

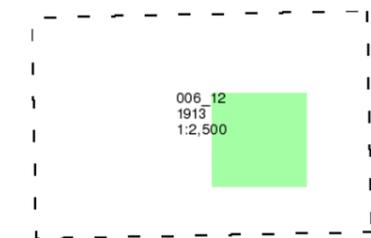
Surrey

Published 1913

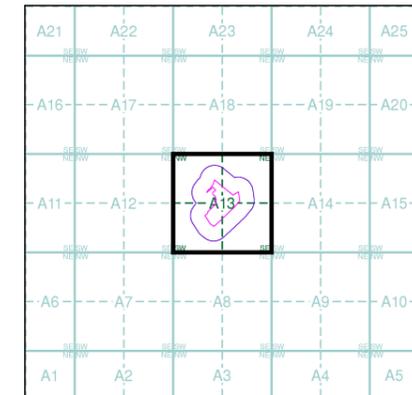
Source map scale - 1:2,500

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)



Historical Map - Segment A13

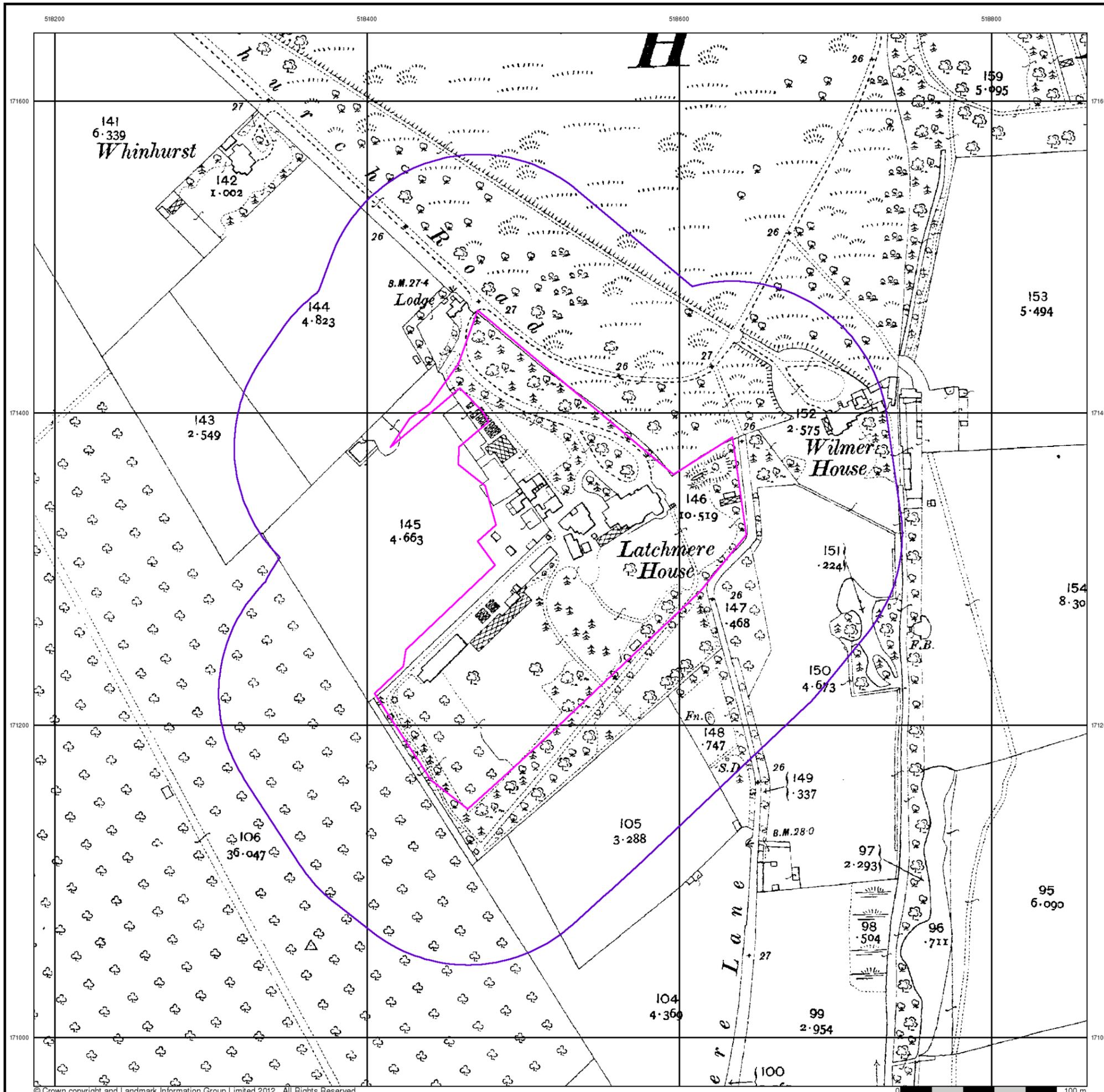


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



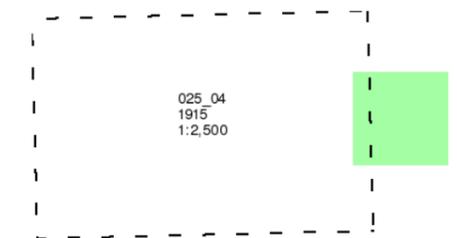
Middlesex

Published 1915

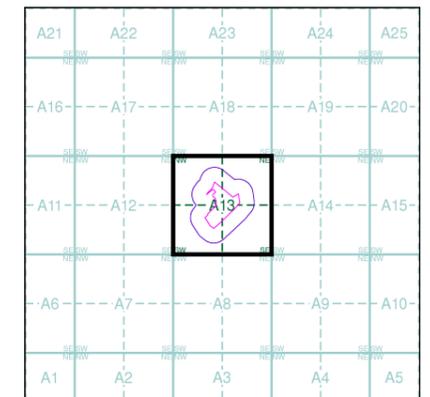
Source map scale - 1:2,500

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)



Historical Map - Segment A13

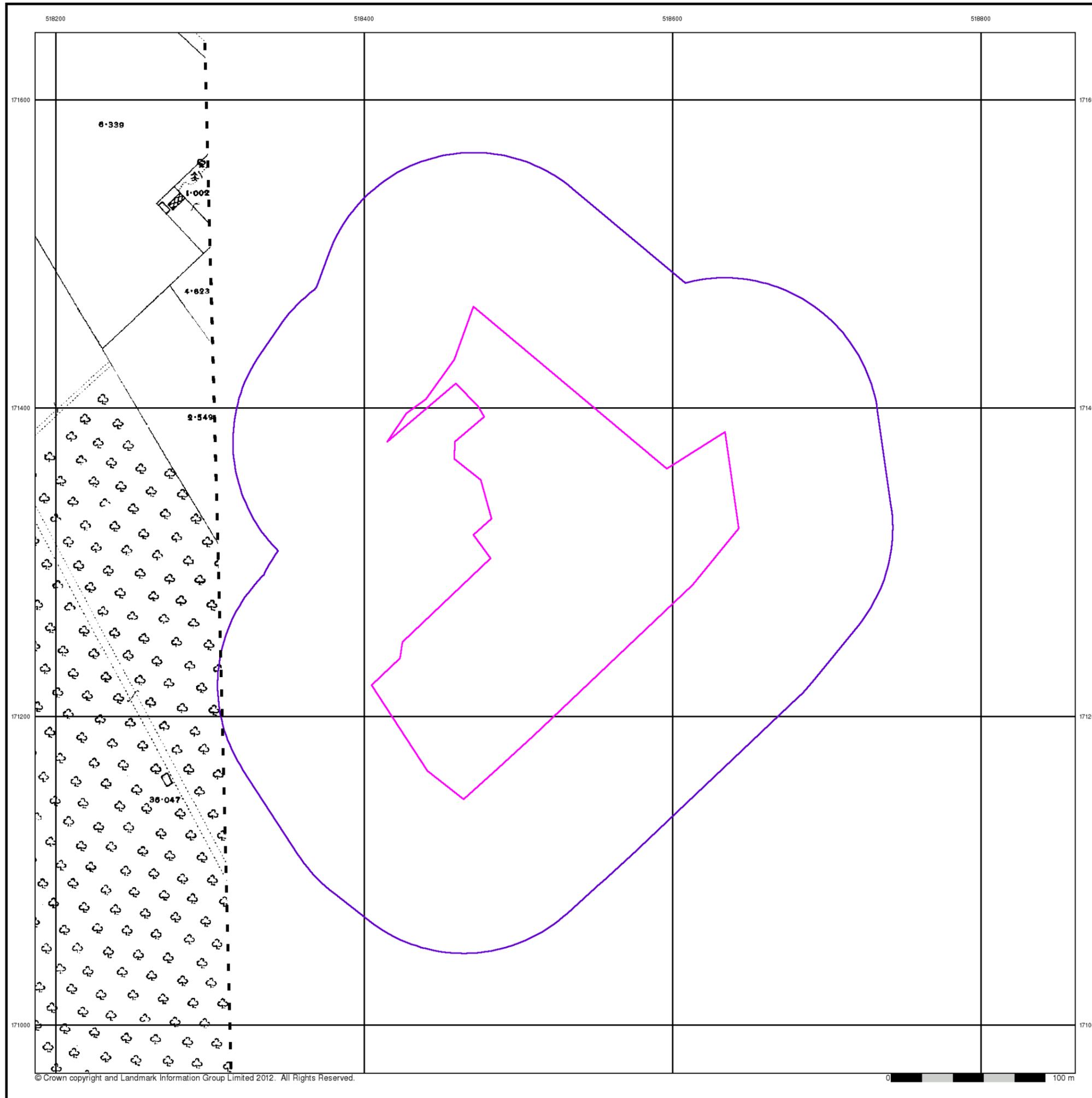


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



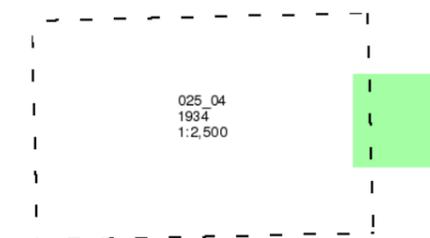
Middlesex

Published 1934

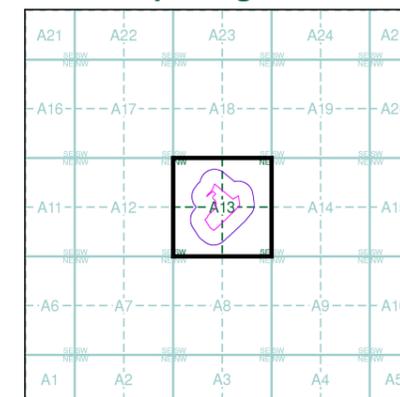
Source map scale - 1:2,500

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)



Historical Map - Segment A13

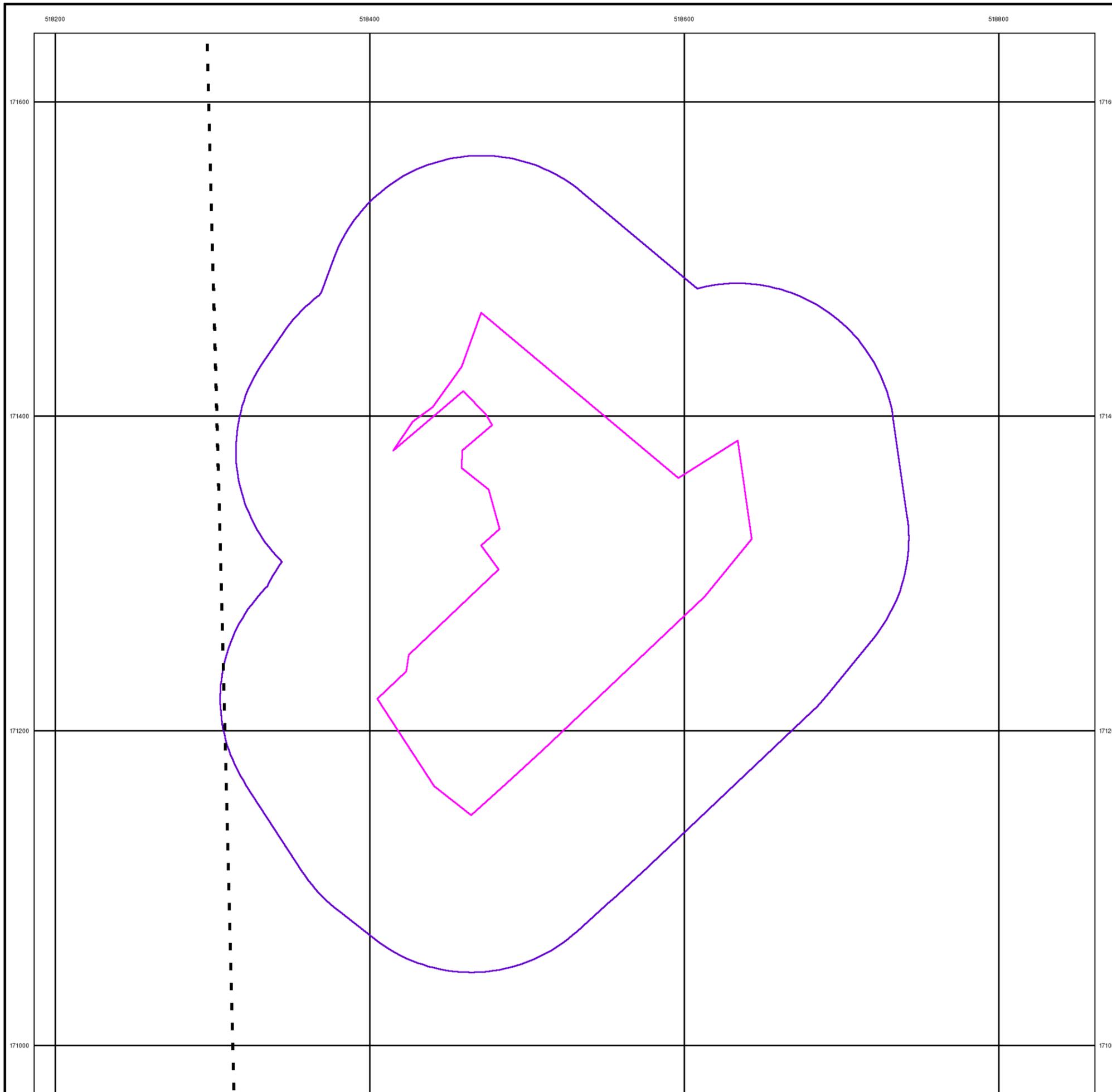


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



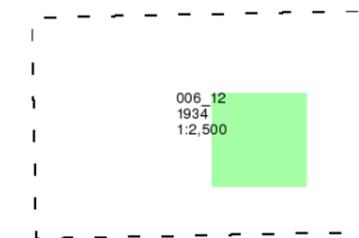
Surrey

Published 1934

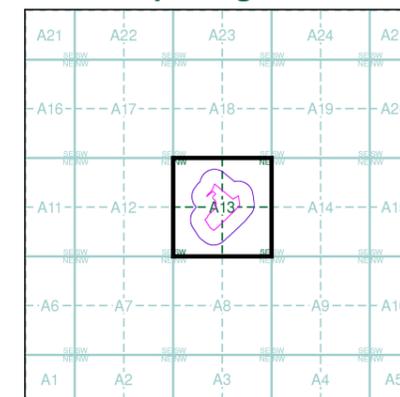
Source map scale - 1:2,500

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)



Historical Map - Segment A13

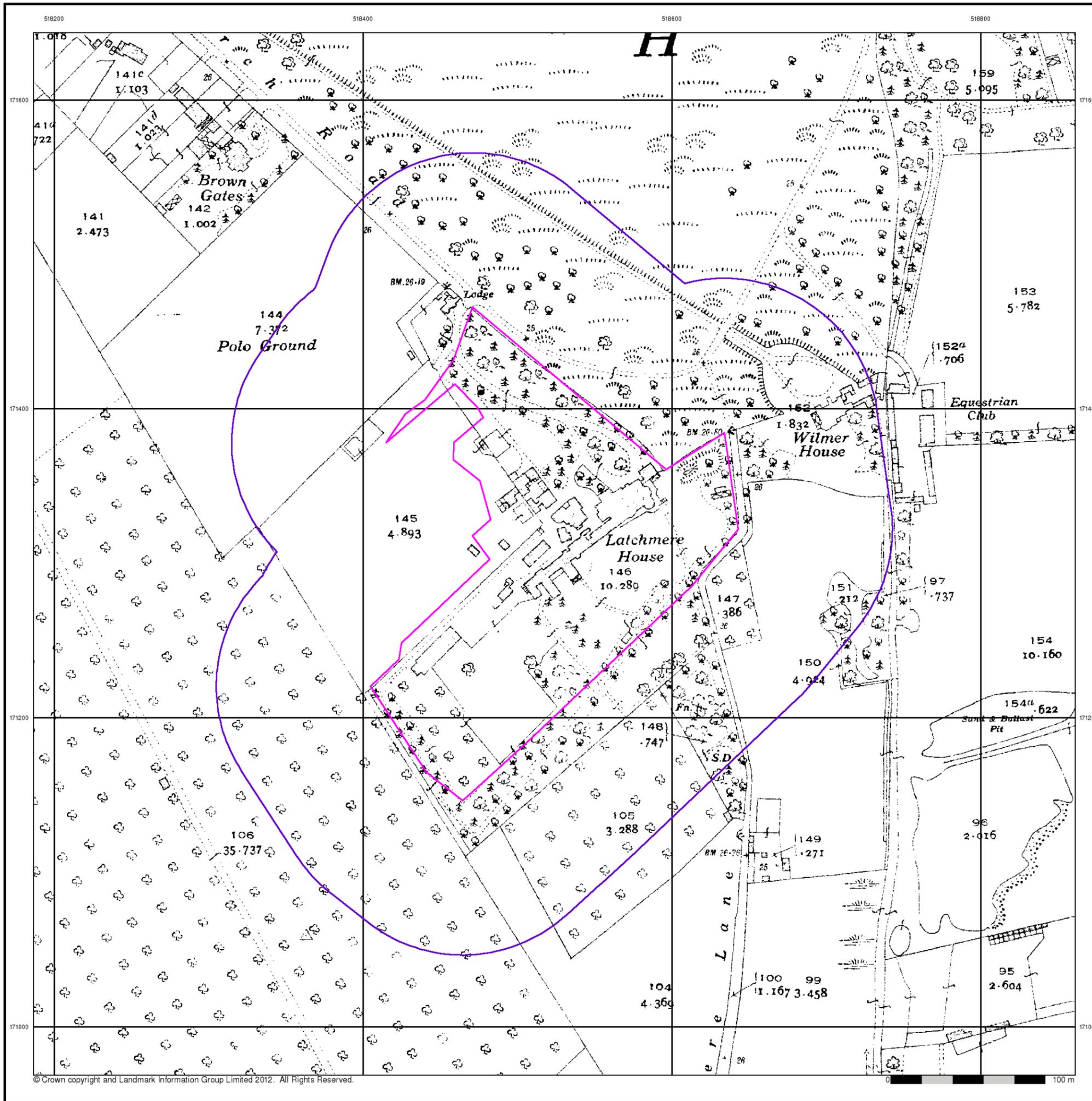


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



Historical Aerial Photography

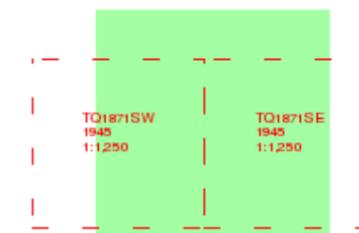
Published 1945

Source map scale - 1:1,250

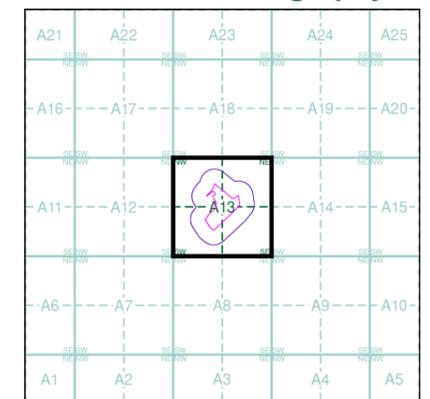
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Segment A13



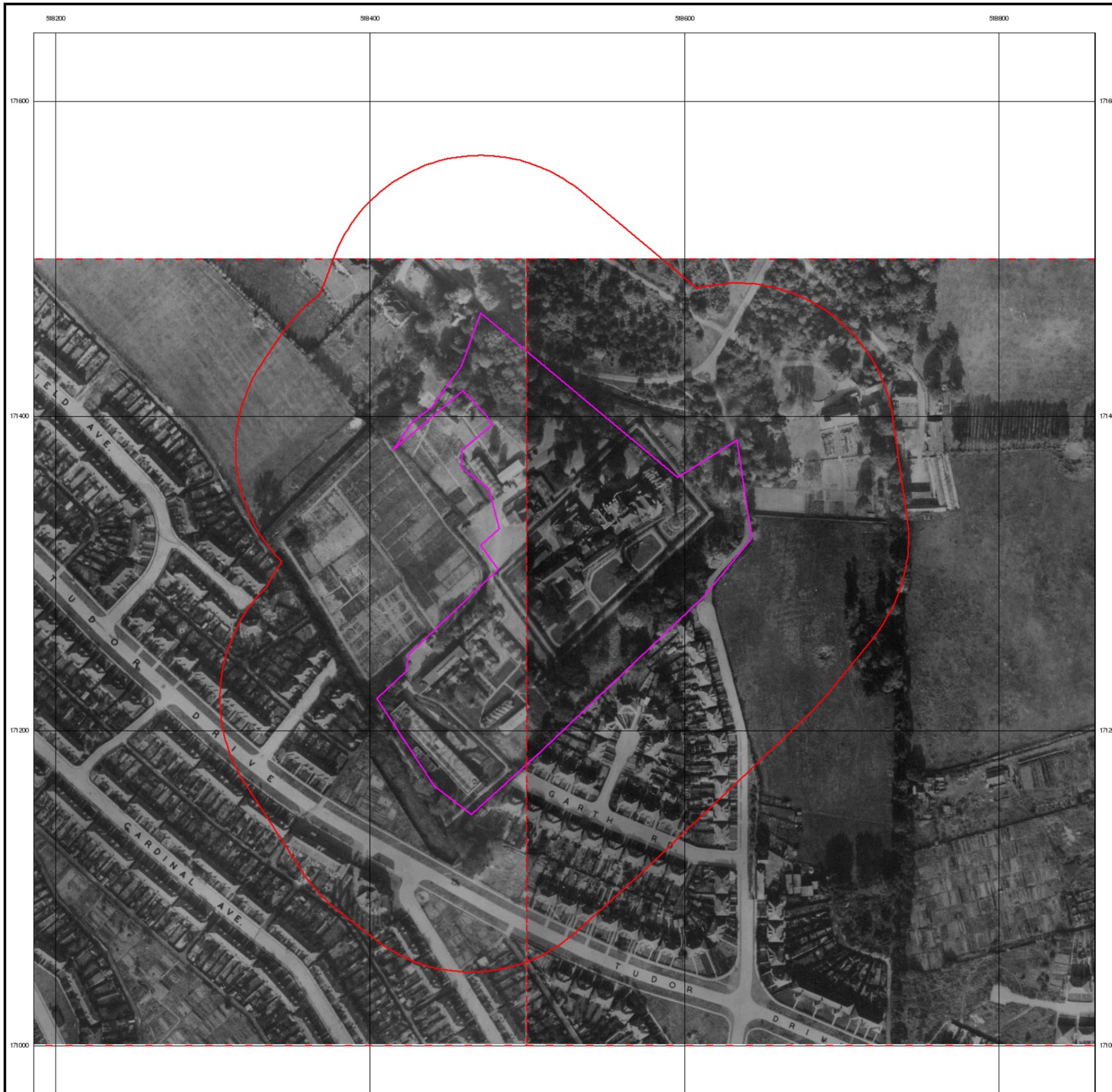
LIBRARY
HSILIRB

Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



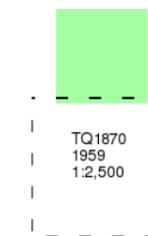
Ordnance Survey Plan

Published 1959

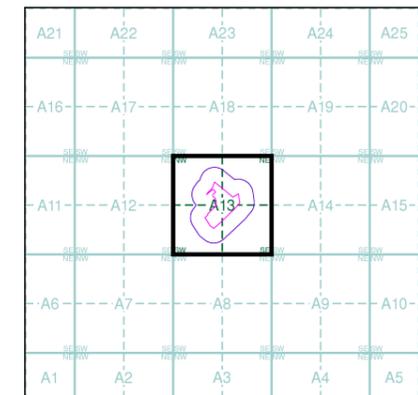
Source map scale - 1:2,500

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)



Historical Map - Segment A13

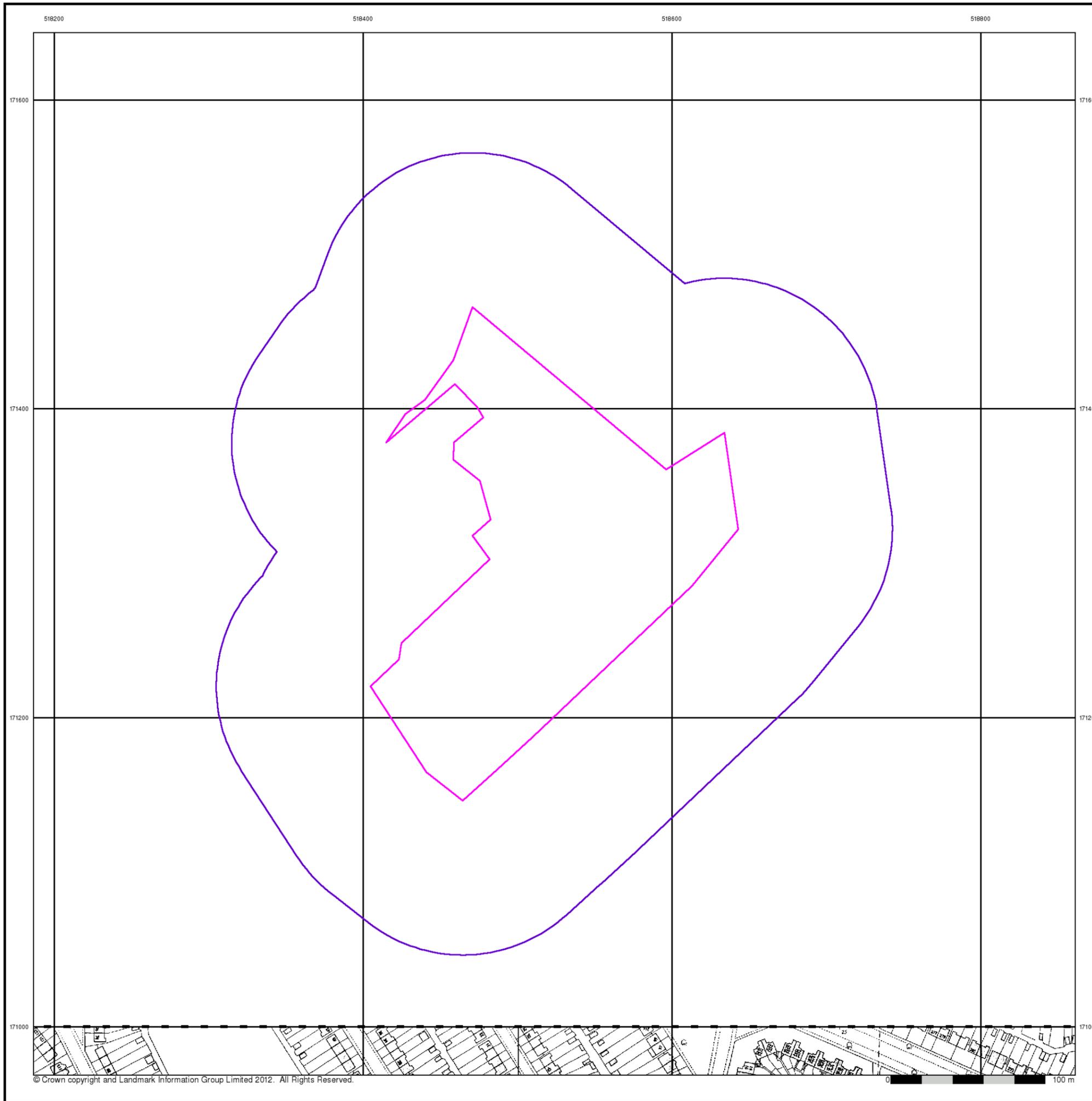


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



Ordnance Survey Plan

Published 1959

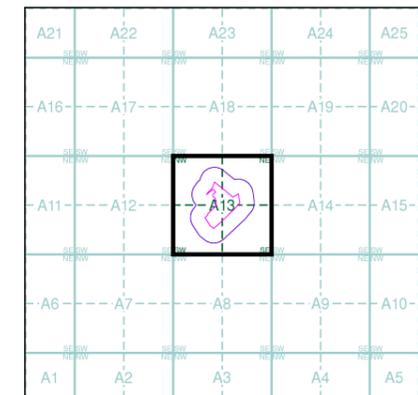
Source map scale - 1:1,250

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)

Q1871NW	Q1871NE
1959	1959
1:1,250	1:1,250
■	
Q1870NW	Q1870NE
1959	1959
1:1,250	1:1,250

Historical Map - Segment A13

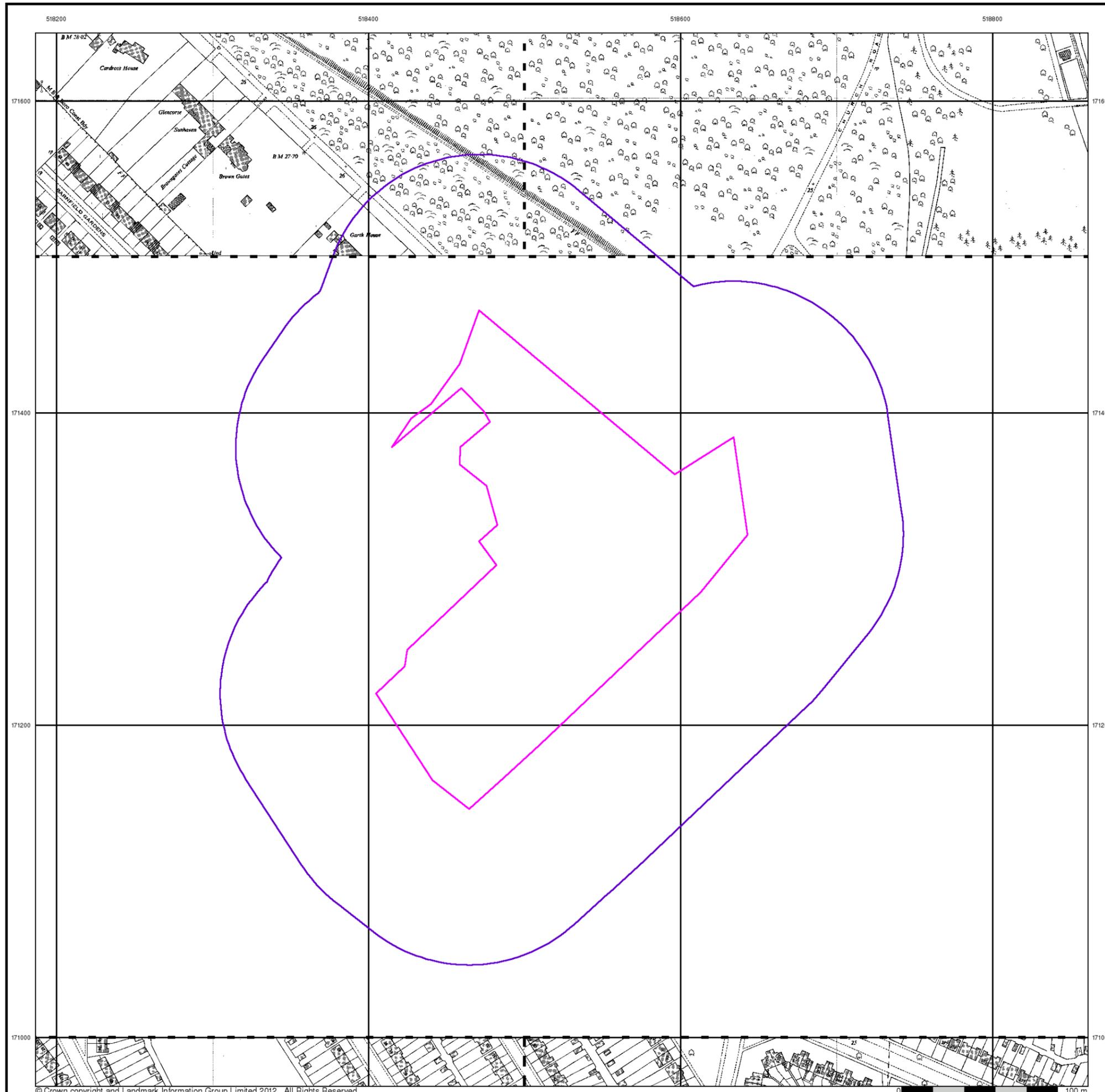


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



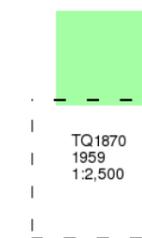
Additional SIMs

Published 1959

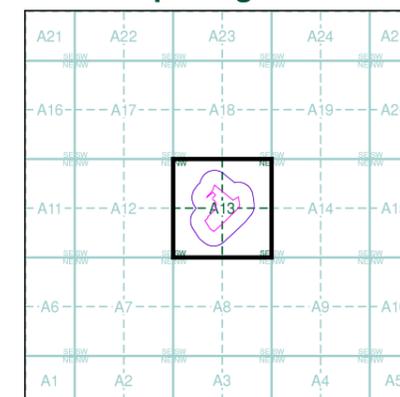
Source map scale - 1:2,500

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

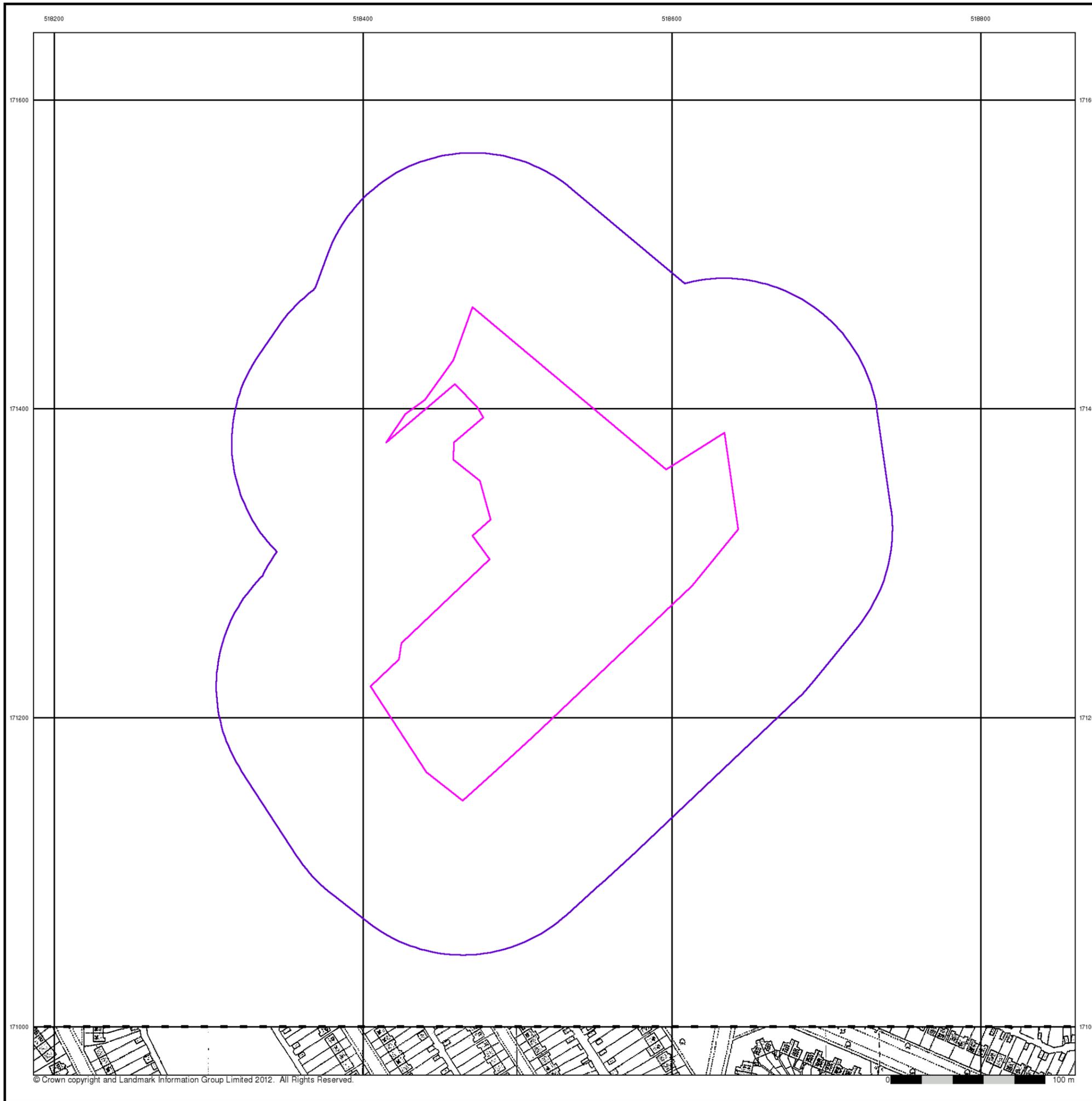


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



Additional SIMs

Published 1959 - 1976

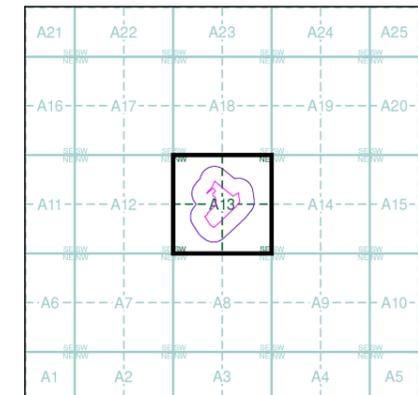
Source map scale - 1:1,250

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)

Q1871NW	Q1871NE
1974	1959
1:1,250	1:1,250
Q1871SW	Q1871SE
1974	1974
1:1,250	1:1,250
Q1870NW	Q1870NE
1959	1976
1:1,250	1:1,250

Historical Map - Segment A13

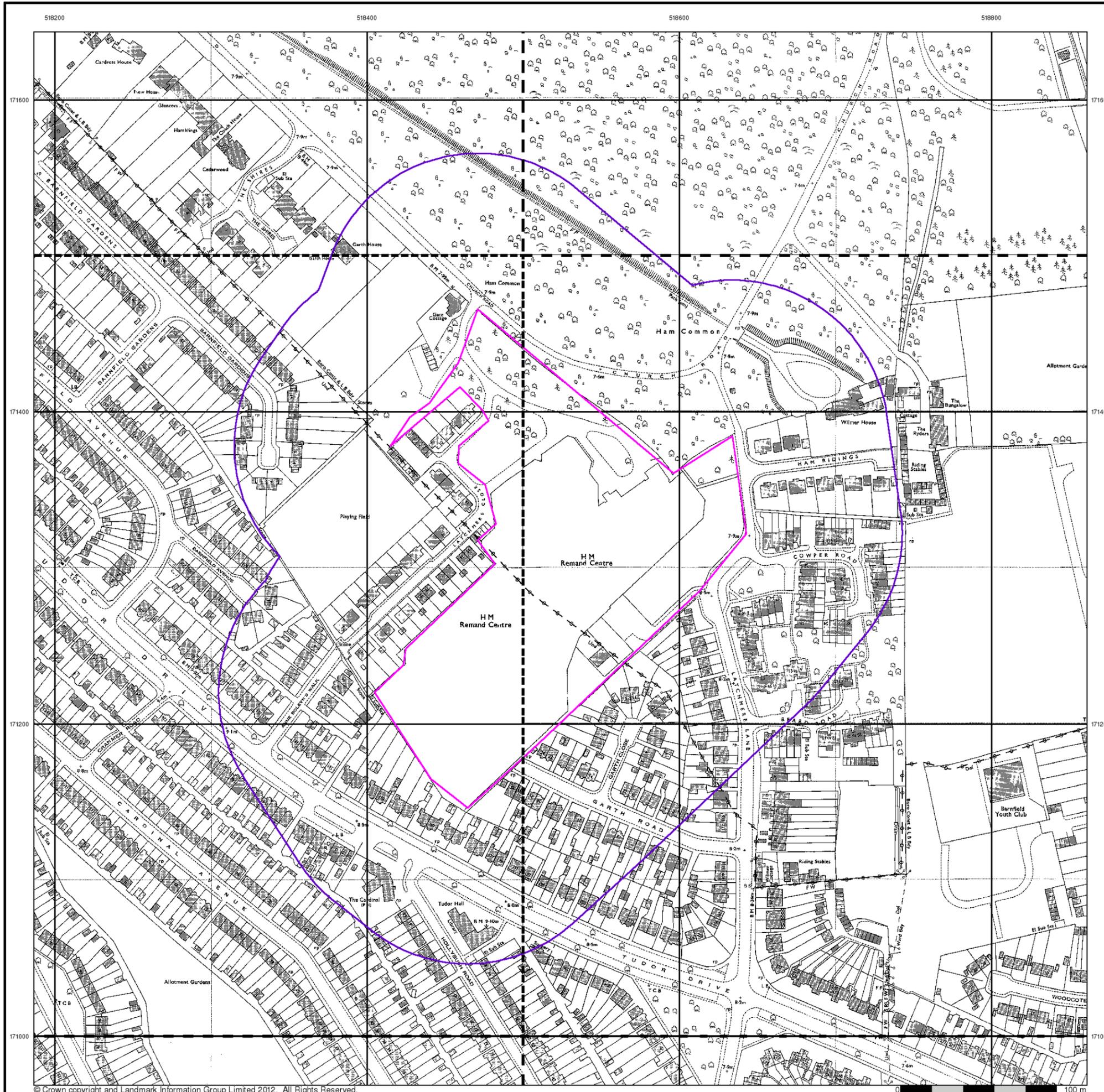


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



Supply of Unpublished Survey Information

Published 1973

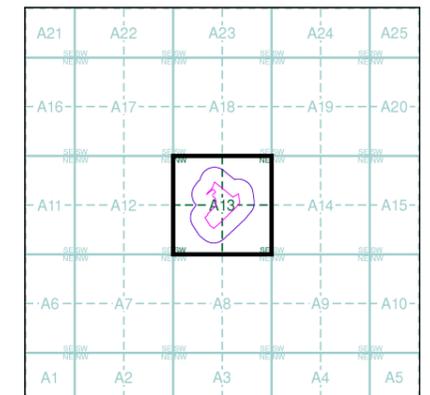
Source map scale - 1:1,250

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

Map Name(s) and Date(s)

TQ1871NW	1973	1:1,250
TQ1871SW	1973	1:1,250
TQ1871SE	1973	1:1,250
TQ1870NW	1973	1:1,250
TQ1870NE	1973	1:1,250

Historical Map - Segment A13

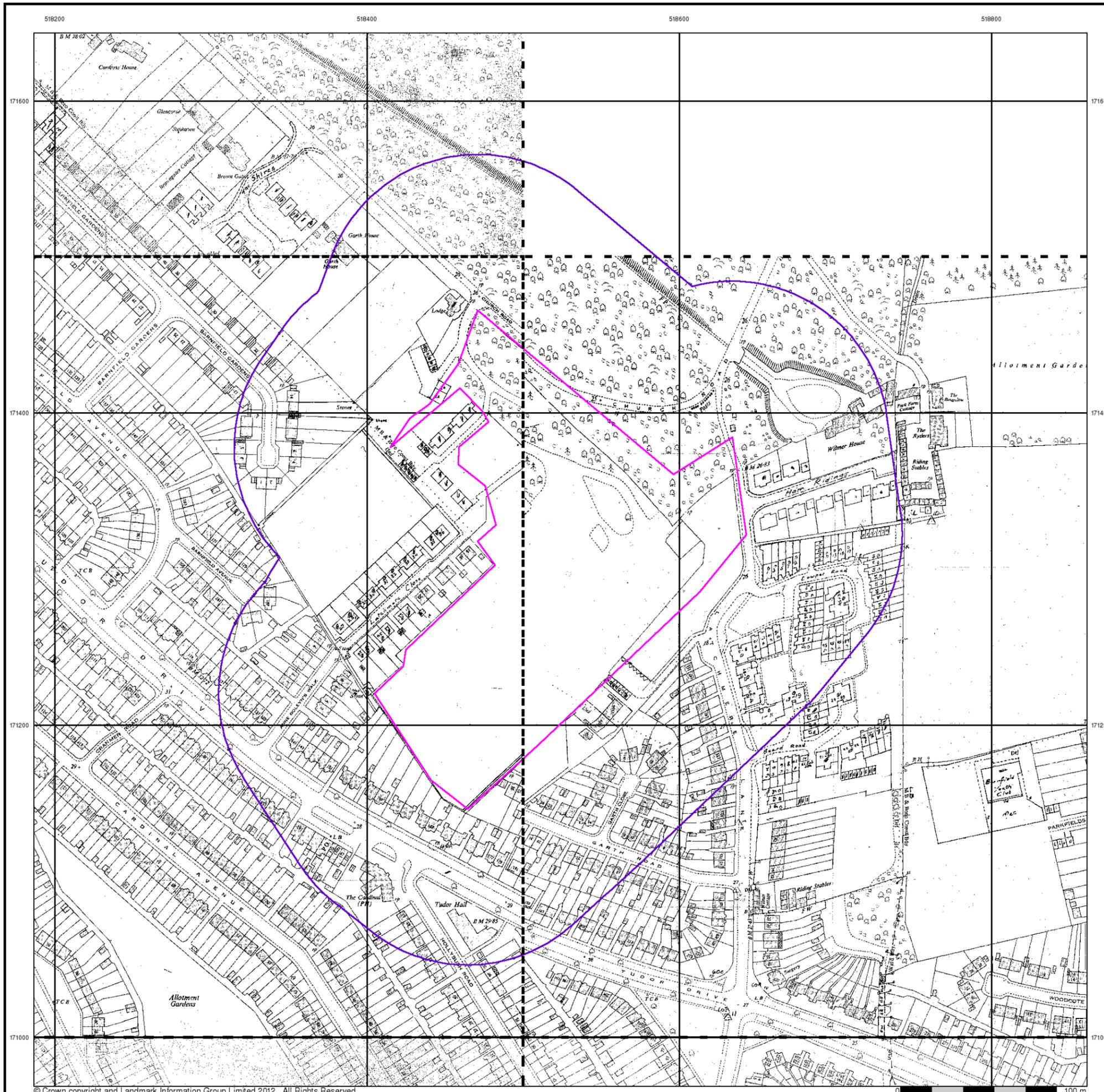


Order Details

Order Number: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



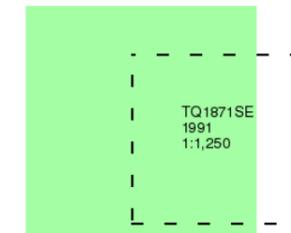
Additional SIMs

Published 1991

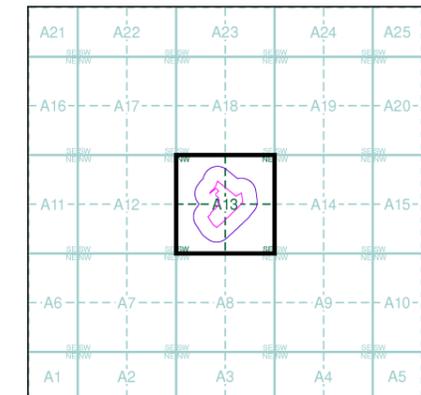
Source map scale - 1:1,250

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: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road, Ham, RICHMOND, Surrey, TW10 5HH



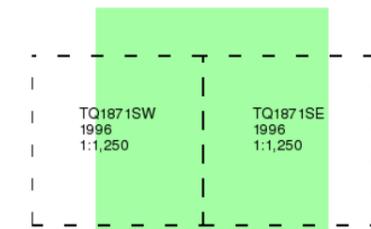
Large-Scale National Grid Data

Published 1996

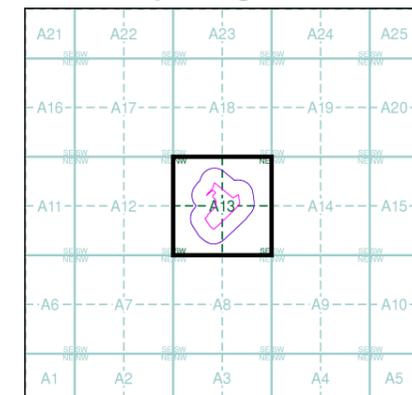
Source map scale - 1:1,250

'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: 40288424_1_1
 Customer Ref: 12.07.020
 National Grid Reference: 518510, 171310
 Slice: A
 Site Area (Ha): 3.5
 Search Buffer (m): 100

Site Details

H M Resettlement Prison, Latchmere House, Church Road,
 Ham, RICHMOND, Surrey, TW10 5HH



APPENDIX 'D'
ESI Statistical Analysis



Client/client ref	Ministry of Justice
Project ref	12-07-020
Site ref	Latchmere House, Ham, Surrey
Data description	
Contaminant(s)	
Test scenario	Planning: is true mean lower than critical concentration ($\mu < C_c$)? ▼
Date	1 September 2012
User details	Murray Bateman

Statistics calculator (version 1)

Input data

This spreadsheet has been produced based on the document 'Guidance on Comparing Soil Contamination Data with a Critical Concentration (CIEH/CL:AIRE, 2008)'. Users of this spreadsheet should always refer to this guidance, the User Manual and to relevant guidance on UK legislation and policy, in order to understand how the procedure should be applied in an appropriate context.

ESI Ltd (ESI) do not promise that the spreadsheet will provide any particular facilities or functions. The user must ensure that the spreadsheet meets their needs and they remain solely responsible for the competent use of the spreadsheet. Users are entirely responsible for the consequences of any use of the spreadsheet, ESI do not provide any warranty about the fitness for purpose or performance of any part of the spreadsheet. We do not promise that the media will always be free from defects, computer viruses, software locks or other similar code or that the operation of the spreadsheet will be uninterrupted or error free. The user should carry out all necessary virus checks prior to installing on their computing system.

Client/client ref: Ministry of Justice
 Project ref: 12-07-020
 Site ref: Latchmere House, Ham, Surrey
 Data description:
 Contaminant(s):
 Test scenario: Planning
 Date: 1 September 2012
 User details: Murray Bateman

	Lead (mg/kg)	BaP (mg/kg)								
Critical concentration, C_c	450	1.2	39							
Notes										
Sample size, n	14	14	0	0	0	0	0	0	0	0
Sample mean, \bar{x}	111.035714	0.54142857	No Data							
Standard deviation, s	190.959591	1.02368007								
Number of non-detects	1	8								
Set non-detect values to:	Half detection limit									
Outliers?	No	No								
Distribution	Non-normal	Non-normal								
Statistical approach	Auto: Chebychev	One-sample t-test	Auto							

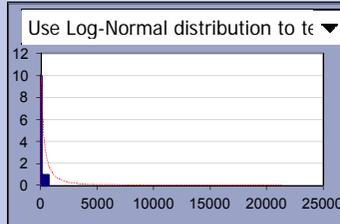
Test scenario:	Planning: is true mean lower than critical concentration ($\mu < C_c$)?		Evidence level required: 95%		Use Log-Normal distribution to test for outliers					
t statistic, t_0 (or k_0)	-6.64165761	-2.407147243								
Upper confidence limit (on true mean concentration, μ)	333.496906	1.02593825								
Evidence level	98%	98%								
Base decision on:	evidence level	evidence level								
Result	$\mu < C_c$	$\mu < C_c$								
Select dataset	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Test Results

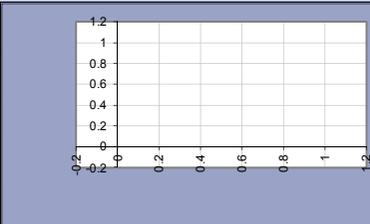
Client/client ref: Ministry of Justice Site ref: Latchmere House, Ham, Surrey
 Project ref: 12-07-020 Data description:

Date: 01-Sep-2012
 User details: Murray Bateman

Dataset: Lead (mg/kg)	
Sample mean, \bar{x} (mg/kg)	111.04
Sample standard deviation, s	190.96
Sample size, n	14
Critical concentration, Cc (mg/kg)	450



Outliers & non-detects	
Outliers present?	NO
Significance level	5%
Outliers removed?	1
Non-detects	1



Normality test

Significance level: 5%

Non-normal distribution

Change: One-sample t-test

Test scenario: Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Evidence against Null hypothesis:	100%
Base decision on:	evidence level
Evidence level required:	95%
Balance of probability?	N/A
Reject Null Hypothesis?	Yes
$\mu < C_c$ (re this dataset)	

[Back to data](#)

[Back to summary](#)

[Go to outlier test](#)

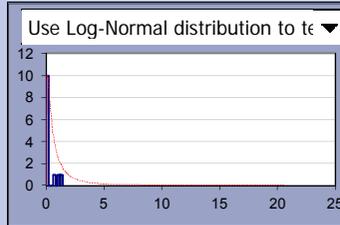
[Go to normality test](#)

Test Results

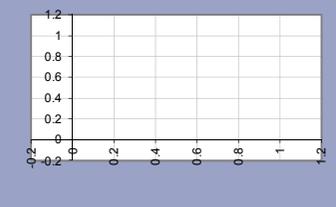
Client/client ref: Ministry of Justice Site ref: Latchmere House, Ham, Surrey
 Project ref: 12-07-020 Data description:

Date: 01-Sep-2012
 User details: Murray Bateman

Dataset: BaP (mg/kg)	
Sample mean, \bar{x} (mg/kg)	0.5414
Sample standard deviation, s	1.0237
Sample size, n	14
Critical concentration, Cc (mg/kg)	1.2



Outliers & non-detects	
Outliers present?	NO
Significance level	5%
Outliers removed?	1
Non-detects	8



Normality test

Significance level: 5%

Non-normal distribution

Change: One-sample t-test

Test scenario: Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$

Evidence against Null hypothesis:	100%
Base decision on:	evidence level
Evidence level required:	95%
Balance of probability?	N/A
Reject Null Hypothesis?	Yes
$\mu < C_c$ (re this dataset)	

[Back to data](#)

[Back to summary](#)

[Go to outlier test](#)

[Go to normality test](#)

APPENDIX 'E'
HazWasteOnline & WAC Testing Results



Job name

Latchmere House, Ham, TW10 5HH

Waste stream

Listers Suite 6 PAH in CAS order and no pH

Comments

Report

Created by: Bateman, Murray
Created date: 07/09/2012 14:41

Job summary

#	Sample name	Depth	Classification result	Hazardous properties
1	1	0.5	Non Hazardous	
2	4	0.4	Non Hazardous	
3	5	0.7	Non Hazardous	
4	6	0.6	Non Hazardous	
5	8	0.5	Non Hazardous	
6	9	0.5	Non Hazardous	
7	10	0.4	Non Hazardous	
8	11	0.5	Non Hazardous	
9	12	0.9	Non Hazardous	
10	13	0.4	Non Hazardous	
11	14	0.6	Non Hazardous	
12	15	0.5	Non Hazardous	



Chemtest

LABORATORY TEST REPORT

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

Listers Geotechnical Consultants

Slapton Hill Barn, Blakesley Road

Slapton, Towcester

Northamptonshire

NN12 8QD

Results of analysis of 2 samples

received 1 August 2012

FAO Murray Bateman

12-07-020 - Latchmere House, Richmond

Report Date

10 August 2012

Login Batch No 210412
Chemtest LIMS ID AH58719 Soil: AH58718
Sample ID 10
Sample No
Sampling Date 26/07/2012
Depth 0.40m

Landfill Waste Acceptance Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
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Solid Waste Analysis

Determinand ↓	SOP ↓	*	Units ↓					
Total Organic Carbon	2625	M	%		2	3	5	6
Loss on Ignition	2610	N	%		3.05			10
Total BTEX	2761	M	mg kg ⁻¹		<0.005	6		
Total PCBs (7 congeners)	2811	N	mg kg ⁻¹		<1	1		
TPH Total WAC	2670	M	mg kg ⁻¹		31	500		
Total (of 17) PAHs	2700	N	mg kg ⁻¹		25	100		
pH	2010	M			8.1		>6	
Acid Neutralisation Capacity	2015	N	mol kg ⁻¹		0.016		To evaluate	To evaluate

Eluate Analysis

Determinand ↓	SOP ↓	*					Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
			2:1 Eluate mg l ⁻¹	8:1 Eluate mg l ⁻¹	2:1 Eluate mg kg ⁻¹	Cumulative 10:1 Eluate mg kg ⁻¹			
Arsenic	1450	N	0.011	0.011	<0.05	0.11	0.5	2	25
Barium	1450	N	0.008	0.004	<0.5	<0.5	20	100	300
Cadmium	1450	N	<0.0005	<0.0005	<0.01	<0.01	0.04	1	5
Chromium	1450	N	0.005	0.004	<0.05	<0.05	0.5	10	70
Copper	1450	N	0.004	0.002	<0.05	<0.05	2	50	100
Mercury	1450	N	<0.0005	<0.0005	<0.01	<0.01	0.01	0.2	2
Molybdenum	1450	N	0.008	0.003	<0.05	<0.05	0.5	10	30
Nickel	1450	N	0.002	0.001	<0.05	<0.05	0.4	10	40
Lead	1450	N	0.001	<0.001	<0.01	<0.01	0.5	10	50
Antimony	1450	N	0.004	0.003	0.01	0.03	0.06	0.7	5
Selenium	1450	N	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	1450	N	0.006	0.005	<0.5	<0.5	4	50	200
Chloride	1220	N	2.9	0.62	5.8	9.09	800	15000	25000
Fluoride	1220	N	0.65	0.29	1.3	3.36	10	150	500
Sulfate	1220	N	17	0.66	34	27.3	1000	20000	50000
Total Dissolved Solids	1040	N	93	58	186	624	4000	60000	100000
Phenol Index	1920	N	<0.03	<0.03	<0.5	<0.5	1		
Dissolved Organic Carbon	1610	N	6.2	6.1	<50	61.1	500	800	1000

Solid Information

Dry mass of test portion/kg	0.175
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Leach Test Information

Leachant volume 1st extract/l	0.319
Leachant volume 2nd extract/l	1.4
Eluate recovered from 1st extract/l	0.2219

All tests undertaken between 1-Aug-2012 and 10-Aug-2012

* Accreditation status

This report should be interpreted in conjunction with the notes on the accompanying cover page.

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LIMS sample ID range AH58718 to AH58719