

Bedrock and Faults

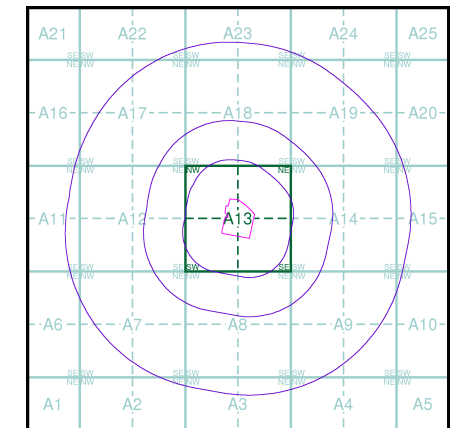
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice A

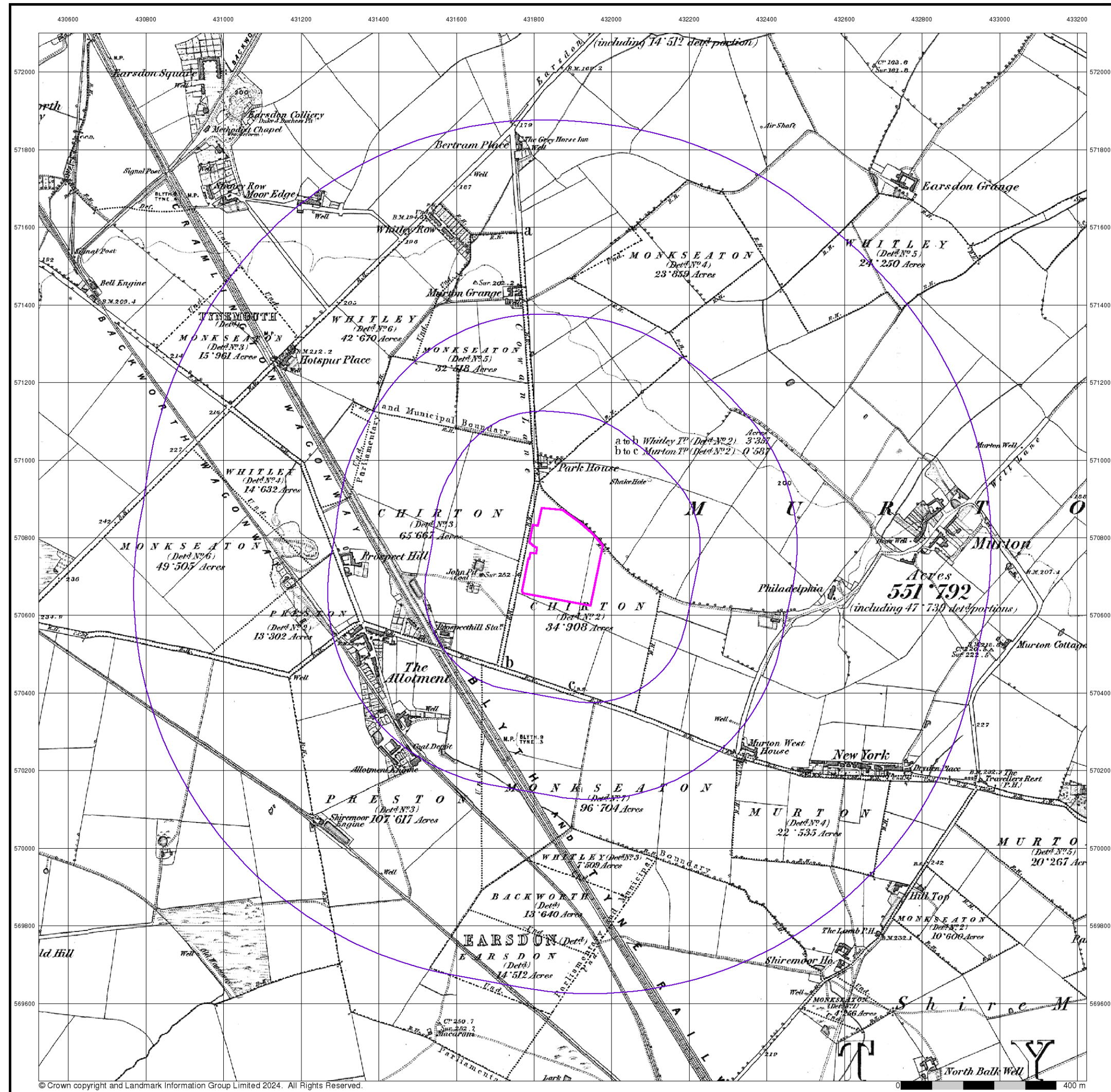


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 1000

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS



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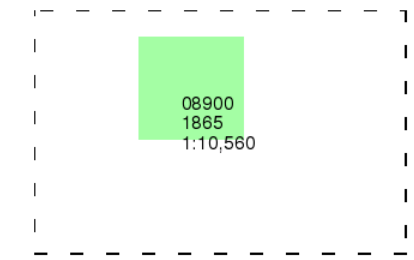
Northumberland

Published 1865

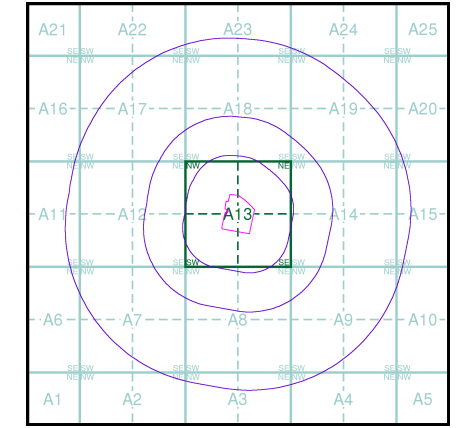
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

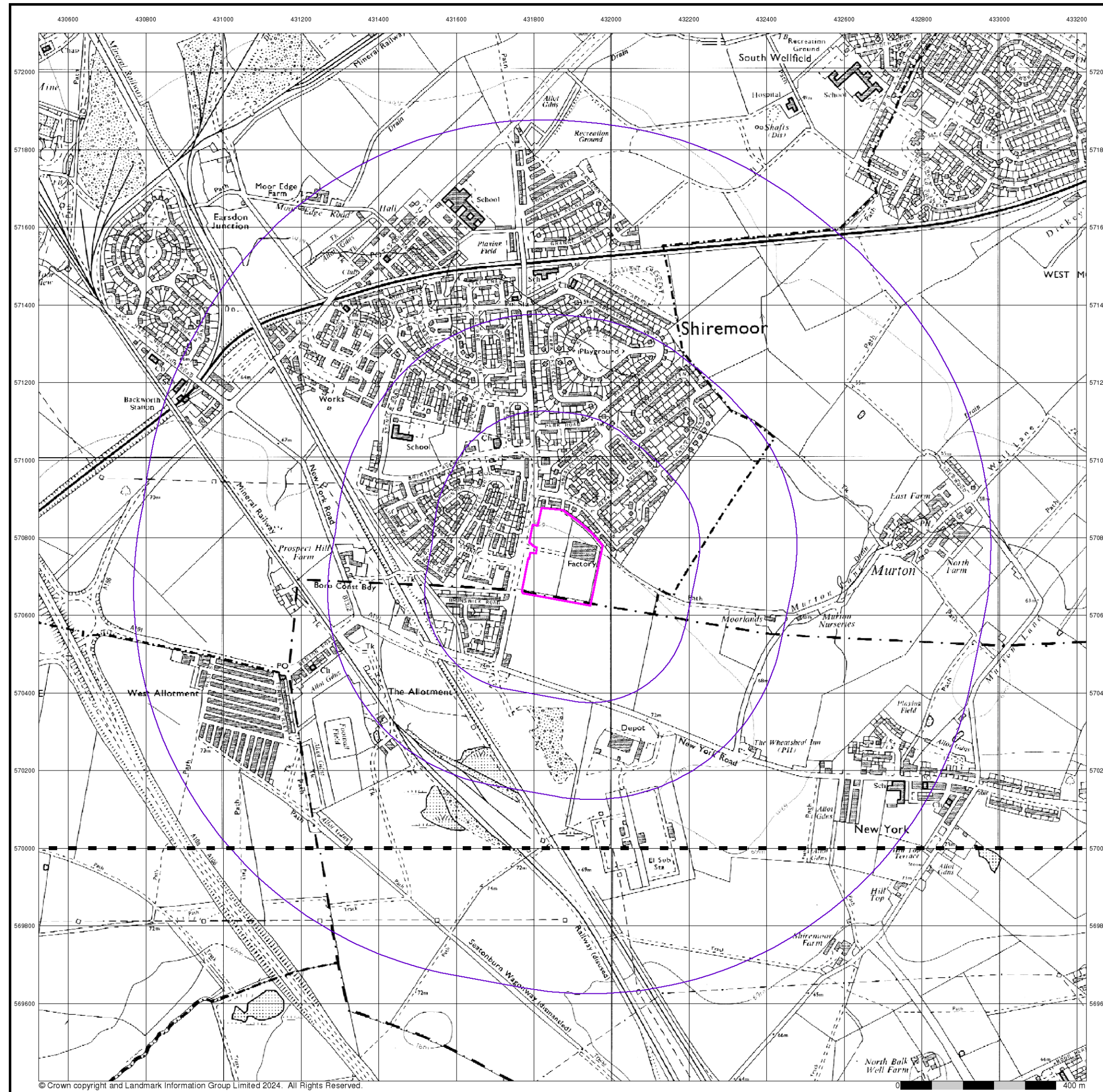
Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1972 - 1973

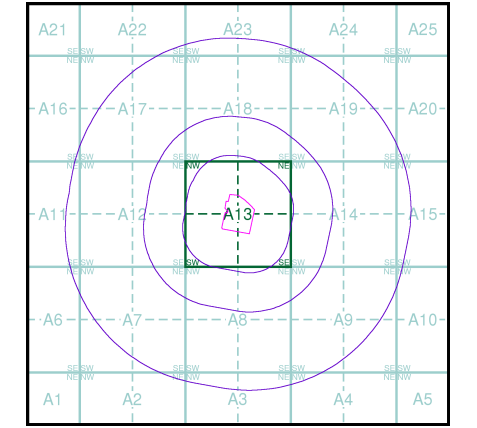
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ37SW	1972	1:10,000
NZ36NW	1973	1:10,000

Historical Map - Slice A

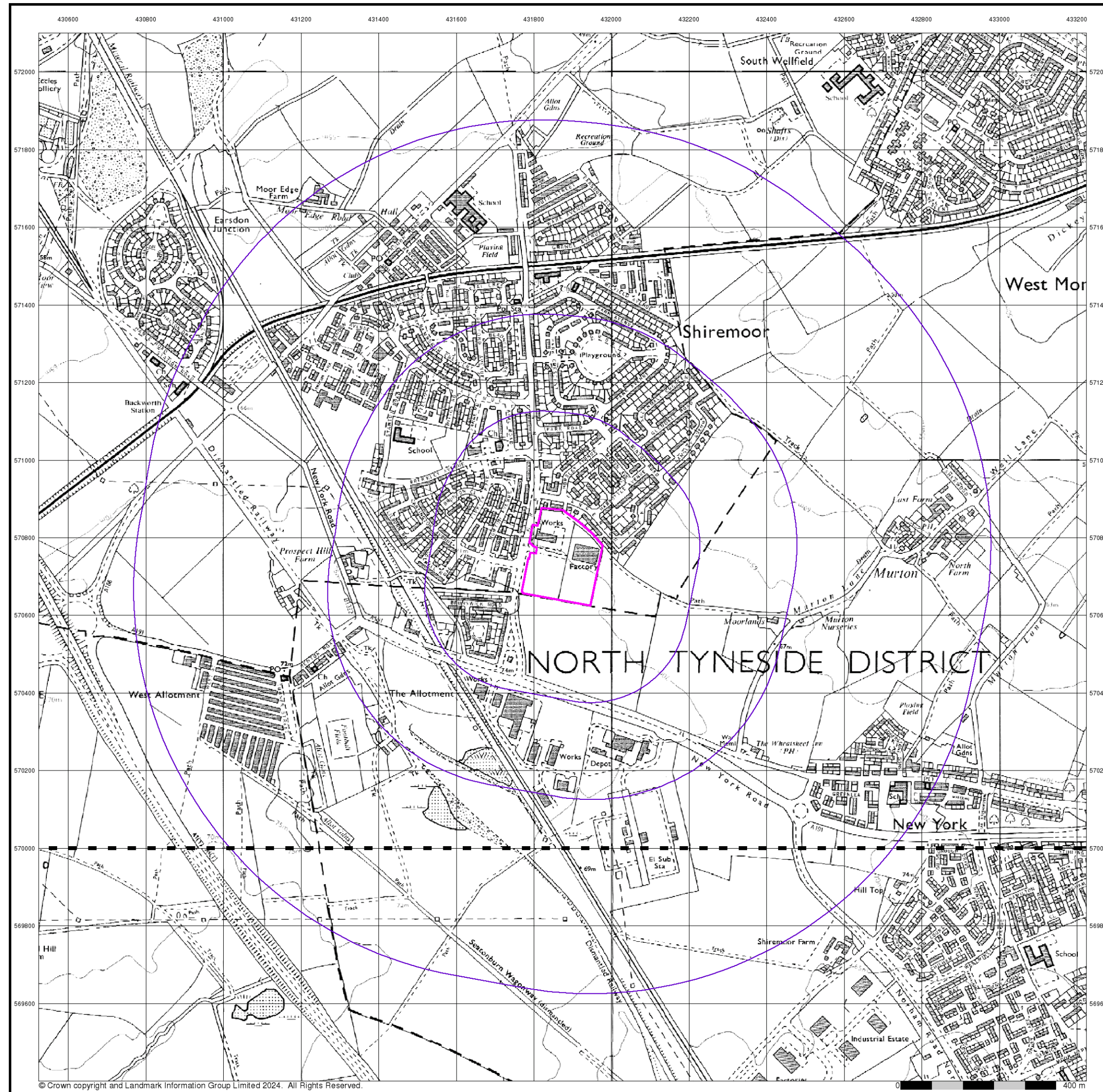


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 1000

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS



Ordnance Survey Plan

Published 1982

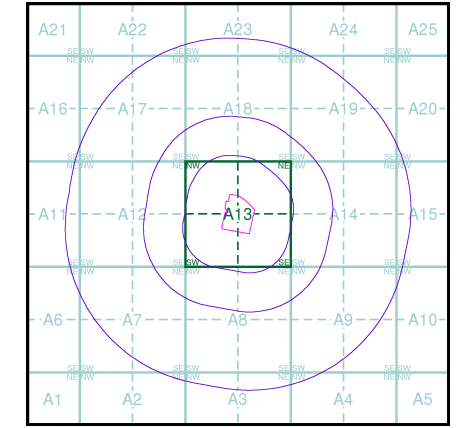
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

NZ37SW	1982	1:10,000
NZ36NW	1982	1:10,000

Historical Map - Slice A

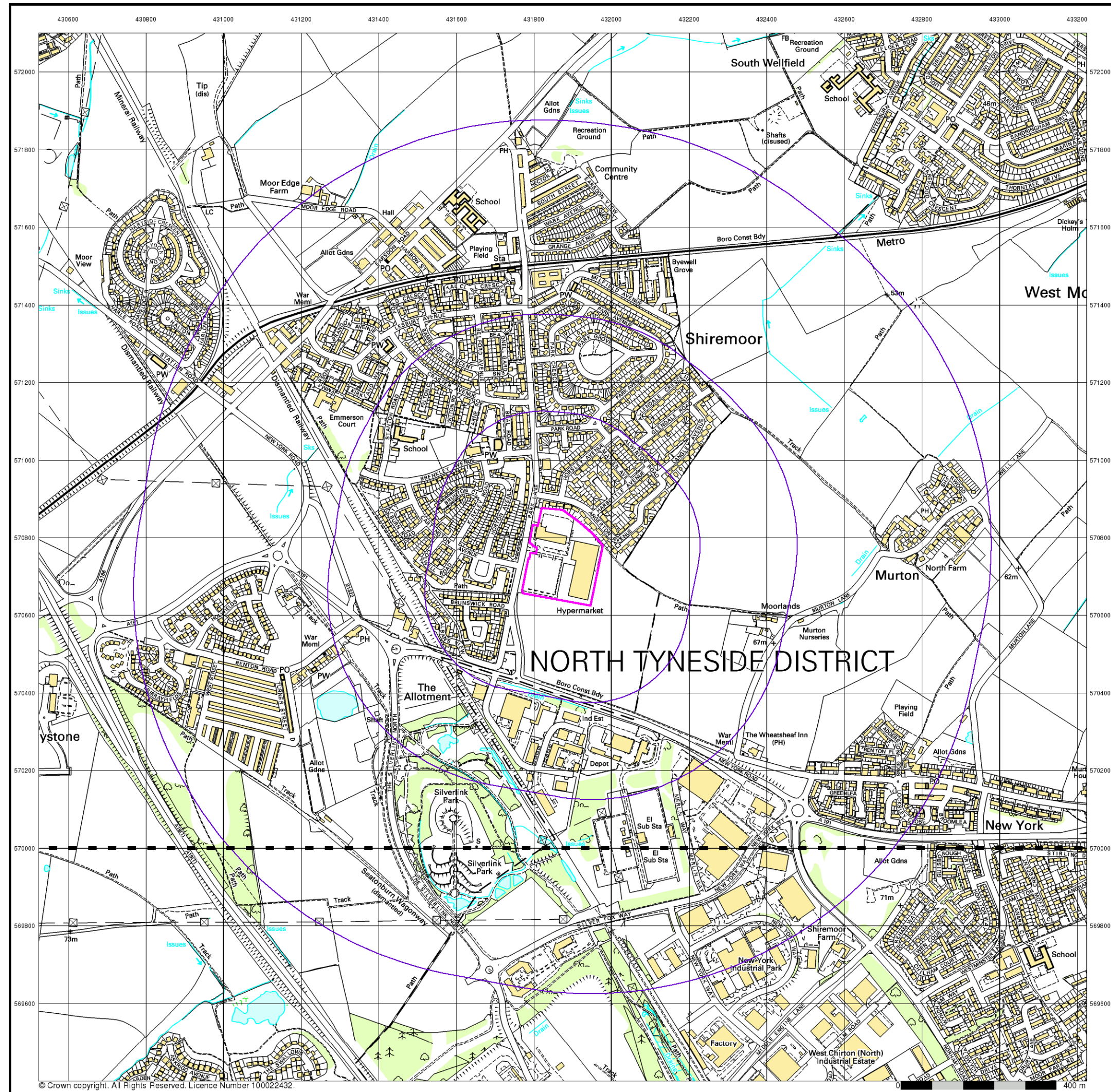


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 1000

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS



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10k Raster Mapping

Published 2000

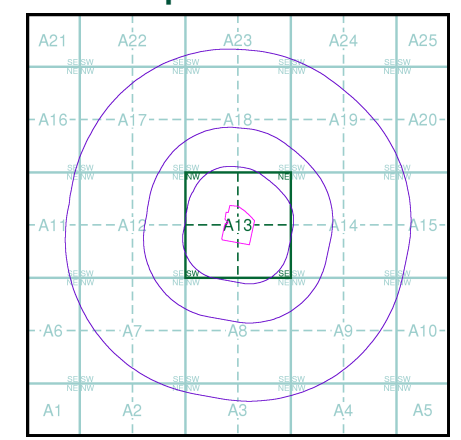
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

NZ37SW	2000
1:10,000	
NZ36NW	2000
1:10,000	

Historical Map - Slice A



Order Details

Order Number:	333561911_1_1
Customer Ref:	Boundary Outlet
National Grid Reference:	431870, 570740
Slice:	A
Site Area (Ha):	3.73
Search Buffer (m):	1000

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS

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10k Raster Mapping

Published 2006

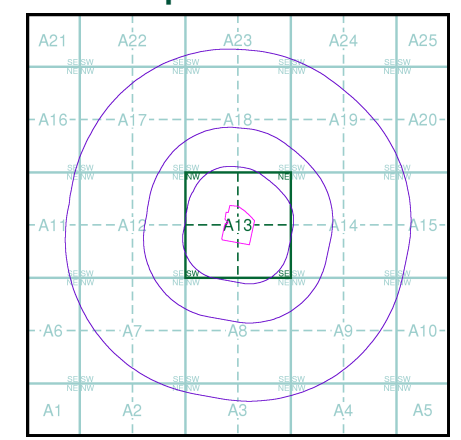
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

NZ37SW	2006
1:10,000	
NZ36NW	2006
1:10,000	

Historical Map - Slice A



Order Details

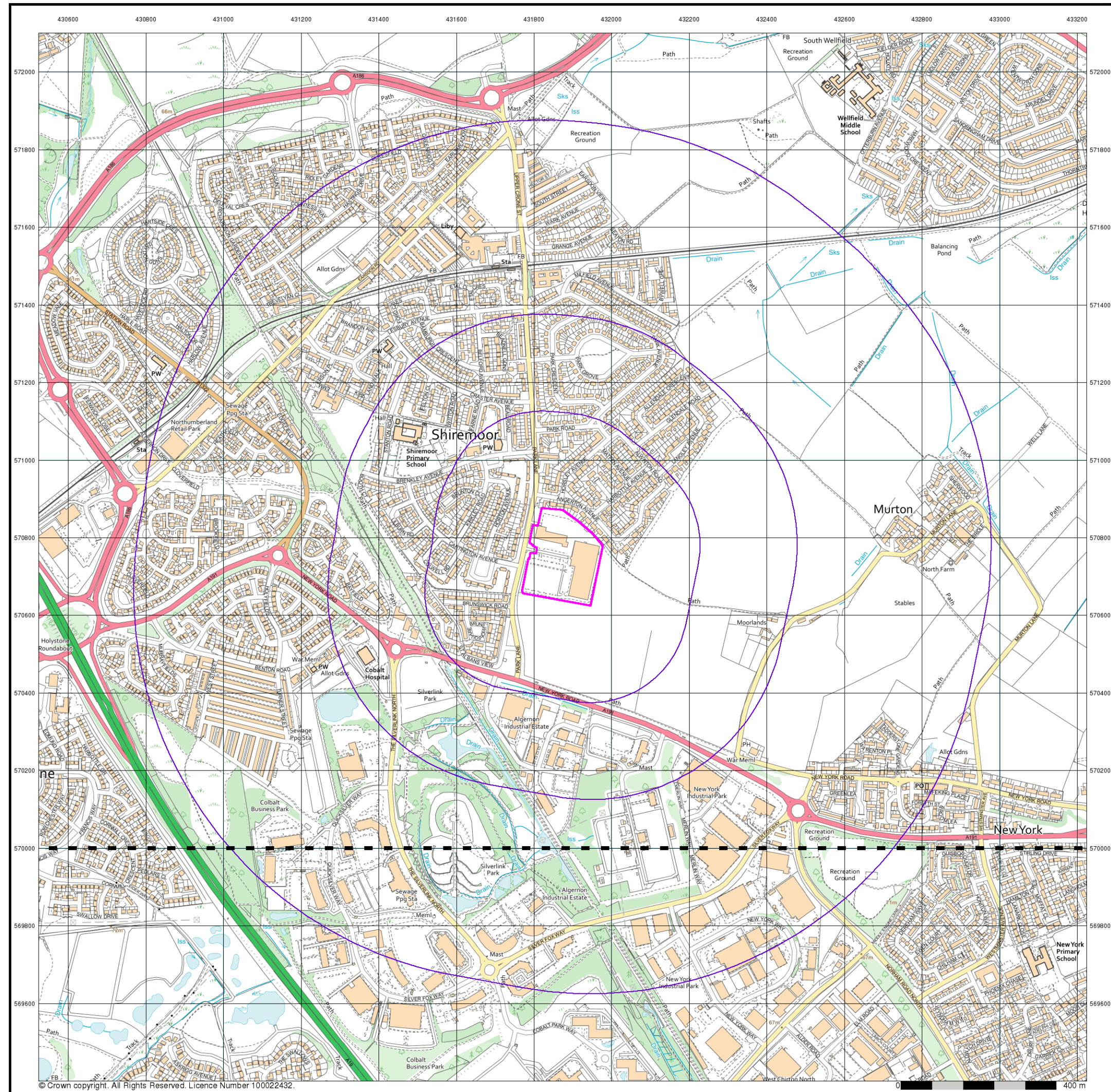
Order Number:	333561911_1_1
Customer Ref:	Boundary Outlet
National Grid Reference:	431870, 570740
Slice:	A
Site Area (Ha):	3.73
Search Buffer (m):	1000

Site Details

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VectorMap Local

Published 2023

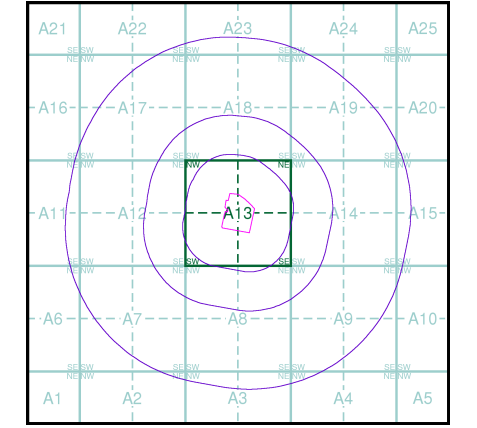
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

- NZ37SW | 2023 | Variable
- NZ36NW | 2023 | Variable

Historical Map - Slice A



Order Details

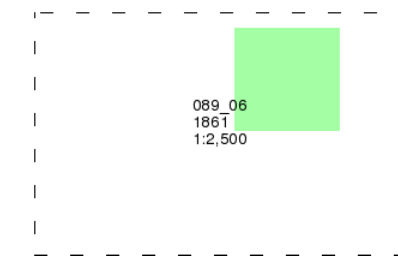
Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 1000

Site Details

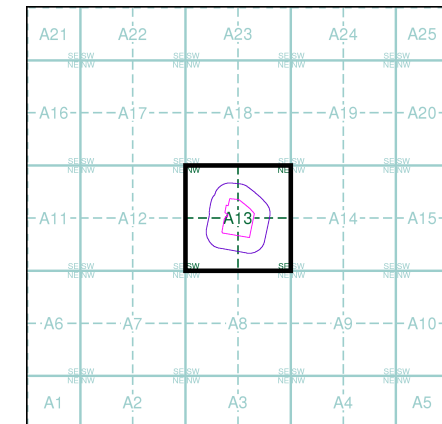
Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS

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)



Historical Map - Segment A13

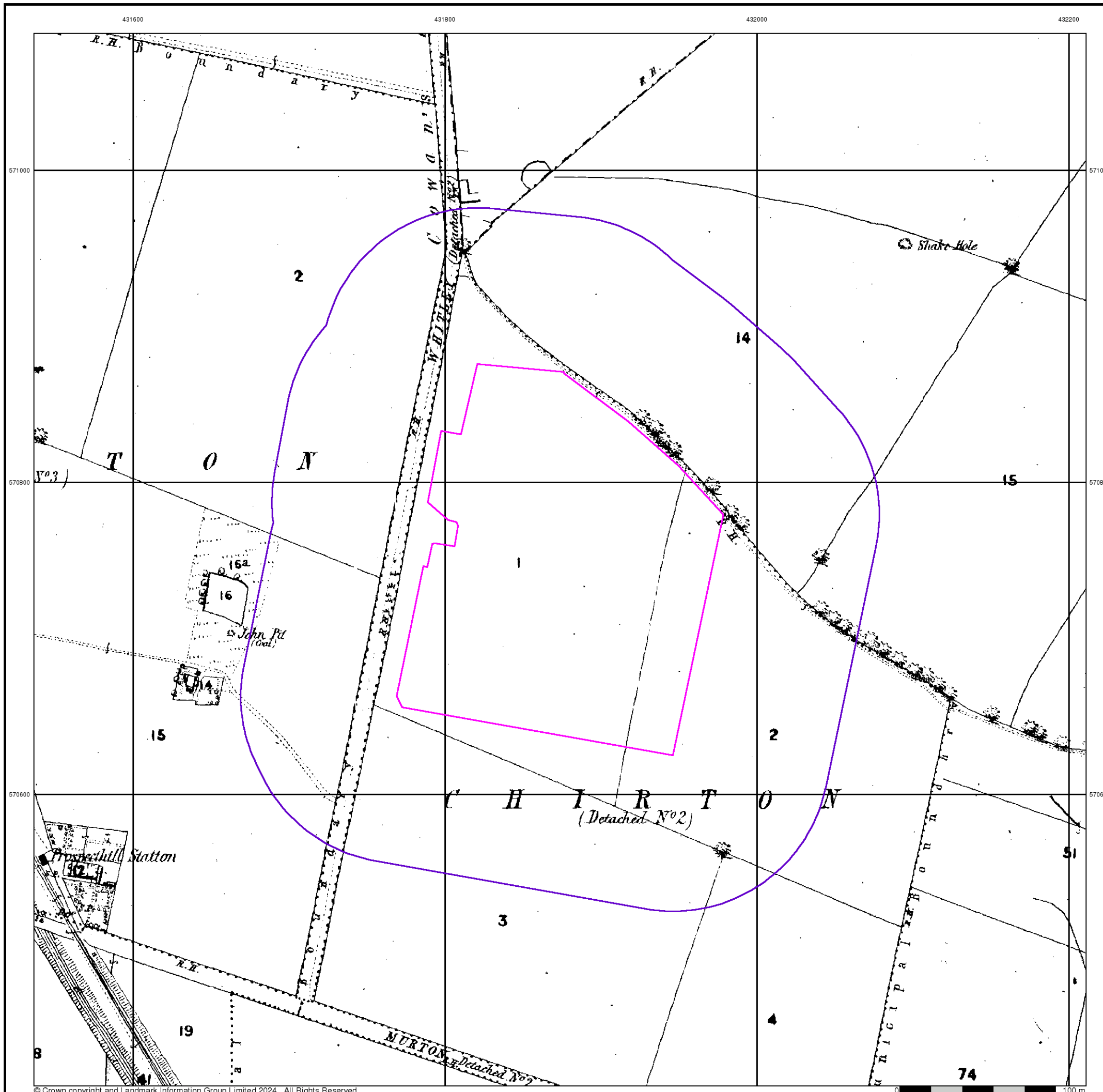


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 100

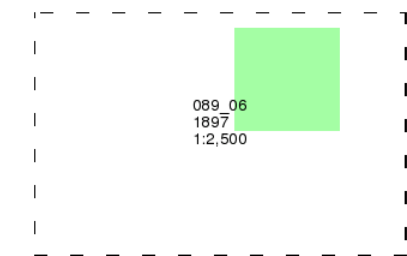
Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS

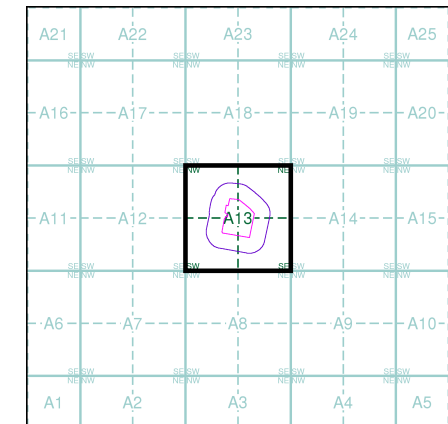


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Map Name(s) and Date(s)



Historical Map - Segment A13

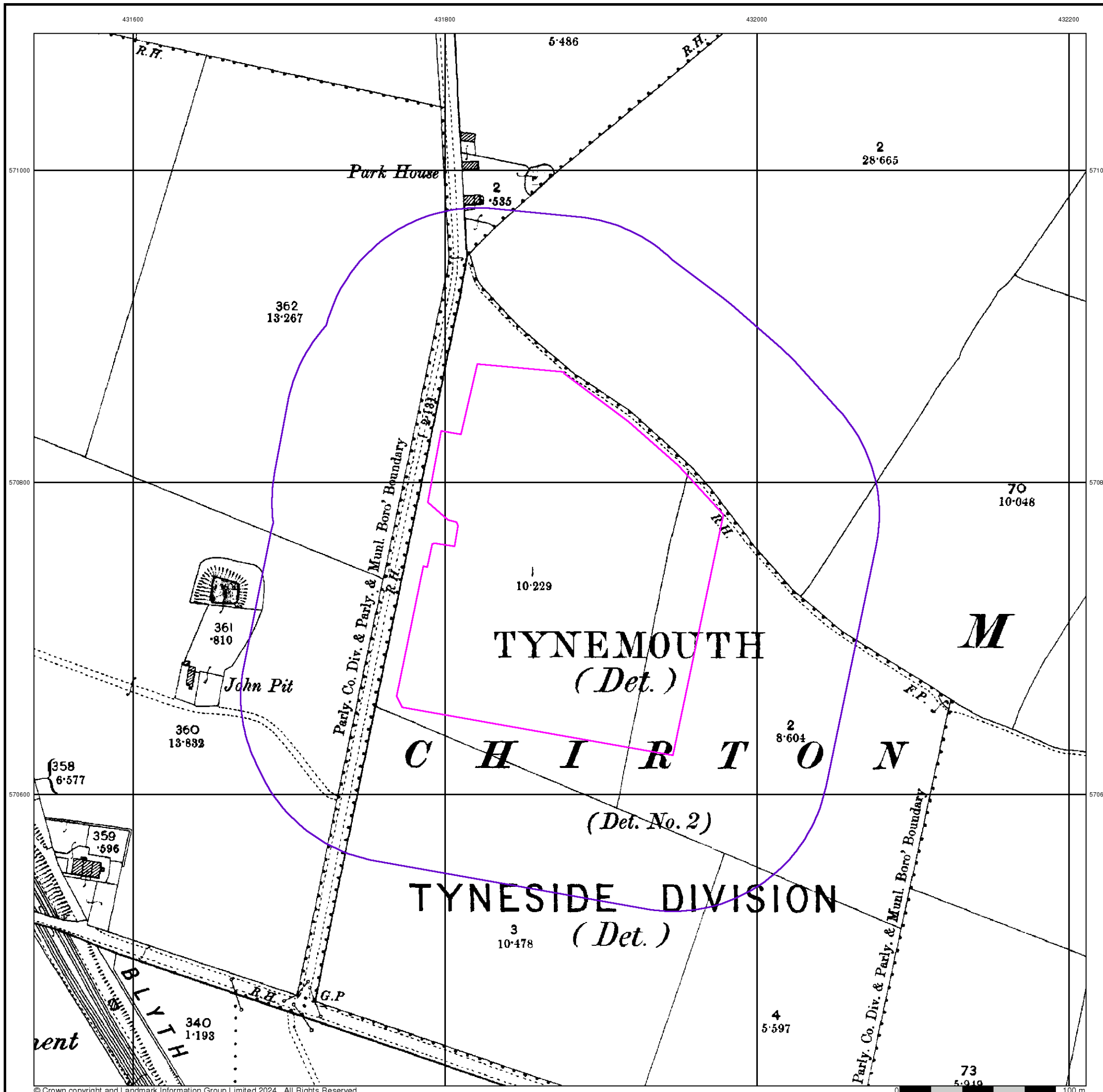


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 100

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS



Northumberland

Published 1919 - 1920

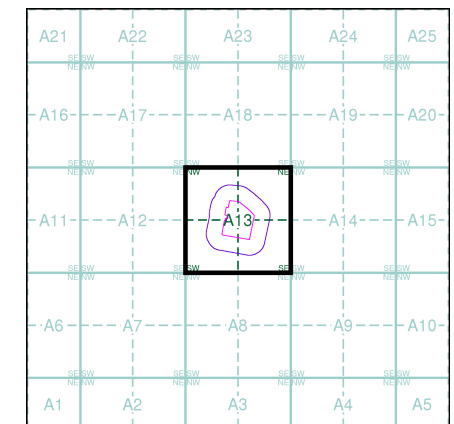
Source map scale - 1:2,500

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)

086_11	1920	1:2,500
086_15	1919	1:2,500

Historical Map - Segment A13

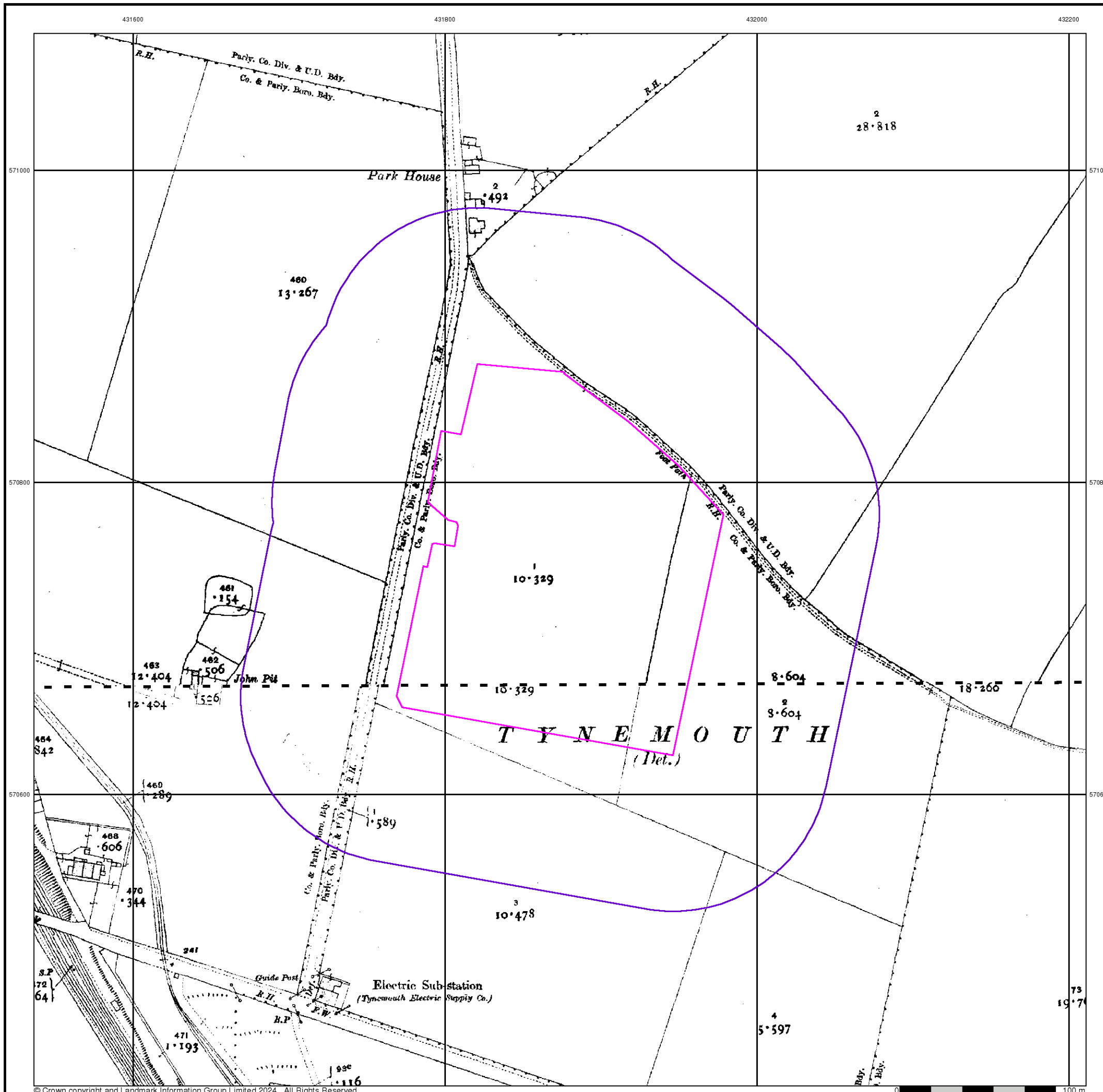


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 100

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS

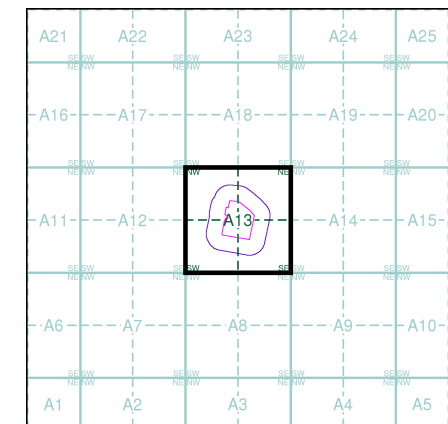


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

086_11
1938
1:2,500
086_15
1938
1:2,500

Historical Map - Segment A13

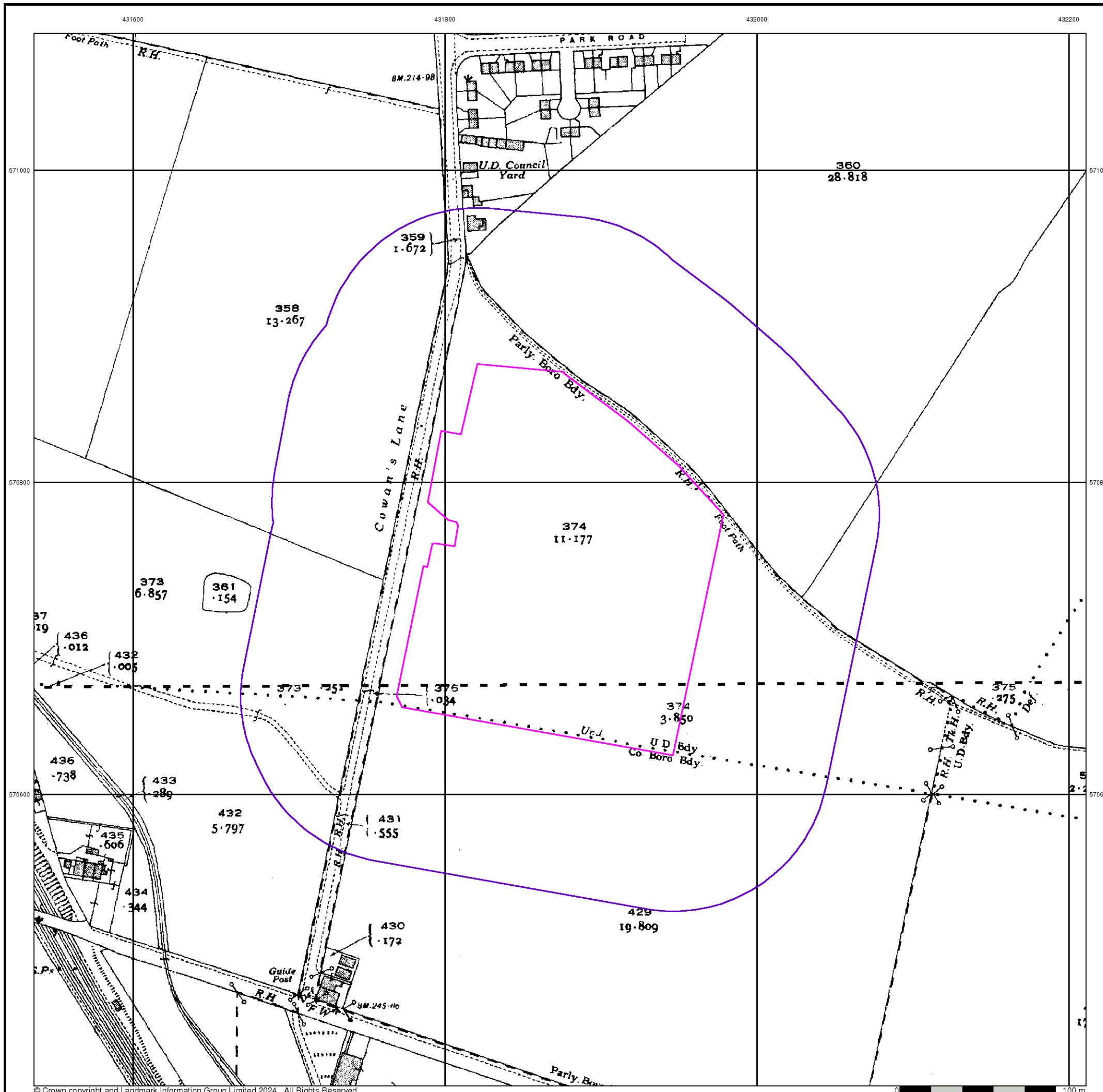


Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 100

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS



Ordnance Survey Plan

Published 1955

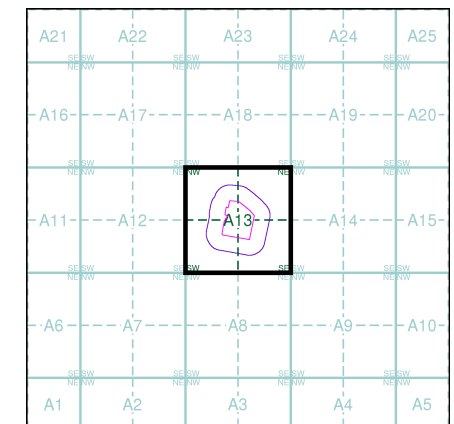
Source map scale - 1:1,250

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)

NZ3171SE	NZ3271SW
1955	955
1:1,250	1:1,250
NZ3170NE	NZ3270NW
1955	955
1:1,250	1:1,250
NZ3170SE	NZ3270SW
1955	955
1:1,250	1:1,250

Historical Map - Segment A13

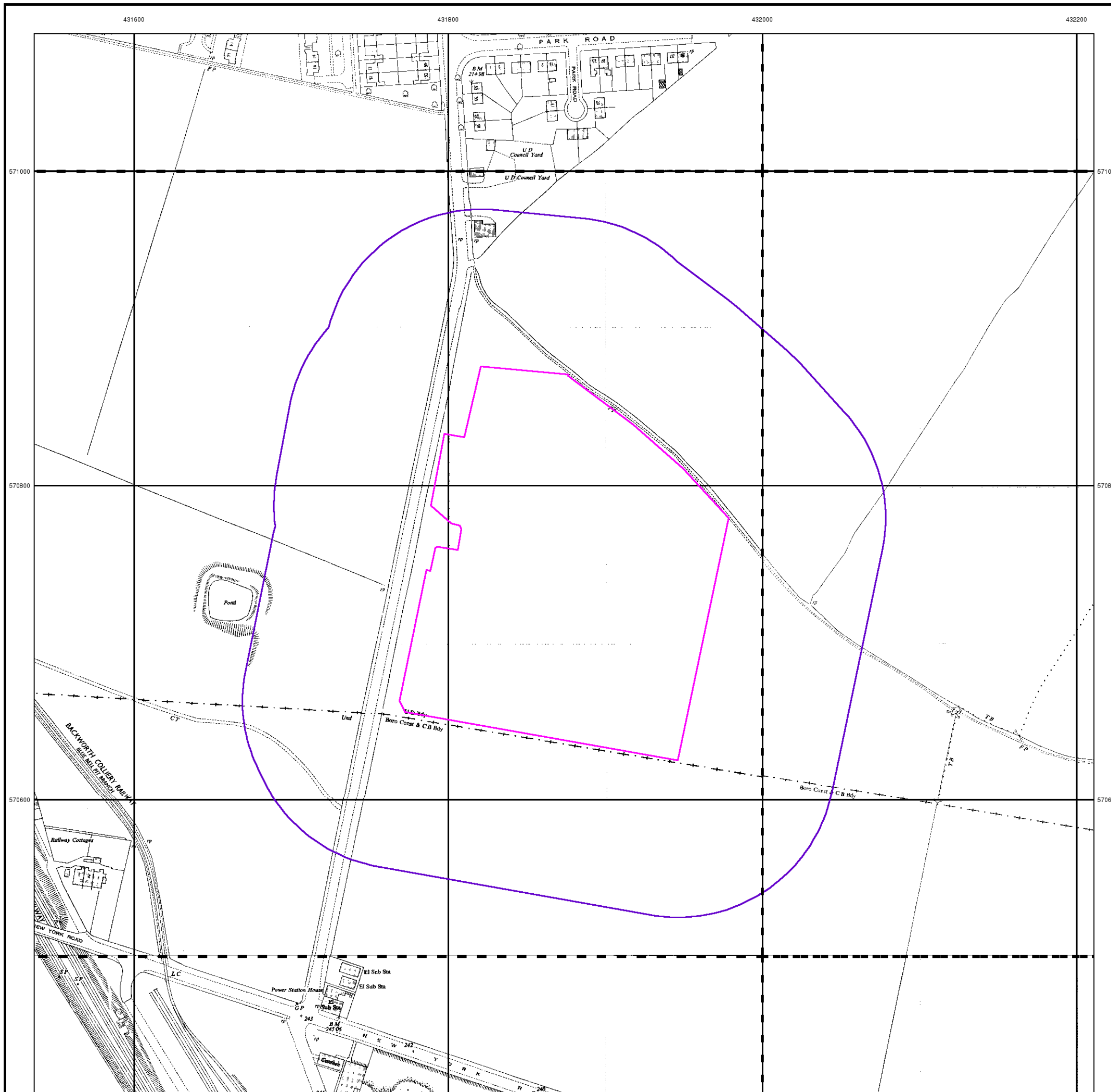


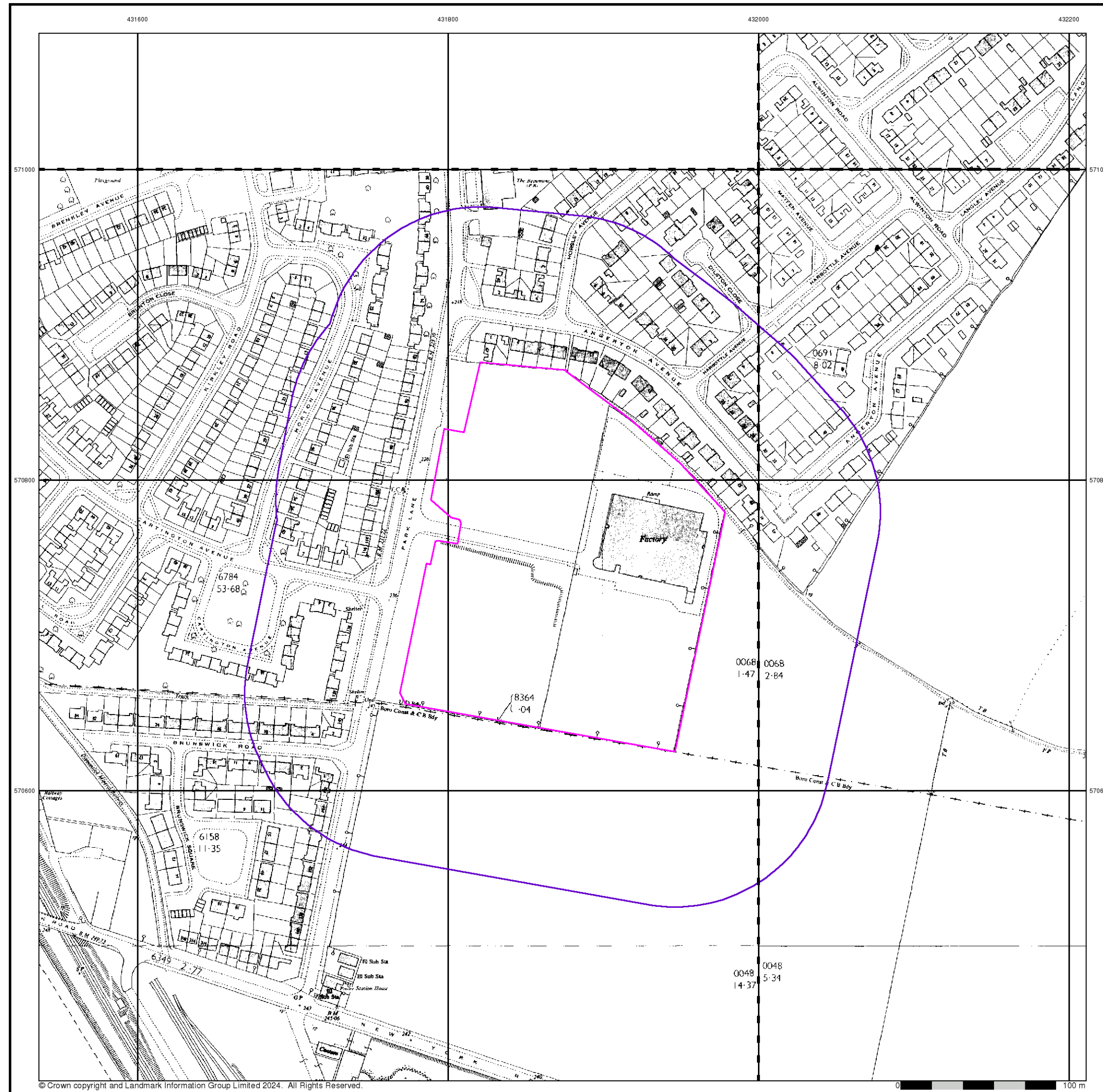
Order Details

Order Number: 333561911_1_1
 Customer Ref: Boundary Outlet
 National Grid Reference: 431870, 570740
 Slice: A
 Site Area (Ha): 3.73
 Search Buffer (m): 100

Site Details

Boundary Mill Stores, Park Lane, Shiremoor, Newcastle upon Tyne, NE27 OBS





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Ordnance Survey Plan

Published 1962 - 1968

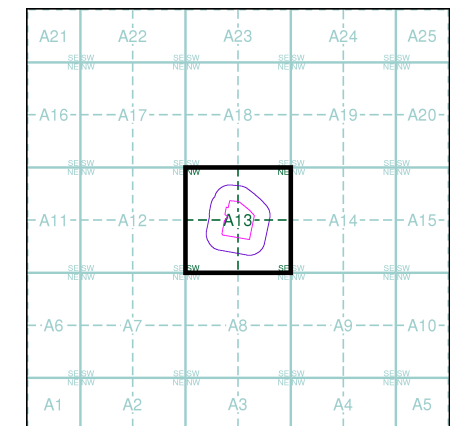
Source map scale - 1:2,500

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Map Name(s) and Date(s)

NZ3271 1962 12,500	NZ3270 1966 12,500
NZ3170 1968 12,500	

Historical Map - Segment A13



Order Details

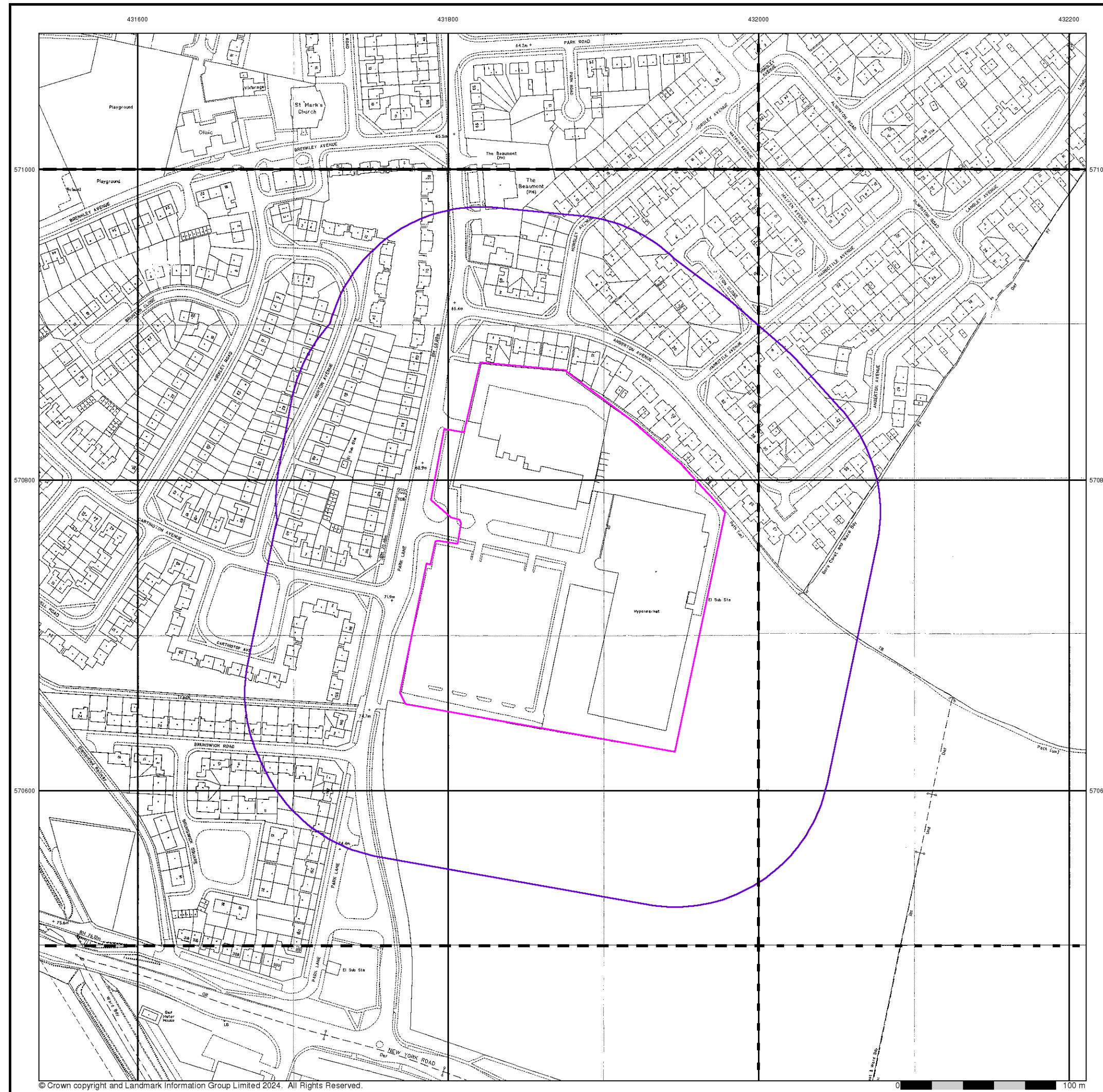
Order Number: 333561911_1_1
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Site Details

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Large-Scale National Grid Data
Published 1993

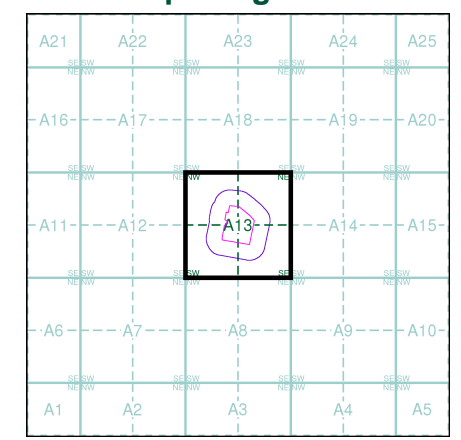
Source map scale - 1:1,250

'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)

NZ3171SE	NZ3271SW
1993	1993
1:1,250	1:1,250
NZ3170NE	NZ3270NW
1993	1993
1:1,250	1:1,250
NZ3170SE	NZ3270SW
1993	1993
1:1,250	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 333561911_1_1
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

BOREHOLE RECORD

Status:- **FINAL**
Date:- 15/12/2006

Project: Shiremoor Flood Relief Scheme, North Tyneside		Exploratory Hole No BH-03	
Client: Northumbrian Water Limited		Location: E:431875.235 N:570831.322	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500		Ground Level (m(AOD)): 67.630	Date: 27/09/2006
		Sheet: 1 of 1	

SAMPLES & TESTS			Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	
0.75 0.80-1.10	JCh1 B2			67.480		(0.15) 0.15	(1) MADE GROUND (Tarmac).
						(0.55)	(1) MADE GROUND (Compact dolomite).
1.50	U3	(60)		66.930		0.70	MADE GROUND (Firm dark brown slightly sandy slightly gravelly clay. Gravel is fine subangular and consists of sandstone).
				66.530		(0.40) 1.10	Firm becoming stiff brown and grey brown sandy gravelly CLAY. Gravel is fine to coarse subrounded and consists of sandstone, some mudstone and coal. Driller notes occasional boulders.
2.00 2.10	J4 JCh5						
2.40-2.85 2.50-2.90	SJ6 B7	N12					
3.50	U8	(100)				(5.20)	below c.3.50m BGL ... very stiff.
4.00	J9						
4.50-4.95 4.55-5.10	SJ10 B11	N32					
5.50	U12	(140)					
6.00	J13						
6.35	J14			61.330		6.30	
6.50	SJ15	50 for 81mm		61.130		(0.20) 6.50	Very weak black COAL interbeds with carbonaceous MUDSTONE completely weathered.
				61.030		(0.10) 6.60	(Recovered as very clayey very gravelly sand). (1) Dark grey SHALE (carbonaceous mudstone). Borehole complete at 6.60m BGL.

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Depth	Casing	Casing Dia	Water Depth		From	To	Hours	From	To	
27/09/2006	0.00	0.00				6.40	6.60	1.00	1.20	3.00	(1) Description derived from drillers daily report. (2) Inspection pit dug prior to drilling.
27/09/2006	3.00	3.00	150mm	dry					3.00	6.50	
28/09/2006	3.00	3.00	150mm	dry							
28/09/2006	6.60	6.40	150mm	dry							

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>SN + MV</i>	Logged by: I. Ujjan	Contract No. 3454DD
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NDC Northumbrian Drilling Contractors
Stephenson Terrace, Wylam
Northumberland

BOREHOLE No. 6
SHEET No. 1 of 2
REPORT No. 84/N/164C

CONTRACT PARK LANE, SHIREMOOR.

Daily Progress		Samples and In-Situ Tests		Ground Level 71.54m A.O.D.			DESCRIPTION OF STRATA
Date	Ground Water	Levels A.O.D.	Type	Key	Depth	Reduced Level	
5.11.75		71.34	J				TOP SOIL.
		71.14	J		0.4	71.14	
		70.94	U				Firm to stiff mottled yellow grey brown sandy CLAY with coal and sandstone fragments. Weathered BOULDER CLAY.
		70.04	J				
		69.54	U		1.9	69.64	BGS REGISTRATION NO. NZ 37 SW/82/6 PAGE NO. 1
		68.79	J				
		68.04	U				Stiff grey sandy CLAY with coal, sandstone fragments and large boulders.
		67.29	J				
		66.54	U				BOULDER CLAY.
		66.09	J				
	64.74	J				Firm grey sandy shaly CLAY.	
	64.14	J		7.6	63.94		

REMARKS

FORM 3

Code: U = Undisturbed Sample J = Jar Sample ∇ = Groundwater first encountered
B = Large Bulk Sample N () = { Standard Penetration Test, Cone Penetration Test } GW = Groundwater Sample



NDC Northumbrian Drilling Contractors Stephenson Terrace, Wylam Northumberland						BOREHOLE No. 6	
CONTRACT PARK LANE, SHIREMOOR.						SHEET No. 2 of 2	
						REPORT No. 84/N/164C	
Daily Progress		Samples and In-Situ Tests		Ground Level 71.54m A.O.D.		DESCRIPTION OF STRATA	
Date	Ground Water	Levels A.O.D.	Type	Key	Depth		Reduced Level
9.11.75 cont.		63.04	J				Firm grey sandy shaly CLAY.
		62.34	N(50)*		9.2	62.34	
9.5m	Nil				9.5	62.04	Dense coarse yellow SANDSTONE with grey shale partings.
							End of Borehole.

BGS REGISTRATION NO.
NZ 37 SW/82/6
PAGE NO. 2

REMARKS * No. of blows for 75mm penetration only.

FORM 3

Code: U = Undisturbed Sample J = Jar Sample = Groundwater first encountered
P = Penetration Test Standard Penetration Test



NDC Northumbrian Drilling Contractors Stephenson Terrace, Wylam Northumberland						BOREHOLE No. 7	
CONTRACT PARK LANE, SHIREMOOR.						SHEET No. 1 of 2	
						REPORT No. 84/N/164C	
Daily Progress		Samples and In-Situ Tests		Ground Level 68.54m A.O.D.			DESCRIPTION OF STRATA
Date	Ground Water	Levels A.O.D.	Type	Key	Depth	Reduced Level	
31.10.75		68.04	U				Firm to stiff mottled yellow grey brown sandy CLAY with coal and sandstone fragments. Weathered BOULDER CLAY.
		67.04	J				
		66.44	B		2.2	66.34	BGS REGISTRATION NO. NZ 37 SW/827 PAGE NO. 1 Stiff grey sandy CLAY with coal and sandstone fragments. BOULDER CLAY.
		65.59	J				
		65.34	U				
		64.04	J				
		63.64	U				
		62.74	J				
		62.14	U				
		61.04	J				
		60.54	U				
REMARKS							

FORM 3

Code: U = Undisturbed Sample J = Jar Sample ∇ = Groundwater first encountered
 B = Large Bulk Sample N () = { Standard Penetration Test, Cone Penetration Test } GW = Groundwater Sample



NDC Northumbrian Drilling Contractors Stephenson Terrace, Wylam Northumberland						BOREHOLE No. 7	
CONTRACT PARK LANE, SHIREMOOR.						SHEET No. 2 of 2	
						REPORT No. 84/N/164C	
Daily Progress		Samples and In-Situ Tests		Ground Level 68.54m A.O.D.		DESCRIPTION OF STRATA	
Date	Ground Water	Levels A.O.D.	Type	Key	Depth		Reduced Level
31.10.75 cont.					8.45	60.09	See 1 of 2.
		59.44 59.29	J * N(50)		9.15	59.39	Stiff grey sandy shaly CLAY with coal fragments.
9.7m	Nil				9.70	58.84	Dense coarse yellow SANDSTONE with grey shale partings.
End of Borehole.							
BGS REGISTRATION NO. NZ 37 SW/82/7 PAGE NO. 2							

REMARKS * No. of blows for 75mm penetration only.

FORM 3

Code: U = Undisturbed Sample

J = Jar Sample
f Standard Penetration Test*

SZ = Groundwater first encountered