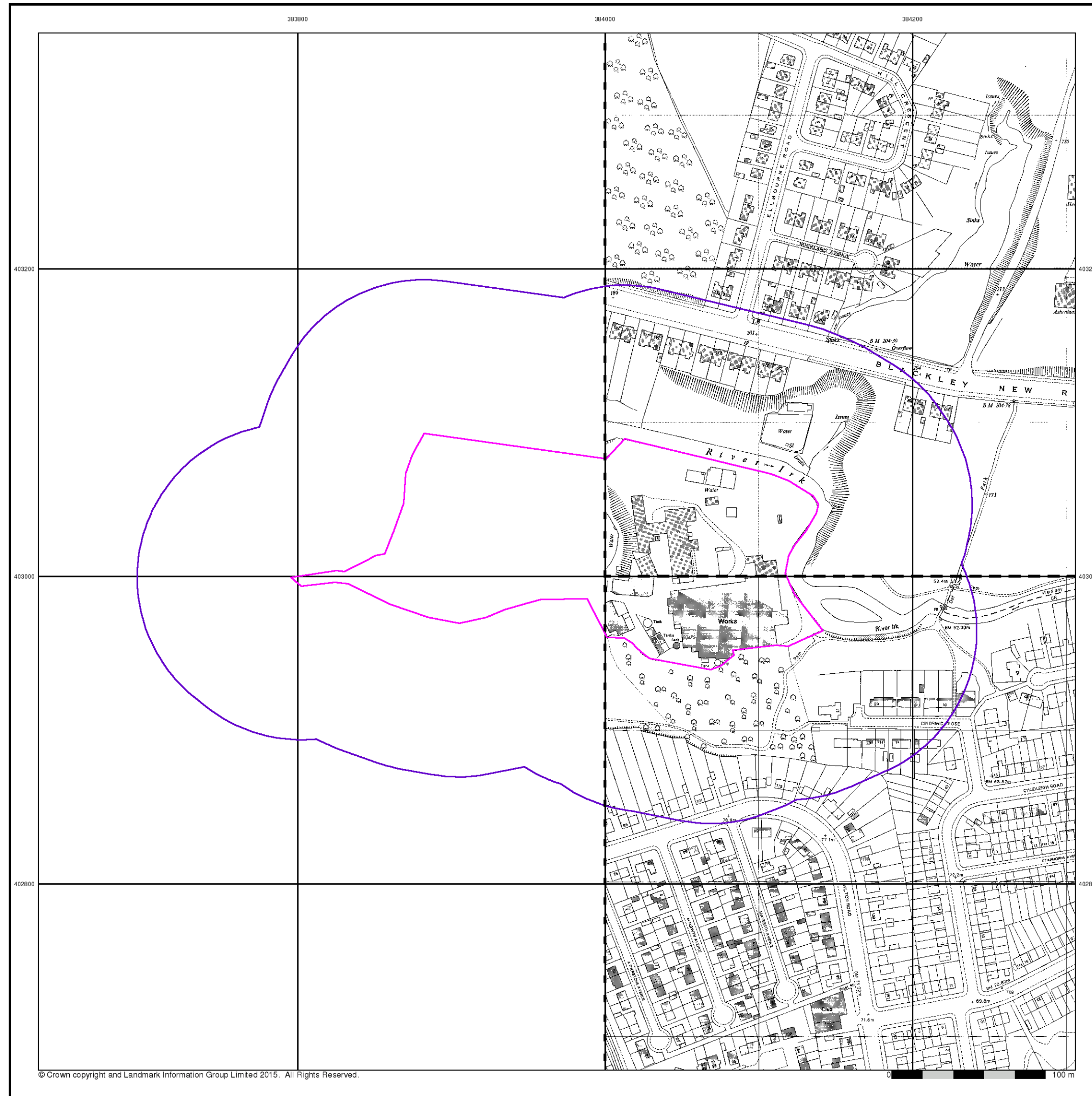
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
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Ordnance Survey Plan

Published 1964 - 1989

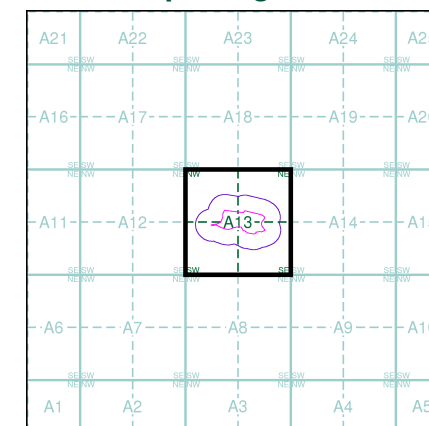
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 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.

Map Name(s) and Date(s)

SD8403SW
1964
1:1,250
SD8402NW
1989
1:1,250

Historical Map - Segment A13



Order Details

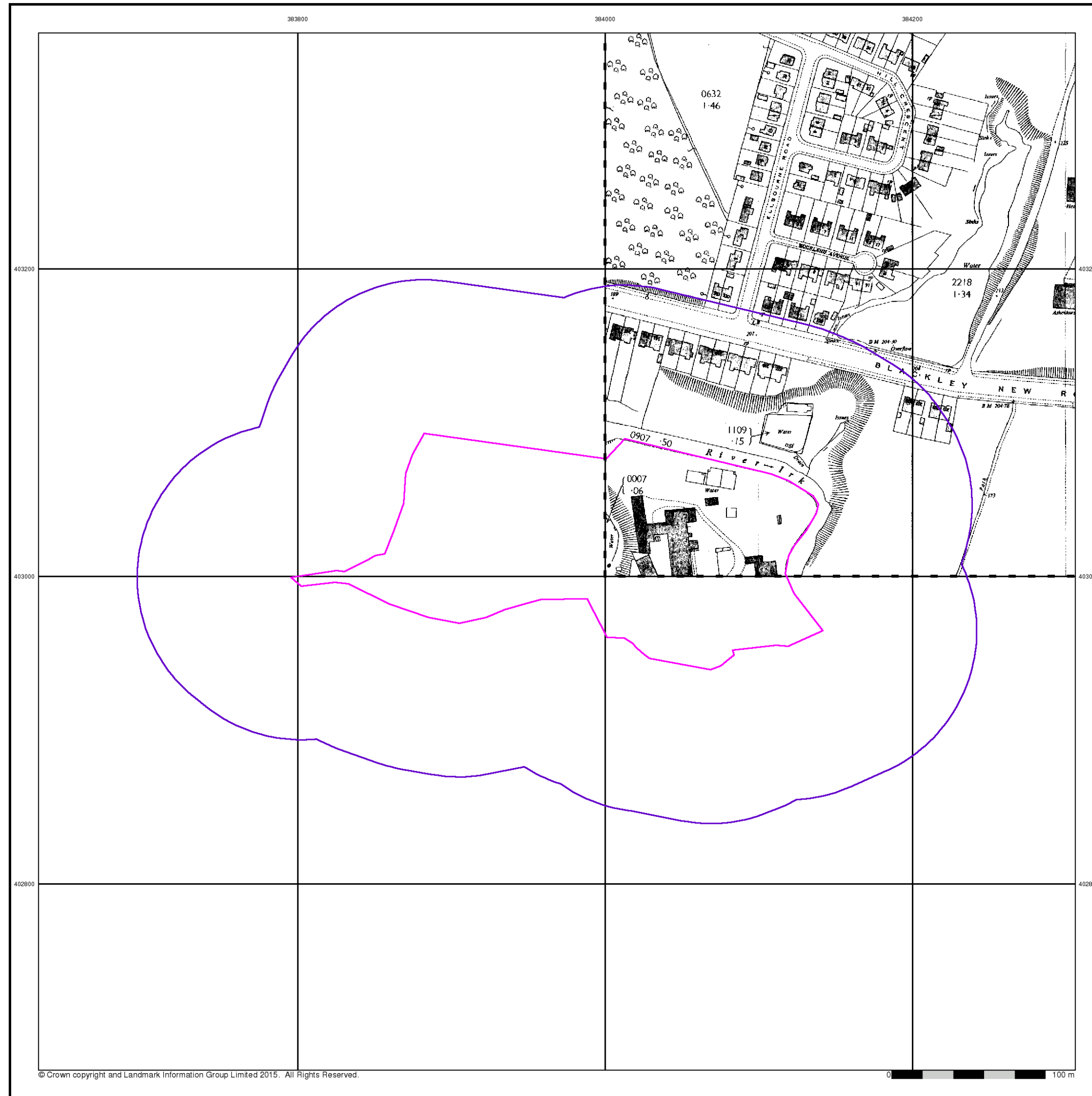
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
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Site Area (Ha): 3.16
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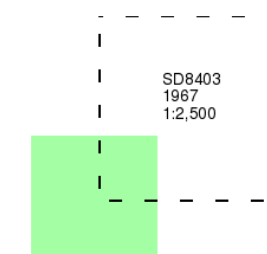
Ordnance Survey Plan

Published 1967

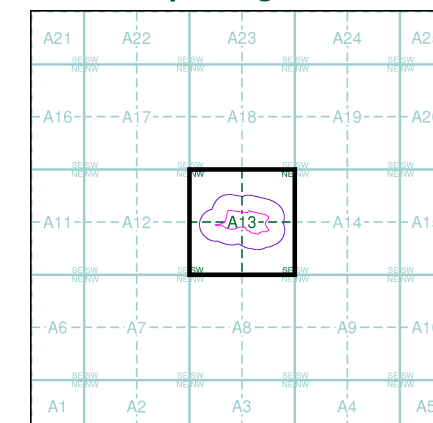
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

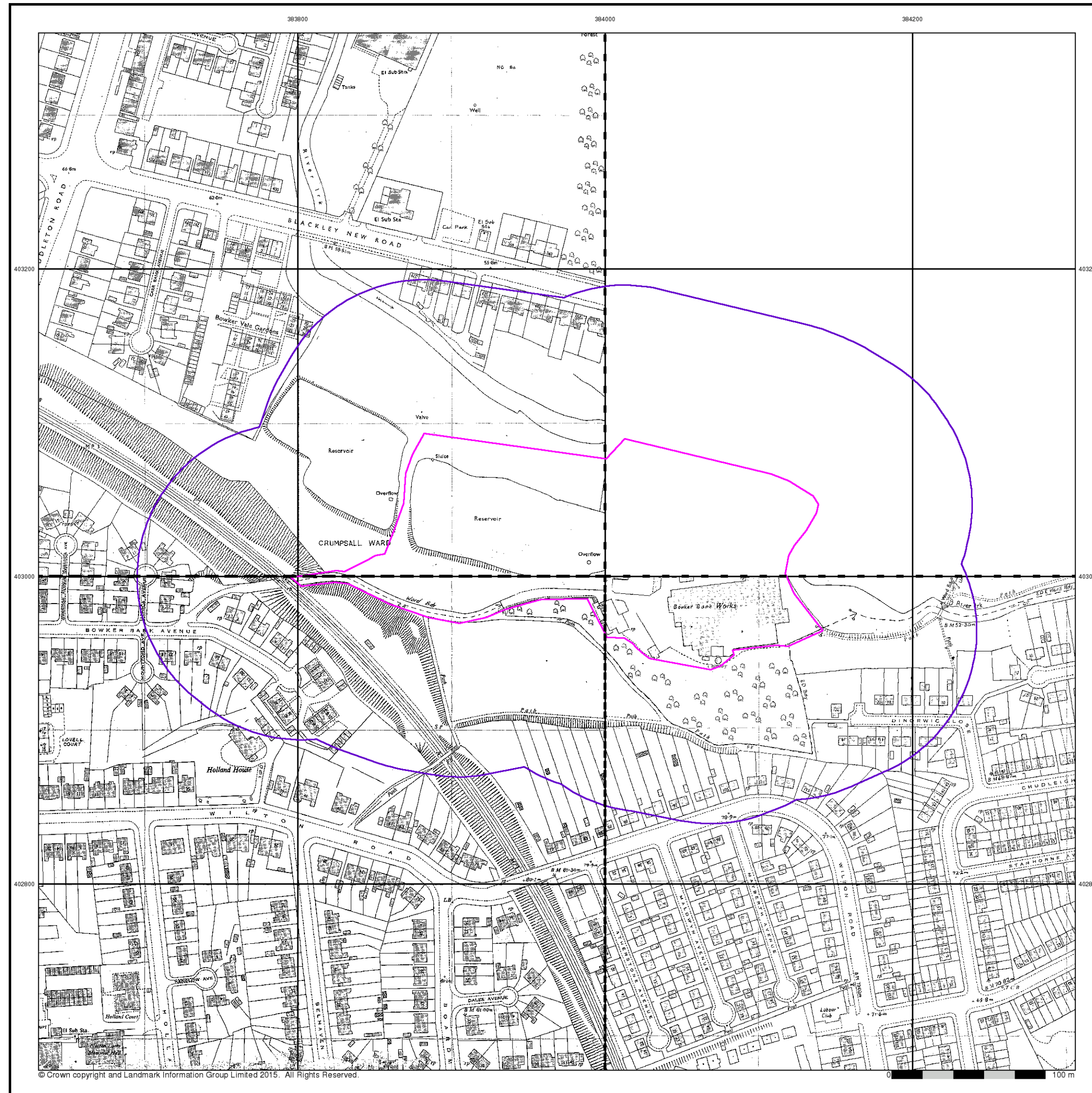
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Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

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Additional SIMs

Published 1978 - 1987

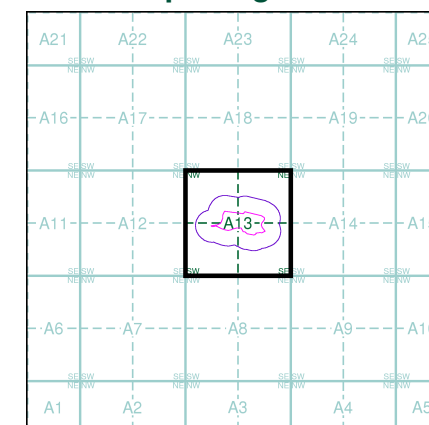
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8303SE	
1987	
1:1,250	
SD8302NE	SD8402NW
1978	1982
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

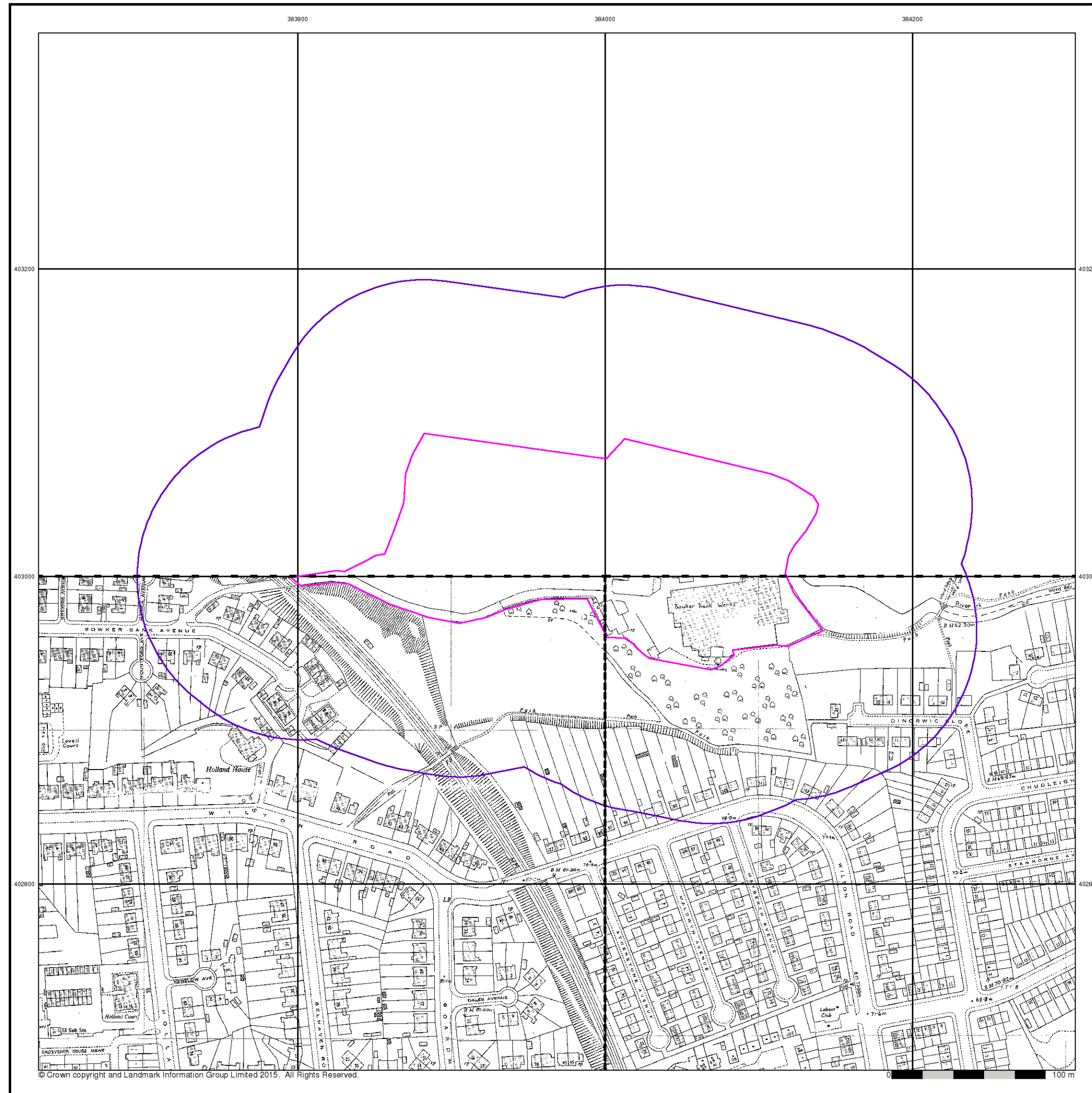
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

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Additional SIMs

Published 1986 - 1991

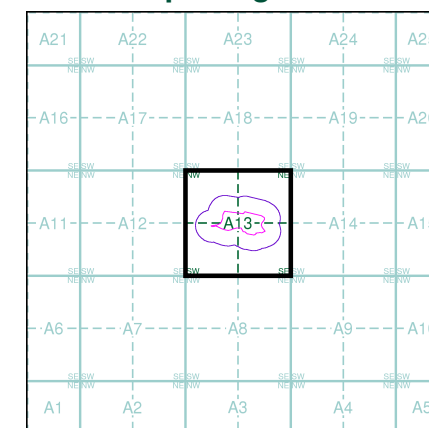
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8302NE 1991 1:1,250		SD8402NW 1986 1:1,250	
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Historical Map - Segment A13



Order Details

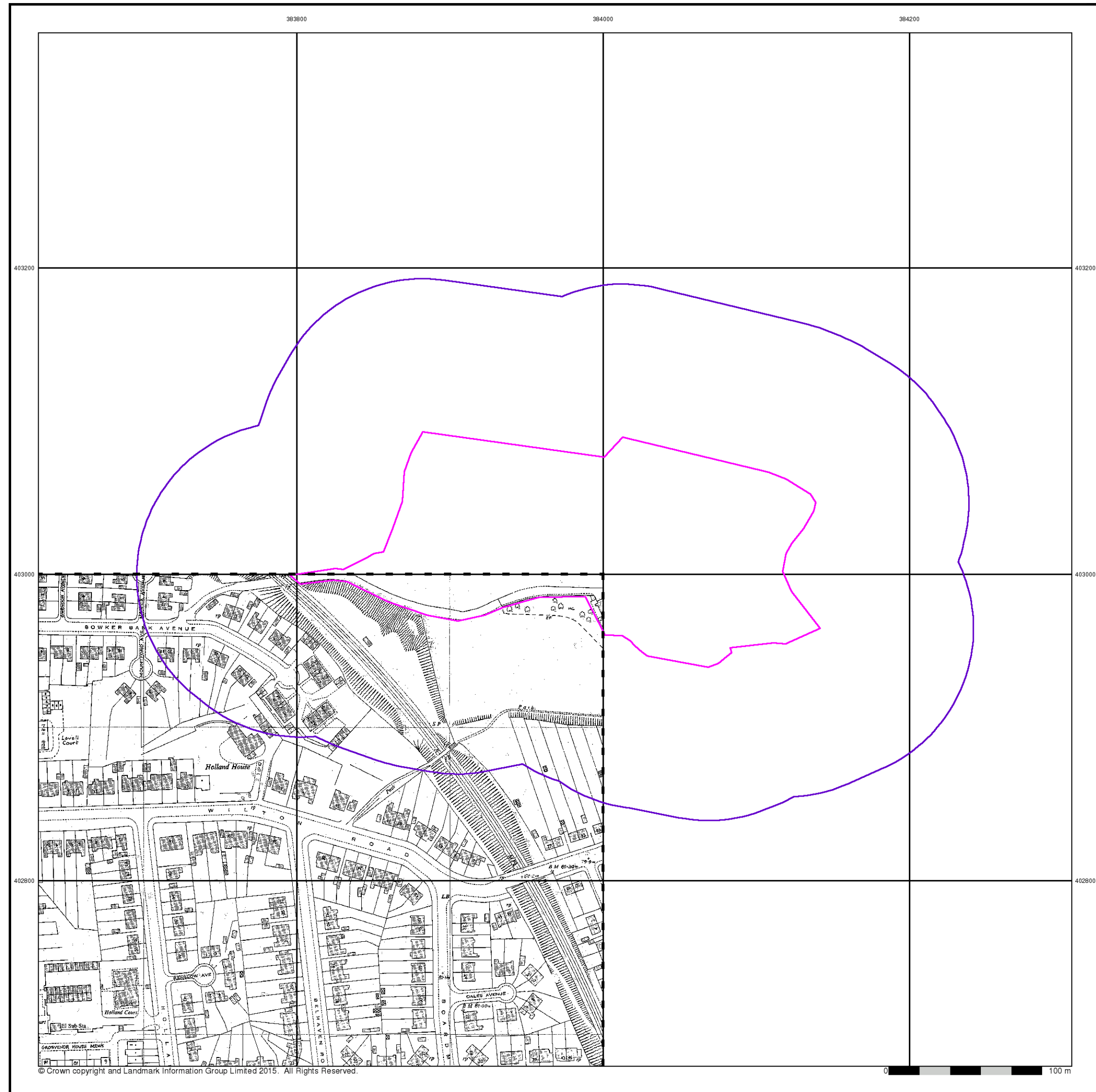
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
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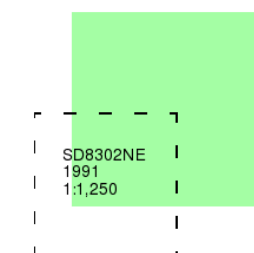
Additional SIMs

Published 1991

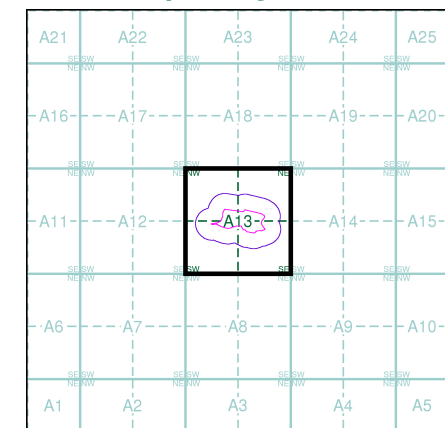
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

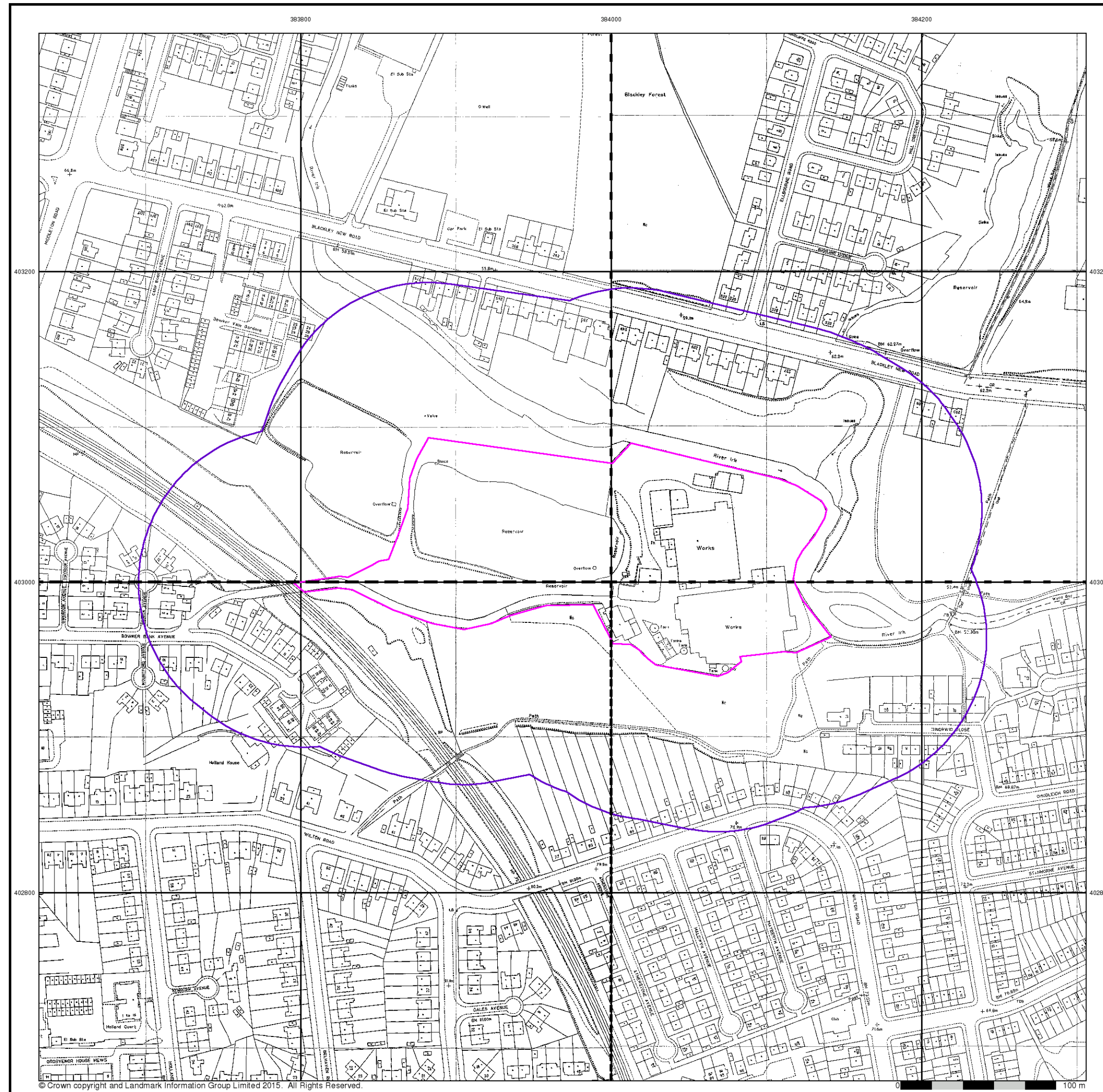
Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

Site Details

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



Large-Scale National Grid Data

Published 1992

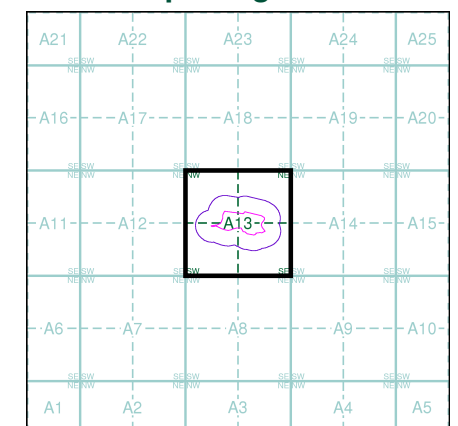
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8303SE	SD8403SW
1992	1992
1:1,250	1:1,250
SD8302NE	SD8402NW
1992	1992
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

Site Details

Blackley Mere, Bowker Bank Avenue, MANCHESTER, M8 4LL



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



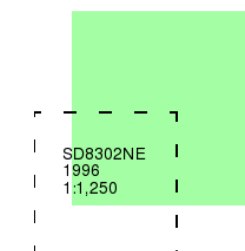
Large-Scale National Grid Data

Published 1996

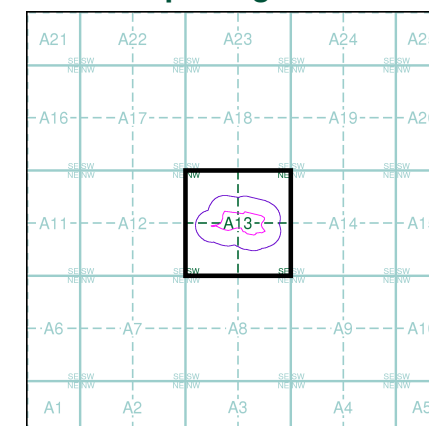
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 92473709_1_1
Customer Ref: 11-164
National Grid Reference: 383980, 403010
Slice: A
Site Area (Ha): 3.16
Search Buffer (m): 100

Site Details

Blackley Mere, Bowker Bank Avenue, MANCHESTER, M8 4LL



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

APPENDIX VI E3P EXPLORATORY HOLE LOGS







Trial Pit Log

Trialpit No

TP102

Sheet 1 of 1

Project Name: Bowker Bank Avenue

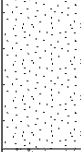
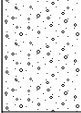
Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
1.40Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼	0.60	ES		0.20			MADE GROUND: Concrete.	1
				0.50			MADE GROUND: Black sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick and sandstone. Cobbles are of brick, sandstone, rare wood and metal.	
							Brown silty fine to coarse SAND (Reworked).	
	1.10	ES		1.00			Black sandy GRAVEL. Gravel is fine to coarse angular to sub-angular of sandstone, brick and mudstone (Hydrocarbon odour).	
				1.40			End of pit at 1.40 m	5

Remarks: 1. Terminated on metal pipes at 1.40m bgl. 2. Water strike encountered at 0.70m bgl.

Stability: Unstable.







Trial Pit Log

Trialpit No

TP104

Sheet 1 of 1

Project Name: Bowker Bank Avenue

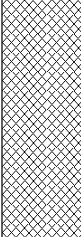
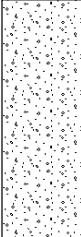
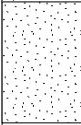
Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.20Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30	ES		0.20			MADE GROUND: Concrete (Reinforced).	1
							MADE GROUND: Black sandy gravelly silt with frequent cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, concrete and brick. Cobbles are of concrete and brick.	
	1.20	ES		1.00			Light brown slightly gravelly silty fine to coarse SAND. Gravel is fine sub-angular to sub-rounded of sandstone and mudstone.	2
				1.80			Brown silty fine to coarse SAND.	3
				2.20			End of pit at 2.20 m	4
								5

Remarks: 1. Terminated at 2.20m bgl due to collapse. 2. Water strike ccountnered at 1.00m bgl.

Stability: Unstable.





Trial Pit Log

Trialpit No

TP105

Sheet 1 of 1

Project Name: Bowker Bank Avenue

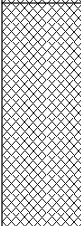
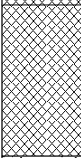
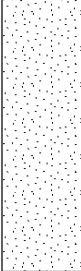
Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.40Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼	0.50	ES		0.25			MADE GROUND: Concrete (Reinforced).	1
							MADE GROUND: Black brown sandy silty gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick and concrete. Cobbles are angular of brick and concrete.	
				1.00			MADE GROUND: Brown sandy clay (Reworked).	
	1.60	ES		1.50			Brown slightly silty fine to coarse SAND (Hydrocarbon odour).	2
				2.40			End of pit at 2.40 m	
								3
								4
								5

Remarks: Water strike encountered at 2.30m bgl.

Stability: Stable.





Trial Pit Log

Trialpit No

TP106

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164

Co-ords: -
Level:

Date
17/08/2016

Location: Blackley, Manchester

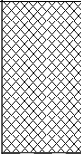
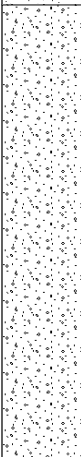
Dimensions
(m):

Depth
2.50

Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.80	ES	HVP=50 HVP=100 HVP=100	0.50 1.00		 	MADE GROUND: Black brown sandy silty gravel. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick and concrete. Firm medium strength to stiff high strength brown sandy slightly gravelly CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone, mudstone and rare coal.	1
	2.00	ES		2.50			Brown slightly silty gravelly fine to coarse SAND. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone (Slightly hydrocarbon odour).	2
							End of pit at 2.50 m	3
								4
								5

Remarks:

Stability: Unstable.





Trial Pit Log

Trialpit No

TP107

Sheet 1 of 1

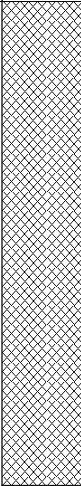
Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.80Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.80	ES					MADE GROUND: Black brown sandy silty gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick, concrete, wood and plastic. Cobbles are angular of brick and concrete.	1
	0.90	ES						
	1.70	ES		1.60			Dark brown slightly gravelly very sandy SILT. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	2
				2.00			Light brown silty fine to coarse SAND.	
				2.80		End of pit at 2.80 m		3
								4
								5

Remarks: Water strike encountered at 2.80m bgl.

Stability: Stable.





Trial Pit Log

Trialpit No

TP108

Sheet 1 of 1

Project Name: Bowker Bank Avenue

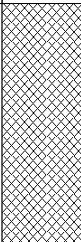
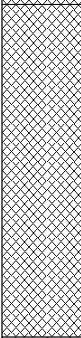
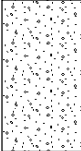
Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.40Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.00	ES		0.80			MADE GROUND: Black brown sandy silty gravel with cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick and concrete. Cobbles are angular of brick and concrete.	
							MADE GROUND: Brown sandy silt with cobbles and boulders. Cobbles are angular of brick. Boulders are angular of concrete.	1
				1.90			Brown slightly gravelly silty fine to coarse SAND. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	2
				2.40			End of pit at 2.40 m	
								3
								4
								5

Remarks:

Stability: Unstable.





Trial Pit Log

Trialpit No

TP109

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
1.70Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	1.10	ES		0.30			MADE GROUND: Concrete (Reinforced).
				0.50			MADE GROUND: Brown sandy gravel. Gravel is fine to coarse angular to sub-angular of sandstone and mudstone.
							MADE GROUND: Black brown sandy silty gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick and concrete. Cobbles are angular of brick and concrete.
				1.70			End of pit at 1.70 m

1

2

3

4

5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP110

Sheet 1 of 1

Project Name: Bowker Bank Avenue

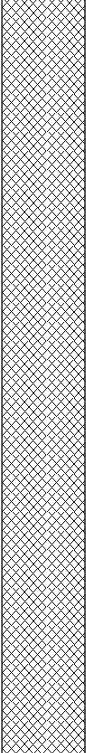
Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.50Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.00	ES					MADE GROUND: Black sandy gravelly silt with cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate and brick. Cobbles are angular of brick and concrete. Boulders are angular of concrete.	1
	1.20	ES						
				2.50				2
								3
								4
								5

End of pit at 2.50 m

Remarks:

Stability: Unstable.





Trial Pit Log

Trialpit No

TP111

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.90Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.15			MADE GROUND: Asphalt.	
							MADE GROUND: Black sandy gravelly silt with frequent cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone and brick. Cobbles are angular of brick.	
				1.00			MADE GROUND: Red white gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick and firebrick. Cobbles are of brick and firebrick.	1
	1.50	ES		2.00			MADE GROUND: Dark brown gravelly silty fine to coarse sand with rare cobbles. Gravel is fine to coarse angular to sub-angular of brick, sandstone and mudstone. Cobbles are angular of brick.	2
				2.90			End of pit at 2.90 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP112

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
17/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.30Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40	ES					MADE GROUND: Dark brown slightly gravelly sandy clay with frequent cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of brick, firebrick, coal, sandstone and mudstone.	1
				1.80			MADE GROUND: Red white gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick and firebrick. Cobbles are of brick and firebrick.	2
				2.30			End of pit at 2.30 m	3
								4
								5

Remarks:

Stability: Unstable.





Trial Pit Log

Trialpit No

TP113

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.70Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30	ES					MADE GROUND: Brown grey silty sandy gravel with frequent cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, concrete brick, firebrick and mudstone. Cobbles are of brick and occasional wood.	
				0.70			MADE GROUND: Brown sandy gravelly silt. Gravel is fine to coarse angular to sub-angular of slate, mudstone, brick and sandstone.	
				1.00			MADE GROUND: White light grey silty gravelly fine to coarse sand. Gravel is fine to medium angular to sub-angular of sandstone.	1
				2.00			MADE GROUND: Black slightly sandy gravelly silt with rootlets. Gravel is fine to medium sub-angular to sub-rounded of brick, sandstone and mudstone (Organic odour).	2
	2.60	ES		2.70			End of pit at 2.70 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP114

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.50Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.00	ES		0.25		XXXXX XXXXX XXXXX XXXXX	Brown slightly sandy gravelly SILT with rootlets. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	1
			HVP=120				Very stiff very high strength orange brown sandy CLAY with rare cobbles of sandstone.	
			HVP=110	1.60			Very stiff high strength brown grey sandy CLAY. Orange bands of fine to coarse sand.	2
			HVP=120					
			HVP=120	2.50			End of pit at 2.50 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP115

Sheet 1 of 1

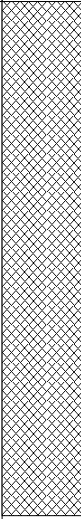
Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
1.70Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.90	ES		1.70			MADE GROUND: Dark brown sandy gravelly silt with frequent cobbles and rare boulders. Gravel is fine to coarse angular to sub-angular of brick, sandstone, mudstone, concrete and slate. Cobbles are angular of brick and concrete. Boulders are angular of concrete.	1
							End of pit at 1.70 m	2
								3
								4
								5

Remarks:

Stability: Unstable.





Trial Pit Log

Trialpit No

TP116

Sheet 1 of 1

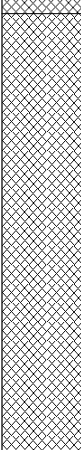
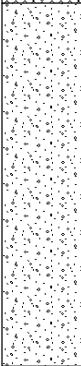
Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.70Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.05			MADE GROUND: Grey gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, brick and concrete. Cobbles are angular of brick and concrete. MADE GROUND: Stiff brown slightly sandy gravelly clay with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, brick, concrete, wood and plastic. Cobbles are angular of brick and concrete.
	2.00	ES		1.50			Orange brown gravelly fine to coarse SAND. Gravel is sub-rounded to rounded of mudstone.
				2.70			End of pit at 2.70 m

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP117

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.50Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES		0.05			MADE GROUND: Grey gravel with cobbles and rare boulders. Gravel is fine to coarse angular to sub-angular of sandstone, concrete and brick. Cobbles are fine to coarse angular to sub-angular of sandstone, concrete and brick. Boulders are angular of concrete. MADE GROUND: Black sandy gravelly silt with cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, brick and concrete. Cobbles are angular of concrete and brick. Orange brown gravelly fine to coarse SAND. Gravel is sub-rounded to rounded of mudstone.
				0.50			
				2.50			
							End of pit at 2.50 m

1

2

3

4

5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP118

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.50Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.05			MADE GROUND: Grey gravel with cobbles and rare boulders. Gravel is fine to coarse angular to sub-angular of sandstone, concrete and brick. Cobbles are fine to coarse angular to sub-angular of sandstone, concrete and brick. Boulders are angular of concrete. MADE GROUND: Very stiff brown slightly sandy gravelly clay with occasional cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone, brick and mudstone. Cobbles are of mudstone, brick and rare coal.	1
	1.40	ES	HVP=120	1.20			Very stiff very high strength brown slightly sandy gravelly CLAY. Gravel is fine to coarse sub-angular to sub-rounded of sandstone, mudstone and rare coal.	2
	1.60	D	HVP=120					
			HVP=120					
				2.50			End of pit at 2.50 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP119

Sheet 1 of 1

Project Name: Bowker Bank Avenue

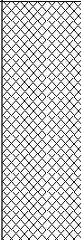
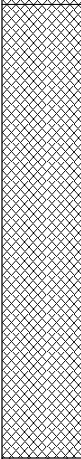
Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.70Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.00	ES		0.80			MADE GROUND: Dark brown sandy gravelly silt with cobbles, boulders and rootlets. Gravel is fine to coarse angular to sub-angular of brick, mudstone, sandstone and concrete. Cobbles are angular of concrete and brick. Boulders are angular of concrete.	
							MADE GROUND: Black silty gravel with cobbles. Gravel is angular to sub-angular of slate, brick and sandstone. Cobbles are angular of brick.	1
				2.30			Grey sandy SILT.	2
				2.70			End of pit at 2.70 m	3
								4
								5

Remarks: Water strike encountered at 2.65m bgl.

Stability: Stable.





Trial Pit Log

Trialpit No

TP120

Sheet 1 of 1

Project Name: Bowker Bank Avenue

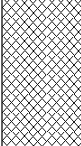
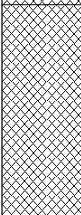
Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.80Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼				0.50			MADE GROUND: Brown silty sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone and brick. Cobbles are of brick.	
							MADE GROUND: Soft to firm silty slightly sandy clay.	1
			HVP=120	1.20			Very stiff high strength brown slightly sandy CLAY. Thin bands of brown fine to coarse sand (Organic odour).	2
			HVP=120					
			HVP=120					
				2.80			End of pit at 2.80 m	3
								4
								5

Remarks: Water strike encountered at 1.20m bgl.

Stability: Stable.





Trial Pit Log

Trialpit No

TP121

Sheet 1 of 1

Project Name: Bowker Bank Avenue

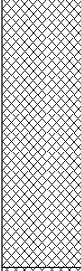
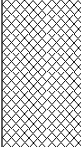
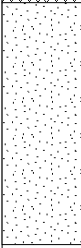
Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.50Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
 	0.50	ES		0.30			MADE GROUND: Concrete (Reinforced).
							MADE GROUND: Dark brown silty sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick, sandstone, slate and firebrick. Cobbles are angular of brick and firebrick.
				1.20			MADE GROUND: Black silty gravel. Gravel is angular to sub-angular of sandstone, mudstone, slate and brick.
				1.70			Brown silty fine to coarse SAND (Organic odour).
				2.50			End of pit at 2.50 m

Remarks: Water strike encountered at 1.20m and 2.00m bgl.

Stability: Unstable.





Trial Pit Log

Trialpit No

TP122

Sheet 1 of 1

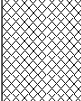
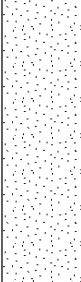
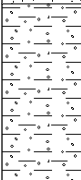
Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.40Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.35			MADE GROUND: Concrete (Reinforced).	
				0.60			MADE GROUND: Grey brown gravel. Gravel is fine to coarse angular to sub-angular of concrete and sandstone.	
				0.80			MADE GROUND: Dark brown sandy gravelly silt. Gravel is fine to coarse angular to sub-angular of brick, sandstone and mudstone./	
							Brown silty fine to coarse SAND with rare coal.	1
	1.90	ES	HVP=90	1.80			Very stiff high strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone, mudstone and rare coal.	2
			HVP=90					
			HVP=80	2.40				
							End of pit at 2.40 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP123

Sheet 1 of 1

Project Name: Bowker Bank Avenue

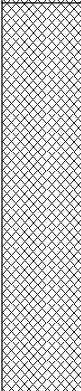
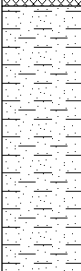
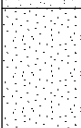
Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
2.80Scale
1:25

Client: Evolve

Logged
D. Horne

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.60	ES		0.20			MADE GROUND: Concrete (Reinforced).	
							MADE GROUND: Black brown sandy silty gravel with cobbles and rare boulders. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate, brick and concrete. Cobbles are angular of brick and concrete. Boulders are angular of concrete.	1
				1.50			Stiff medium strength brown very sandy CLAY.	2
			HVP=70 HVP=50	2.40			Light brown very silty fine to coarse SAND.	
				2.80			End of pit at 2.80 m	3
								4
								5

Remarks:

Stability: Stable.





Trial Pit Log

Trialpit No

TP124

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
1.50Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40	ES					MADE GROUND: Grey sandy silty gravel with frequent cobbles and boulders. Gravel is fine to coarse angular to sub-angular of sandstone, brick, concrete, mudstone and slate. Cobbles are angular of slate, brick and concrete. Boulders are of concrete.	1
				1.10		key key key incorrect incorrect incorrect key key key incorrect incorrect incorrect key key key incorrect incorrect incorrect key key key incorrect incorrect incorrect	Relic Foundation.	
				1.50			End of pit at 1.50 m	2
								3
								4
								5

Remarks: 1. Relic foundation encountered between 1.10m and 1.50m bgl . 2. Refused on foundation at 1.50m bgl.

Stability: Unstable.





Trial Pit Log

Trialpit No

TP125

Sheet 1 of 1

Project Name: Bowker Bank Avenue

Project No.
11164Co-ords: -
Level:Date
18/08/2016

Location: Blackley, Manchester

Dimensions
(m):Depth
1.50Scale
1:25Logged
D. Horne

Client: Evolve

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.70	ES		0.10			MADE GROUND: Asphalt.	1 2 3 4 5
							MADE GROUND: Concrete.	
				0.30			MADE GROUND: Brown sandy gravel with cobbles. Gravel and cobbles are fine to coarse angular to sub-angular of brick, concrete and sandstone.	
				0.50				
								
						End of pit at 1.50 m		

Remarks: Terminated at 1.50m bgl.

Stability: Unstable.





Borehole Log

Borehole No.

WS101

Sheet 1 of 1

Project Name
Bowker Bank Avenue

Project No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	ES		0.35			MADE GROUND: Black slightly sandy gravelly silt with cobbles. Gravel is medium to coarse angular of brick. Cobbles are angular of brick.	
		0.50	ES		0.65			MADE GROUND: Black gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, brick and mudstone. Cobbles are angular of brick.	
		0.80	PP	49 N=1 (0,0/0,0,0,1)	0.95			MADE GROUND: Firm to stiff dark brown slightly sandy gravelly clay with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone and brick. Cobbles are angular of brick.	1
					1.50			MADE GROUND: Brown clayey slightly gravelly fine to coarse sand. Gravel is fine to coarse sub-angular to sub-rounded of mudstone.	
		1.90	PP	25	1.80			MADE GROUND: Dark brown gravel. Gravel is fine to coarse sub-angular to sub-rounded of sandstone and mudstone.	2
		1.90	ES	N=2 (1,0/1,0,1,0)				Very loose brown slightly sandy gravelly SILT. Gravel is fine to medium sub-angular to sub-rounded of mudstone. Thin bands of black slightly sandy silt between 1.90m and 1.95m bgl (Organic odour).	
								Loose brown slightly gravelly silty fine to coarse SAND with cobbles of sandstone. Gravel is fine sub-rounded to rounded of mudstone and sandstone (Organic odour).	3
		2.80	PP	25 N=6 (1,2/2,2,1,1)	3.10			Very stiff high strength brown slightly sandy gravelly CLAY. Gravel is fine sub-angular to sub-rounded of mudstone.	4
				N=11 (8,8/6,2,2,1)					
		4.95	PP	90 N=14 (4,3/5,3,3,3)	4.90				5
					5.45			End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Water strike encountered at 0.80m bgl.





Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES					MADE GROUND: Black red brown silty sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick and sandstone. Cobbles are angular of brick, sandstone and firebrick.	
		1.20	ES	N=4 (1,0/0,2,1,1)	1.00			MADE GROUND: Black sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone, slate and brick. Cobbles are of slate, sandstone and brick.	1
					1.80			MADE GROUND: Grey cobbles of sandstone.	2
				N=2 (1,0/0,1,0,1)	2.00			MADE GROUND: Black sandy gravel. Gravel is fine to coarse angular to sub-angular of brick, slate and sandstone.	
		2.60	PP	25	2.30			Loose brown slightly sandy gravelly SILT. Gravel is fine to coarse sub-angular to sub-rounded of mudstone and sandstone (Organic odour).	3
		2.80	ES						
					3.45			End of borehole at 3.45 m	
									4
									5
									6
									7
									8
									9
									10

Remarks

1. Terminated at 3.45m bgl due to collapse. 2. Water strike encountered at 1.00m bgl. 3. Monitoring well installed.





Borehole Log

Borehole No.

WS103

Sheet 1 of 1

Project Name
Bowker Bank Avenue

Project No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40			MADE GROUND: Black sandy gravel. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone and brick.	
		0.70	ES	57				MADE GROUND: Orange brown grey sandy gravelly silt with rare cobbles.	
		0.80	PP	N=1 (0,0/0,0,0,1)	0.90			Gravel is fine to coarse angular to sub-angular of brick and sandstone. Cobbles are angular of brick.	1
		1.10	ES					Soft brown slightly sandy gravelly SILT. Gravel is fine sub-rounded of mudstone (Organic odour).	
		1.40	PP	25	1.50			Very loose brown silty fine to coarse SAND (Organic odour).	2
				N=1 (0,0/0,0,0,1)					
				N=4 (1,1/1,1,1,1)	3.00			Loose brown silty fine to coarse SAND (Organic odour).	3
				N=7 (1,1/1,2,2,2)					4
				N=35 (3,5/8,9,9,9)	5.00			Very stiff high strength brown slightly sandy gravelly CLAY. Gravel is fine sub-angular to sub-rounded of mudstone.	5
					5.45			End of borehole at 5.45 m	

Remarks

1. Terminated at 3.45m bgl 2. CPT continued to 5.45m bgl. 3. Water strike encountered at 2.00m bgl. 4. Monitoring well installed.





Borehole Log

Borehole No.

WS104

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
				N=5 (1,1/1,2,1,1)	1.20			MADE GROUND: Black brown silty sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, mudstone and brick. Cobbles are angular of brick and mudstone.	1
		1.50 1.60	PP ES	25				MADE GROUND: Black slightly sandy gravelly silt. Gravel is fine to coarse angular to sub-angular of brick, sandstone and mudstone. Cobbles are angular of mudstone and sandstone.	2
		2.30	ES	N=2 (1,1/0,1,0,1)	2.10			Very loose brown sandy SILT with rare coal.	
		2.70	PP	33				Loose light brown silty fine to coarse SAND.	3
				N=5 (1,1/1,2,1,1)	3.10				
				N=10 (1,2/3,2,2,3)					4
				N=15 (4,3/4,3,4,4)	5.00				5
					5.45				
								End of borehole at 5.45 m	
									6
									7
									8
									9
									10

Remarks

1. Complete. 2. Water strike encountered at 3.00m bgl. 3. Monitoring well installed.





Borehole Log

Borehole No.

WS105

Sheet 1 of 1

Project Name
Bowker Bank Avenue

Project No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
				N=22 (5,5/6,6,5,5)	0.30			MADE GROUND: Dark brown slightly sandy gravelly silt with rootlets. Gravel is fine to coarse angular to sub-angular of brick, sandstone and mudstone.	1
				N=5 (1,1/2,1,1,1)	2.10			MADE GROUND: Grey sandy gravel with cobbles. Gravel is fine to coarse of brick, sandstone and slate. Cobbles are angular of brick and plastic.	2
		3.00	PP	25	2.90			MADE GROUND: Brown slightly gravelly fine to coarse sand. Gravel is sub-rounded to rounded of mudstone.	3
		3.00	ES	N=9 (2,2/2,3,2,2)	3.45			Loose black very sandy SILT.	3
								End of borehole at 3.45 m	4
									5
									6
									7
									8
									9
									10

Remarks

1. Refused at 3.45m bgl on timber. 2. Monitoring well installed.





Borehole Log

Borehole No.

WS106

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

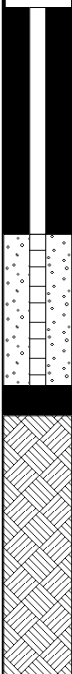
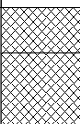
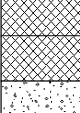
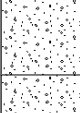
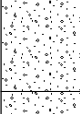
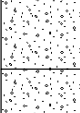
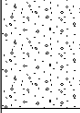
Level:

Scale
1:50

Client: Evolve

Dates: 17/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.90	ES	N=1 (1,1/0,0,0,1)	0.30			MADE GROUND: Black sandy gravelly silt with cobbles and rootlets. Gravel is fine to coarse angular to sub-angular of sandstone and brick. Cobbles are angular of brick.	1		
					1.00			MADE GROUND: Yellow brown sandy gravel with cobbles. Gravel is fine angular to sub-angular of brick, sandstone and firebrick. Cobbles are angular of brick.			
					1.30			MADE GROUND: Red white gravel with cobbles. Gravel is fine to coarse angular to sub-angular of brick and firebrick. Cobbles are of brick and firebrick.			
		2.80	ES	N=18 (6,5/6,4,4,4)	2.00			Loose orange brown slightly gravelly fine to coarse SAND. Gravel is fine to medium sub-angular to sub-rounded of coal and mudstone.	2		
					2.85			Medium dense brown gravelly fine to coarse SAND. Gravel is fine to medium sub-rounded to rounded of mudstone.			
					3.45			Medium dense grey gravelly fine to coarse SAND. Gravel is fine to coarse sub-rounded to rounded of mudstone.			
					4.45			Dense grey gravelly fine to coarse SAND. Gravel is fine to coarse sub-rounded to rounded of mudstone.			
				N=36 (4,3/11,9,10,6)					4		
		End of borehole at 4.45 m							5		
									6		
									7		
									8		
									9		
									10		

Remarks

1. Fell in to 2.50m bgl. 2. Water strike encountered at 2.50m bgl. 3. Monitoring well installed.





Borehole Log

Borehole No.

WS107

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.95			MADE GROUND: Grey silty sandy gravel with cobbles. Gravel and cobbles are fine to coarse angular to sub-angular of sandstone and brick.	
		1.80	ES	N=15 (1,0/1,5,5,4) N=3 (1,0/1,0,1,1)	2.15			MADE GROUND: Grey sandy gravelly silt with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, brick, ceramic and coal. Cobbles are angular of brick.	1
		2.60	PP	41	2.65			Very loose black sandy SILT.	2
		2.90	ES	N=13 (3,3/4,3,3,3)				Stiff medium strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone, mudstone and rare coal.	3
		3.20	PP	131	3.80			Loose light brown fine to coarse SAND with occasional coal.	4
				N=11 (2,1/2,3,3,3)					
				N=7 (1,1/1,2,2,2)	5.45				5
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed.





Borehole Log

Borehole No.

WS108

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

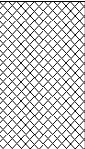
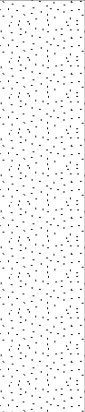
Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.90	ES	N=19 (5,5/6,4,5,4)	1.00			MADE GROUND: Grey silty sandy gravel with cobbles. Gravel and cobbles are fine to coarse angular to sub-angular of sandstone and brick.	
		1.70	ES	123	1.50			MADE GROUND: Grey sandy gravelly silt with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone and brick. Cobbles are angular of brick.	1
		1.80	PP	N=14 (2,2/3,3,4,4)	2.20			Stiff medium strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone, mudstone and rare coal.	2
		2.60	PP	106	2.70			Firm to stiff orange brown slightly sandy CLAY with rare coal.	
				N=17 (3,3/4,4,5,4)				Medium dense light brown fine to coarse SAND with occasional coal.	3
				N=17 (3,4/4,4,5,4)					4
				N=22 (3,4/4,6,6,6)	5.45				5
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks
Complete.



Borehole Log

Borehole No.

WS109

Sheet 1 of 1

Project Name
Bowker Bank Avenue

Project No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.10	ES	N=2 (1,0/1,0,1,0)	1.00			MADE GROUND: Dark brown slightly sandy gravelly silt with cobbles and rootlets. Gravel and cobbles are fine to coarse angular to sub-angular of brick, sandstone and mudstone.	1
				N=8 (2,3/2,2,2,2)	2.05			Very loose light brown silty fine to coarse SAND with rare coal.	2
					2.50			Loose grey brown silty fine to coarse SAND with rare coal.	3
				N=13 (3,2/3,3,4,3)				Medium dense grey slightly gravelly fine to coarse SAND. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	3
		3.70	PP	172 N=29 (7,7/7,8,7,7)	3.40			Very stiff medium strength brown slightly sandy CLAY.	4
		4.90	PP	172 N=18 (4,5/5,4,4,5)	5.00			Stiff medium strength brown slightly sandy CLAY.	5
					5.45			End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Water strike encountered at 3.50m bgl. 3 Monitoring well installed.





Borehole Log

Borehole No.

WS110

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30			MADE GROUND: Grey sandy gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone and brick. Cobbles are angular of brick.	
		0.80	ES	N=1 (0,0/0,0,0,1)	0.70			MADE GROUND: Dark brown slightly sandy gravelly silt with cobbles. Gravel is fine to coarse angular to sub-angular of mudstone, sandstone and brick. Cobbles are angular of brick.	1
		1.20	ES		1.00			MADE GROUND: Black ashy gravel. Gravel is angular to sub-angular of slate, ash and sandstone.	
				N=15 (3,2/3,3,4,5)	2.10			Grey brown sandy SILT (Organic odour).	2
		2.80	PP	221 N=21 (4,5/5,6,5,5)	3.00			Stiff medium strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	3
		3.60	PP	131				Very stiff high strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	
				N=12 (2,2/3,3,3,3)	4.00			Stiff medium strength brown slightly gravelly sandy CLAY. Gravel is fine to medium sub-angular to sub-rounded of sandstone and mudstone.	4
		4.70	PP	98 N=13 (3,3/3,3,4,3)					5
					5.45				
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Water strike encountered at 2.00m bgl. 3. Monitoring well installed.





Borehole Log

Borehole No.

WS111

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40	ES		0.05 0.30			MADE GROUND: Asphalt.	
					0.70			MADE GROUND: Grey gravel. Gravel is angular to sub-angular of sandstone and concrete.	
				N=1 (0,0/0,0,0,1)	1.00			MADE GROUND: Brown very silty slightly sandy gravel. Gravel is fine to coarse angular to sub-angular of sandstone and brick.	1
		1.95	ES	N=7 (1,1/2,2,1,2)	2.00			MADE GROUND: Brown slightly gravelly sandy silt. Gravel is fine to medium angular of brick.	
	▼							MADE GROUND: Brown slightly gravelly very sandy silt. Gravel is fine to coarse angular to sub-angular of brick, mudstone and sandstone (Organic odour).	2
		2.70	PP	25				Loose dark brown black sandy SILT (Organic odour).	
				N=6 (1,2/1,2,1,2)	2.90				
					3.20			Grey slightly gravelly fine to coarse SAND. Gravel is fine sub-angular to sub-rounded of sandstone.	3
								Loose brown very sandy SILT with coal.	
				N=7 (2,2/1,2,2,2)					4
				N=6 (1,0/1,2,1,2)					5
					5.45				
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. Water strike encountered at 2.00m bgl.





Borehole Log

Borehole No.

WS112

Sheet 1 of 1

Project Name
Bowker Bank AvenueProject No.
11164

Co-ords: -

Hole Type
WS

Location: Blackley, Manchester

Level:

Scale
1:50

Client: Evolve

Dates: 18/08/2016 -

Logged By
D. Horne

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.80	ES	N=1 (1,0/1,0,0,0)	0.30			MADE GROUND: Concrete.	
					0.60			MADE GROUND: White gravel. Gravel is of concrete and sandstone.	
					1.00			MADE GROUND: Brown silty gravelly fine to coarse sand. Gravel is fine to coarse angular to sub-angular of sandstone and brick.	1
		2.10	ES	N=5 (1,2/1,1,2,1)	2.00			MADE GROUND: Black silty gravel with cobbles. Gravel is fine to coarse angular to sub-angular of sandstone, coal and brick. Cobbles are angular of brick.	2
					3.00			MADE GROUND: Grey slightly silty fine to coarse sand with coal.	3
					3.45			MADE GROUND: Brown sandy gravel. Gravel is fine to coarse angular to sub-angular of sandstone, brick and mudstone. End of borehole at 3.45 m	3
									4
									5
									6
									7
									8
									9
									10

Remarks

1. Refused at 3.45m bgl. 2. Water strike encountered at 2.00m bgl. 3. Monitoring well installed.



APPENDIX VII CHEMICAL TESTING RESULTS



**D Horne**

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Analytical Report Number : 16-25822

Project / Site name:	Blakeley Mere	Samples received on:	22/08/2016
Your job number:	11164	Samples instructed on:	22/08/2016
Your order number:	11164-4241-DH	Analysis completed by:	26/08/2016
Report Issue Number:	1	Report issued on:	26/08/2016
Samples Analysed:	2 leachate samples - 18 soil samples		

Signed:

Rexona Rahman
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Emma Winter
Assistant Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

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4041



Environmental Science

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618769	618770	618771	618772	618773
Sample Reference				WS101	TP101	TP103	TP104	TP104
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.90-2.00	0.40-0.50	0.40-0.50	0.30-0.40	1.20-1.30
Date Sampled				17/08/2016	17/08/2016	17/08/2016	17/08/2016	17/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	26	10	14	9.7	16
Total mass of sample received	kg	0.001	NONE	0.54	0.42	0.39	0.50	0.62

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Amosite- Loose fibres, Insulation lagging, Crocidolite- Loose fibres	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Detected	Not-detected	Not-detected	-

General Inorganics

pH (Automated)	pH Units	N/A	MCERTS	8.0	8.5	8.2	8.0	8.2
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	3	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	420	1800	1200	730	73
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	260	330	130	68	18
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.13	0.16	0.066	0.034	0.0091
Water Soluble Sulphate (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	130	163	65.9	33.8	9.1
Sulphide	mg/kg	1	MCERTS	7.8	< 1.0	11	< 1.0	< 1.0
Total Sulphur	mg/kg	50	NONE	540	1100	1400	400	< 50

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	1.0	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.21	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	1.3	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	1.3	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.71	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.67	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.46	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.92	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.49	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.64	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	9.81	< 1.60	< 1.60	< 1.60
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.4	77	170	330	7.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.3	0.6	0.7	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	39	200	260	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	29	160	630	210	9.5
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27	280	870	500	4.3
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.6	0.4	0.6	0.5	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	60	56	24	5.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.5	1.4	2.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	60	140	130	170	21

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618769	618770	618771	618772	618773
Sample Reference				WS101	TP101	TP103	TP104	TP104
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.90-2.00	0.40-0.50	0.40-0.50	0.30-0.40	1.20-1.30
Date Sampled				17/08/2016	17/08/2016	17/08/2016	17/08/2016	17/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Petroleum Hydrocarbons								
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12)	mg/kg	2	ISO 17025	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16)	mg/kg	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
TPH (C16 - C21)	mg/kg	1	ISO 17025	< 1.0	22	< 1.0	< 1.0	< 1.0
TPH (C21 - C35)	mg/kg	1	ISO 17025	< 1.0	110	< 1.0	< 1.0	< 1.0

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618774	618775	618776	618777	618778
Sample Reference				TP105	TP106	TP107	TP109	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	2.00-2.10	0.80-0.90	1.10-1.20	0.90-1.00
Date Sampled				17/08/2016	17/08/2016	17/08/2016	17/08/2016	17/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	8.5	19	8.5	21	15
Total mass of sample received	kg	0.001	NONE	0.42	0.56	0.41	0.41	0.40

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile- Insulation lagging	-	Amosite- Insulation lagging, Chrysotile- Loose fibres	Chrysotile- Hard/cement type material, Insulation board/tile, Insulation lagging	Chrysotile- Insulation lagging, Amosite- Loose fibres
Asbestos in Soil	Type	N/A	ISO 17025	Detected	-	Detected	Detected	Detected

General Inorganics

pH (Automated)	pH Units	N/A	MCERTS	8.7	7.6	8.2	8.2	8.5
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	3
Total Sulphate as SO ₄	mg/kg	50	MCERTS	7900	130	1100	1300	2900
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3600	130	100	220	130
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.8	0.065	0.051	0.11	0.067
Water Soluble Sulphate (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1820	64.8	51.3	110	66.8
Sulphide	mg/kg	1	MCERTS	< 1.0	7.8	< 1.0	2.8	13
Total Sulphur	mg/kg	50	NONE	3400	180	640	720	1300

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.22	< 0.05	< 0.05	0.31	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	0.31	< 0.10	< 0.10	0.36	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	0.19	< 0.10	< 0.10	0.32	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	3.3	< 0.10	2.2	3.1	0.59
Anthracene	mg/kg	0.1	MCERTS	0.59	< 0.10	0.38	0.55	0.14
Fluoranthene	mg/kg	0.1	MCERTS	5.5	< 0.10	4.3	3.2	1.9
Pyrene	mg/kg	0.1	MCERTS	5.4	< 0.10	4.0	2.8	1.9
Benzo(a)anthracene	mg/kg	0.1	MCERTS	2.9	< 0.10	2.0	1.4	1.1
Chrysene	mg/kg	0.05	MCERTS	2.2	< 0.05	1.8	1.1	0.82
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	3.0	< 0.10	2.1	1.4	1.3
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	1.5	< 0.10	1.0	0.71	0.58
Benzo(a)pyrene	mg/kg	0.1	MCERTS	3.0	< 0.10	2.1	1.4	1.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	1.3	< 0.10	0.96	0.62	0.57
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	0.30	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.7	< 0.05	1.2	0.75	0.64

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	31.3	< 1.60	22.1	18.2	10.6
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	73	28	85	43	3300
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	< 0.2	1.0	0.8	4.3
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	41	6.1	100	28	150
Copper (aqua regia extractable)	mg/kg	1	MCERTS	180	12	350	120	550
Lead (aqua regia extractable)	mg/kg	1	MCERTS	270	4.4	430	510	710
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.7	< 0.3	0.9	1.2	0.9
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	35	5.9	35	18	74
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	2.0	< 1.0	1.7
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	170	16	310	200	1400

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618774	618775	618776	618777	618778
Sample Reference				TP105	TP106	TP107	TP109	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	2.00-2.10	0.80-0.90	1.10-1.20	0.90-1.00
Date Sampled				17/08/2016	17/08/2016	17/08/2016	17/08/2016	17/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Petroleum Hydrocarbons								
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12)	mg/kg	2	ISO 17025	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16)	mg/kg	4	ISO 17025	< 4.0	< 4.0	< 4.0	4.3	< 4.0
TPH (C16 - C21)	mg/kg	1	ISO 17025	30	< 1.0	22	22	13
TPH (C21 - C35)	mg/kg	1	ISO 17025	140	< 1.0	210	100	160

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618779	618780	618781	618782	618783
Sample Reference				TP115	TP117	TP118	WS109	WS110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.90-1.00	0.30-0.40	1.40-1.50	1.10-1.20	0.80-0.90
Date Sampled				18/08/2016	18/08/2016	18/08/2016	18/08/2016	18/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	17	13	13	13	11
Total mass of sample received	kg	0.001	NONE	1.2	0.40	0.37	0.48	0.38

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile- Insulation lagging, Amosite- Loose fibres	Chrysotile, Amosite- Loose fibres	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	-	-	Not-detected

General Inorganics

pH (Automated)	pH Units	N/A	MCERTS	8.4	7.4	8.4	8.4	8.7
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	3500	1300	480	86	640
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	3100	530	300	26	60
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.6	0.27	0.15	0.013	0.030
Water Soluble Sulphate (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1570	266	149	12.8	30.2
Sulphide	mg/kg	1	MCERTS	5.8	1.1	12	< 1.0	1.7
Total Sulphur	mg/kg	50	NONE	1800	630	700	< 50	680

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.25	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	1.7	1.0	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	0.51	0.21	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	4.8	1.9	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	4.2	1.7	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	2.7	1.0	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	2.3	0.74	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	2.8	1.0	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	1.3	0.71	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	2.1	1.0	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	1.2	0.51	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	0.22	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	0.64	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	25.1	10.7	< 1.60	< 1.60	< 1.60
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	34	45	6.5	5.8	56
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.1	0.5	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	50	52	24	11	98
Copper (aqua regia extractable)	mg/kg	1	MCERTS	230	220	23	12	470
Lead (aqua regia extractable)	mg/kg	1	MCERTS	220	220	9.3	6.4	360
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	0.8	< 0.3	0.4	3.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	25	27	6.2	64
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.6	2.3	1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	210	180	49	17	150

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618779	618780	618781	618782	618783
Sample Reference				TP115	TP117	TP118	WS109	WS110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.90-1.00	0.30-0.40	1.40-1.50	1.10-1.20	0.80-0.90
Date Sampled				18/08/2016	18/08/2016	18/08/2016	18/08/2016	18/08/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Petroleum Hydrocarbons								
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12)	mg/kg	2	ISO 17025	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16)	mg/kg	4	ISO 17025	15	8.0	< 4.0	< 4.0	< 4.0
TPH (C16 - C21)	mg/kg	1	ISO 17025	74	34	1.8	< 1.0	< 1.0
TPH (C21 - C35)	mg/kg	1	ISO 17025	320	180	14	< 1.0	< 1.0

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618784	618785	618786		
Sample Reference				WS111	WS108	WS107		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.95-2.05	1.90	1.80-1.90		
Date Sampled				18/08/2016	18/08/2016	18/08/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	15	16	14		
Total mass of sample received	kg	0.001	NONE	0.47	0.38	0.38		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile- Insulation lagging, Loose fibres		
Asbestos in Soil	Type	N/A	ISO 17025	-	-	Detected		

General Inorganics

pH (Automated)	pH Units	N/A	MCERTS	7.6	8.0	8.1		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	15		
Total Sulphate as SO ₄	mg/kg	50	MCERTS	490	450	1400		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	490	48	68		
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.25	0.024	0.034		
Water Soluble Sulphate (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	245	24.2	33.8		
Sulphide	mg/kg	1	MCERTS	31	1.1	< 1.0		
Total Sulphur	mg/kg	50	NONE	1500	360	780		

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.18		
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.76		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.15		
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1.9		
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1.8		
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1.1		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.87		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1.1		
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.65		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	1.1		
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	0.56		
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.75		

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60	10.9		
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	27	430		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	1.3		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	9.1	24	1200		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	50	510		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	180	1800		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.7	1.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	10	21	41		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.1	2.6		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	25	83	1900		

Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618784	618785	618786		
Sample Reference				WS111	WS108	WS107		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				1.95-2.05	1.90	1.80-1.90		
Date Sampled				18/08/2016	18/08/2016	18/08/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Petroleum Hydrocarbons								
TPH (C5 - C6)	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
TPH (C6 - C8)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
TPH (C8 - C10)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1		
TPH (C10 - C12)	mg/kg	2	ISO 17025	< 2.0	< 2.0	< 2.0		
TPH (C12 - C16)	mg/kg	4	ISO 17025	< 4.0	< 4.0	5.0		
TPH (C16 - C21)	mg/kg	1	ISO 17025	< 1.0	< 1.0	26		
TPH (C21 - C35)	mg/kg	1	ISO 17025	< 1.0	2.1	190		



Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618787	618788			
Sample Reference				TP102	TP110			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.10-1.20	1.20-1.30			
Date Sampled				18/08/2016	18/08/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	7.9	8.0			
Total Cyanide	µg/l	10	ISO 17025	< 10	18			

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
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Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01			
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	NONE	< 0.01	< 0.01			
Fluorene	µg/l	0.01	NONE	< 0.01	< 0.01			
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01			
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01			
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01			
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01			
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01			

Total PAH

Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2	< 0.2			
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1.1	ISO 17025	14	6.7			
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08			
Chromium (hexavalent)	µg/l	5	NONE	17	< 5.0			
Chromium (dissolved)	µg/l	0.4	ISO 17025	32	1.0			
Copper (dissolved)	µg/l	0.7	ISO 17025	1.6	14			
Lead (dissolved)	µg/l	1	ISO 17025	3.2	1.0			
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5			
Nickel (dissolved)	µg/l	0.3	ISO 17025	8.3	4.7			
Selenium (dissolved)	µg/l	4	ISO 17025	5.4	15			
Zinc (dissolved)	µg/l	0.4	ISO 17025	5.9	6.3			



Analytical Report Number: 16-25822

Project / Site name: Blakeley Mere

Your Order No: 11164-4241-DH

Lab Sample Number				618787	618788			
Sample Reference				TP102	TP110			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.10-1.20	1.20-1.30			
Date Sampled				18/08/2016	18/08/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

Benzene	µg/l	1	NONE	< 1.0	< 1.0			
Toluene	µg/l	1	NONE	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	NONE	< 1.0	< 1.0			
p & m-xylene	µg/l	1	NONE	< 1.0	< 1.0			
o-xylene	µg/l	1	NONE	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10			

Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	< 10	< 10			
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TPH-CWG - Aliphatic >C5 - C6	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C6 - C8	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C8 - C10	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

TPH-CWG - Aromatic >C5 - C7	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C7 - C8	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C8 - C10	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

Analytical Report Number : 16-25822
Project / Site name: Blakeley Mere

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
618769	WS101	None Supplied	1.90-2.00	Brown clay and loam.
618770	TP101	None Supplied	0.40-0.50	Brown sandy loam with gravel and brick.
618771	TP103	None Supplied	0.40-0.50	Black gravelly loam.
618772	TP104	None Supplied	0.30-0.40	Brown clay and loam with gravel.
618773	TP104	None Supplied	1.20-1.30	Light brown sandy clay.
618774	TP105	None Supplied	0.50-0.60	Brown sandy loam with gravel and brick.
618775	TP106	None Supplied	2.00-2.10	Light brown sandy clay.
618776	TP107	None Supplied	0.80-0.90	Brown loam and clay with gravel.
618777	TP109	None Supplied	1.10-1.20	Brown loam and sand with gravel and brick.
618778	WS106	None Supplied	0.90-1.00	Light brown sandy loam with gravel and vegetation.
618779	TP115	None Supplied	0.90-1.00	Brown loam and sand with gravel and brick.
618780	TP117	None Supplied	0.30-0.40	Brown loam and clay with gravel and vegetation.
618781	TP118	None Supplied	1.40-1.50	Brown clay and loam.
618782	WS109	None Supplied	1.10-1.20	Light brown sandy clay.
618783	WS110	None Supplied	0.80-0.90	Black gravelly loam with brick.
618784	WS111	None Supplied	1.95-2.05	Light brown sandy clay.
618785	WS108	None Supplied	1.90	Light brown clay and loam.
618786	WS107	None Supplied	1.80-1.90	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 16-25822

Project / Site name: Blakeley Mere

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in leachate	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in leachate	Determination of pH in leachate by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number : 16-25822

Project / Site name: Blakeley Mere

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L076-PL	D	NONE
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

**Gregor Hirst**

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Analytical Report Number : 16-27329

Project / Site name:	Blakeley Mere	Samples received on:	09/09/2016
Your job number:	11-164	Samples instructed on:	09/09/2016
Your order number:	4364	Analysis completed by:	15/09/2016
Report Issue Number:	1	Report issued on:	15/09/2016
Samples Analysed:	8 water samples		

Signed:

Rexona Rahman
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Dr Irma Doyle
Senior Account Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

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Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627010	627011	627012	627013	627014
Sample Reference				WS101	WS103	WS104	WS110	RS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				07/09/2016	07/09/2016	07/09/2016	07/09/2016	07/09/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	7.6	7.7	7.1	7.9	7.8
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.89	7.73	14.8	25.9	1.82
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.05	0.07	0.21	< 0.02	< 0.02
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.6	3.3	0.9	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	7.2	1.3	< 0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	8.5	3.2	1.4	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.10	0.08	0.08	0.10	0.09
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.2	2.7	6.9	5.6	8.1
Selenium (dissolved)	µg/l	0.6	ISO 17025	4.4	< 0.6	3.7	< 0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	17	24	110	18	22



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627010	627011	627012	627013	627014
Sample Reference				WS101	WS103	WS104	WS110	RS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				07/09/2016	07/09/2016	07/09/2016	07/09/2016	07/09/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C5 - C6	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C6 - C8	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C7 - C8	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
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Date Sampled				07/09/2016	07/09/2016	07/09/2016	07/09/2016	07/09/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

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Lab Sample Number				627010	627011	627012	627013	627014
Sample Reference				WS101	WS103	WS104	WS110	RS2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				07/09/2016	07/09/2016	07/09/2016	07/09/2016	07/09/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627015	627101	627102		
Sample Reference				RS3	WS109	RS1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/09/2016	07/09/2016	07/09/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	7.6	7.2	7.6		
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10		

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10		
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	< 0.16	< 0.16		
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.71	0.21	7.60		
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.17	< 0.02		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.2	< 0.2	0.3		
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5		
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	< 0.2	0.8		
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.07	0.07	0.06		
Nickel (dissolved)	µg/l	0.5	ISO 17025	8.3	16	9.1		
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	< 0.6	< 0.6		
Zinc (dissolved)	µg/l	0.5	ISO 17025	18	2.1	17		



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627015	627101	627102		
Sample Reference				RS3	WS109	RS1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/09/2016	07/09/2016	07/09/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	< 10	< 10	< 10		
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TPH-CWG - Aliphatic >C5 - C6	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		

TPH-CWG - Aromatic >C5 - C7	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C7 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627015	627101	627102		
Sample Reference				RS3	WS109	RS1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/09/2016	07/09/2016	07/09/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		



Analytical Report Number: 16-27329

Project / Site name: Blakeley Mere

Your Order No: 4364

Lab Sample Number				627015	627101	627102		
Sample Reference				RS3	WS109	RS1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/09/2016	07/09/2016	07/09/2016		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01		

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 16-27329-1 Blakeley Mere 11-164

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number : 16-27329

Project / Site name: Blakeley Mere

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	NONE
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L0102B-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
TPH1 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX VIII GEOTECHNICAL TESTING RESULTS





TEST CERTIFICATE

Determination of Moisture Content

Tested in Accordance with BS 1377-2:1990: Clause 3.2

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

Test results

Laboratory Reference	Sample Reference	Location	Depth Top [m]	Depth Base [m]	Sample Type	Description	Moisture Content [%]
619371	Not Given	WS108	2	Not Given	D	Yellowish brown slightly gravelly slightly sandy CLAY with fragments of bricks	16
619372	Not Given	WS109	4	Not Given	D	Yellowish brown slightly gravelly clayey SAND	15
619373	Not Given	WS110	3	Not Given	D	Brown slightly gravelly sandy CLAY	22
619374	Not Given	TP118	1.6	Not Given	D	Brown slightly gravelly sandy CLAY	16

Comments:

Approved:

Mirosława Pytlík
PL Head of Geotechnical section
Date Reported: 29/08/2016

Signed:

Terry Stafford
Geotechnical Manager

for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Determination of Liquid and Plastic Limits

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Tested in Accordance with BS1377-2: 1990: Clause 4.4 & 5: One Point Method

Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

TEST RESULTS

Laboratory Reference: 619371
Sample Reference: Not Given

Description: Yellowish brown slightly gravelly slightly sandy CLAY with fragments of bricks

Sample Type: D

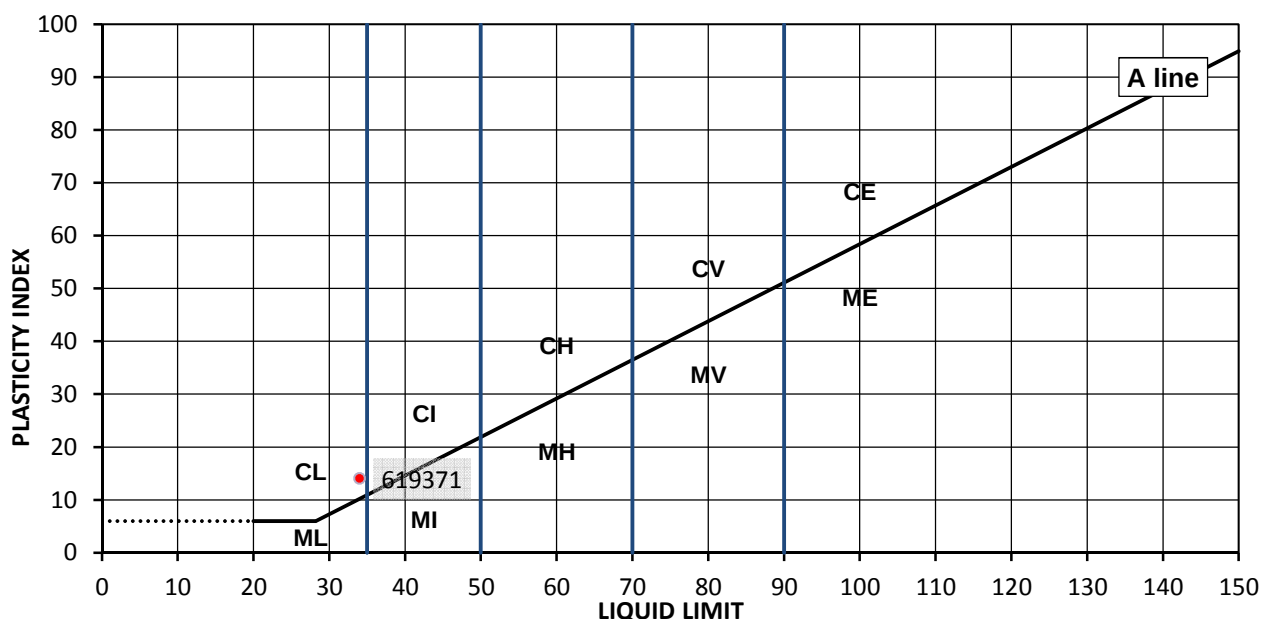
Location: WS108

Depth Top [m]: 2

Sample Preparation: Tested after >425um removed by hand

Depth Base [m]: Not Given

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
16	34	20	14	95



Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

		Plasticity	Liquid Limit
C	Clay	L Low	below 35
M	Silt	I Medium	35 to 50
		H High	50 to 70
		V Very high	70 to 90
		E Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)

Comments:

Approved:

Signed:

Mirosława Pytlak
PL Head of Geotechnical section
Date Reported: 29/08/2016

Terry Stafford
Geotechnical Manager

for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Determination of Liquid and Plastic Limits

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Tested in Accordance with BS1377-2: 1990: Clause 4.4 & 5: One Point Method

Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

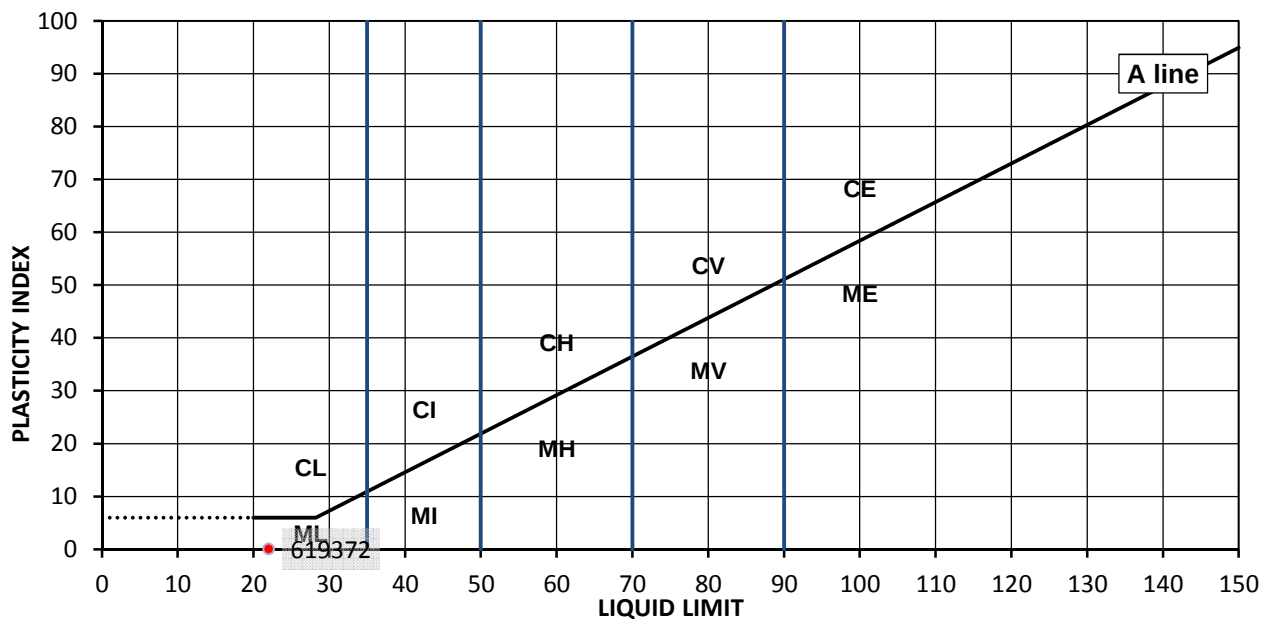
TEST RESULTS

Laboratory Reference: 619372
Sample Reference: Not Given

Description: Yellowish brown slightly gravelly clayey SAND
Location: WS109
Sample Preparation: Tested after >425um removed by hand

Sample Type: D
Depth Top [m]: 4
Depth Base [m]: Not Given

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
15	22	NP*	N/A	75



Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

	Plasticity	Liquid Limit
C	Clay	below 35
M	Silt	35 to 50
	L Low	50 to 70
	I Medium	70 to 90
	H High	exceeding 90
	V Very high	
	E Extremely high	
Organic	O	append to classification for organic material (eg CHO)

Comments:

*- Sample unsuitable for the test (PL)

Approved:

Mirosława Pytlík
PL Head of Geotechnical section
Date Reported: 29/08/2016

Signed:

Terry Stafford
Geotechnical Manager

for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Determination of Liquid and Plastic Limits

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Tested in Accordance with BS1377-2: 1990: Clause 4.4 & 5: One Point Method

Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

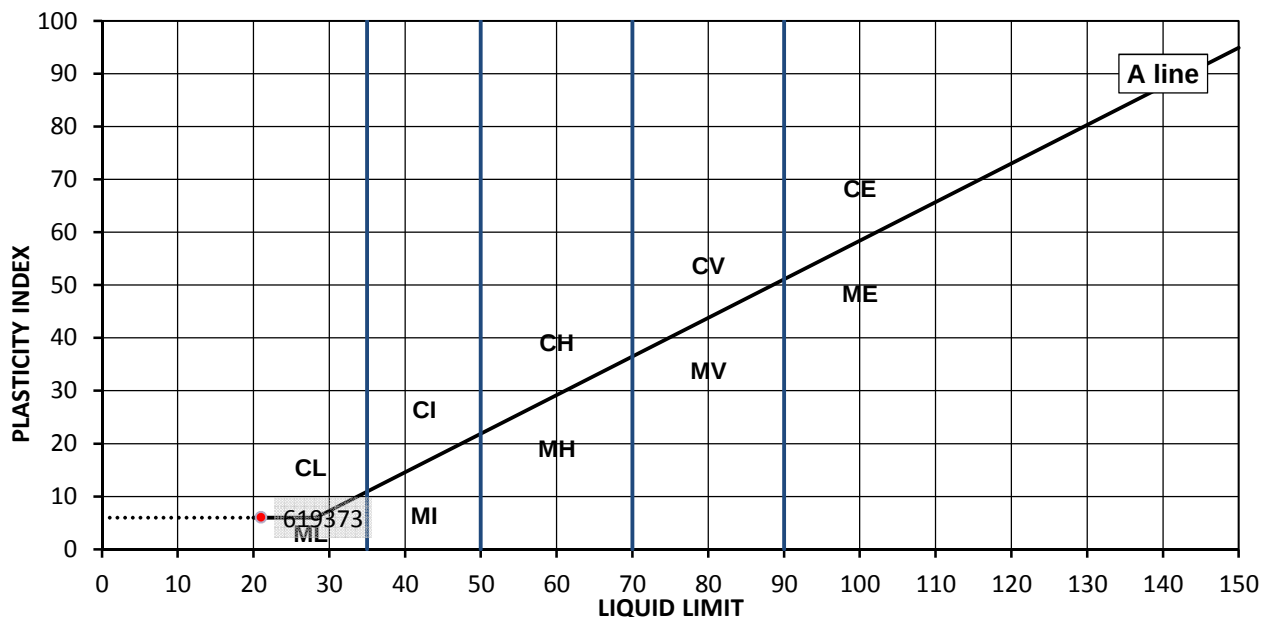
TEST RESULTS

Laboratory Reference: 619373
Sample Reference: Not Given

Description: Brown slightly gravelly sandy CLAY
Location: WS110
Sample Preparation: Tested after >425um removed by hand

Sample Type: D
Depth Top [m]: 3
Depth Base [m]: Not Given

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
22	21	15	6	96



Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

	Plasticity	Liquid Limit
C	Clay	
M	Silt	
L	Low	below 35
I	Medium	35 to 50
H	High	50 to 70
V	Very high	70 to 90
E	Extremely high	exceeding 90
O	Organic	append to classification for organic material (eg CHO)

Comments:

Approved:

Mirosława Pytlík
PL Head of Geotechnical section
Date Reported: 29/08/2016

Signed:

Terry Stafford
Geotechnical Manager

for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Determination of Liquid and Plastic Limits

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Tested in Accordance with BS1377-2: 1990: Clause 4.4 & 5: One Point Method

Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

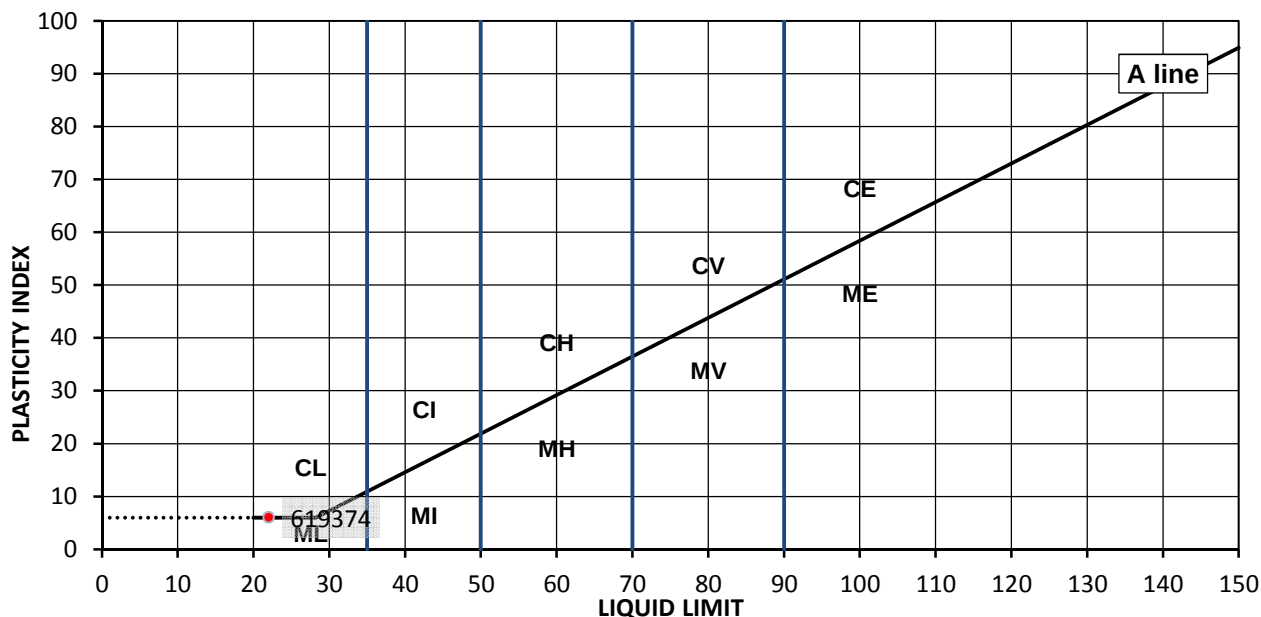
TEST RESULTS

Laboratory Reference: 619374
Sample Reference: Not Given

Description: Brown slightly gravelly sandy CLAY
Location: TP118
Sample Preparation: Tested after >425um removed by hand

Sample Type: D
Depth Top [m]: 1.6
Depth Base [m]: Not Given

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
16	22	16	6	94



Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

	Plasticity	Liquid Limit
C	Clay	
M	Silt	
L	Low	below 35
I	Medium	35 to 50
H	High	50 to 70
V	Very high	70 to 90
E	Extremely high	exceeding 90
O	Organic	append to classification for organic material (eg CHO)

Comments:

Approved:

Mirosława Pytlík
PL Head of Geotechnical section
Date Reported: 29/08/2016

Signed:

Terry Stafford
Geotechnical Manager

for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

Summary of Liquid and Plastic Limits

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



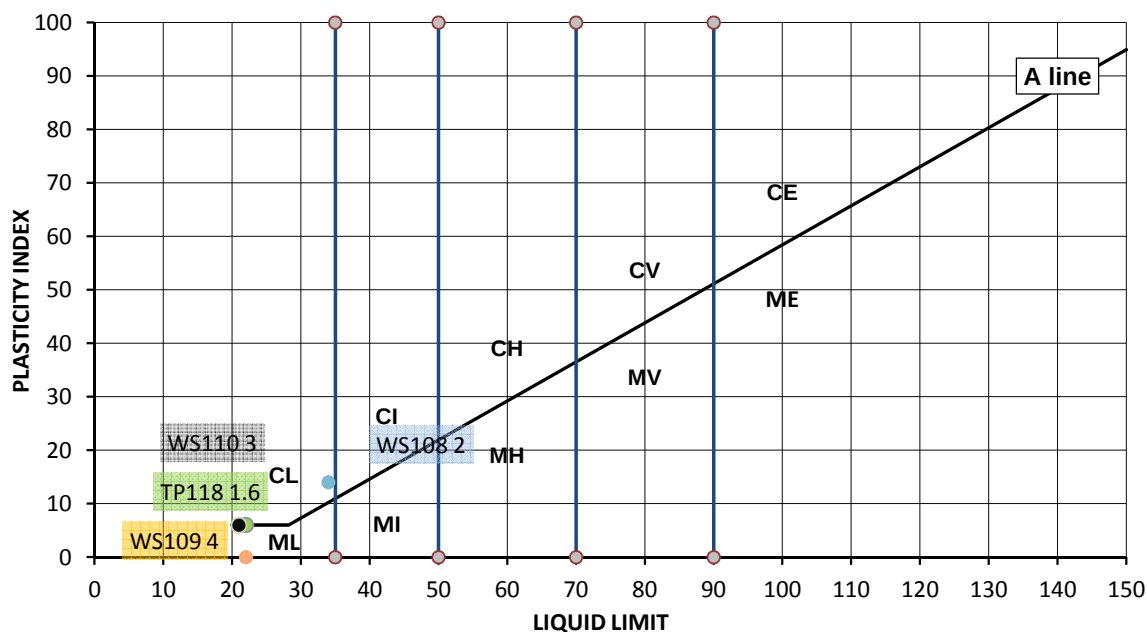
Tested in Accordance with BS1377-2: 1990: Clauses 4.4 & 5: One Point Method

Client: e3p
Client Address: Office 4
Heliport Business Park
Eccles, Liverpool Road
Manchester, M30 7RU
Contact: D Horne
Site Name: Blakeley Mere
Site Address: Not Given

Client Reference: 11164
Job Number: 16-25955
Date Sampled: 18/08/2016
Date Received: 23/08/2016
Date Tested: 25/08/2016
Sampled By: Not Given

TEST RESULTS

Location	Depth [m]	As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
TP118	1.6	16	22	16	6	94
WS108	2	16	34	20	14	95
WS109	4	15	22	NP	N/A	75
WS110	3	22	21	15	6	96



Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

	Plasticity	Liquid Limit
C	Clay	below 35
M	Silt	35 to 50
	L Low	50 to 70
	I Medium	70 to 90
	H High	exceeding 90
	V Very high	
	E Extremely high	
Organic	O	append to classification for organic material (eg CHO)

Comments:

Approved: Mirosława Pytlik
PL Head of Geotechnical section

Signed: Terry Stafford
Geotechnical Manager

Date Reported: 29/08/2016

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APPENDIX IX ORIGIN OF TIER I GENERIC ASSESSMENT CRITERIA



CONSTITUENT	ORIGIN OF RISK ASSESSMENT VALUE
Arsenic	PC4SL - DEFRA
Cadmium	P4CSL - DEFRA
Chromium	P4CSL - DEFRA
Lead	P4CSL - DEFRA
Mercury	2014 LQM/CIEH S4ULs - methylmercury
Nickel	2014 LQM/CIEH S4ULs
Selenium	2014 LQM/CIEH S4ULs
Copper	2014 LQM/CIEH S4ULs
Zinc	2014 LQM/CIEH S4ULs
Cyanide - Total	2014 LQM/CIEH S4ULs
Phenols - Total.	2014 LQM/CIEH S4ULs
Naphthalene	General Assessment Criteria (GAC) developed by CIEH / LQM Suitable 4 Use Levels with supporting data from SR3, SR7 and existing Tox report where applicable. 1% SOM
Acenaphthylene	
Acenaphthene	
Fluorene	
Phenanthrene	
Anthracene	
Fluoranthene	
Pyrene	
Benzo(a)Anthracene ⁽ⁱ⁾	
Chrysene	
Benzo(b/k)Fluoranthene ⁽ⁱⁱⁱ⁾	
Benzo(a)Pyrene	P4CSL - DEFRA
Indeno(123-cd)Pyrene	General Assessment Criteria (GAC) developed by CIEH / LQM Suitable 4 Use Levels with supporting data from SR3, SR7 and existing Tox report where applicable. 1% SOM
Dibenzo(a,h)Anthracene	
Benzo(ghi)Perylene	
TPH C ₅ -C ₆ (aliphatic)	
TPH C ₆ -C ₈ (aliphatic)	
TPH C ₈ -C ₁₀ (aliphatic)	
TPH C ₁₀ -C ₁₂ (aliphatic)	
TPH C ₁₂ -C ₁₆ (aromatic)	
TPH C ₁₆ -C ₂₁ (aromatic)	
TPH C ₂₁ -C ₃₅ (aromatic)	