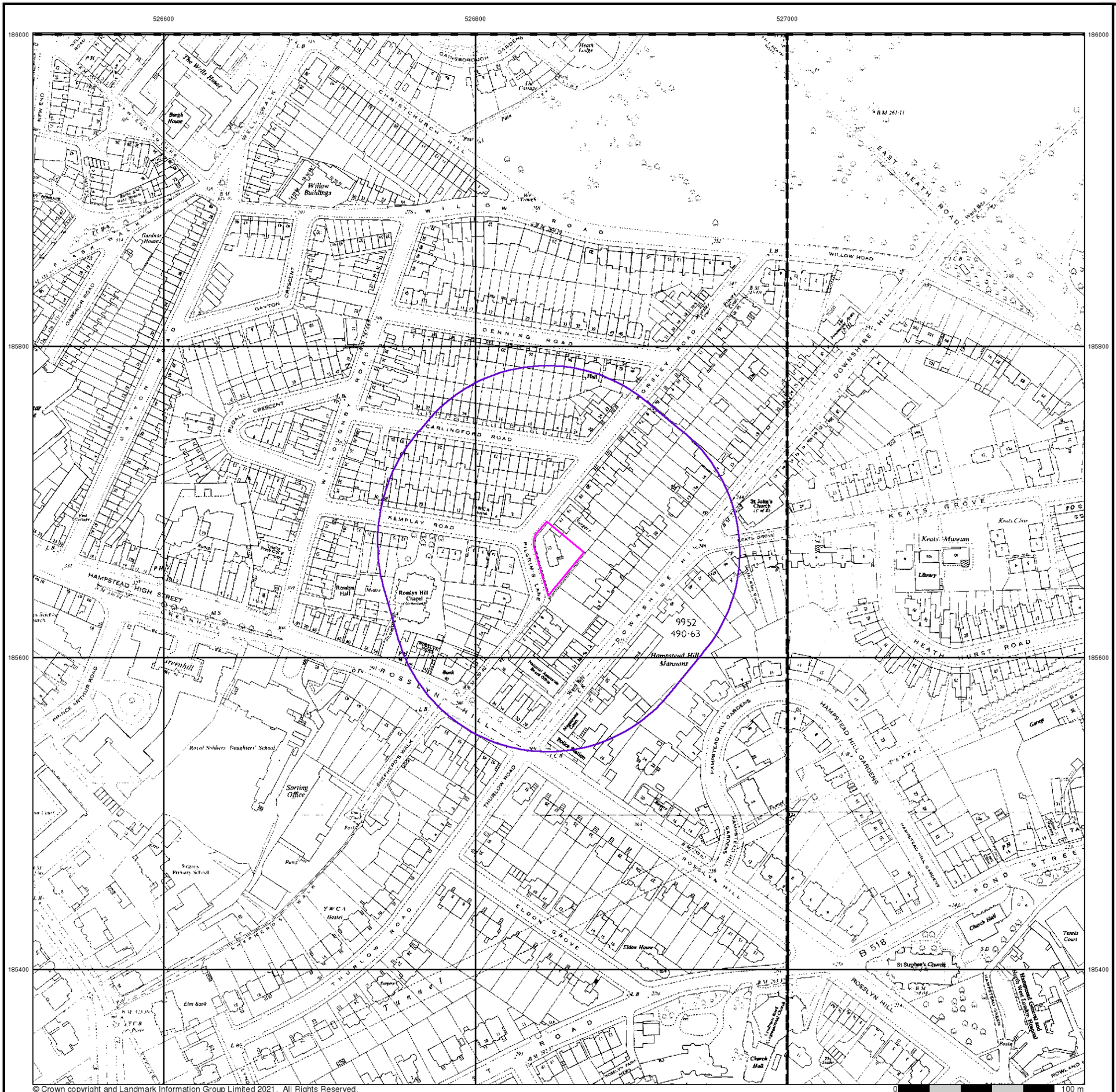


GEA

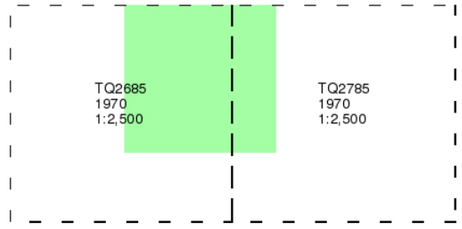
Ordnance Survey Plan

Published 1970

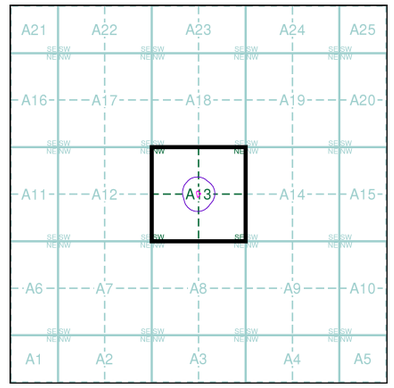
Source map scale - 1:2,500

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)



Historical Map - Segment A13



Order Details

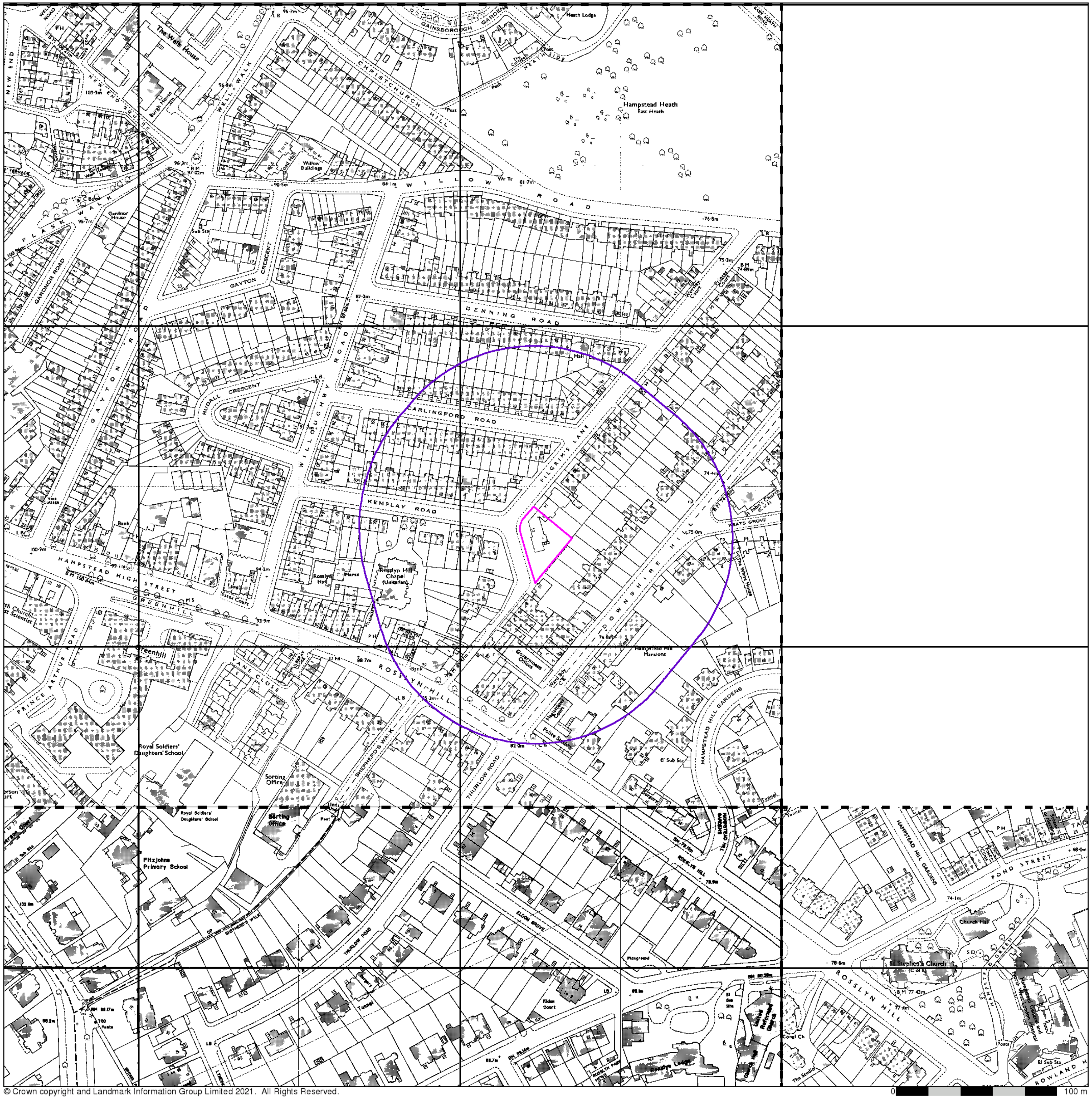
Order Number:	287612059_1_1
Customer Ref:	J21282
National Grid Reference:	526850, 185660
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

Site Details

12, Pilgrims Lane, LONDON, NW3 1SN

Landmark INFORMATION GROUP

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



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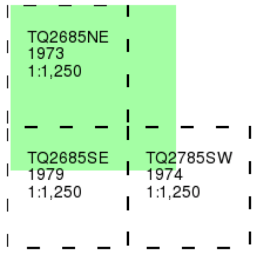
Ordnance Survey Plan

Published 1973 - 1979

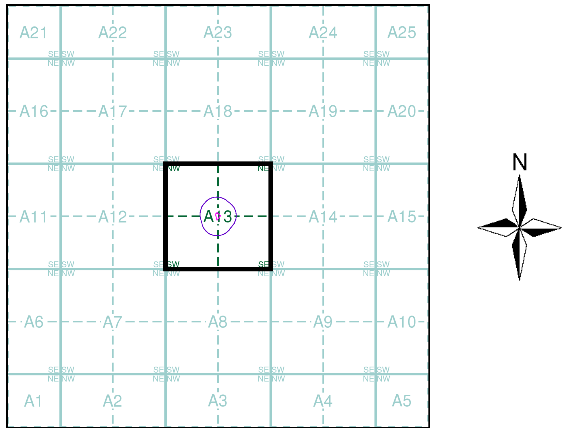
Source map scale - 1:1,250

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)



Historical Map - Segment A13



Order Details

Order Number: 287612059_1_1
Customer Ref: J21282
National Grid Reference: 526850, 185660
Slice: A
Site Area (Ha): 0.08
Search Buffer (m): 100

Site Details

12, Pilgrims Lane, LONDON, NW3 1SN

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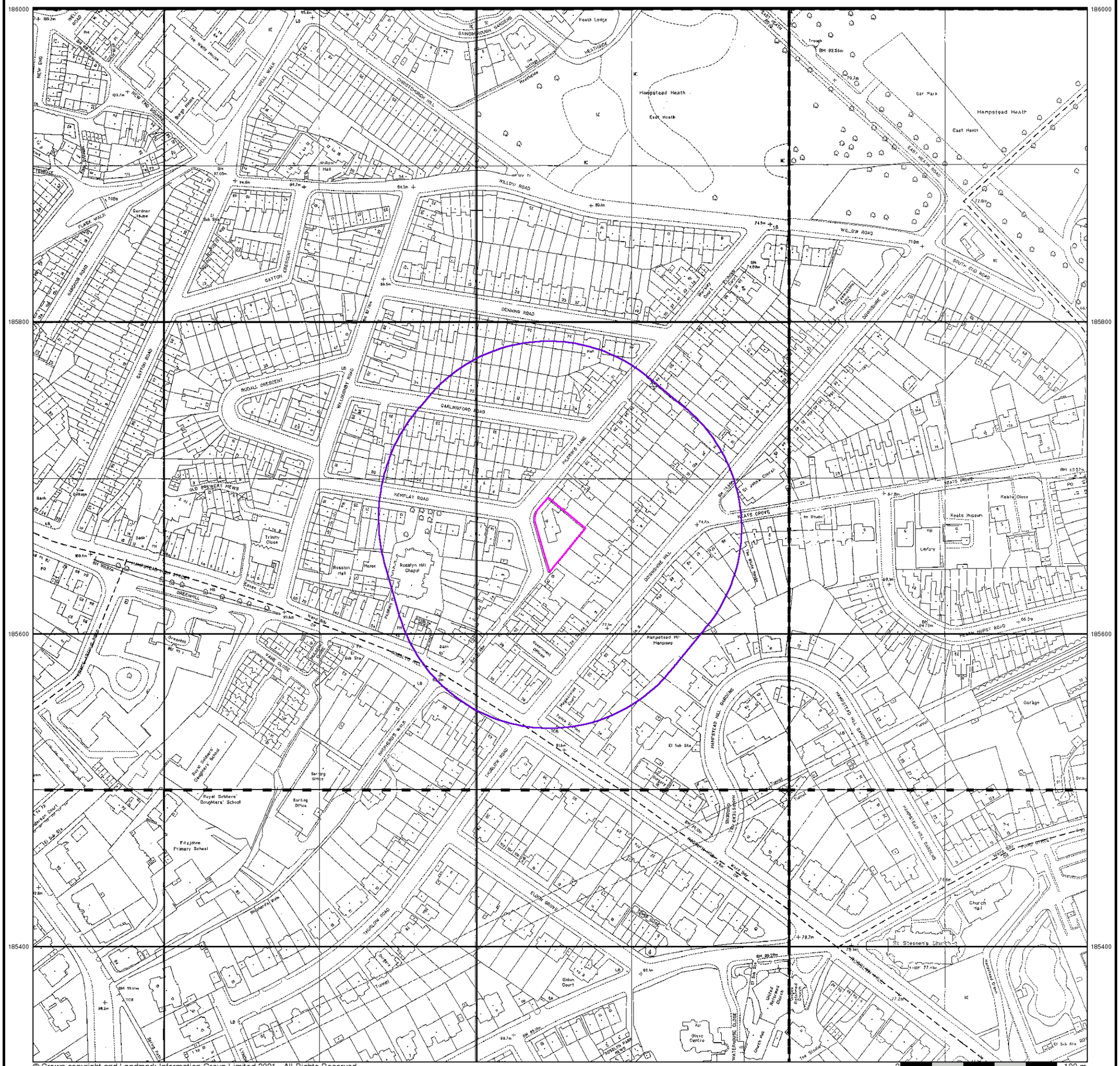


GEA

Large-Scale National Grid Data

Published 1991

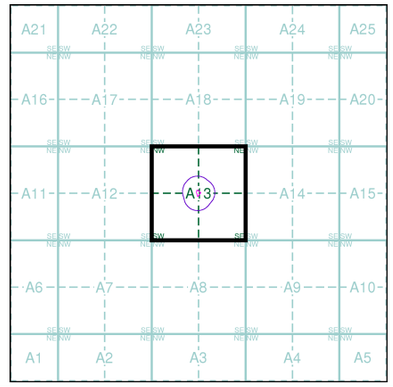
Source map scale - 1:1,250

'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)

TQ2686SE 1991 1:1,250	TQ2786SW 1991 1:1,250
TQ2685NE 1991 1:1,250	TQ2785NW 1991 1:1,250
TQ2685SE 1991 1:1,250	TQ2785SW 1991 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	287612059_1_1
Customer Ref:	J21282
National Grid Reference:	526850, 185660
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

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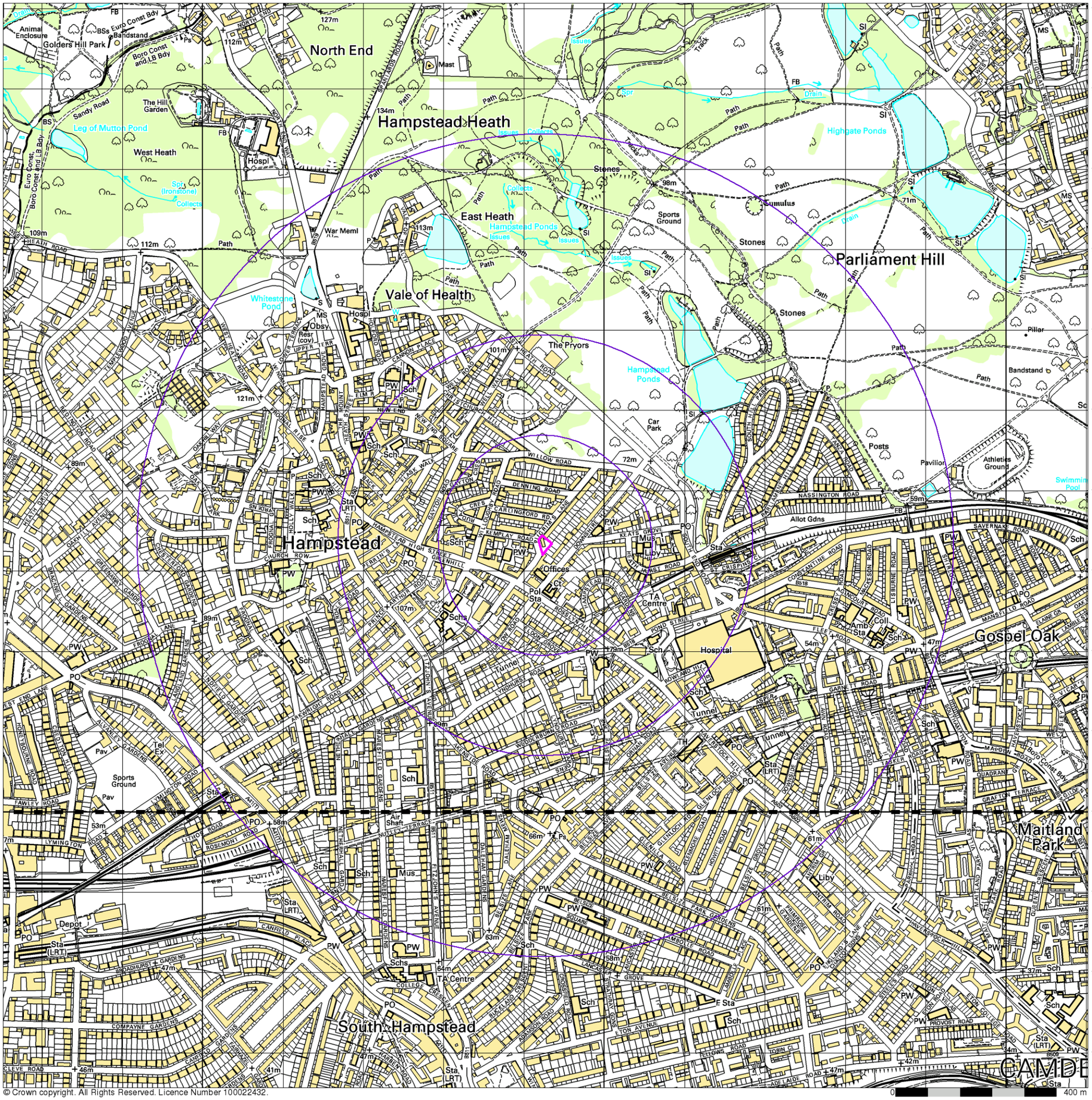


0 400 m

GEA

10k Raster Mapping

Published 1999

Source map scale - 1:10,000

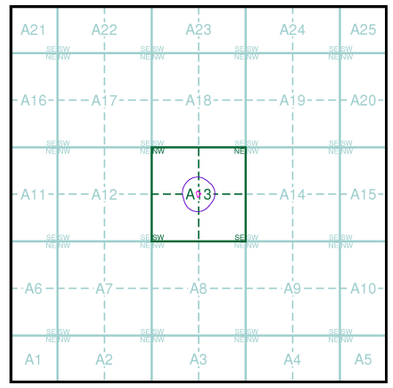
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

TQ28NE 1999 1:10,000

TQ28SE 1999 1:10,000

Historical Map - Slice A



Order Details

Order Number:	287612059_1_1
Customer Ref:	J21282
National Grid Reference:	526850, 185660
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	1000

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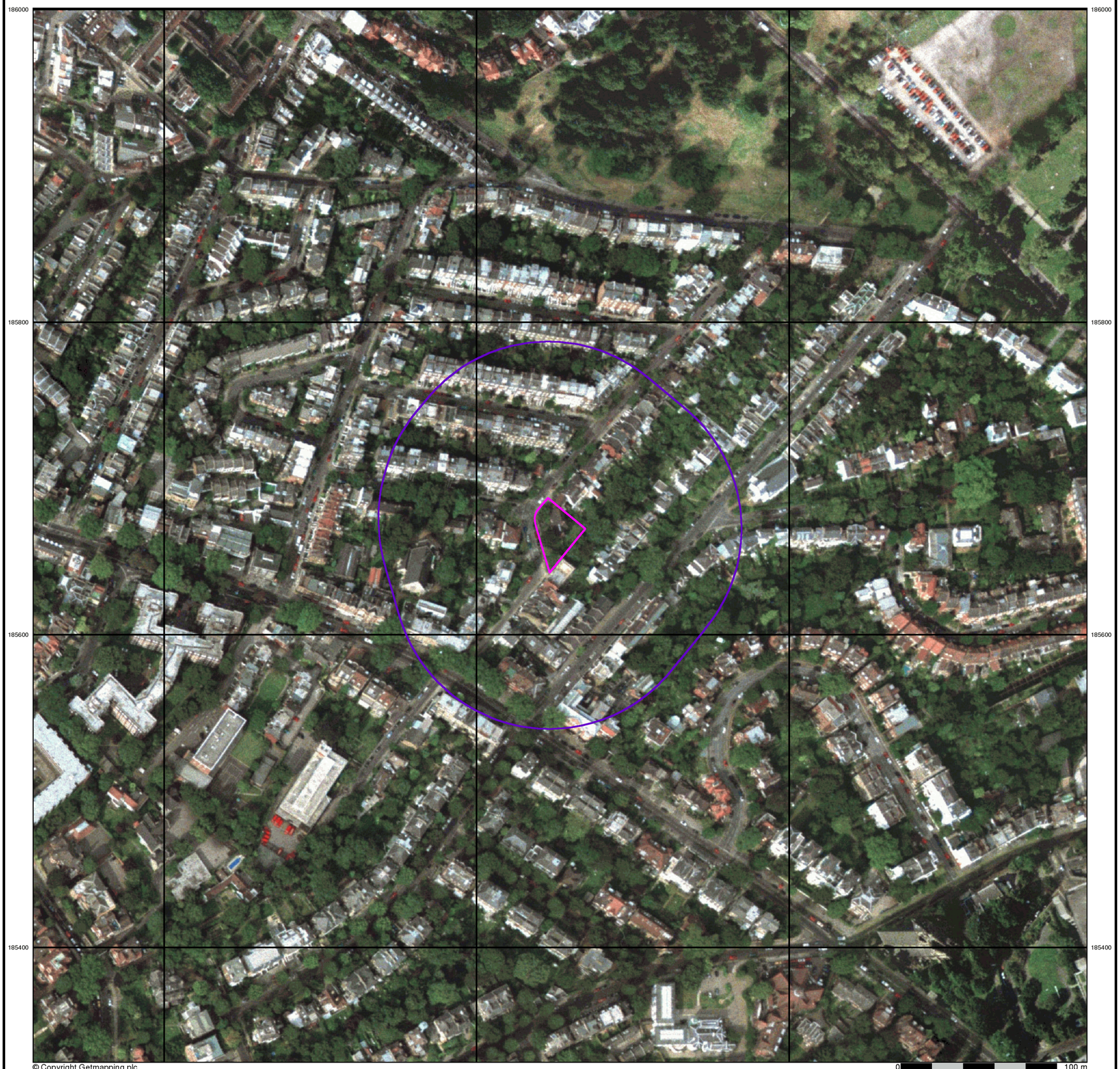
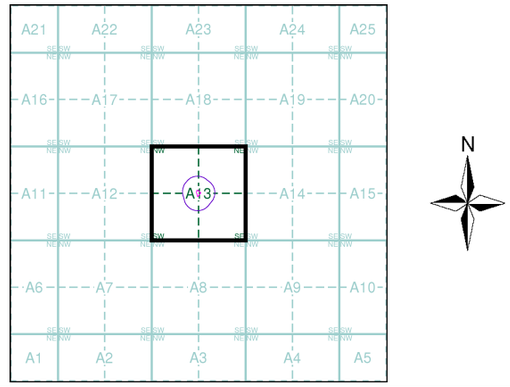


Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	287612059_1_1
Customer Ref:	J21282
National Grid Reference:	526850, 185660
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	100

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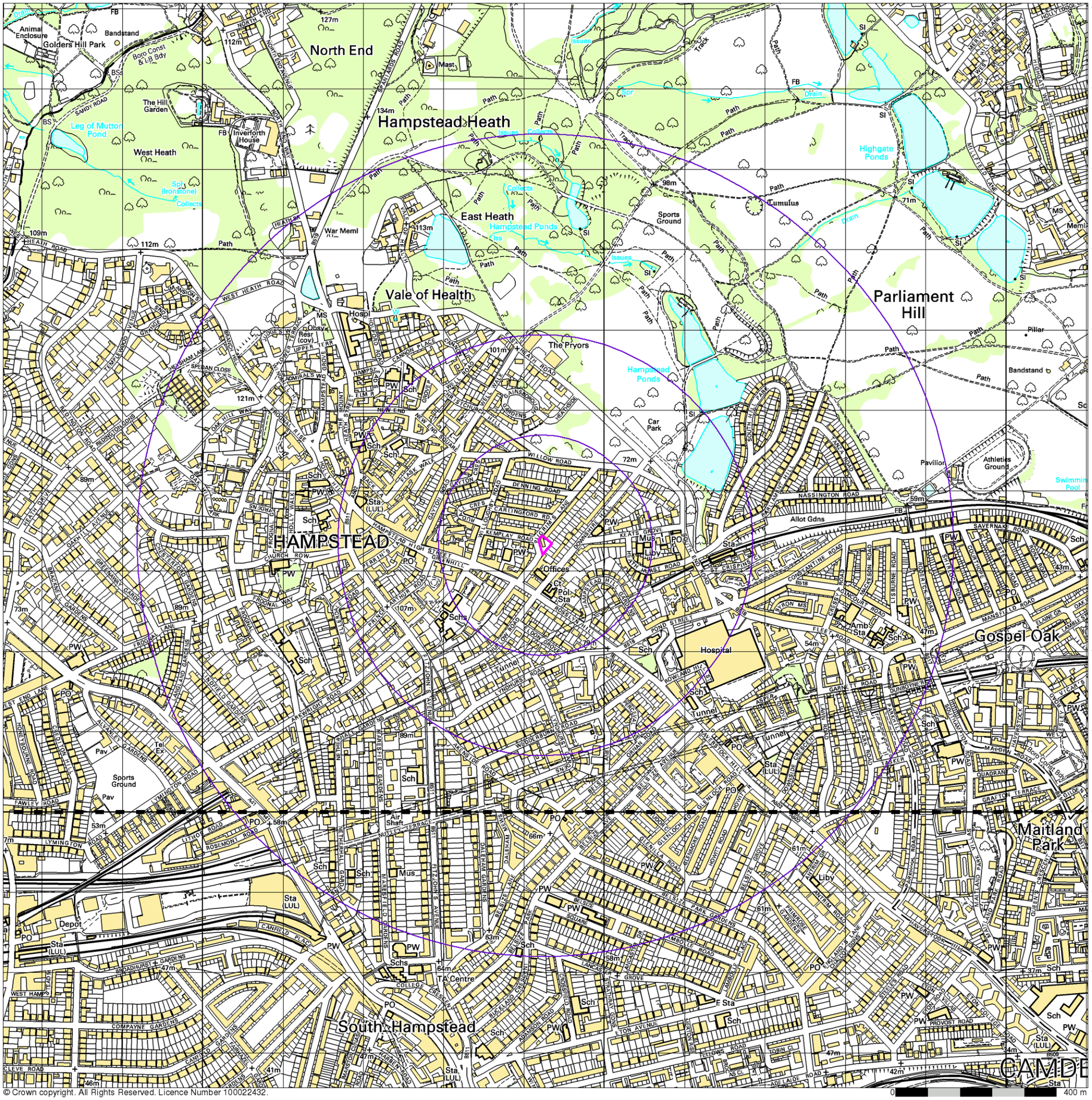


GEA

10k Raster Mapping

Published 2006

Source map scale - 1:10,000

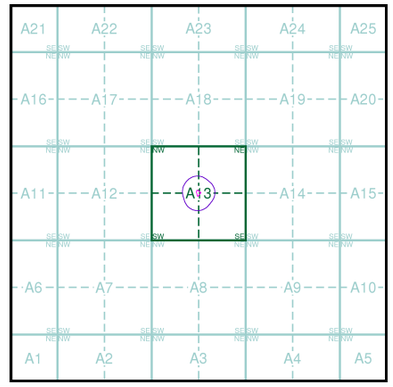
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks 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)

TQ28NE
2006
1:10,000

TQ28SE
2006
1:10,000

Historical Map - Slice A



Order Details

Order Number:	287612059_1_1
Customer Ref:	J21282
National Grid Reference:	526850, 185660
Slice:	A
Site Area (Ha):	0.08
Search Buffer (m):	1000

Site Details

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VectorMap Local

Published 2021

Source map scale - 1:10,000

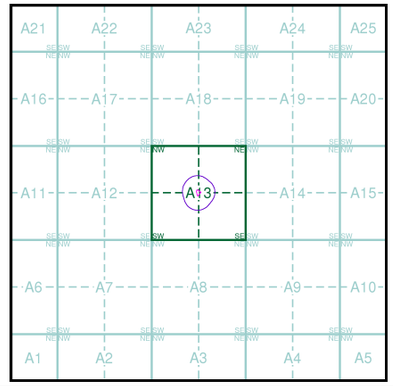
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap 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)

TQ28NE
2021
Variable

TQ28SE
2021
Variable

Historical Map - Slice A



Order Details

Order Number:	287612059_1_1
Customer Ref:	J21282
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Classification of Consequence

Classification	Definition	Examples
Severe	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings / property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health ("significant harm" as defined in DETR, 2000). Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the Draft Circular of Contaminated Land, DETR, 2000). Damage to sensitive buildings / structures / services or the environment.	Pollution of non-classified groundwater Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discolouration of concrete.

Classification of Probability

Classification	Probability
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place, and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

From Rudland, DJ, Lancefield, RM and Mayell, PN (2001) *Contaminated land risk assessment. A guide to good practice.* CIRIA Pub C552

Risk Assessment Matrix

		Consequence			
		Severe	***Medium***	***Mild***	***Minor***
Probability	***High likelihood***	**Very high risk**	**High risk**	**Moderate risk**	Moderate / low risk
	Likely	**High risk**	**Moderate risk**	Moderate / low risk	Low risk
	Low likelihood	**Moderate risk**	Moderate / low risk	Low risk	Very low risk
	Unlikely	Moderate / low risk	Low risk	Very low risk	Very low risk

	Description of the assessed risks and likely action required
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

From Rudland, DJ, Lancefield, RM and Mayell, PN (2001) *Contaminated land risk assessment. A guide to good practice.* CIRIA Pub C552

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VAT No: 128 8833 79

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Preliminary UXO Risk Assessment

Client	GEA Ltd
Project	12 Pilgrims Lane
Site Address	12 Pilgrims Lane, London, NW3 1SN
Report Reference	PA14246-00
Date	20/09/21
Originator	AT

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the 12 Pilgrims Lane site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

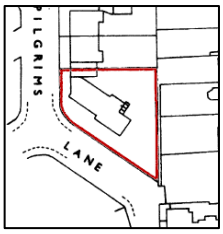
Background

This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.

Risk Assessment Considerations	
Site location and description/current use	The site is located in the London Borough of Camden. It is currently occupied by the property of 12 Pilgrim's Lane and the site borders Pilgrim's Lane to the west. Residential properties and their associated gardens border the site in other directions. The site is approximately centred on the OS grid reference: TQ 26850 85668 
Are there any indicators of current/historical military activity on/close to the site?	In-house records do not indicate that the site has had any current/former military use. In addition, 1st Line Defence could find no evidence to suggest that items of ordnance have ever been produced, stored or disposed of within the site or its immediate vicinity.
What was the pre- and post-WWII history of the site?	OS mapping from 1936 mirrors the site's current description, comprising of a residential property and its rear garden. It is bordered to the west by Pilgrim's Lane. Post-war OS mapping from 1954 shows no structural changes to the site or its immediate surroundings.
Was the area subject to bombing during WWII?	During WWII, the site was located within the Metropolitan Borough of Hampstead. Home Office statistics indicate that Hampstead suffered from a very high density bombing campaign during WWII, with an average of 166 items recorded per 1,000 acres. This included 311 high explosive (HE) bombs, 6 parachute mines, 21 oil bombs, 5 phosphorus bombs, 10 V-1 pilotless aircraft and 3 V-2 long range rocket bombs. Although an incendiary bomb shower is recorded in the general site area, there are no bombs recorded directly on the site or within its immediate vicinity. There are several bombs recorded in the surrounding region, the closest being approximately 150m to the west. This is likely the same strike recorded in local bomb mapping for Hampstead, which records a bomb approximately 150m to the west.
Is there any evidence of bomb damage on/close to the site?	London County Council (LCC) bomb damage mapping does not attribute any damage to the property on site, or bordering properties. This is corroborated by post-WWII aerial photography, available in-house on this occasion, which does not show any signs of serious bomb damage on the site.
To what degree would the site have been subject to access?	As the site comprises a residential property which was unaffected by bombing or bomb damage, it is anticipated that access to the site would have been frequent. Frequent access would increase the likelihood of obvious signs of UXO being noticed and reported.
To what degree has the site been developed post-WWII?	The site has not experienced any significant development since WWII.
What is the nature and extent of the intrusive works proposed?	Works proposed at this stage are understood to comprise four open drive sampler boreholes.

Summary and Conclusions

During WWII, the site was located within the Metropolitan Borough of Hampstead. Hampstead suffered from a very high density bombing campaign during WWII, with an average of 166 items recorded per 1,000 acres. Despite this, , there are no bombs recorded directly on the site or within its immediate vicinity on London Bomb Census Mapping, although an incendiary bomb shower is recorded in the general site area. There are several bombs recorded in the surrounding region, the closest being approximately 150m to the west. This is likely the same strike recorded in local bomb mapping for Hampstead, which records a bomb approximately 150m to the west.

LCC bomb damage mapping attributes no damage to the site or surrounding properties. This is corroborated by WWII-era aerial photography, which does not show any signs of serious bomb damage on site. As such, the site would likely have been frequently accessed both during and after WWII. Frequent access would increase the likelihood of obvious signs of UXO being noticed and reported.

Recommendations

Given the findings of this preliminary report, the risk from UXO on site is not considered to be significantly elevated above the background level for the region. It is therefore recommended that **no further research** be undertaken for this site.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.

It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing with historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.

appendix d

Ground Movement Analysis

PDisp Analysis – Tabular input - Short Term Movements
PDisp Analysis – Tabular input - Total Movements
PDisp Analysis – Contour output - Short Term Movements
PDisp Analysis – Contour output - Total Movements
PDisp Analysis – Tabular output - Short Term Movements
PDisp Analysis – Tabular output - Total Movements

XDisp Analysis – Tabular input - Installation
XDisp Analysis – Tabular input - Installation and Excavation
XDisp Analysis – Vertical movements - Installation
XDisp Analysis – Horizontal movements - Installation
XDisp Analysis – Vertical movements - Installation and Excavation
XDisp Analysis – Horizontal movements - Installation and Excavation XDisp Analysis – Tabular output - Installation
XDisp Analysis – Tabular output - Installation and Excavation

Titles

Job No.: J21282
Job Title: 12 Pilgrims Lane
Sub-title: Short term movements
Calculation Heading: Input data
Initials: AG
Checker:
Date Saved:
Date Checked:
Notes:
File Name: PDISP.pdd
File Path: C:\Users\alex.goodsell\Documents\GMA J21282\Dec 2024

History

Date	Time	By	Notes
24-Jun-2022	15:37	Alex.Goodsell	New
24-Jun-2022	17:21	Alex.Goodsell	
28-Jun-2022	11:43	Alex.Goodsell	
14-Sep-2022	17:16	Alex.Goodsell	
09-Dec-2024	17:06	Alex.Goodsell	
09-Dec-2024	18:04	Alex.Goodsell	
11-Dec-2024	17:48	Alex.Goodsell	Open

Analysis Options

General
Global Poisson's ratio: 0.20
Maximum allowable ratio between values of E: 1.5
Horizontal rigid boundary level: 0.00 [m OD]
Displacements at load centroids: Yes
GSA piled raft data : No

Elastic
Elastic : Yes

Consolidation
Consolidation : No

Soil ProfilesSoil Profile 1

Layer ref.	Name	Level at top [mOD]	Number of intermediate displacement levels	Youngs Modulus : Top [kN/m²]	Youngs Modulus : Btm. [kN/m²]	Poissons ratio	Non-linear curve
1	MG	100.00	1	10000.	10000.	0.20000	None
2	LC	99.000	104	15000.	189500.	0.50000	None

Soil Zones

Zone	Name	X min [m]	X max [m]	Y min [m]	Y max [m]	Profile
1	1	-45.000	30.000	-15.000	30.000	Soil Profile 1

Polygonal Load Data

Load ref.	Name	Position : Level	Position : Polygon : Coords.	Position : Polygon : Rect.	No. of Rectangles	Value : Normal (local z)

		[m]		[m]	tolerance [%]		[kN/m²]
1	ex 1	96.50000	(-10.3,3.78) (-3.76,7.69) (-10.3,3.78)	(-10.3,7.69) (-3.76,3.78)	10.000	1	-20.900
2	ex 2	96.50000	(-18.5,2.68) (-15.3,6.8) (-10.3,7.69) (-18.5,2.68)	(-18.5,6.8) (-15.3,7.69) (-10.3,2.68)	10.000	2	-20.900
3	ex 3	96.50000	(-22.6,11.8) (-14.6,8.99) (-15.3,7.69) (-18.5,6.8) (-19.1,6.4)	(-18.6,14.7) (-14.6,7.69) (-15.3,6.8) (-18.5,6.4) (-22.6,11.8)	10.000	10	-59.510
4	1	96.50000	(-10.3,7.69) (-3.76,6.59) (-10.3,7.69)	(-3.76,7.69) (-10.3,6.59)	10.000	1	125.00
5	2	96.50000	(-3.76,6.59) (-4.86,4.88) (-3.76,6.59)	(-3.76,4.88) (-4.86,6.59)	10.000	1	125.00
6	3	96.50000	(-3.76,3.78) (-10.3,4.88) (-3.76,3.78)	(-10.3,3.78) (-3.76,4.88)	10.000	1	125.00
7	4	96.50000	(-18.5,2.68) (-10.3,3.78) (-18.5,2.68)	(-10.3,2.68) (-18.5,3.78)	10.000	1	125.00
8	5	96.50000	(-18.5,3.78) (-17.4,5.7) (-18.5,3.78)	(-18.5,5.7) (-17.4,3.78)	10.000	1	125.00
9	6	96.50000	(-18.5,6.8) (-15.3,7.69) (-10.3,6.59) (-14.2,5.7) (-18.5,6.8)	(-15.3,6.8) (-10.3,7.69) (-14.2,6.59) (-18.5,5.7)	10.000	3	125.00
10	7	96.50000	(-10.3,4.88) (-11.4,3.78) (-10.3,4.88)	(-10.3,3.78) (-11.4,4.88)	10.000	1	125.00
11	8	96.50000	(-22.6,11.8) (-18,13.8) (-22.6,11.8)	(-18.6,14.7) (-22,10.9)	10.000	1	125.00
12	9	96.50000	(-22,10.9) (-18.5,6.4) (-18.1,6.8) (-21.1,11.5)	(-19.1,6.4) (-18.5,6.8) (-18.2,7.03) (-22,10.9)	10.000	10	125.00
13	10	96.50000	(-18,13.8) (-14.6,7.69) (-15.5,8.36) (-18,13.8)	(-14.6,8.99) (-15.3,7.69) (-18.9,13.1)	10.000	6	125.00

Polygonal Loads' Rectangles

No.	Centre : x [m]	Centre : y [m]	Angle of local x from global X [Degrees]	Width x [m]	Depth y [m]
Load 1 : ex 1					
(Edge 2 optimal)					
1	-7.04500	5.73500	0.0	6.5700	3.9100
Load 2 : ex 2					
(Edge 2 optimal)					
1	-16.87500	4.74000	0.0	3.1700	4.1200
2	-12.81000	5.18500	0.0	4.9600	5.0100
Load 3 : ex 3					
(Edge 10 optimal)					
1	-18.84433	6.60000	90.000	0.40000	0.76865
2	-17.46677	7.24500	90.000	0.89000	4.3535
3	-17.46396	8.34000	90.000	1.3000	5.7679
4	-18.14968	9.69500	90.000	1.4100	6.1397
5	-19.10302	11.10500	90.000	1.4100	6.0470
6	-19.48171	12.09500	90.000	0.57000	5.4006

No.	Centre : x	Centre : y	Angle of local x from global X	Width x	Depth y
7	-19.28578	12.66500	90.000	0.57000	4.2004
8	-19.08984	13.23500	90.000	0.57000	3.0003
9	-18.89390	13.80500	90.000	0.57000	1.8002
10	-18.69797	14.37500	90.000	0.57000	0.60006
Load 4 : 1					
(Edge 2 optimal)					
1	-7.04500	7.14000	-90.000	1.1000	6.5700
Load 5 : 2					
(Edge 2 optimal)					
1	-4.31000	5.73500	-180.00	1.1000	1.7100
Load 6 : 3					
(Edge 2 optimal)					
1	-7.04500	4.33000	90.000	1.1000	6.5700
Load 7 : 4					
(Edge 1 optimal)					
1	-14.39500	3.23000	0.0	8.1300	1.1000
Load 8 : 5					
(Edge 2 optimal)					
1	-17.91000	4.74000	0.0	1.1000	1.9200
Load 9 : 6					
(Edge 2 optimal)					
1	-14.39500	6.69500	-90.000	0.21000	8.1300
2	-16.32500	6.14500	-90.000	0.89000	4.2700
3	-12.81000	7.24500	-90.000	0.89000	4.9600
Load 10 : 7					
(Edge 2 optimal)					
1	-10.88000	4.33000	-180.00	1.1000	1.1000
Load 11 : 8					
(Edge 1 optimal)					
1	-20.27916	12.79089	35.268	4.8898	1.0841
Load 12 : 9					
(Edge 1 optimal)					
1	-20.10000	8.97000	-57.258	5.3188	1.0977
2	-18.73993	6.58000	-57.258	0.067289	0.66562
3	-18.67772	6.54000	-57.258	0.067289	0.51770
4	-18.61552	6.50000	-57.258	0.067289	0.36979
5	-18.55331	6.46000	-57.258	0.067289	0.22187
6	-18.49110	6.42000	-57.258	0.067289	0.073957
7	-18.28423	6.88087	-57.258	0.054085	0.29906
8	-18.22016	6.85777	-57.258	0.054085	0.21361
9	-18.15610	6.83466	-57.258	0.054085	0.12817
10	-18.09203	6.81155	-57.258	0.054085	0.042723
Load 13 : 10					
(Edge 2 optimal)					
1	-16.41913	10.93090	-145.01	0.70372	6.4141
2	-16.74332	10.47260	-145.01	0.35309	6.7932
3	-15.25106	7.98313	-145.01	0.057141	0.71561
4	-15.26219	7.89938	-145.01	0.057141	0.51115
5	-15.27331	7.81562	-145.01	0.057141	0.30669
6	-15.28444	7.73188	-145.01	0.057141	0.10223

Displacement Lines

Name	X1 [m]	Y1 [m]	Z1 [m]	X2 [m]	Y2 [m]	Z2 [m]	Intervals [No.]	Calculate	Detailed Results
14 A	-31.01000	6.12000	99.30000	-26.15000	9.60000	99.30000	6	Yes	Yes
14 B	-26.16000	9.60000	99.30000	-22.89000	11.94000	99.30000	4	Yes	Yes
14 C	-32.41000	8.08000	99.30000	-27.55000	11.56000	99.30000	6	Yes	Yes
14 D	-27.56000	11.56000	99.30000	-24.29000	13.90000	99.30000	4	Yes	Yes
14 E	-22.90000	11.94000	99.30000	-29.03000	19.83000	99.30000	10	Yes	Yes
14 F	-31.02000	6.12000	99.30000	-37.15000	14.01000	99.30000	10	Yes	Yes
14 G	-26.17000	9.60000	99.30000	-32.29000	17.49000	99.30000	10	Yes	Yes
16 A	-37.16000	14.01000	99.30000	-32.30000	17.49000	99.30000	6	Yes	Yes
16 B	-32.31000	17.49000	99.30000	-29.04000	19.83000	99.30000	4	Yes	Yes
16 C	-43.29000	21.90000	99.30000	-38.43000	25.38000	99.30000	6	Yes	Yes
16 D	-38.44000	25.38000	99.30000	-35.17000	27.72000	99.30000	4	Yes	Yes
16 E	-29.05000	19.83000	99.30000	-35.16000	27.72000	99.30000	10	Yes	Yes
16 F	-32.31000	17.49000	99.30000	-38.45000	25.38000	99.30000	10	Yes	Yes

Name	X1 [m]	Y1 [m]	Z1 [m]	X2 [m]	Y2 [m]	Z2 [m]	Intervals [No.]	Calculate	Detailed Results
16 G	-37.17000	14.01000	99.30000	-43.29000	21.90000	99.30000	10	Yes	Yes
10 A	8.00000	0.17000	97.10000	15.47000	6.32000	97.10000	10	Yes	Yes
10 B	15.48000	6.32000	97.10000	25.36000	-7.51000	97.10000	17	Yes	Yes
10 C	25.37000	-7.51000	97.10000	17.90000	-13.66000	97.10000	10	Yes	Yes
10 D	17.89000	-13.66000	97.10000	8.01000	0.17000	97.10000	17	Yes	Yes

Displacement Grids

Name	Extrusion: Direction	X1 [m]	Y1 [m]	Z1 [m]	X2 [m]	Y2 [m]	Z2 [m]	Intervals Along Line [No.]	Extrusion: Distance [m]	Extrusion: Intervals Along [No.]	Calculate	Detailed Results
PDISP	Global X	-45.00000	-15.00000	99.30000	-	30.00000	99.30000	45	75.00000	75	Yes	Yes

Titles

Job No.: J21282
Job Title: 12 Pilgrims Lane
Sub-title: Long term (total) movements
Calculation Heading: Input data
Initials: AG
Checker:
Date Saved:
Date Checked:
Notes:
File Name: PDISP LT.pdd
File Path: C:\Users\alex.goodsell\Documents\GMA J21282\Dec 2024

History

Date	Time	By	Notes
24-Jun-2022	15:37	Alex.Goodsell	New
24-Jun-2022	17:43	Alex.Goodsell	
28-Jun-2022	11:50	Alex.Goodsell	
14-Sep-2022	17:19	Alex.Goodsell	
09-Dec-2024	16:46	Alex.Goodsell	
09-Dec-2024	17:58	Alex.Goodsell	
09-Dec-2024	18:14	Alex.Goodsell	
11-Dec-2024	17:53	Alex.Goodsell	Open

Analysis Options

General
Global Poisson's ratio: 0.20
Maximum allowable ratio between values of E: 1.5
Horizontal rigid boundary level: 46.50 [m OD]
Displacements at load centroids: Yes
GSA piled raft data : No

Elastic
Elastic : Yes

Consolidation
Consolidation : No

Soil ProfilesSoil Profile 1

Layer ref.	Name	Level at top [mOD]	Number of intermediate displacement levels	Youngs Modulus : Top [kN/m²]	Youngs Modulus : Btm. [kN/m²]	Poissons ratio	Non-linear curve
1	MG	100.00	1	10000.	10000.	0.20000	None
2	LC	99.000	104	9000.0	113700.	0.50000	None

Soil Zones

Zone	Name	X min [m]	X max [m]	Y min [m]	Y max [m]	Profile
1	1	-45.000	30.000	-15.000	30.000	Soil Profile 1

Polygonal Load Data

Load ref.	Name	Position : Level	Position : Polygon : Coords.	Position : Polygon	No. of Rectangles	Value : Normal

				: Rect. tolerance		(local z)
		[m]	[m]	[%]		[kN/m²]
1	ex 1	96.50000	(-10.3,3.78) (-10.3,7.69) (-3.76,7.69) (-3.76,3.78) (-10.3,3.78)	10.000	1	-20.900
2	ex 2	96.50000	(-18.5,2.68) (-18.5,6.8) (-15.3,6.8) (-15.3,7.69) (-10.3,7.69) (-10.3,2.68) (-18.5,2.68)	10.000	2	-20.900
3	ex 3	96.50000	(-22.6,11.8) (-18.6,14.7) (-14.6,8.99) (-14.6,7.69) (-15.3,7.69) (-15.3,6.8) (-18.5,6.8) (-18.5,6.4) (-19.1,6.4) (-22.6,11.8)	10.000	10	-59.510
4	1	96.50000	(-10.3,7.69) (-3.76,7.69) (-3.76,6.59) (-10.3,6.59) (-10.3,7.69)	10.000	1	125.00
5	2	96.50000	(-3.76,6.59) (-3.76,4.88) (-4.86,4.88) (-4.86,6.59) (-3.76,6.59)	10.000	1	125.00
6	3	96.50000	(-3.76,3.78) (-10.3,3.78) (-10.3,4.88) (-3.76,4.88) (-3.76,3.78)	10.000	1	125.00
7	4	96.50000	(-18.5,2.68) (-10.3,2.68) (-10.3,3.78) (-18.5,3.78) (-18.5,2.68)	10.000	1	125.00
8	5	96.50000	(-18.5,3.78) (-18.5,5.7) (-17.4,5.7) (-17.4,3.78) (-18.5,3.78)	10.000	1	125.00
9	6	96.50000	(-18.5,6.8) (-15.3,6.8) (-15.3,7.69) (-10.3,7.69) (-10.3,6.59) (-14.2,6.59) (-14.2,5.7) (-18.5,5.7) (-18.5,6.8)	10.000	3	125.00
10	7	96.50000	(-10.3,4.88) (-10.3,3.78) (-11.4,3.78) (-11.4,4.88) (-10.3,4.88)	10.000	1	125.00
11	8	96.50000	(-22.6,11.8) (-18.6,14.7) (-18,13.8) (-22,10.9) (-22.6,11.8)	10.000	1	125.00
12	9	96.50000	(-22,10.9) (-19.1,6.4) (-18.5,6.4) (-18.5,6.8) (-18.1,6.8) (-18.2,7.03) (-21.1,11.5) (-22,10.9)	10.000	10	125.00
13	10	96.50000	(-18,13.8) (-14.6,8.99) (-14.6,7.69) (-15.3,7.69) (-15.5,8.36) (-18.9,13.1) (-18,13.8)	10.000	6	125.00

Polygonal Loads' Rectangles

No.	Centre : x	Centre : y	Angle of local x from global X	Width x	Depth y
	[m]	[m]	[Degrees]	[m]	[m]
Load 1 : ex 1					
(Edge 2 optimal)					
1	-7.04500	5.73500	0.0	6.5700	3.9100
Load 2 : ex 2					
(Edge 2 optimal)					
1	-16.87500	4.74000	0.0	3.1700	4.1200
2	-12.81000	5.18500	0.0	4.9600	5.0100
Load 3 : ex 3					
(Edge 10 optimal)					
1	-18.84433	6.60000	90.000	0.40000	0.76865
2	-17.46677	7.24500	90.000	0.89000	4.3535
3	-17.46396	8.34000	90.000	1.3000	5.7679
4	-18.14968	9.69500	90.000	1.4100	6.1397
5	-19.10302	11.10500	90.000	1.4100	6.0470

No.	Centre : x	Centre : y	Angle of local x from global X	Width x	Depth y
6	-19.48171	12.09500	90.000	0.57000	5.4006
7	-19.28578	12.66500	90.000	0.57000	4.2004
8	-19.08984	13.23500	90.000	0.57000	3.0003
9	-18.89390	13.80500	90.000	0.57000	1.8002
10	-18.69797	14.37500	90.000	0.57000	0.60006
Load 4 : 1					
(Edge 2 optimal)					
1	-7.04500	7.14000	-90.000	1.1000	6.5700
Load 5 : 2					
(Edge 2 optimal)					
1	-4.31000	5.73500	-180.00	1.1000	1.7100
Load 6 : 3					
(Edge 2 optimal)					
1	-7.04500	4.33000	90.000	1.1000	6.5700
Load 7 : 4					
(Edge 1 optimal)					
1	-14.39500	3.23000	0.0	8.1300	1.1000
Load 8 : 5					
(Edge 2 optimal)					
1	-17.91000	4.74000	0.0	1.1000	1.9200
Load 9 : 6					
(Edge 2 optimal)					
1	-14.39500	6.69500	-90.000	0.21000	8.1300
2	-16.32500	6.14500	-90.000	0.89000	4.2700
3	-12.81000	7.24500	-90.000	0.89000	4.9600
Load 10 : 7					
(Edge 2 optimal)					
1	-10.88000	4.33000	-180.00	1.1000	1.1000
Load 11 : 8					
(Edge 1 optimal)					
1	-20.27916	12.79089	35.268	4.8898	1.0841
Load 12 : 9					
(Edge 1 optimal)					
1	-20.10000	8.97000	-57.258	5.3188	1.0977
2	-18.73993	6.58000	-57.258	0.067289	0.66562
3	-18.67772	6.54000	-57.258	0.067289	0.51770
4	-18.61552	6.50000	-57.258	0.067289	0.36979
5	-18.55331	6.46000	-57.258	0.067289	0.22187
6	-18.49110	6.42000	-57.258	0.067289	0.073957
7	-18.28423	6.88087	-57.258	0.054085	0.29906
8	-18.22016	6.85777	-57.258	0.054085	0.21361
9	-18.15610	6.83466	-57.258	0.054085	0.12817
10	-18.09203	6.81155	-57.258	0.054085	0.042723
Load 13 : 10					
(Edge 2 optimal)					
1	-16.41913	10.93090	-145.01	0.70372	6.4141
2	-16.74332	10.47260	-145.01	0.35309	6.7932
3	-15.25106	7.98313	-145.01	0.057141	0.71561
4	-15.26219	7.89938	-145.01	0.057141	0.51115
5	-15.27331	7.81562	-145.01	0.057141	0.30669
6	-15.28444	7.73188	-145.01	0.057141	0.10223

Displacement Lines

Name	X1 [m]	Y1 [m]	Z1 [m]	X2 [m]	Y2 [m]	Z2 [m]	Intervals [No.]	Calculate	Detailed Results
14 A	-31.01000	6.12000	99.30000	-26.15000	9.60000	99.30000	6	Yes	Yes
14 B	-26.16000	9.60000	99.30000	-22.89000	11.94000	99.30000	4	Yes	Yes
14 C	-32.41000	8.08000	99.30000	-27.55000	11.56000	99.30000	6	Yes	Yes
14 D	-27.56000	11.56000	99.30000	-24.29000	13.90000	99.30000	4	Yes	Yes
14 E	-22.90000	11.94000	99.30000	-29.03000	19.83000	99.30000	10	Yes	Yes
14 F	-31.02000	6.12000	99.30000	-37.15000	14.01000	99.30000	10	Yes	Yes
14 G	-26.17000	9.60000	99.30000	-32.29000	17.49000	99.30000	10	Yes	Yes
16 A	-37.16000	14.01000	99.30000	-32.30000	17.49000	99.30000	6	Yes	Yes
16 B	-32.31000	17.49000	99.30000	-29.04000	19.83000	99.30000	4	Yes	Yes
16 C	-43.29000	21.90000	99.30000	-38.43000	25.38000	99.30000	6	Yes	Yes
16 D	-38.44000	25.38000	99.30000	-35.17000	27.72000	99.30000	4	Yes	Yes
16 E	-29.05000	19.83000	99.30000	-35.16000	27.72000	99.30000	10	Yes	Yes