GEA Geotechnical & Environmental Associates

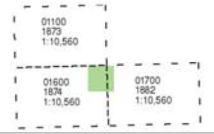
Middlesex

Published 1873 - 1882

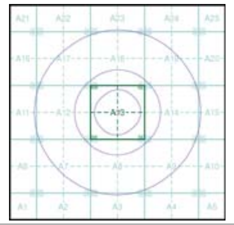
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

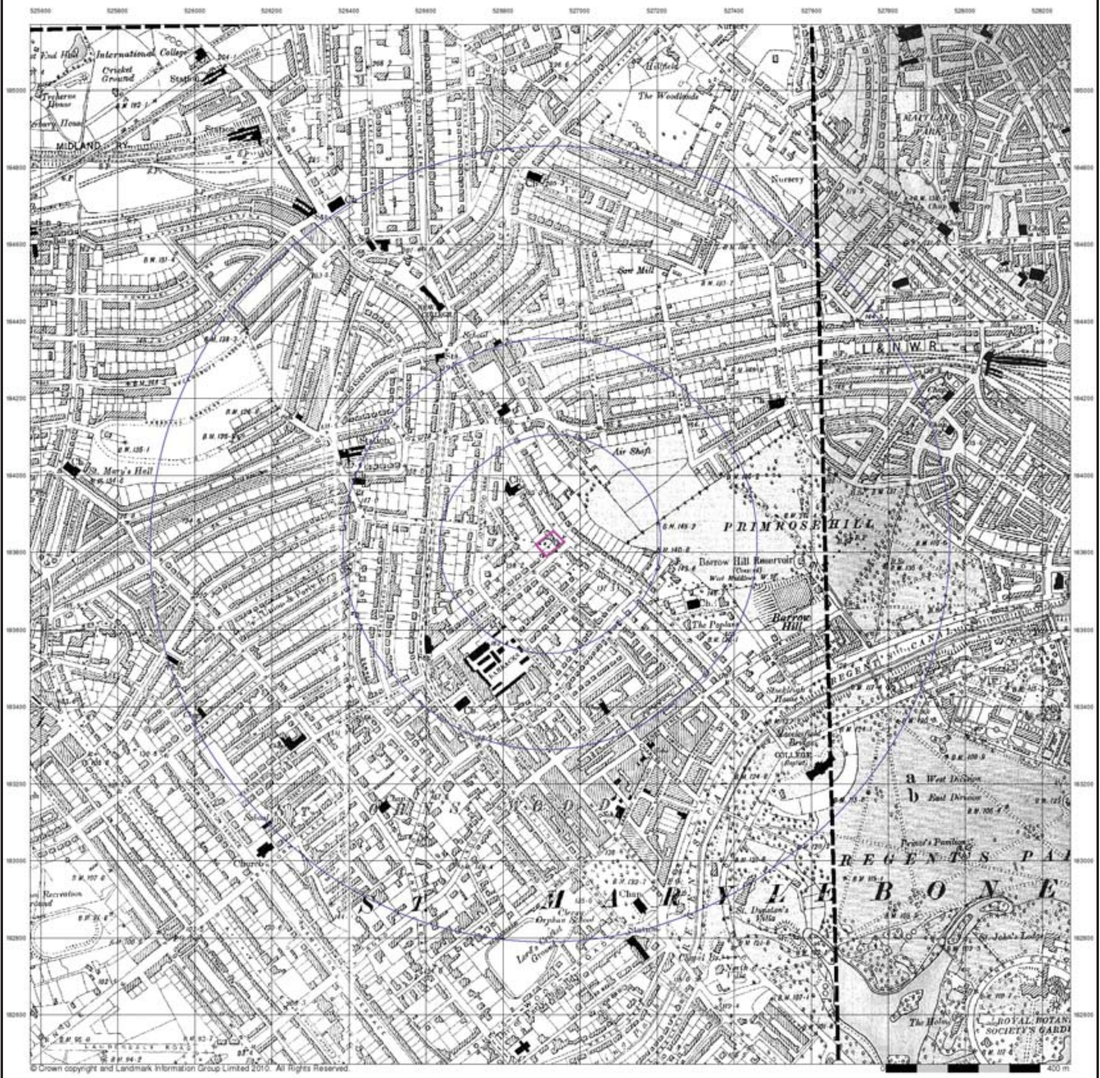
Order Number:	32983683_1_1
Customer Ref:	J10229
National Grid Reference:	526920, 183820
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	1000

Site Details

75 Avenue Road, LONDON, NW8 6JD

Landmark Information Group

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



GEA Geotechnical & Environmental Associates

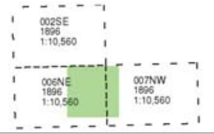
London

Published 1896

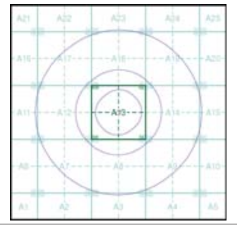
Source map scale - 1:10,560

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

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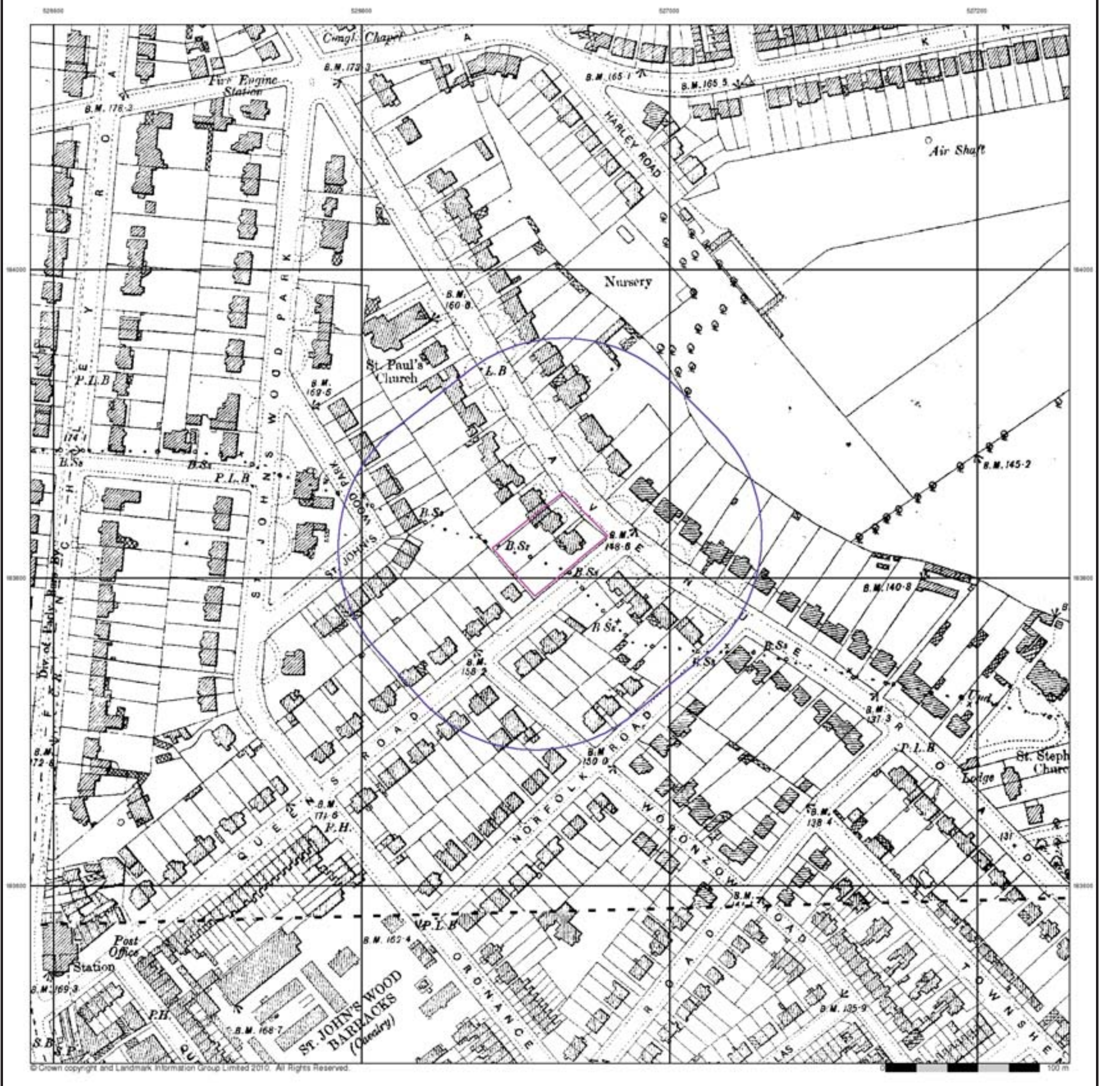


Geotechnical & Environmental Associates

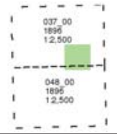
London

Published 1896

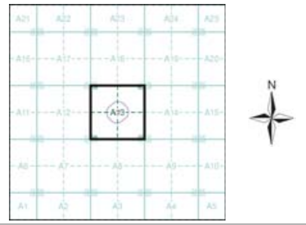
Source map scale - 1:2,500

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:	32983683_1_1
Customer Ref:	J10229
National Grid Reference:	526920, 183820
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	100

Site Details

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Geotechnical & Environmental Associates

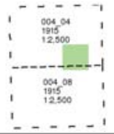
London

Published 1915

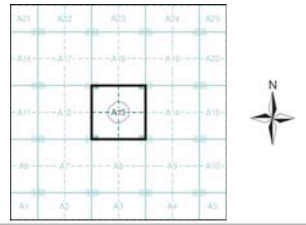
Source map scale - 1:2,500

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

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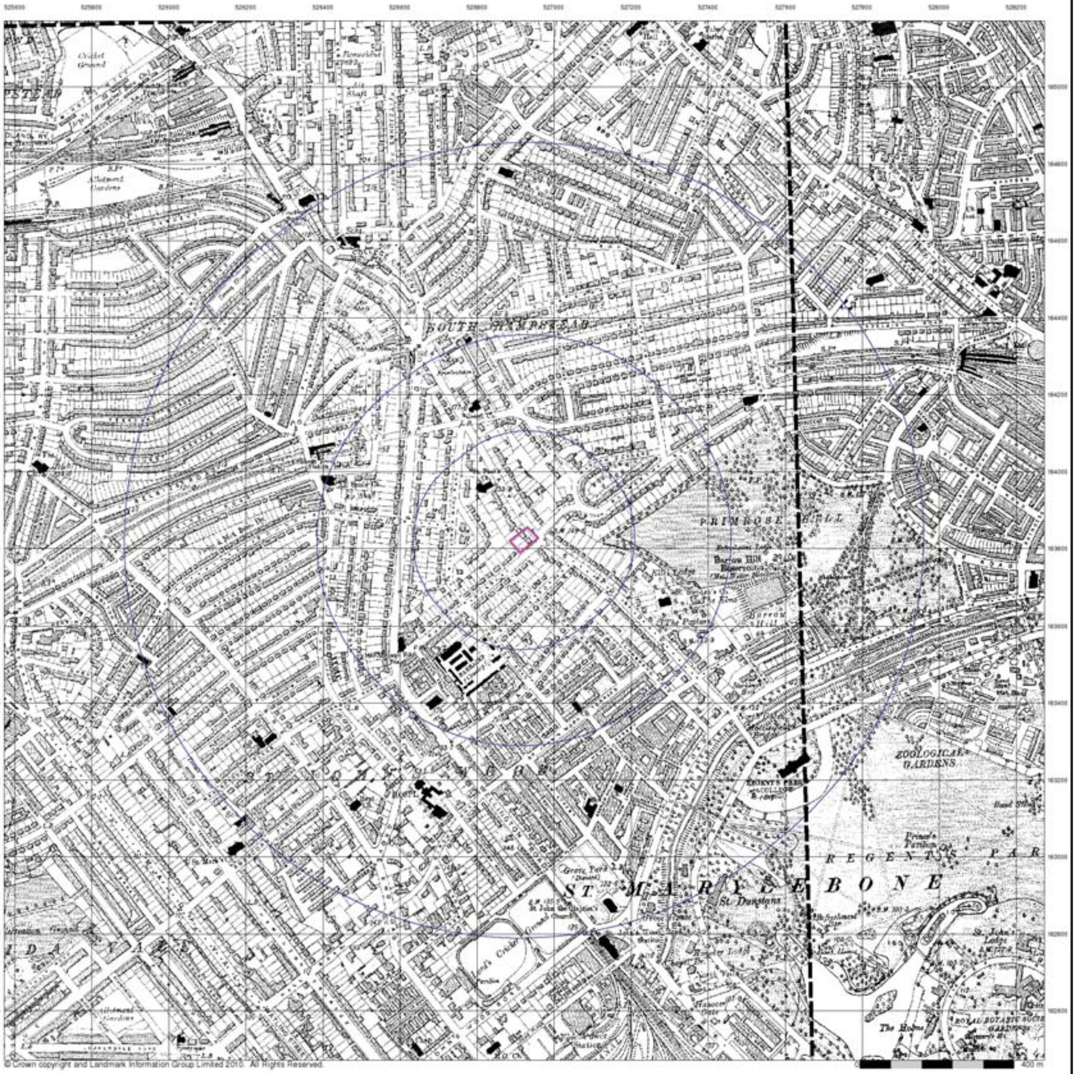


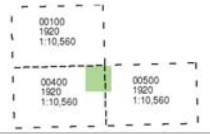
London

Published 1920

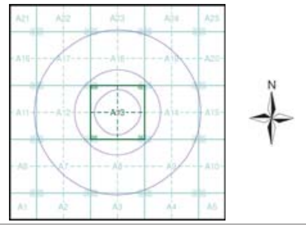
Source map scale - 1:10,560

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

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National Grid Reference:	526920, 183820
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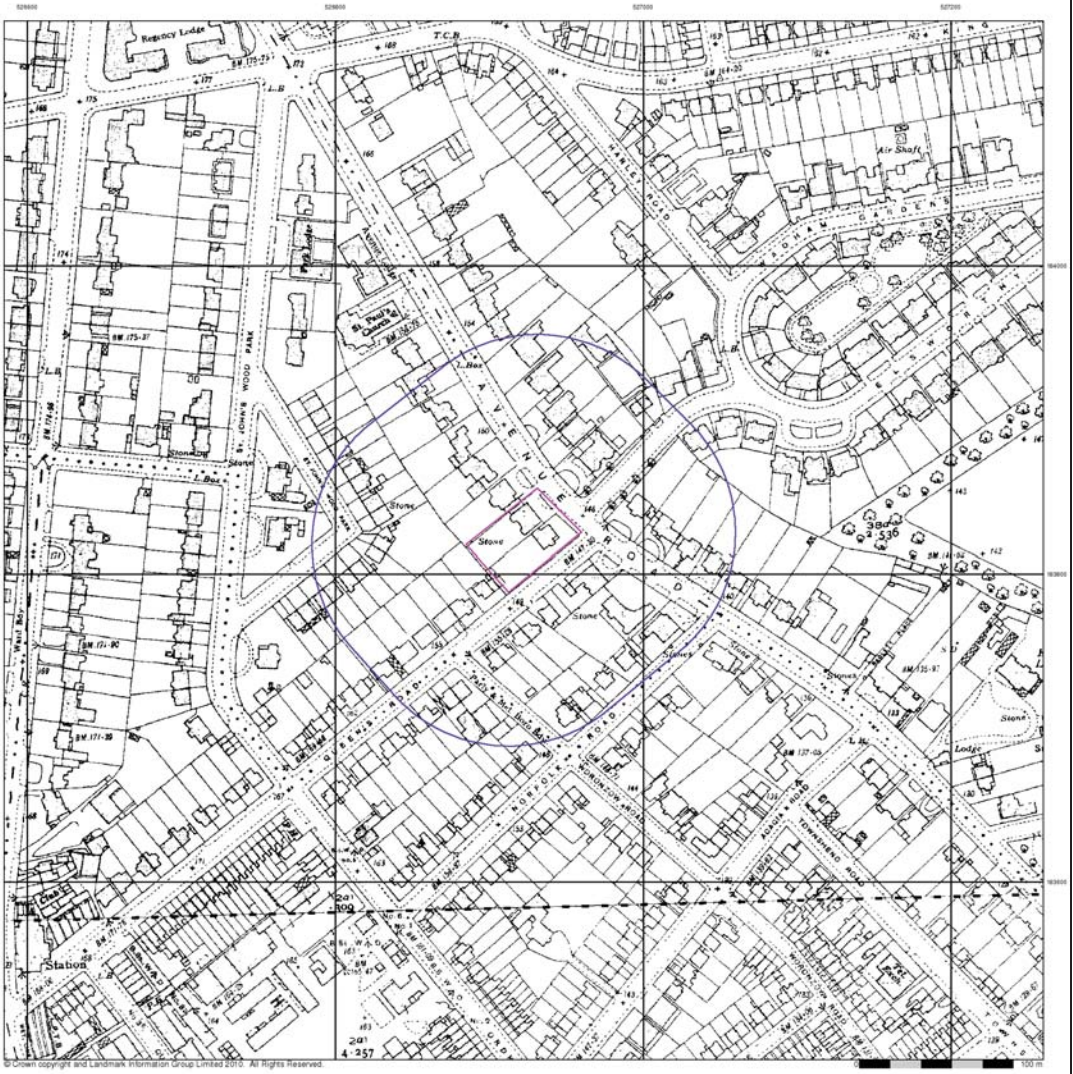


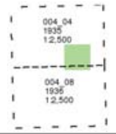
London

Published 1935 - 1936

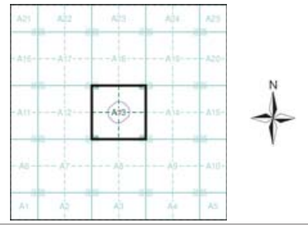
Source map scale - 1:2,500

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:	32983683_1_1
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Site Area (Ha):	0.25
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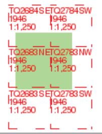
Historical Aerial Photography

Published 1946

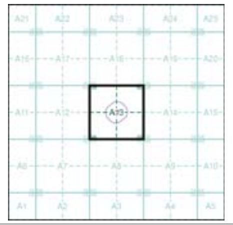
Source map scale - 1:1,250

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.

Map Name(s) and Date(s)



Historical Aerial Photography - Segment A13



Order Details

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Site Details

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Ordnance Survey Plan

Published 1951

Source map scale - 1:10,000

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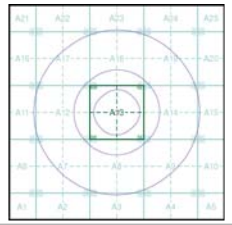
Map Name(s) and Date(s)

Historical Map - Slice A



Order Details

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National Grid Reference:	526920, 183820
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75 Avenue Road, LONDON, NW8 6JD

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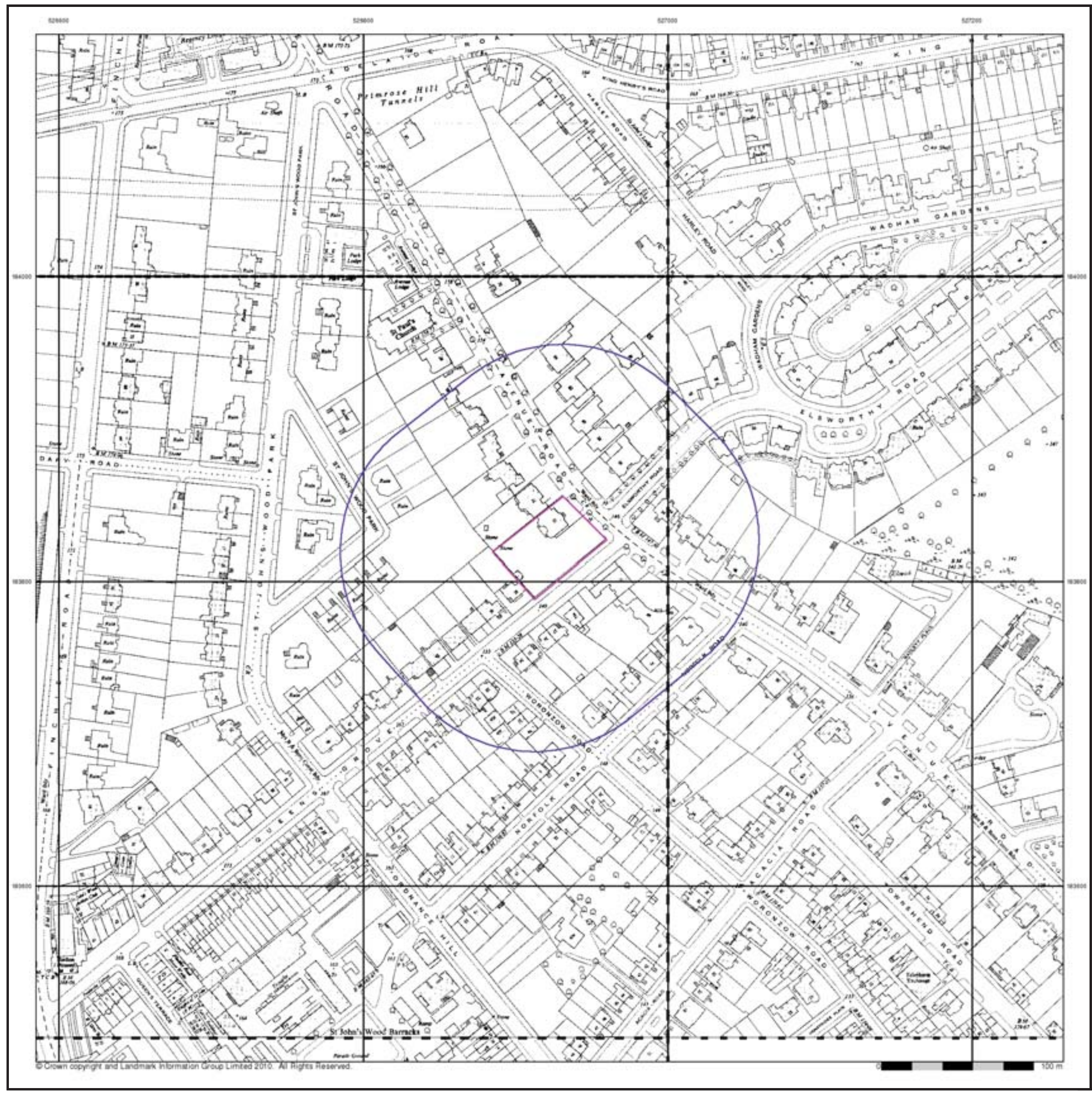


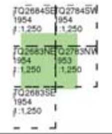
Ordnance Survey Plan

Published 1953 - 1954

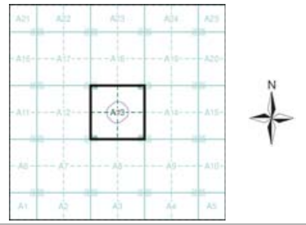
Source map scale - 1:1,250

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:	32983683_1_1
Customer Ref:	J10229
National Grid Reference:	526920, 183820
Slice:	A
Site Area (Ha):	0.25
Search Buffer (m):	100

Site Details

75 Avenue Road, LONDON, NW8 6JD

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

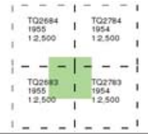
Ordnance Survey Plan

Published 1954 - 1955

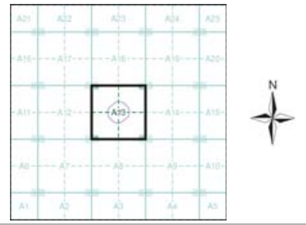
Source map scale - 1:2,500

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



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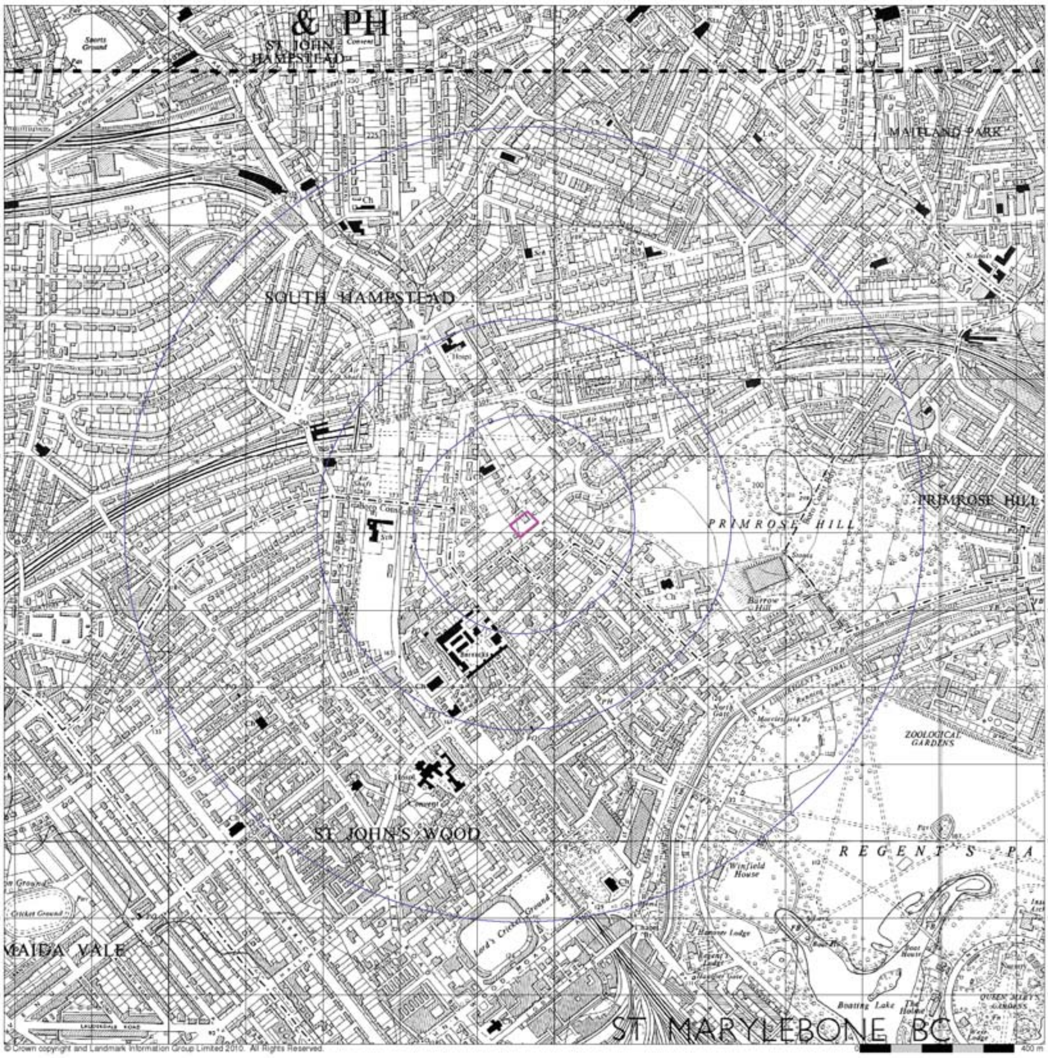


Ordnance Survey Plan

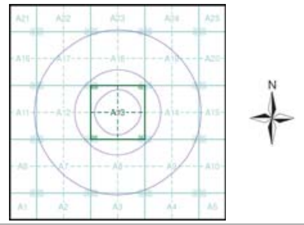
Published 1957 - 1958

Source map scale - 1:10,000

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

Map Name(s) and Date(s)

Historical Map - Slice A

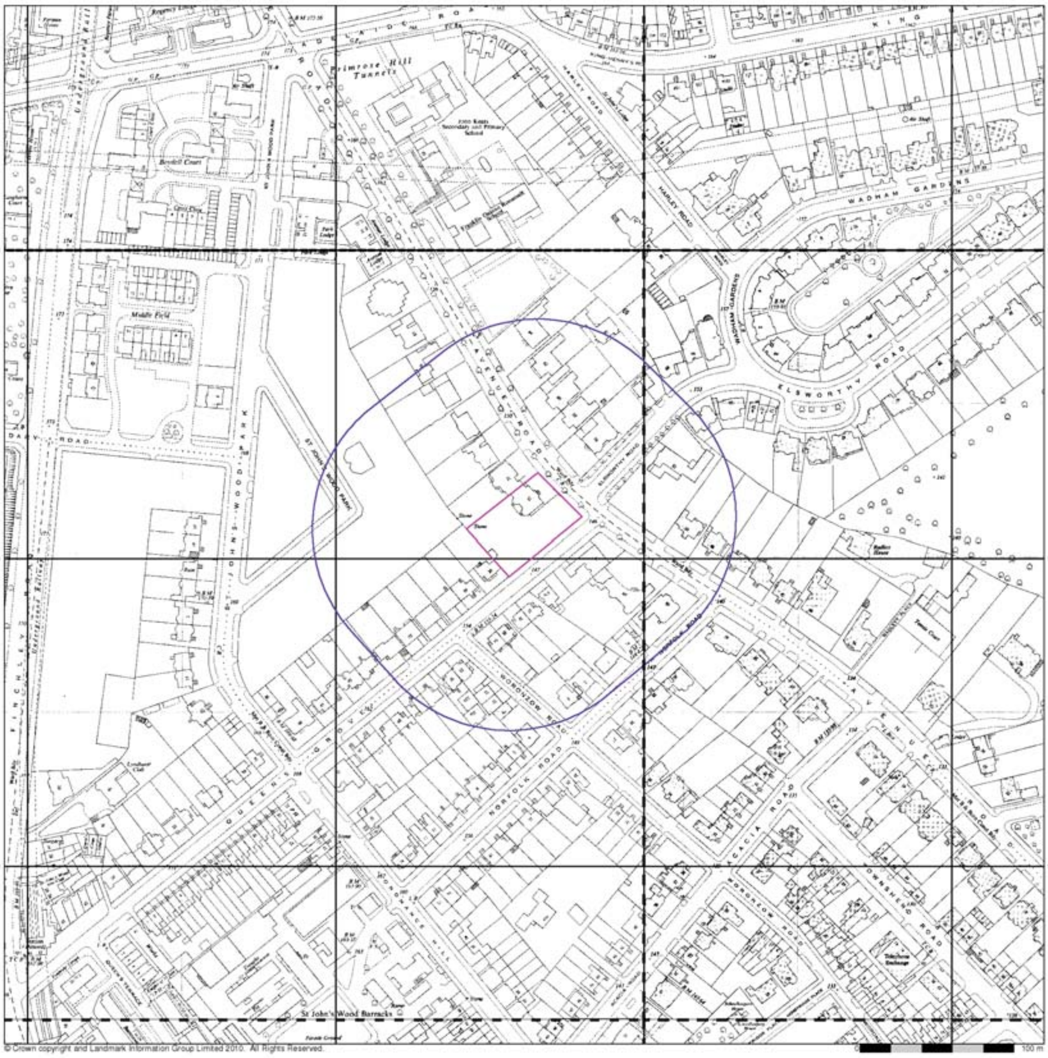


Order Details

Order Number: 32983683_1_1
Customer Ref: J10229
National Grid Reference: 526920, 183820
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 1000

Site Details

75 Avenue Road, LONDON, NW8 6JD



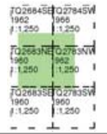
Ordnance Survey Plan

Published 1960 - 1966

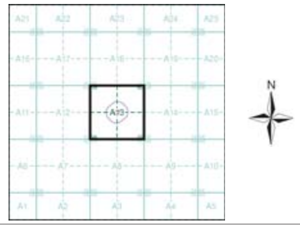
Source map scale - 1:1,250

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: 32983683_1_1
Customer Ref: J10229
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Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 100

Site Details

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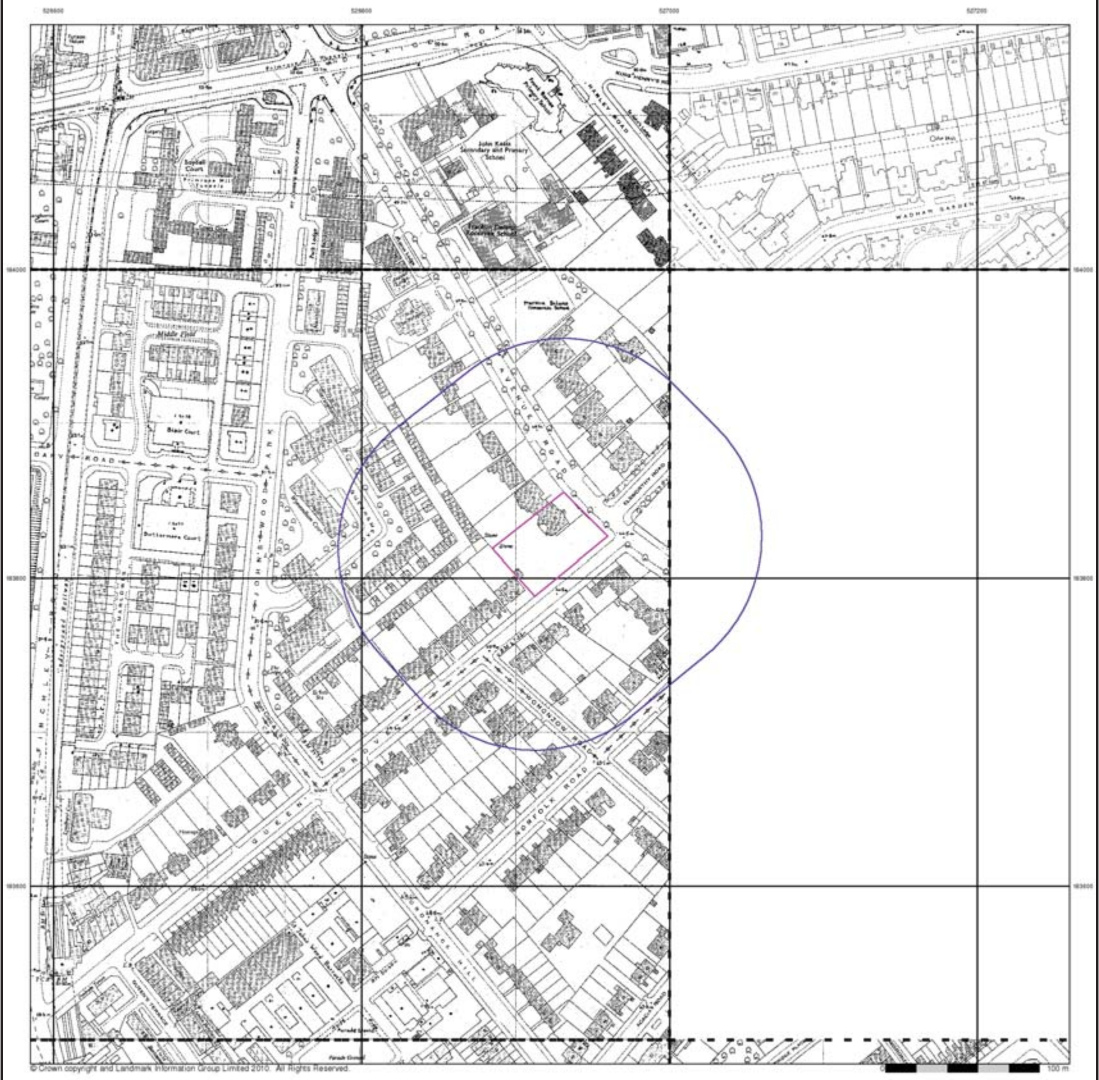


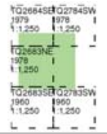
Additional SIMs

Published 1960 - 1979

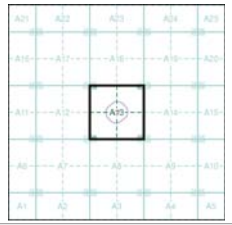
Source map scale - 1:1,250

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

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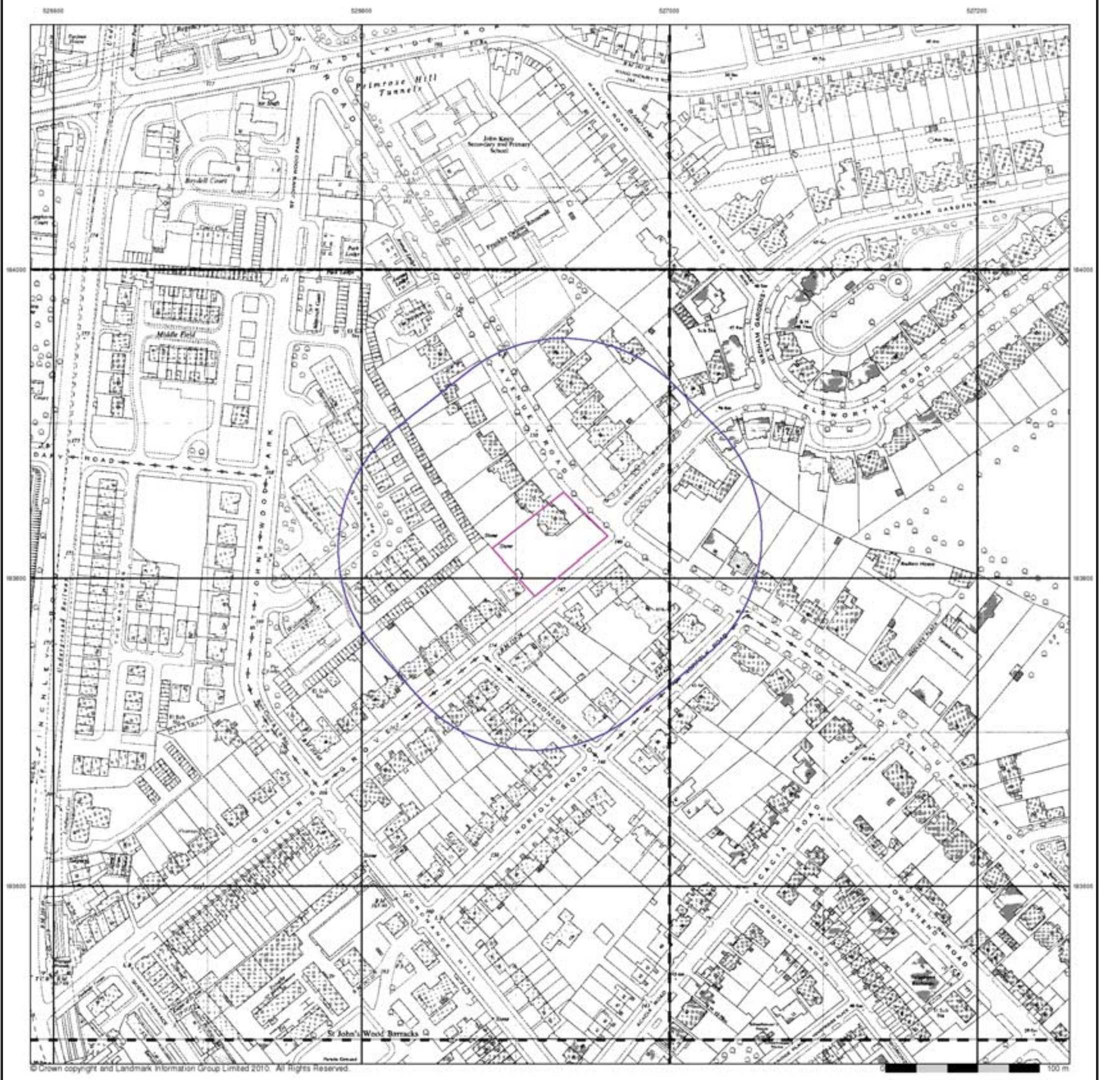

Ordnance Survey Plan

Published 1967 - 1973

Source map scale - 1:1,250

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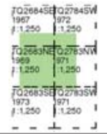
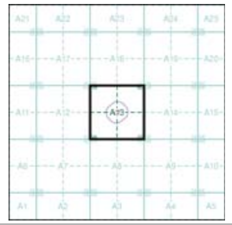
Map Name(s) and Date(s)



Historical Map - Segment A13



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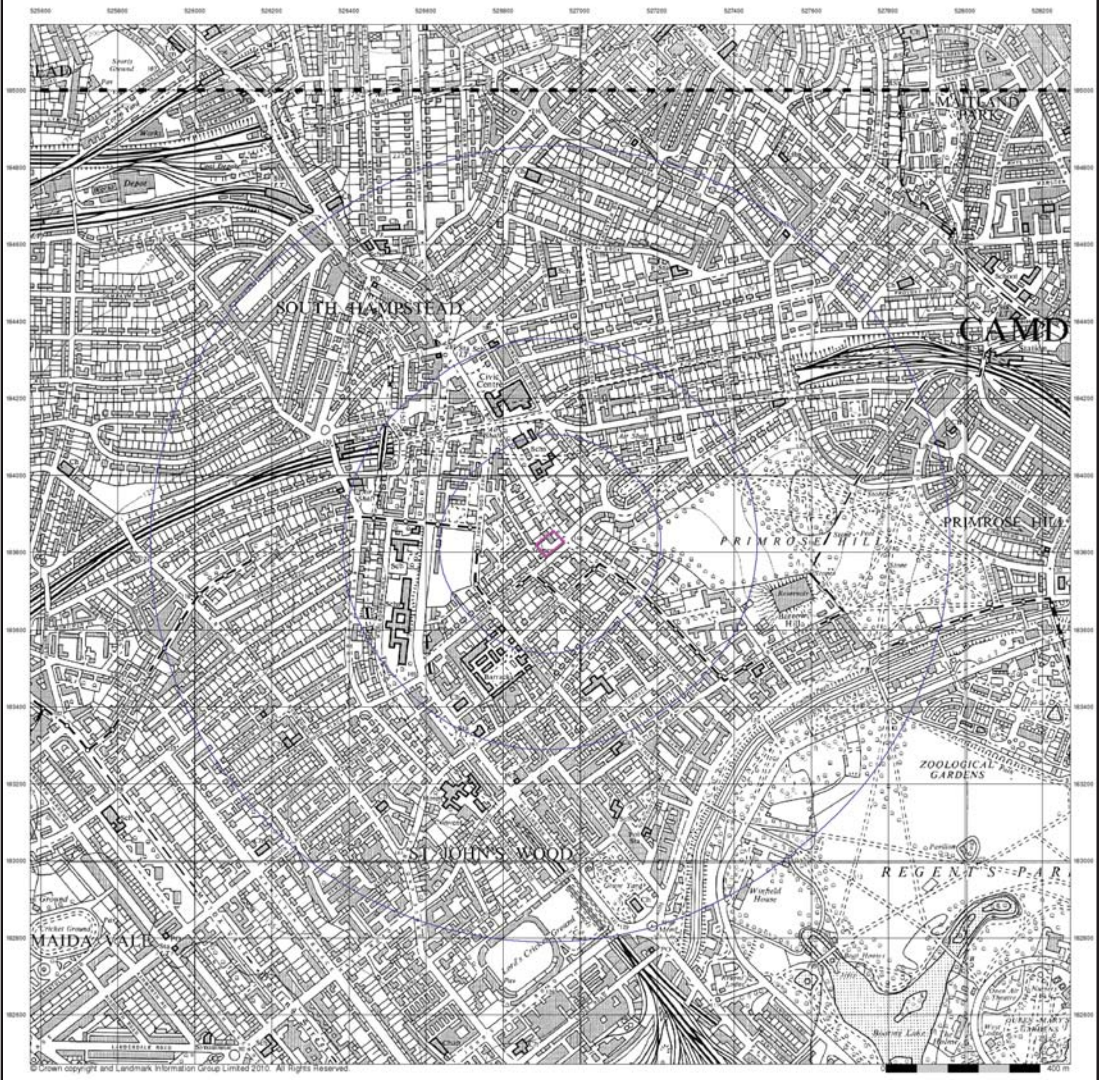


Geotechnical & Environmental Associates

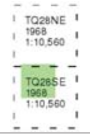
Ordnance Survey Plan

Published 1968

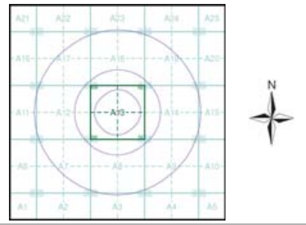
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A

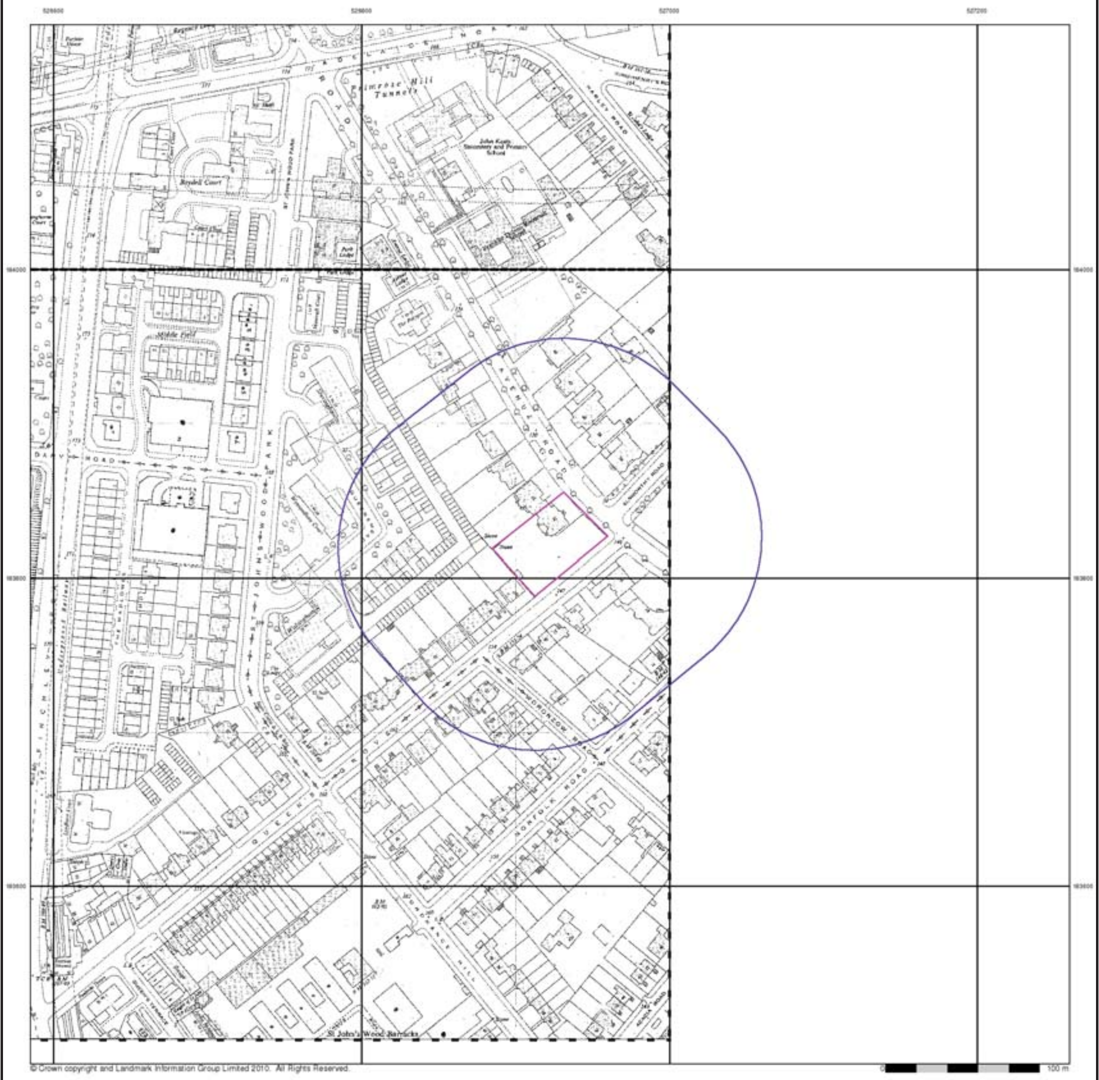


Order Details

Order Number: 32983683_1_1
Customer Ref: J10229
National Grid Reference: 526920, 183820
Slice: A
Site Area (Ha): 0.25
Search Buffer (m): 1000

Site Details

75 Avenue Road, LONDON, NW8 6JD



Geotechnical & Environmental Associates

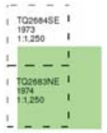
Supply of Unpublished Survey Information

Published 1973 - 1974

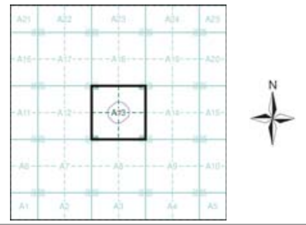
Source map scale - 1:1,250

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)



Historical Map - Segment A13



Order Details

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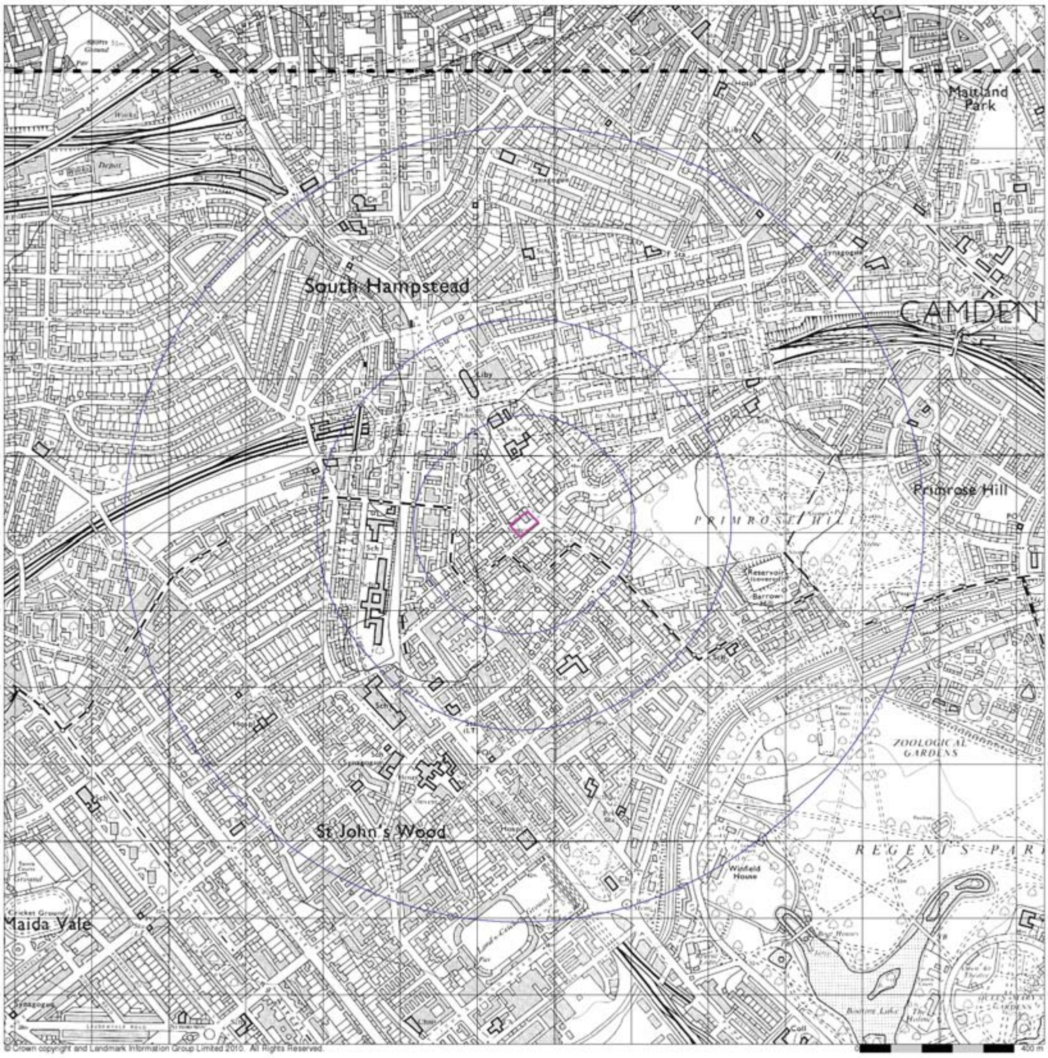

Geotechnical & Environmental Associates

Ordnance Survey Plan

Published 1974 - 1976

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.

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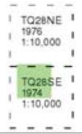
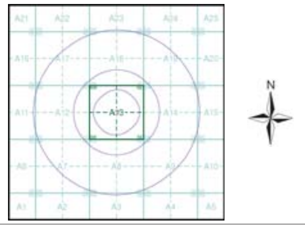


Historical Map - Slice A



Order Details

Order Number:	32983683_1_1
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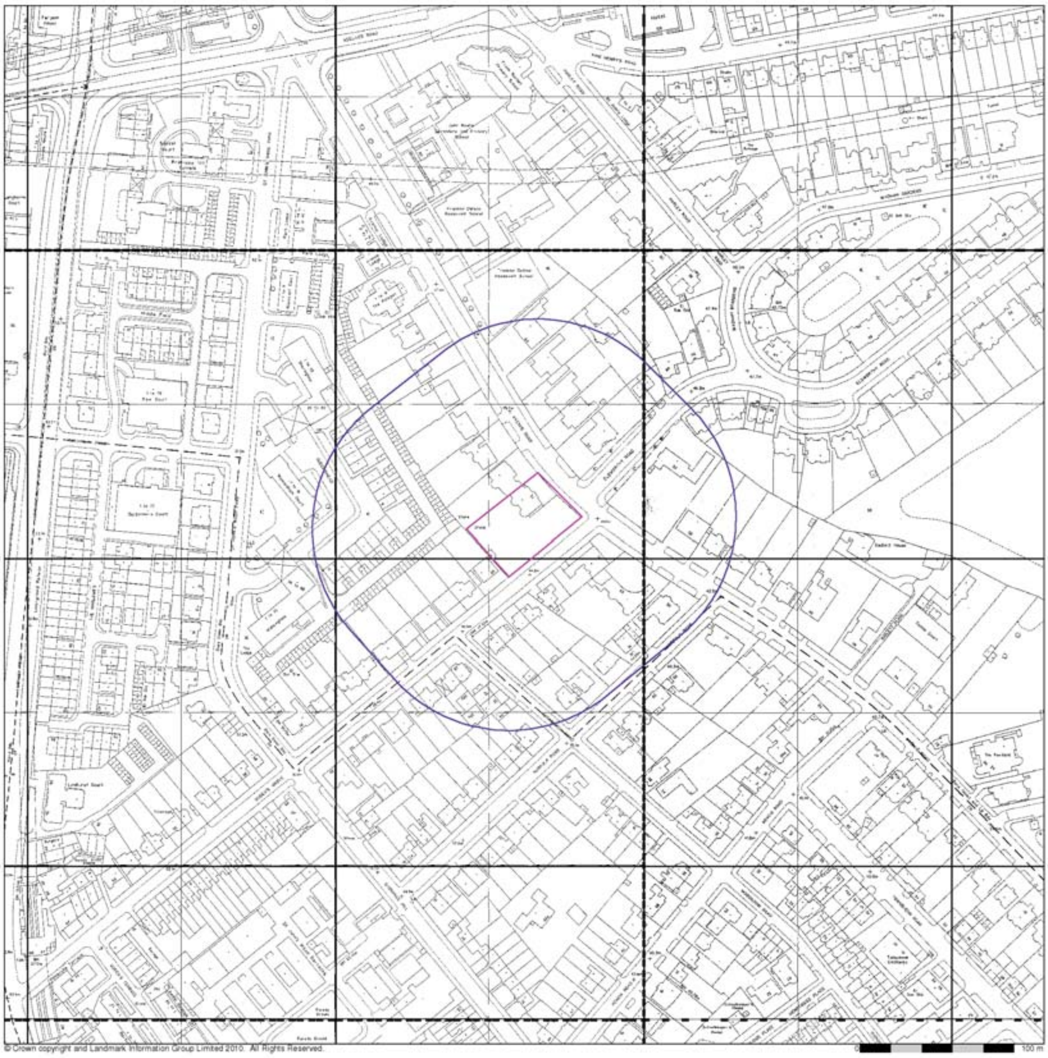
75 Avenue Road, LONDON, NW8 6JD



Geotechnical & Environmental Associates

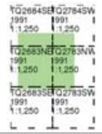
Large-Scale National Grid Data

Published 1991

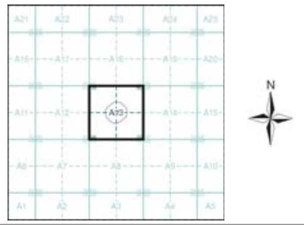
Source map scale - 1:1,250

'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)



Historical Map - Segment A13



Order Details

Order Number:	32983683_1_1
Customer Ref:	J10229
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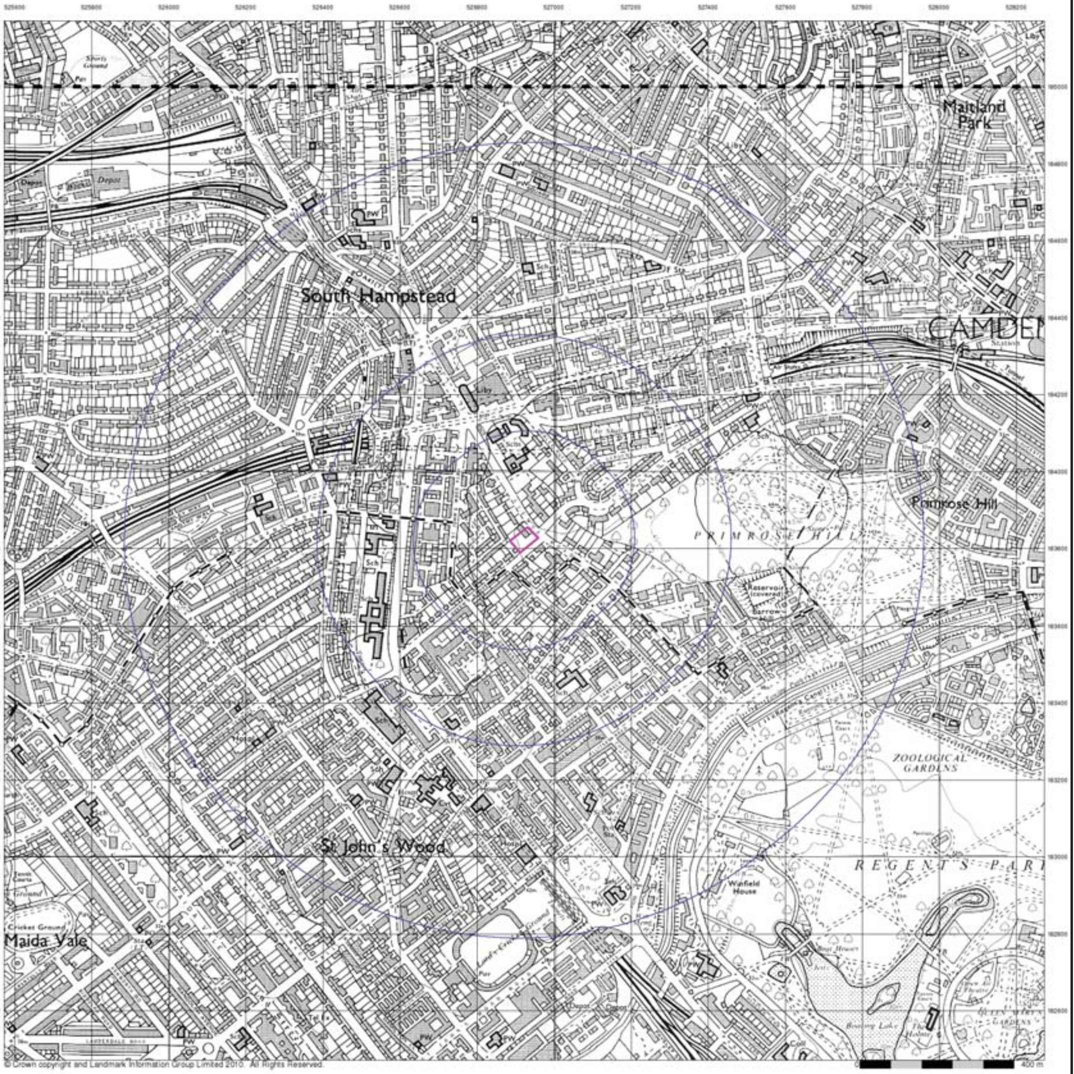


GEA Geotechnical & Environmental Associates

Ordnance Survey Plan

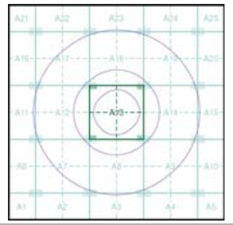
Published 1991 - 1996

Source map scale - 1:10,000

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

Map Name(s) and Date(s)

Historical Map - Slice A



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Order Number:	32983683_1_1
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Slice:	A
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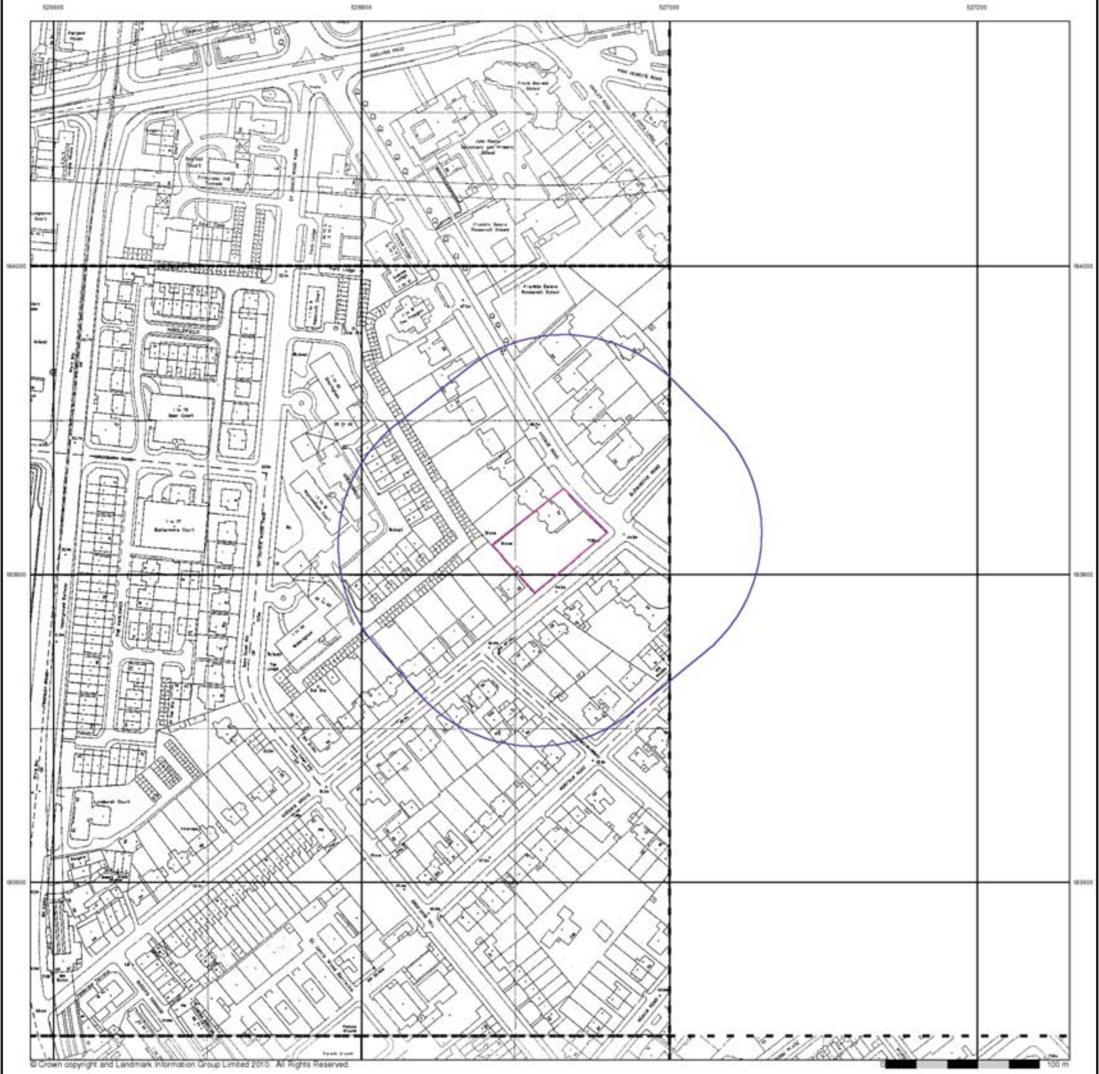
Site Details

75 Avenue Road, LONDON, NW8 6JD

Landmark Information Group

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



GEA Geotechnical & Environmental Associates

Large-Scale National Grid Data

Published 1992 - 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.

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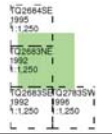

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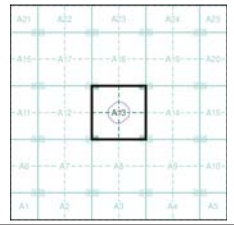

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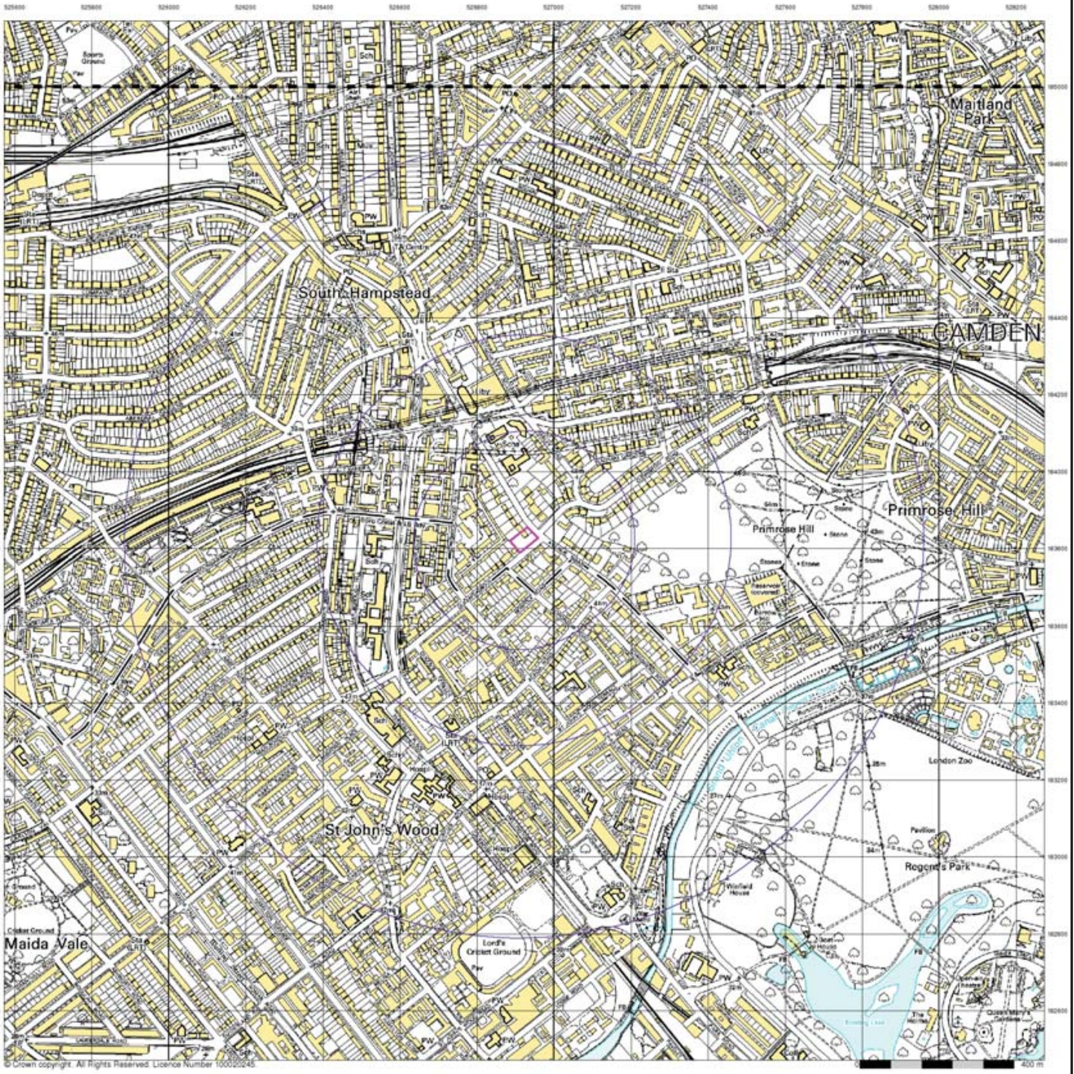


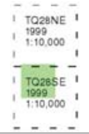
10k Raster Mapping

Published 1999

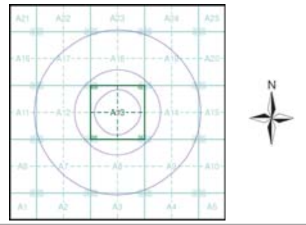
Source map scale - 1:10,000

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)



Historical Map - Slice A



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Slice:	A
Site Area (Ha):	0.25
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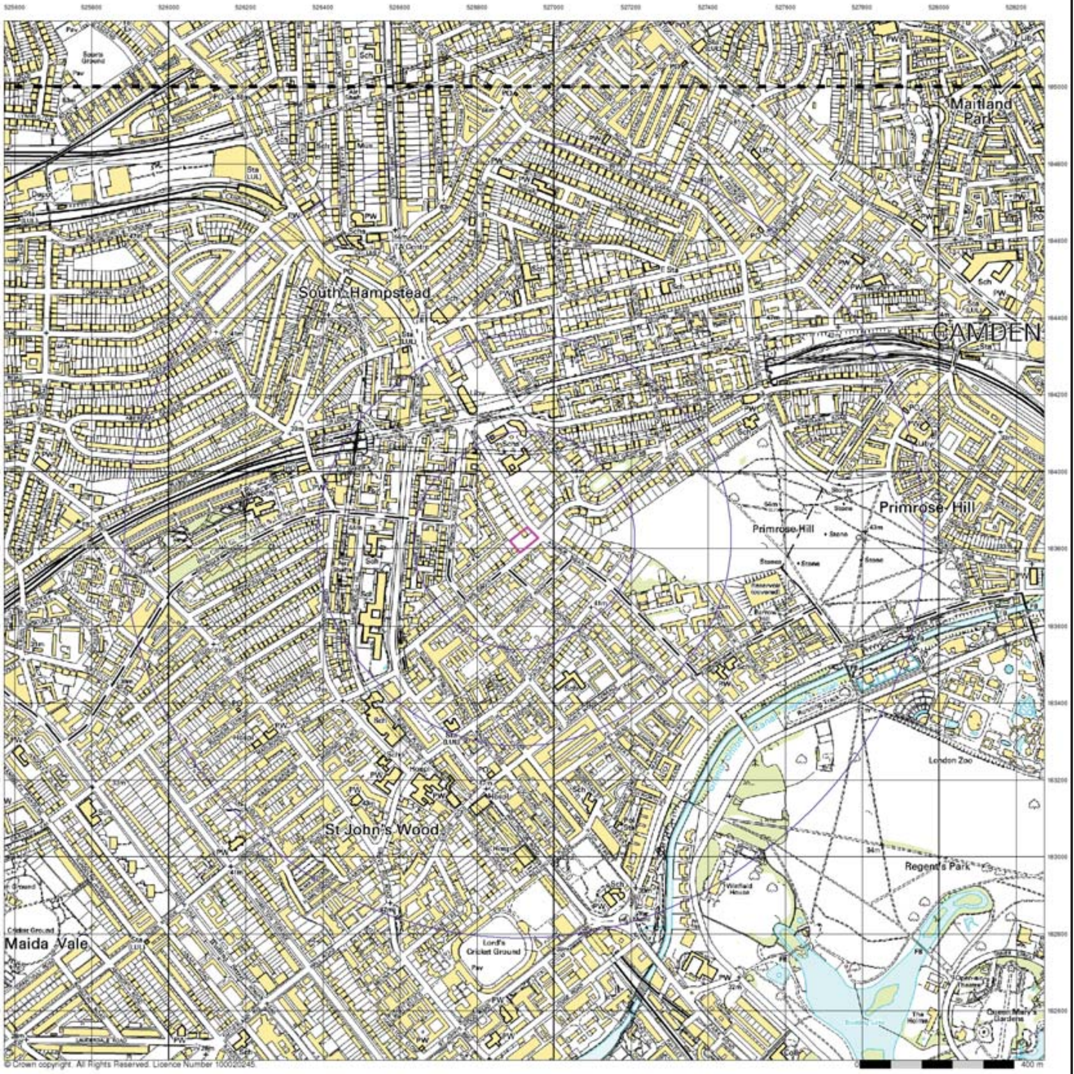


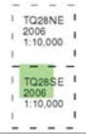
10k Raster Mapping

Published 2006

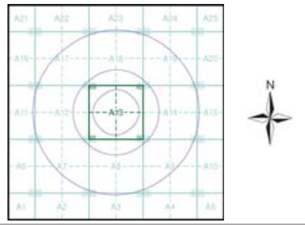
Source map scale - 1:10,000

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)



Historical Map - Slice A



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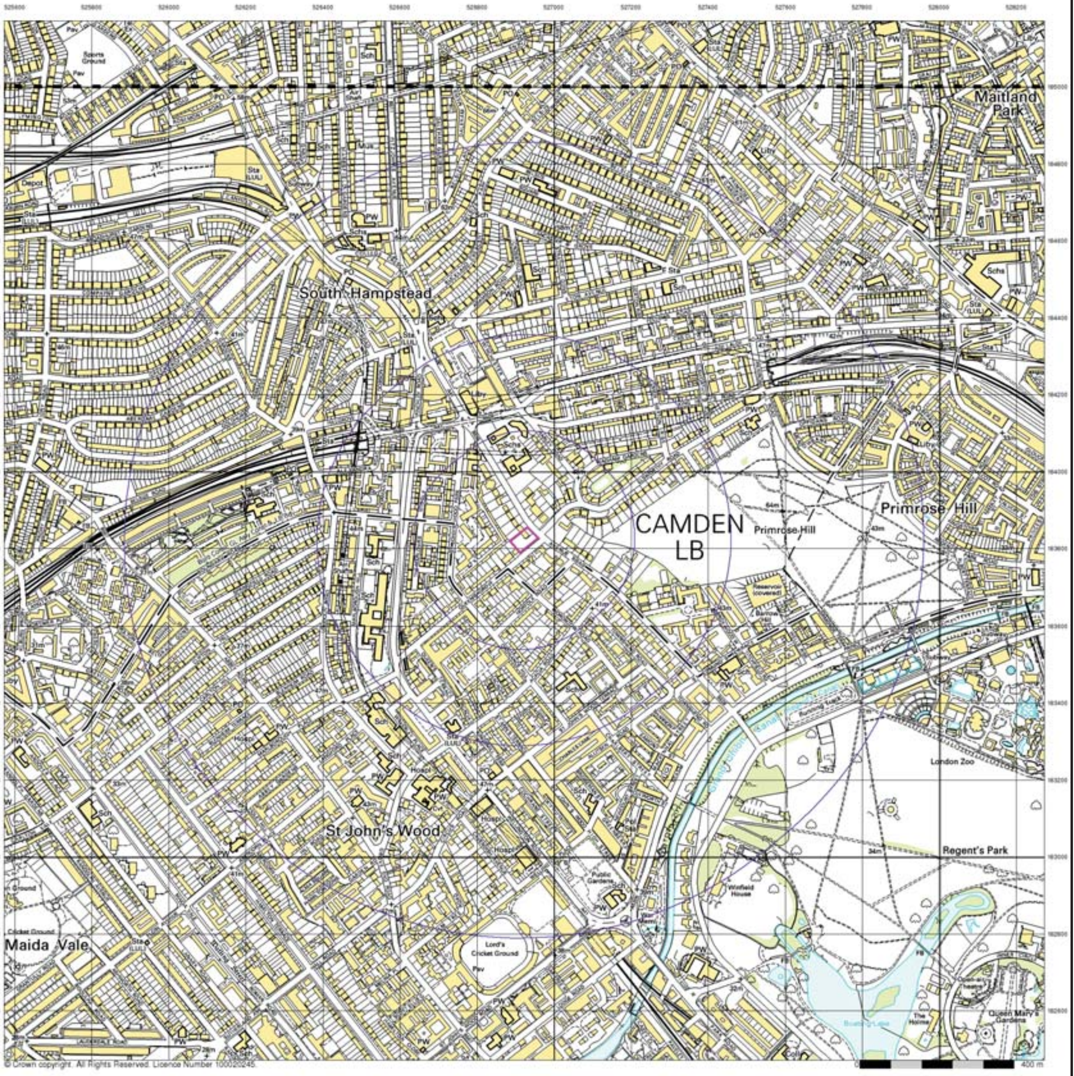

10k Raster Mapping

Published 2010

Source map scale - 1:10,000

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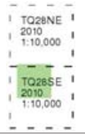
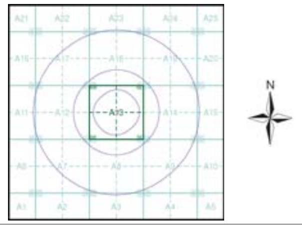
Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 32983683_1_1
Customer Ref: J10229
National Grid Reference: 526920, 183820
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Site Area (Ha): 0.25
Search Buffer (m): 1000

Site Details

75 Avenue Road, LONDON, NW8 6JD

Tel: 0844 844 9952
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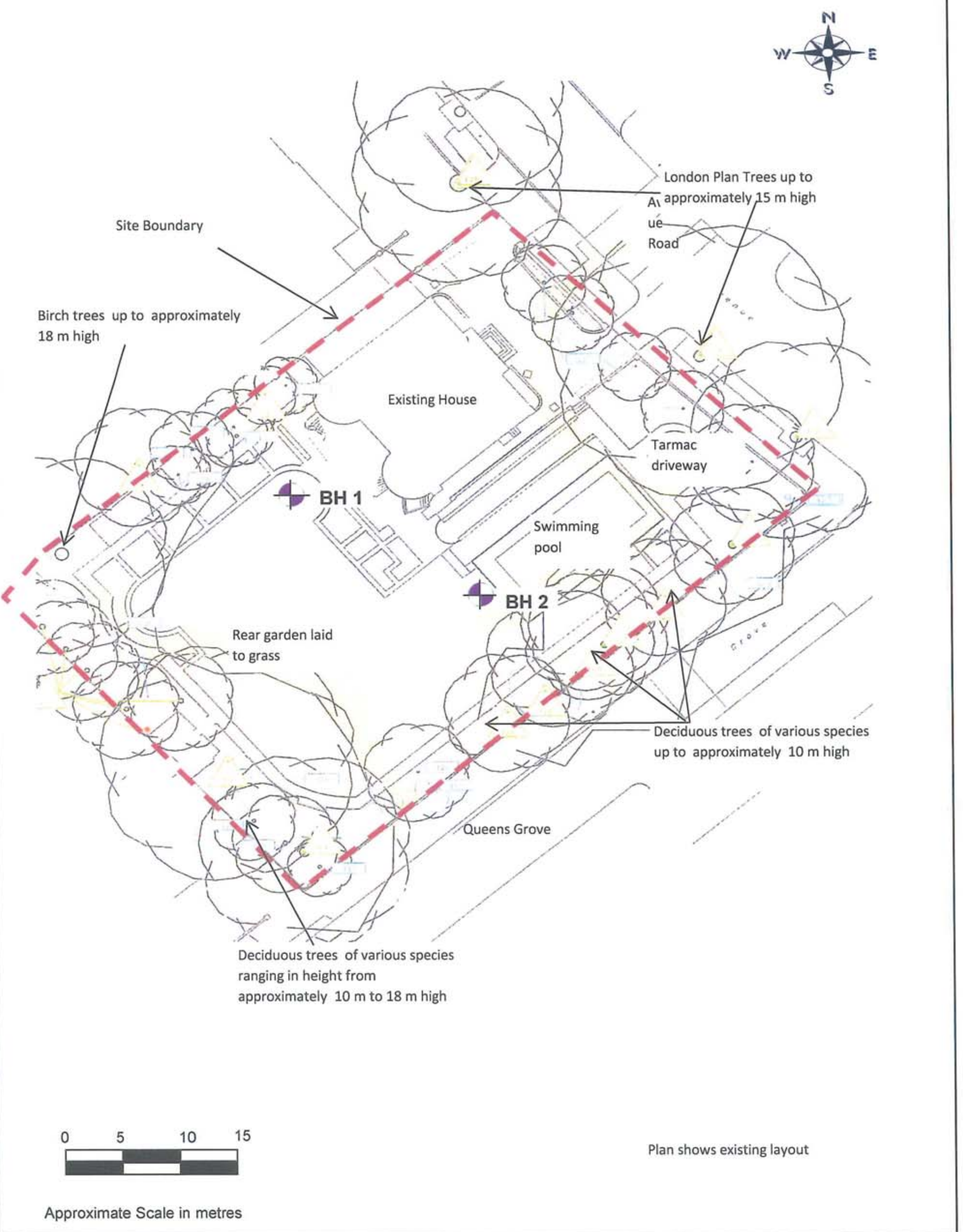
Tyttenhanger House
Coursers Road
St Albans
AL4 0PG

Site Plan

Site	75 Avenue Road, London, Nw8 6JD	**Job Number**	J10229
Client	Deroda Investments Ltd	**Sheet**	1 / 1
Engineer	Price and Myers		



Plan shows existing layout

Approximate Scale in metres

Geotechnical & Environmental Associates (GEA) is an engineer-led and client-focused independent specialist providing a complete range of geotechnical and contaminated land investigation, analytical and consultancy services to the property and construction industries.

We have offices at

Tyttenhanger House
Coursers Road
St Albans
AL4 0PG
tel 01727 824666
mail@gea-ltd.co.uk

and

Church Farm
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Kingston on Soar
Notts
NG11 0DE
tel 01509 674888
midlands@gea-ltd.co.uk

Enquiries can also be made on-line at
www.gea-ltd.co.uk
where information can be found
on all of the services that we offer.

Geotechnical & Environmental Associates

Widbury Barn
Widbury Hill
Ware
SG12 7QE

tel 01727 824666
email mail@gea-ltd.co.uk
web www.gea-ltd.co.uk

11 February 2015

Your ref:
Our ref: J14383/AB/1

Mr Neil Cameron
Heyne Tillett Steel
77 Bastwick Street
London
EC1V 3PZ

Dear Mr Cameron

Re 73–75 AVENUE ROAD, LONDON, NW8 6HP

Geotechnical and Environmental Associates (GEA) has been commissioned by Neil Cameron of Heyne Tillett Steel on behalf of Deroda Investments Ltd, to carry out investigations into the location of the historical River Tyburn at the above location. Borehole records and a site plan indicating the borehole locations are enclosed and this letter presents the findings of the work carried out.

The work comprised:

- ☐ A review of the previous report produced by GEA in February 2011[i];
- ☐ A review of evidence for the threat from Unexploded Ordnance (UXO); and
- ☐ An intrusive ground investigation

1. Existing Information

The site has changed little since the production of the report by GEA in 2011. The desk study carried out as part of the previous investigation indicated that originally two houses were located at the site until some time between 1951 and 1953 when the eastern house was removed. At some time between 1953 and the present day, the existing swimming pool was constructed.

A review of the historical maps and online information[ii] provides circumstantial evidence that the site may have suffered from direct bombing during World War II. The historical map from 1954 showed several houses to the west of the site as "ruins". Later maps indicate these areas were cleared of houses and redeveloped.

A review of the *The Lost Rivers of London* [iii] indicates a tributary of the River Tyburn running across the site in the easterly corner, in a north-south orientation towards Regent's Park. The house that was removed from the site was closest to the indicated location of the tributary of the River Tyburn.

The service plans from 2011 indicate that a Combined Sewer Main runs along the centre of Avenue Road. It is known that "*many of the rivers have become part of London's complex sewer system.*" (Barton, 1992), so it is considered likely that the River Tyburn and its tributary are now captured in the sewer system.

The Geological Survey map of the area (BGS Sheet 256) indicates that the site is underlain by London Clay. The previous investigation found a 0.9 m to 1.4 m thickness of made ground, overlying London Clay and found no evidence of a tributary of the River Tyburn.

2. Purposes of Work

The principal objective of the work carried out was to find evidence or locate the former tributary of the River Tyburn.

3. Ground Investigation

A ground investigation was undertaken on Wednesday 14th January 2015 and comprised 13 window sampler boreholes. These boreholes were scheduled to terminate at 3.0 m below ground level, to allow the exploratory holes to prove the top of the London Clay. The investigation focused on the northeastern half of the site, where the location of the tributary is suspected.

Due to the risks highlighted by the initial UXO review, a Preliminary UXO Threat Assessment[iv] was commissioned by GEA from a UXO specialist. This recommended that a Detailed UXO Threat Assessment was undertaken and a UXO Specialist was procured to provide on-site support to clear each borehole location to allow mitigation of the risk of a UXO strike during the ground investigation.

The Detailed UXO Threat Assessment[v] has highlighted a medium risk and has recommended on site mitigation measures as part of the development. A copy of this report has been provided to the Client under separate cover.

4. Ground Conditions

The boreholes indicated a significant and variable thickness of made ground across the investigated area, which resulted in seven of the 13 boreholes being terminated on obstructions within the made ground. Two of these boreholes were terminated on obstructions at a depth of less than 0.4 m.

The made ground was found to extend to depths of between 1.2 m and 2.3 m, although the base was not reached in Borehole No 5, which was terminated on a concrete obstruction at a depth of 2.20 m. The made ground comprised an upper layer of soft dark brown sandy gravelly clay overlying a further layer of made ground. In seven of the boreholes this comprised cobbles and/or gravel of brick and concrete. In Borehole No 9 this was further underlain by made ground of sandy clay. In four boreholes, the made ground underlying the soft dark brown sandy gravelly clay was variable and included soft slightly sandy slight gravelly clay to soft silty clay.

Borehole Nos 6 and 11 encountered sand and gravel between the made ground and natural clay at depths from 1.6m to 2.10m and 1.85m to 2.10m. It is unclear whether this material was made ground and imported as part of the swimming pool construction or was naturally insitu. There was water associated with this stratum as the material extracted was found to be wet.

Where encountered the London Clay tended to be soft to firm and very gravelly underlying the sand and gravel layer. Elsewhere, the clay was soft to firm and slightly gravelly, becoming stiff with increasing depth.

5. Conclusions

Evidence of the River Tyburn tributary is not considered to have been encountered. The investigation was somewhat hindered by the presence and nature of the made ground which terminated seven boreholes prematurely. However the remaining boreholes provided a good spread over the area of concern and these did not provide evidence expected to be associated with a river tributary. The sands and gravels encountered are believed to be natural, as similar pockets of gravel have been encountered on other sites in the area. It is conceivable that the increased thickness of made ground is associated with historic infilling of a former river channel, but the presence of concrete within the made ground suggests that is more likely to be associated with the former house that was present at this location.

The sands and gravels appear to be saturated and therefore excavations within this material are likely to be unstable. However, the greatest thickness encountered was 0.5m and is therefore unlikely to cause significant issues.

We trust this information is sufficient for your present requirements, but please do not hesitate to contact us if we can be of any further assistance.

Yours sincerely
GEOTECHNICAL & ENVIRONMENTAL ASSOCIATES

Angela Baird

Encs

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[i] GEA, February 2011, *Desk Study and Factual Ground Investigation Report* 75 Avenue Road, London, NW8 6JL, Deroda Investments Ltd,

[ii] www.bombsight.org

[iii] Barton, N (1992) *The Lost Rivers of London* Historical Publications Ltd.

[iv] 1st Line Defence Limited, 2015, *OPN2111 Express Preliminary UXO Risk Assessment, 73 -75 Avenue Road, London NW8 6HP*

[v] 1st Line Defence Limited, 2015, *2111AT1 Detailed Unexploded (UXO) Threat Assessment, 73 -75 Avenue Road, London NW8 6HP*

GEA Geotechnical & Environmental Associates

Tyttenhanger House
Coursers Road
St Albans
Herts AL4 0PG

Site Plan

Site	73 - 75 Avenue Road, London, NW8 6HP	**Job Number**	J14383
Client	Deroda Investments Limited	**Sheet**	1 / 1
Engineer	Heyne Tillett Steel		

Site plan shows existing site configuration with proposed dwellings indicated in light grey.

GEA Geotechnical & Environmental Associates

Tyttenhanger House
Coursers Road
St Albans
AL4 0PG

Site 73 - 75 Avenue Road, London, NW8 6HP				**Number** **BH3**
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Deroda Investments Limited	**Job Number** J14383
	Location	**Dates** 14/01/2015	**Engineer** Heyne Tillett Steel	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.00) 0.00	Grass and topsoil.		
					(0.20) 0.20	Made ground: Soft dark brown slightly sandy gravelly silty CLAY. Gravel is fine to medium angular to subrounded brick, flint, concrete and chalk. Occasional sand pockets of upto 5mm in diameter.	▩	
					(1.00) 1.20	Possible made ground: Soft light brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium angular to subrounded flint. Rare fine roots.	▩	
					(0.60) 1.80	Firm orange brown mottled grey slightly sandy CLAY. (Weathered LONDON CLAY)		
			At 1.9m PP: 2.5, 2.25, 2.5 At 2.4m PP: 3.75, 3.75, 3.75		(1.00) 2.80	Stiff orange brown slightly gravelly sandy CLAY. Gravel is fine to medium flint. (Weathered LONDON CLAY)		
					(0.20) 3.00	Stiff brown mottled grey silty CLAY. (Weathered LONDON CLAY)		
						Complete at 3.00m		

Remarks
PP refers to Pocket Penetrometer readings.
Borehole completed at 3.0m

Scale (approx)	**Logged By**
1:20	AB
Figure No. J14383.BH3	

GEA Geotechnical & Environmental Associates

Tyttenhanger House
Coursers Road
St Albans
AL4 0PG

Site 73 - 75 Avenue Road, London, NW8 6HP			**Number** **BH4**
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Deroda Investments Limited
Job Number J14383	**Location**	**Dates** 14/01/2015	**Engineer** Heyne Tillett Steel
Sheet 1/1			

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.40) 0.40	Topsoil		
					(0.40) 0.80	Made ground: Dark brown slightly sandy slightly gravelly silty clay. Gravel is fine to coarse angular to subrounded brick and sandstone. Occasional fine to medium roots.		
					(0.80) 1.60	Made ground: Soft orange brown gravelly clay. Gravel is fine to medium subangular to subrounded flint.		
					(0.40) 2.00	Made ground: Orange brown slightly clayey sand and gravel. Sand is fine to coarse and includes brick. Gravel is fine to medium angular to subrounded flint.		
			At 2.00m PP: 1.5, 1.75, 1.75		(0.50) 2.50	Firm orange brown slightly gravelly CLAY.		
			At 2.50m PP: 3.0, 2.75, 2.75 At 2.90m PP: 2.75, 2.5, 2.5		(0.50) 3.00	Stiff orange brown slightly gravelly CLAY. From 2.7 to 2.9m frequent selenite crystals.		
						Complete at 3.00m		

Remarks
PP refers to Pocket Penetrometer reading.

Scale (approx)	Logged By
1:20	AB

Figure No.
J14383.BH4

GEA Geotechnical & Environmental Associates

Tyttenhanger House
Coursers Road
St Albans
AL4 0PG

Site 73 - 75 Avenue Road, London, NW8 6HP			**Number** **BH5**
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)**	**Client** Deroda Investments Limited
Job Number J14383	**Location**	**Dates** 14/01/2015	**Engineer** Heyne Tillett Steel
Sheet 1/1			

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30) 0.30	Topsoil		
					(0.30) 0.60	Made ground: Soft dark brown slightly sandy slightly gravelly silty clay. Gravel is fine to coarse angular to subrounded brick and sandstone. Occasional fine to medium roots.		
					(0.20) 0.80	Made ground: Soft orange brown slightly sandy slightly gravelly clay. Gravel is fine to medium flint and brick.		
					(0.20) 1.00	Made ground: Cobble sized brick fragments.		
					(1.10) 2.10	No recovery		
					(0.10) 2.20	Concrete.		
						Complete at 2.20m		

Remarks
Borehole refused at 2.20m on concrete.

Scale (approx)	Logged By
1:20	AB

Figure No.
J14383.BH5