Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	DHGR	Dollis Hill Gravel Member	Sand and Gravel	Anglian - Cromerian
	STGR	Stanmore Gravel Formation	Sand and Gravel	Pleistocene - Pleistocene

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CLGB	Claygate Member	Clay, Silt and Sand	Eocene - Eocene
	LC	London Clay Formation	Clay, Silt and Sand	Eocene - Eocene
	BGS	Bagshot Formation	Sand	Eocene - Eocene

LUSTRE CONSULTING

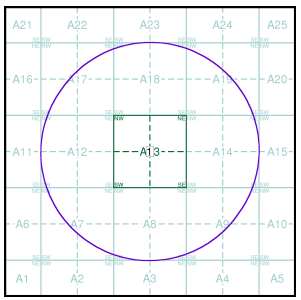
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**256**
Map Name:	**North London**
Map Date:	**2006**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A



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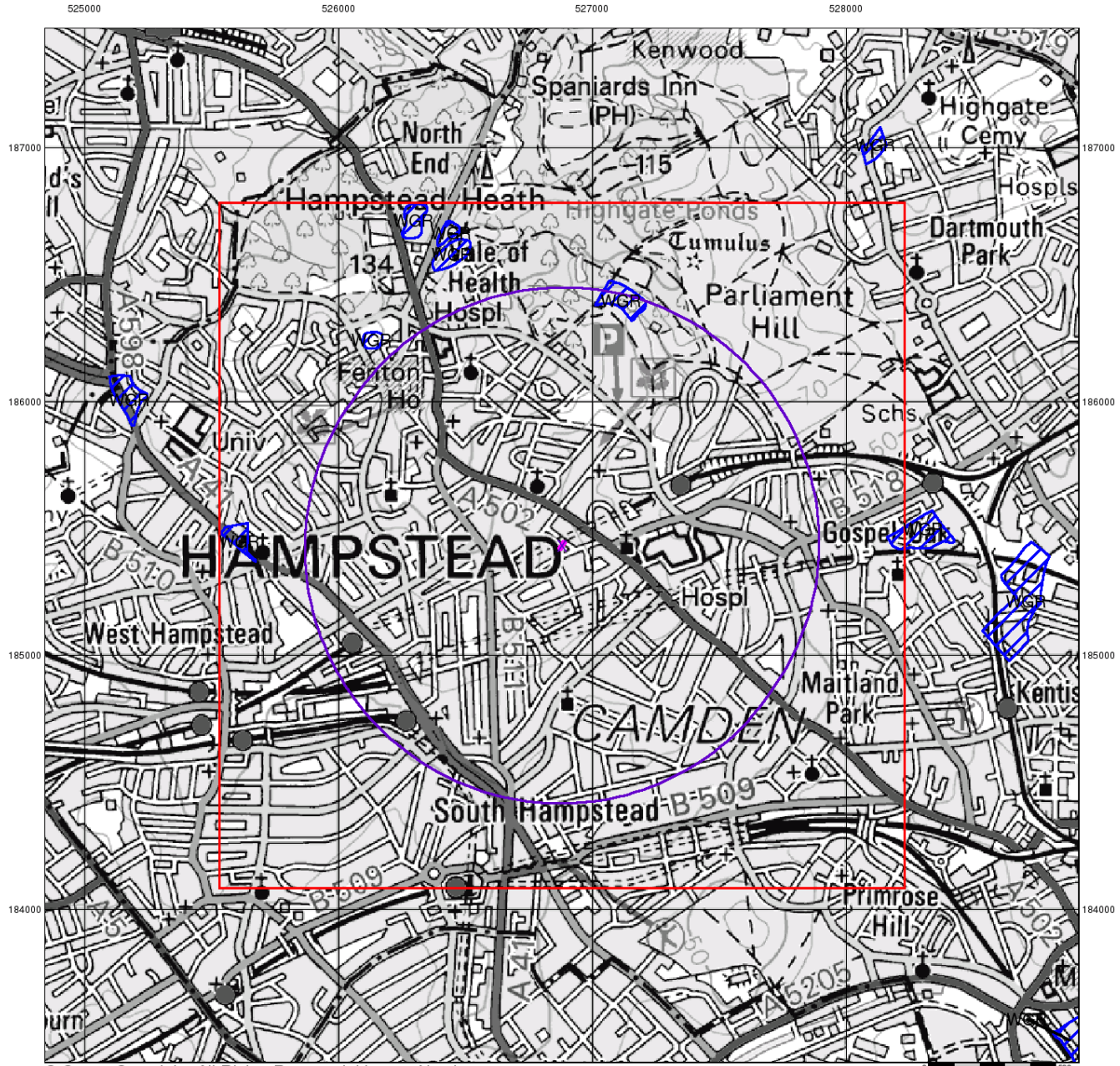
Customer Reference:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	1000

Site Details:

14 Eldon Grove, LONDON, NW3 5PT



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Artificial Ground and Landslip

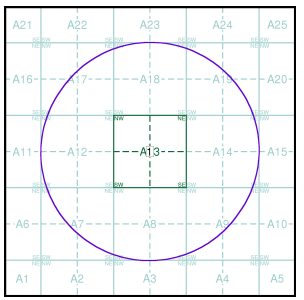
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



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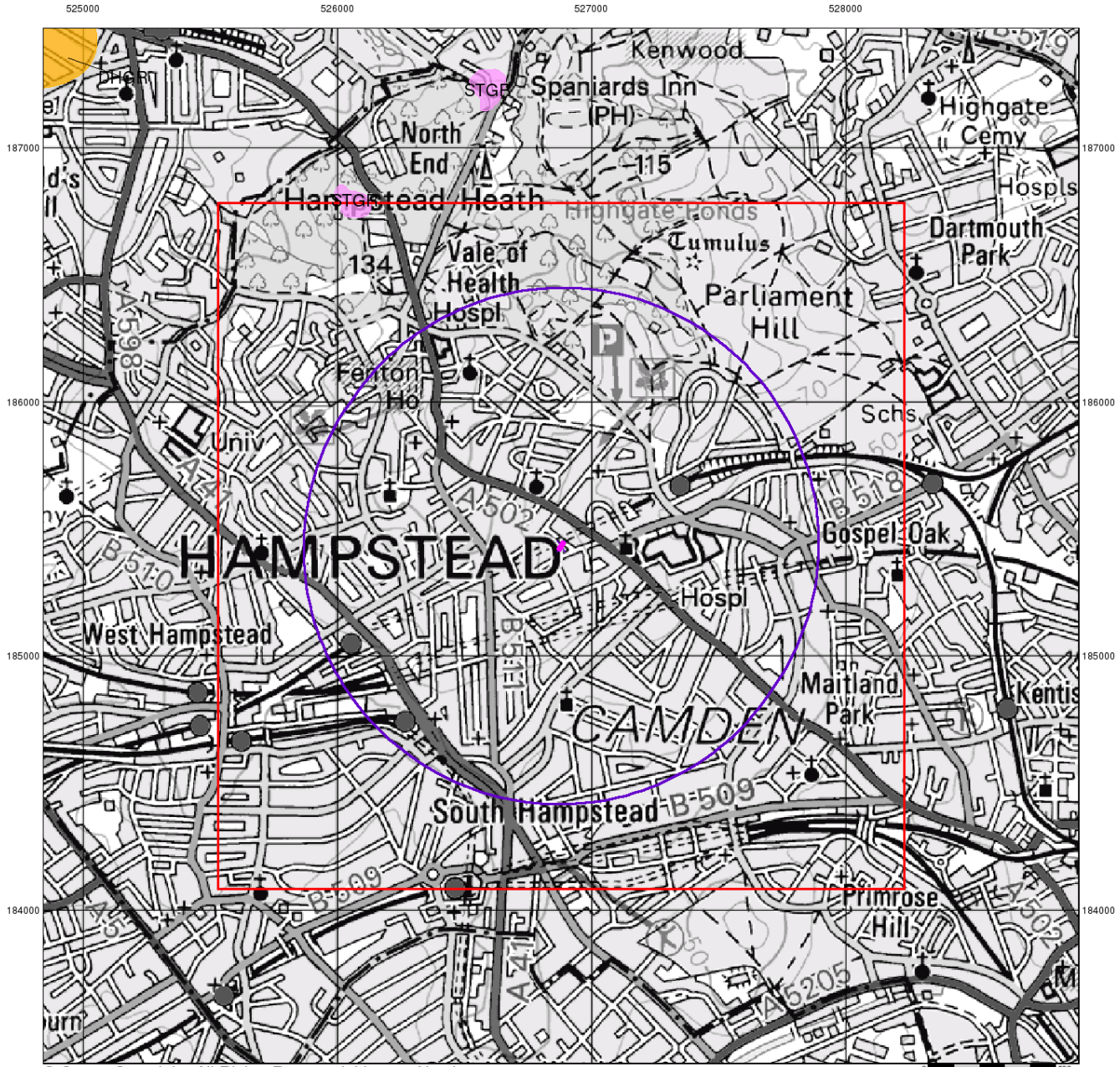
Customer Reference:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	1000

Site Details:

14 Eldon Grove, LONDON, NW3 5PT

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



LUSTRE CONSULTING

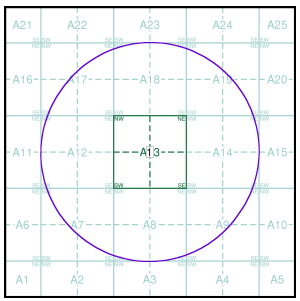
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

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National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	1000

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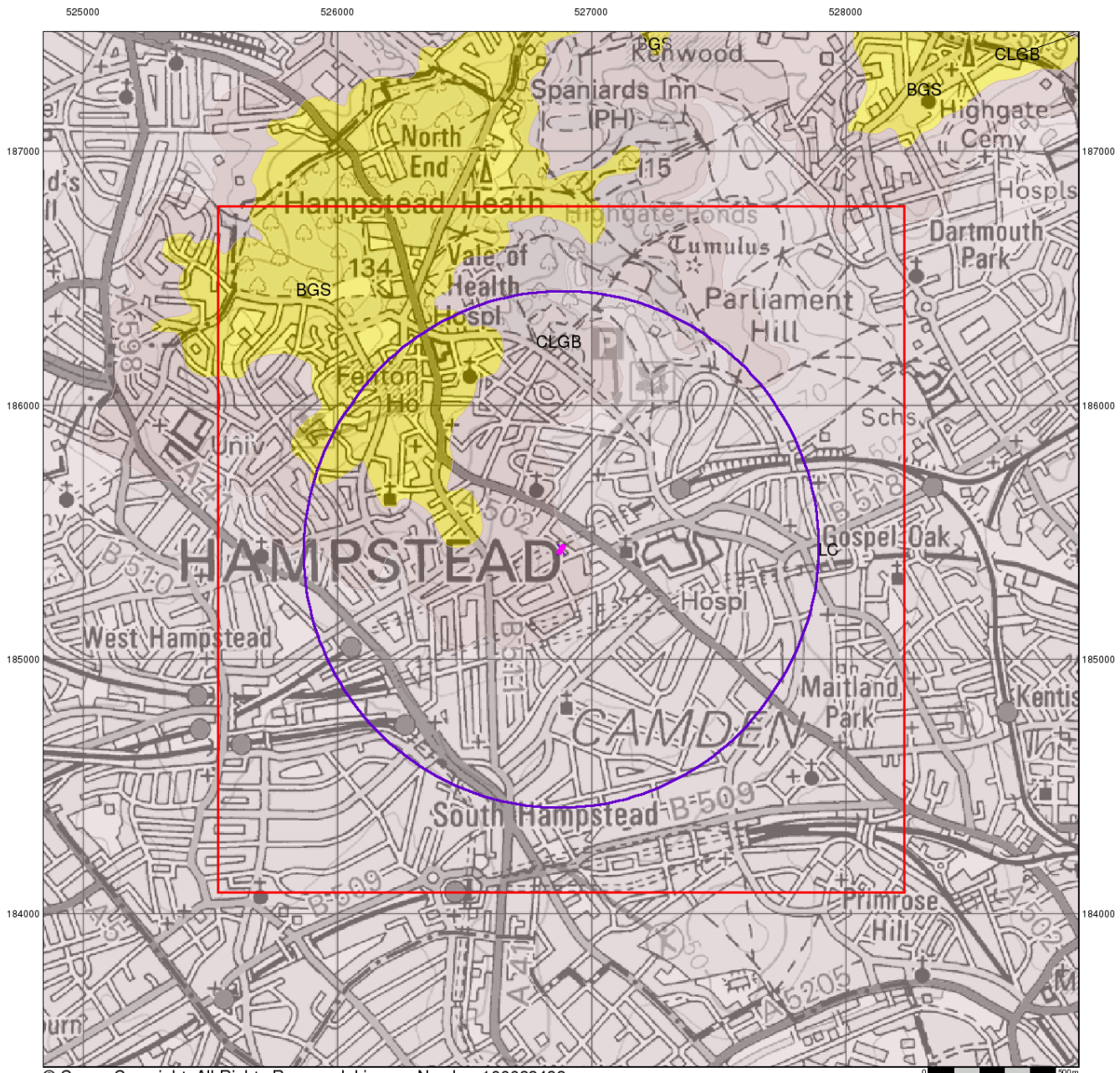


LUSTRE CONSULTING

Bedrock and Faults

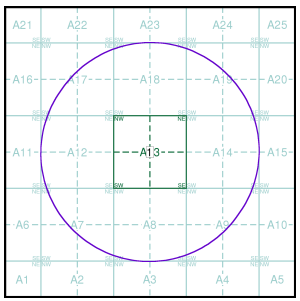
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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

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

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



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Customer Reference:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
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Site Details:

14 Eldon Grove, LONDON, NW3 5PT

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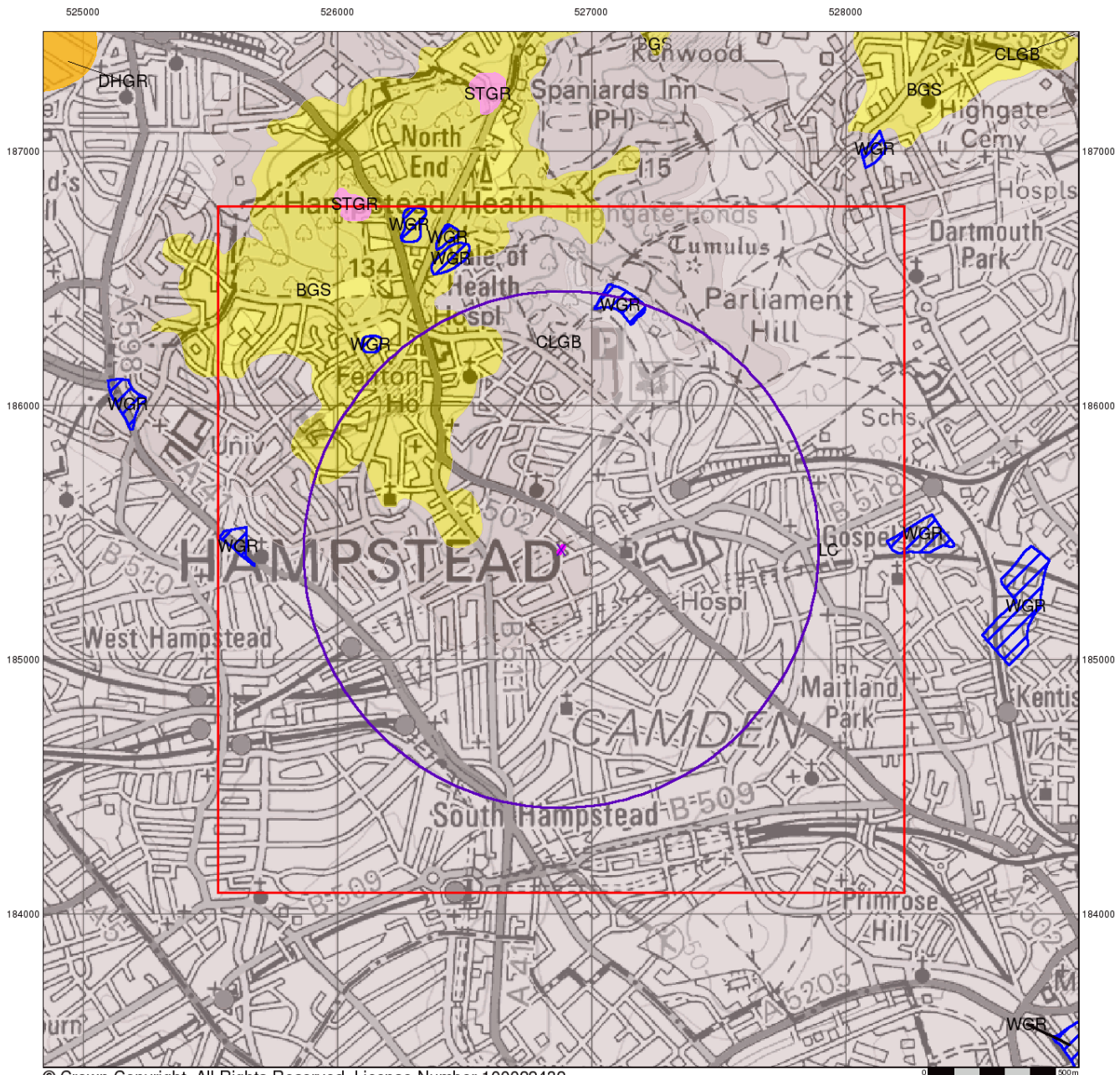


LUSTRE CONSULTING

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

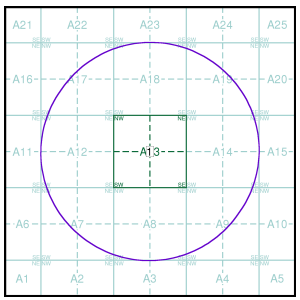
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



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Customer Reference:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	1000

Site Details:

14 Eldon Grove, LONDON, NW3 5PT

APPENDIX C:
HISTORICAL MAPS

LUSTRE CONSULTING

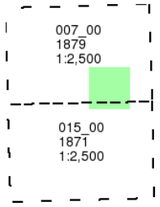
London

Published 1871 - 1879

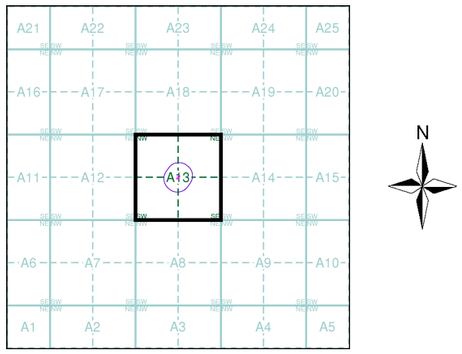
Source map scale - 1:2,500

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:	57255743_1_1
Customer Ref:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	100

Site Details

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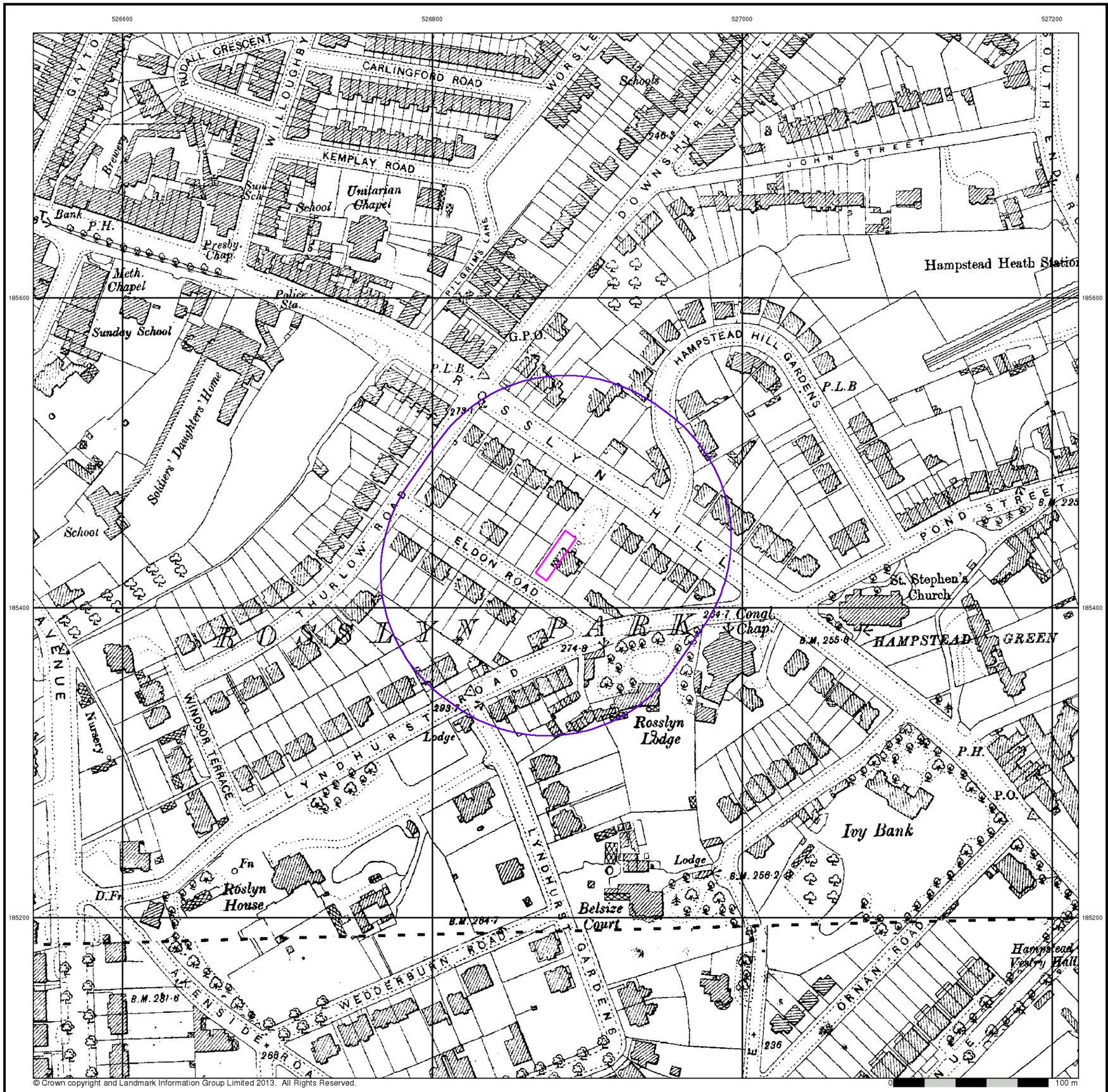


LUSTRE CONSULTING

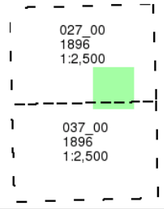
London

Published 1896

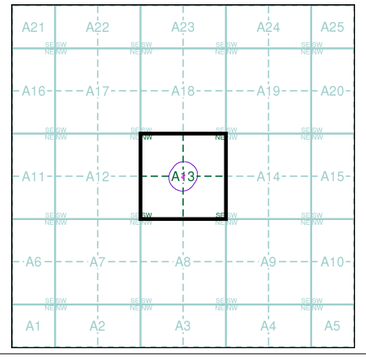
Source map scale - 1:2,500

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:	57255743_1_1
Customer Ref:	1303
National Grid Reference:	526880, 185430
Slice:	A
Site Area (Ha):	0.03
Search Buffer (m):	100

Site Details

14 Eldon Grove, LONDON, NW3 5PT

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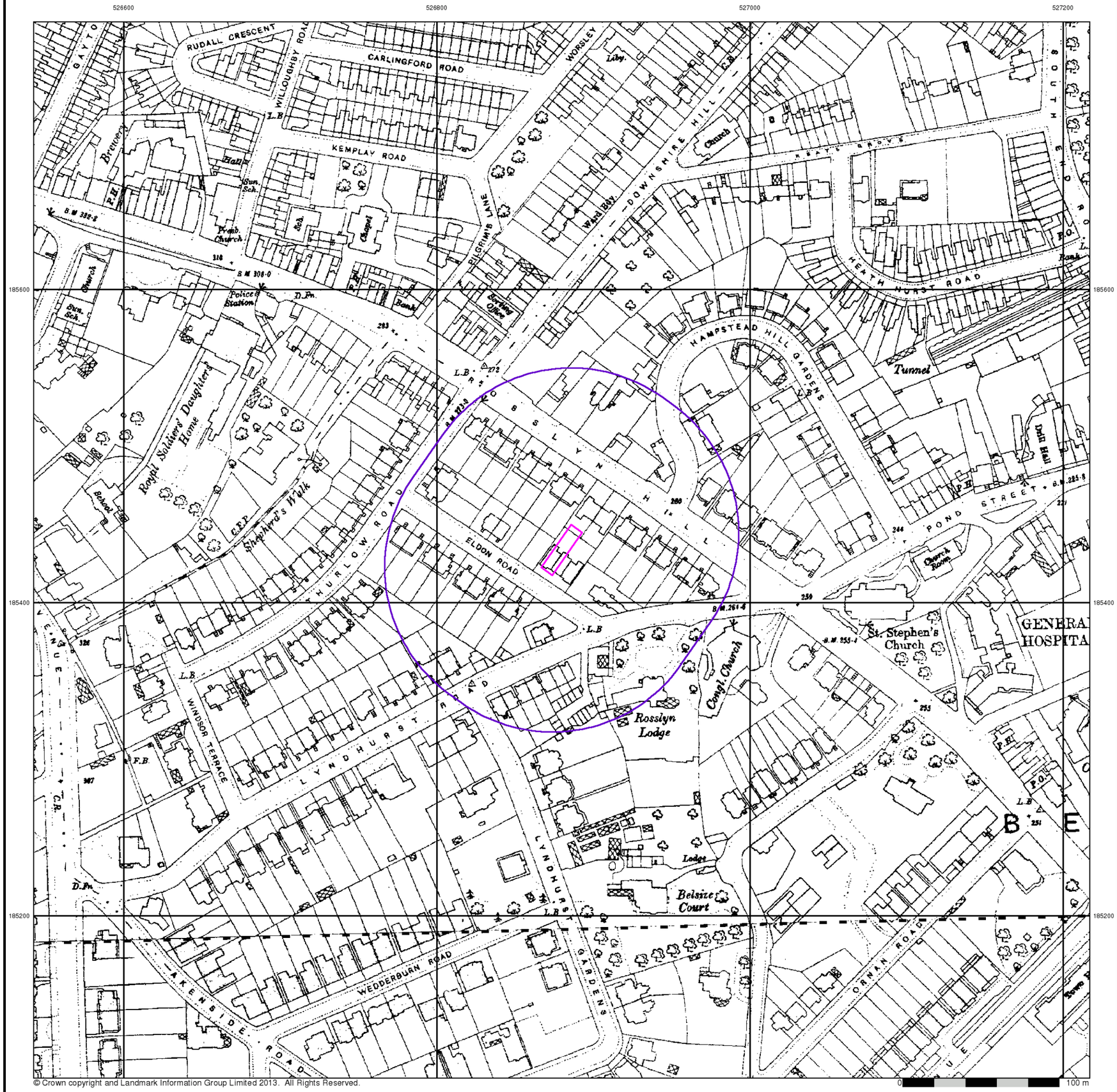

LUSTRE CONSULTING

London

Published 1915

Source map scale - 1:2,500

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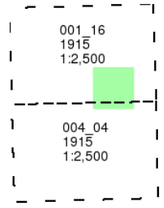
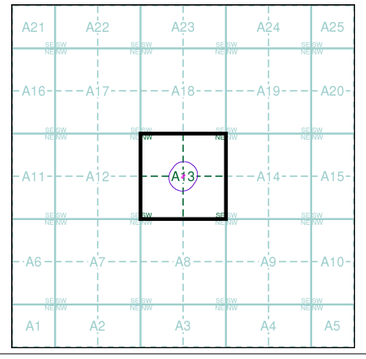
Map Name(s) and Date(s)



Historical Map - Segment A13



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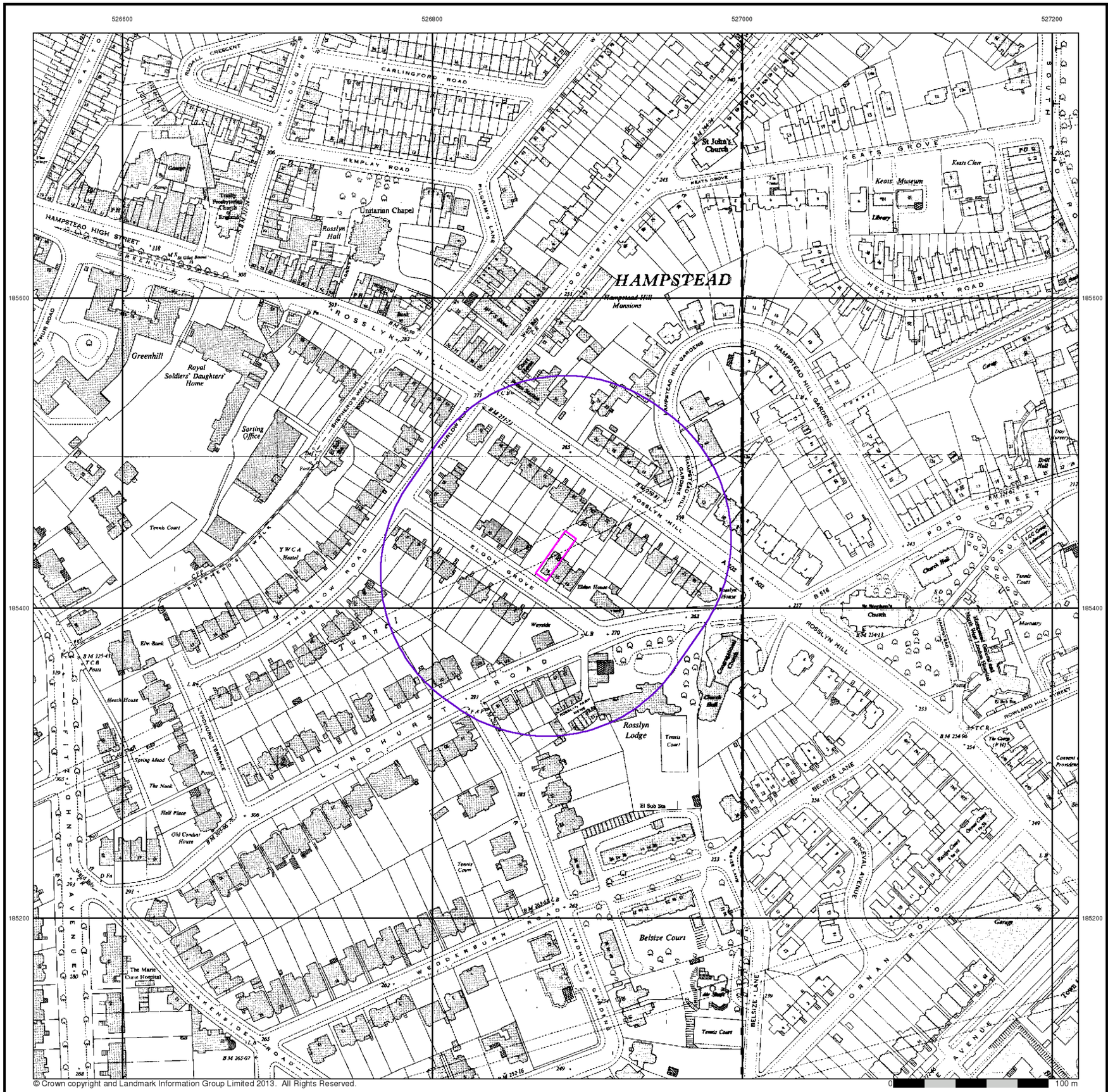
Site Details

14 Eldon Grove, LONDON, NW3 5PT



LUSTRE CONSULTING

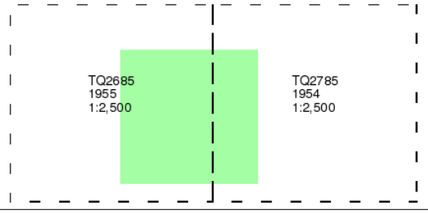
Ordnance Survey Plan

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)



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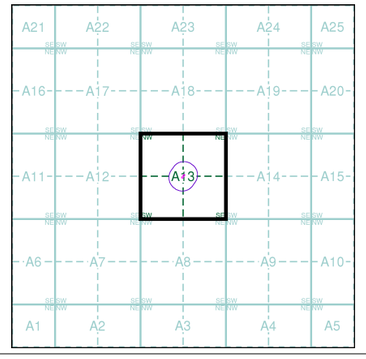

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Search Buffer (m):	100

Site Details

14 Eldon Grove, LONDON, NW3 5PT

Landmark Information Group

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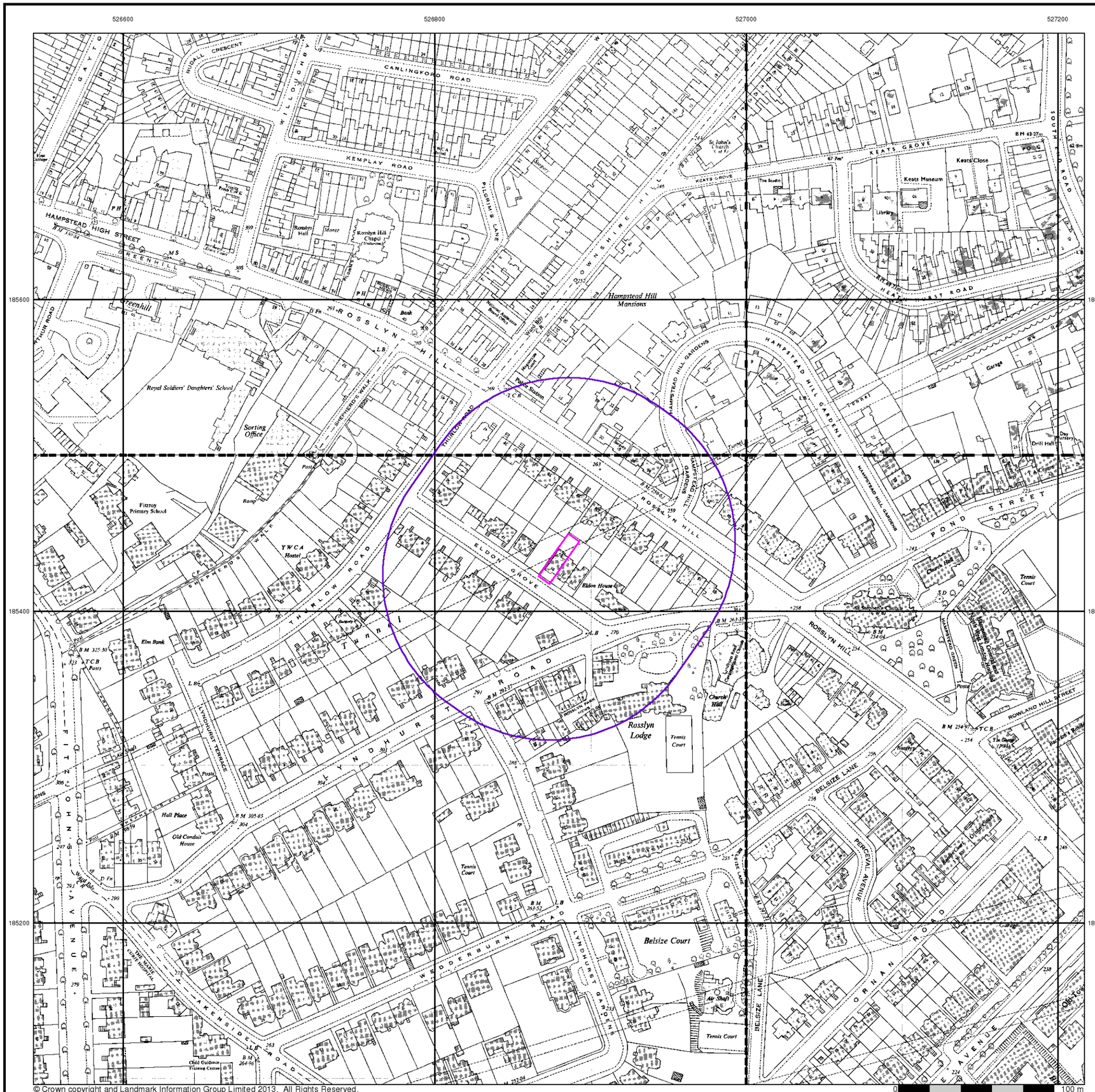
Web: www.envirocheck.co.uk



LUSTRE CONSULTING

Ordnance Survey Plan

Published 1966 - 1972

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)

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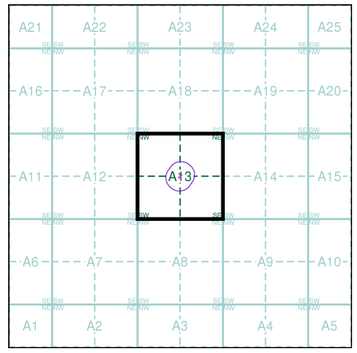
TQ2685SE 1966 1:1,250	TQ2785SW 1966 1:1,250

Historical Map - Segment A13



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Slice:	A
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Search Buffer (m):	100

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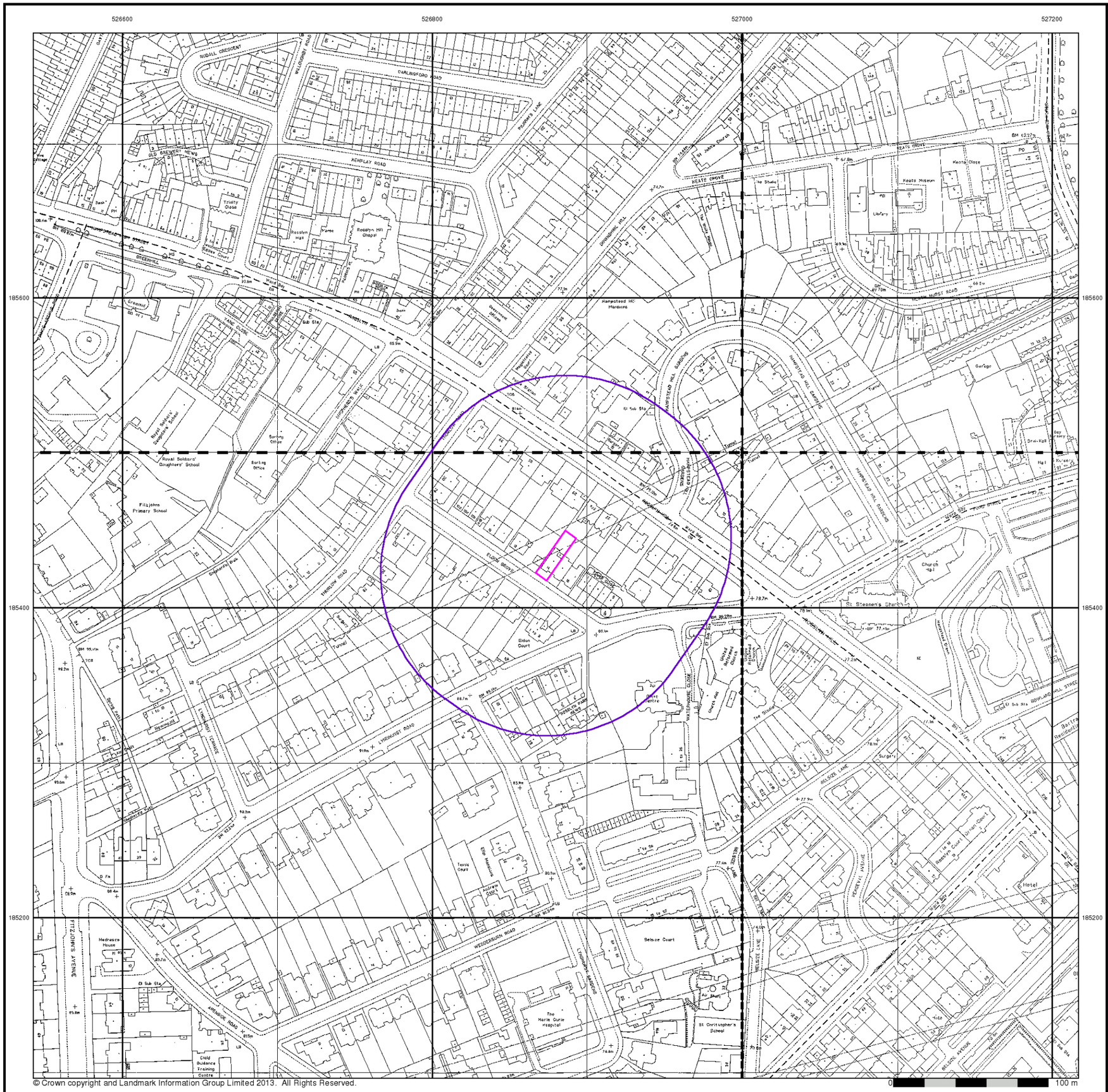

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Large-Scale National Grid Data

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)

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: 57255743_1_1
Customer Ref: 1303
National Grid Reference: 526880, 185430
Slice: A
Site Area (Ha): 0.03
Search Buffer (m): 100

Site Details

14 Eldon Grove, LONDON, NW3 5PT

Landmark
Information Group

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

APPENDIX D:
BOREHOLE RECORDS

Investigation Layout Plan

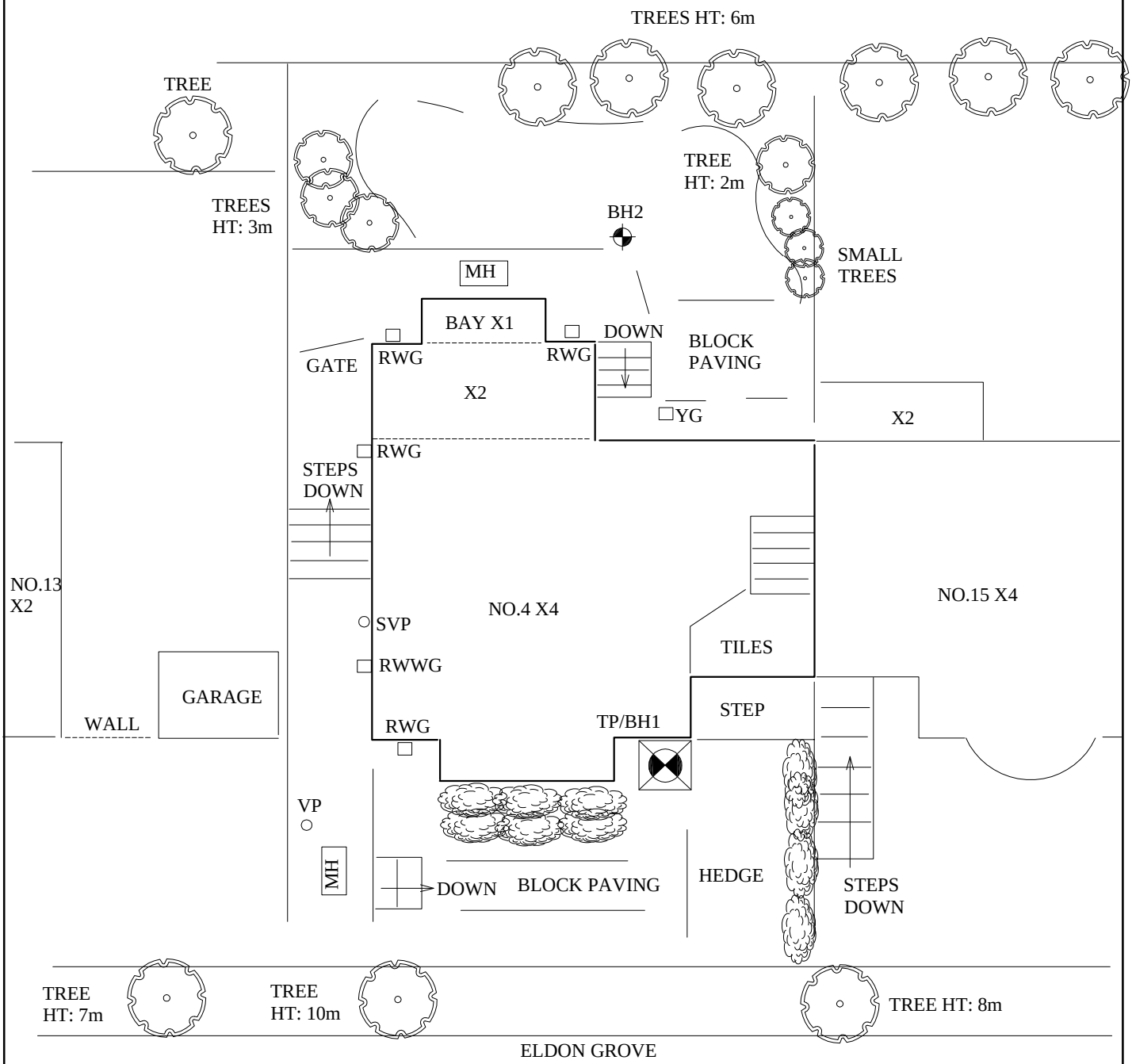
Sheet: 1 of 1
Job No: 169121E
Date: 11/11/2013

Site: 14 Eldon Grove, NW3

Work carried out for: Cunningham Lindsey

MH (SI) SE (Checked) AR (Drawn)

Weather: RAIN



ON SITE TREE IDENTIFICATION FOR GUIDANCE ONLY. NOT AUTHENTICATED.

Remarks:

Scale: N.T.S.

Key:

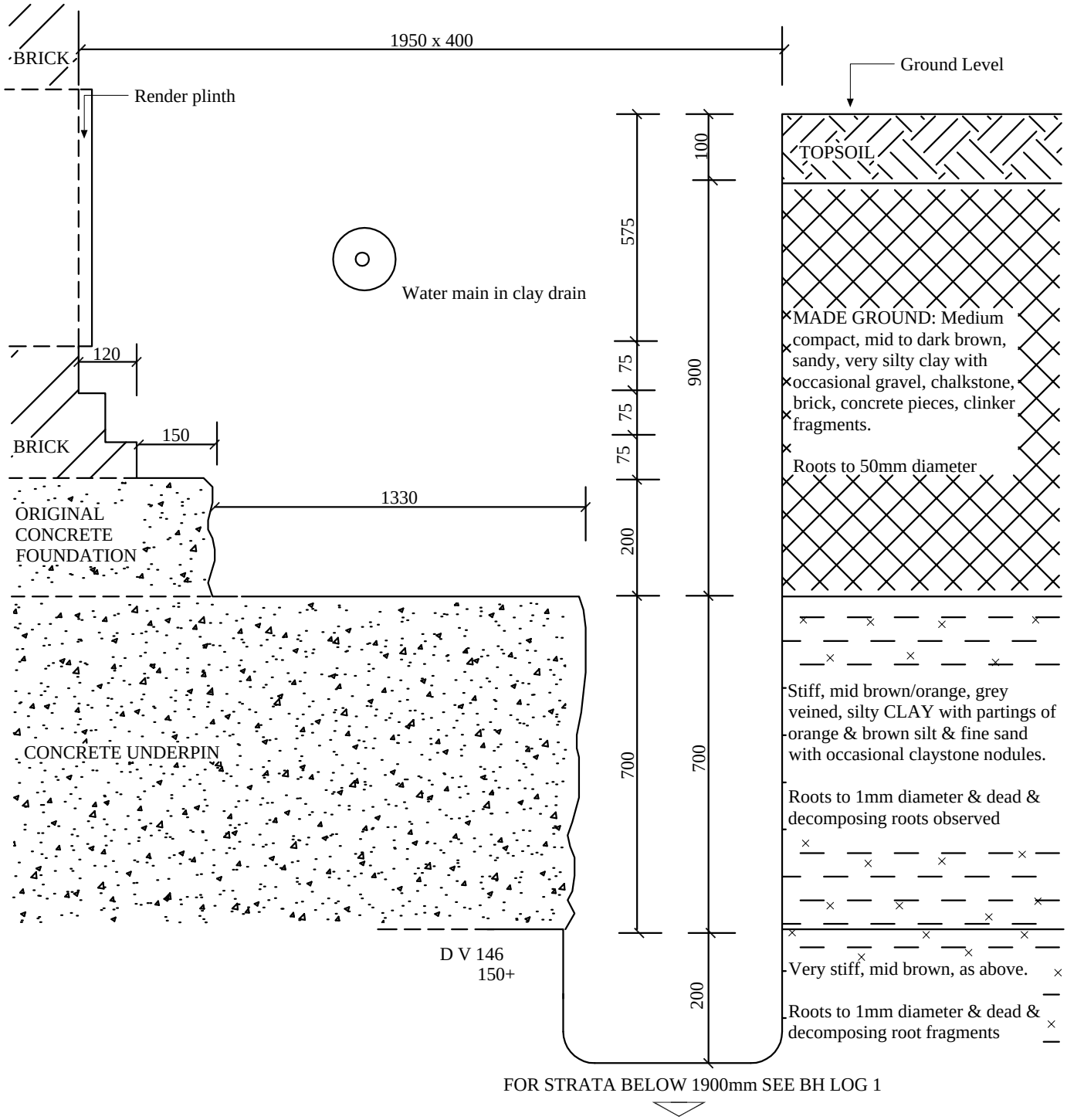
Combined Gulley	RWWG	Surface Water Drain	
Manhole	MH	Foul Water Drain	
Rain Water Pipe	RWP	Tree / Bush (approx. ht in m)	
Rain Water Gulley	RWG		
Soil Vent Pipe	SVP	Trial Pit	
Waste Gulley	WG	Borehole	
Waste Pipe	WP		

Trial Pit No: 1

Sheet: 1 of 1
Job No: 169121E
Date: 11.11.13

Site: 14 Eldon Grove, London NW3
Work carried out for: Cunningham Lindsey

Excavation Method: Hand Tools
Weather: Rain
Drawn by: DVC
Ground Level mOD:



Remarks: All measurements in millimetres.
Thought to be underside at 1700mm. Curved steel pin hammered 300mm beyond concrete foundation. House and bay foundations are similar depth

Key:
D Small disturbed sample
B Bulk disturbed sample
W Water sample
TDTD Too dense to drive
J Jar sample
V Pilcon Vane (kPa)
M Mackintosh probe

Logged: MH | Checked: SE | Approved: | Scale: N.T.S.

Borehole No: 1

Sheet: 1 of 1

Job No: 169121E

Site: 14 Eldon Grove, London NW3

Boring Method: Hand Auger

Date: 11/11/2013

Diameter: 75mm

Coordinates:

Ground Level mOD:

Work Carried out for: Cunningham Lindsey

Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
	As Trial Pit 1	1.90							
1.90								Roots to 1mm diameter to 3m	
	Very stiff, mid brown, grey veined, silty CLAY with partings of orange & brown silt & fine sand with occasional claystone nodules.	1.10		D	V	150+ 150+	2.00		
				D	V	150+ 150+	2.50		
3.00				D	V	150+ 150+	3.00	Dead & decomposing root fragments to 4.5m	
	Very stiff, as above with crystals.	2.00		D	V	150+ 150+	3.50		
				D	V	150+ 150+	4.00		
				D	V	150+ 150+	4.50	No roots observed below 4.5m	
5.00				D	V	150+ 150+	5.00		
	Borehole ends at 5m								

Remarks: Borehole dry and open on completion

Key: T.D.T.D. Too Dense to Drive

D Small disturbed sample J Jar sample

B Bulk disturbed sample V Pilcon Vane (kPa)

W Water sample M Mackintosh Probe

Logged: MH Checked: SE Typed by: DVC Scale: NTS Weather: Rain

Borehole No: 2	Sheet: 1 of 1		
	Job No: 169121E	Site:	14 Eldon Grove, London NW3
Boring Method: Hand Auger	Date: 11/11/2013		
Diameter: 75mm / Coordinates:	Ground Level mOD:	Work Carried out for:	Cunningham Lindsey

Depth (m)	Description of Strata	Thick-ness (m)	Legend	Sample	Test Type	Test Result	Depth (m)	Field Records/Comments	Depth to water (m)
G.L 0.20	Turf over MADE GROUND: Medium compact, mid to dark brown, sandy, very silty clay with occasional gravel & brick, concrete & clinker fragments.	0.20						Roots to 1mm diameter to 3m	
0.50	MADE GROUND: Medium compact, mid brown/orange, silty clay with occasional gravel & brick, concrete & clinker fragments	0.30							
1.00	Firm, mid brown, grey veined, silty CLAY with partings of orange & brown silt & fine sand with occasional claystone nodules.	0.50		D	V	78 78	1.00		
	Stiff, as above.	1.50		D	V	104 106	1.50		
				D	V	114 116	2.00		
2.50				D	V	110 110	2.50		
3.00	Stiff, mid brown, grey veined, silty CLAY with partings of orange & brown silt & fine sand with occasional claystone nodules & crystals.	0.50		D	V	150+ 150+	3.00	Dead & decomposing root fragments to 4.2m	
	Very stiff, as above.	2.00		D	V	150+ 150+	3.50		
				D	V	150+ 150+	4.00	No roots observed below 4.2m	
				D	V	150+ 150+	4.50		
5.00				D	V	150+ 150+	5.00		
	Borehole ends at 5m								

Remarks:
Borehole dry and open on completion

Key: T.D.T.D. Too Dense to Drive

D	Small disturbed sample	J	Jar sample
B	Bulk disturbed sample	V	Pilcon Vane (kPa)
W	Water sample	M	Mackintosh Probe

Logged: MH	Checked: SE	Typed by: DVC	Scale: NTS	Weather: Rain

APPENDIX E:
NOTES ON LIMITATIONS

LUSTRE CONSULTING, ENVIRONMENTAL AND GEOTECHNICAL CONSULTANCY SERVICES

NOTES ON LIMITATIONS

General

Lustre Consulting have completed the attached report for the use of the Client detailed on the front cover and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed.

Third parties should not use or rely upon the contents of the report unless written approval has been gained from Lustre Consulting; (due to legal requirements, a charge may be levied against such approval).

Lustre Consulting accepts no responsibility or liability for:

a) the consequences of this documentation being used for any purpose or project other than that for which it was commissioned, and

b) this document to any third party with whom approval for use has not been agreed.

Phase I Environmental Risk Assessments, Desk Studies and Site Audits

The work completed and utilised to provide this report comprises a study of available documentation. The opinions and results presented in this report have been arrived at by utilising the finite amount of data available at the time of writing and are relevant only to the purpose for which the report was commissioned. The data which has been reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative information pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, Lustre Consulting reserves the right to review this information and, if warranted, to modify the opinions presented in the report accordingly.

It should be noted that the risks which are identified in this report are perceived risks based on the available information at the time of writing and that the actual risks associated can only be assessed following a physical investigation of the site.

Phase II Site Investigations

The intrusive investigation has been completed to provide information concerning the type and degree of contamination present along with ground and groundwater conditions which facilitates a reasonable risk assessment to be completed. The stated objectives of the ground investigation have been limited to assessing the proven risks which are associated with potential human targets, building materials, the environment (including adjacent land), and to surface and groundwater.

The amount of exploratory work, chemical testing and monitoring completed as part of this project has potentially been restricted by the short timescale available, and the locations of exploratory holes undertaken have potentially been restricted to areas unoccupied by buildings(s) and buried services. A more comprehensive post demolition / decommission investigation may be required if the site is to be redeveloped. For these reasons any costs included in relation to site remediation must be considered as tentative only at this time.

The exploratory holes investigate only a small volume of the ground in relation to the size of the site and therefore, can only provide a “snap shot” or general indication of ground conditions located on the site. The fact that the site has been investigated does not preclude the existence of localised “hotspots” of contamination where concentrations may be significantly higher than those actually encountered.

The risk assessment and opinions provided in this report take into account currently available guidance values relating to acceptable contamination concentrates; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

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