

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

1

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	No data	No data	No data	No data	No data	No data	No data

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

5

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	40	7	660	453	0.6	97	99	34	53
16m N	38	6.7	613	421	0.6	100	96	32	50
36m E	37	6.5	640	440	0.6	97	94	34	50
40m NE	35	6.1	565	388	0.6	103	87	32	47
48m W	38	6.7	638	438	0.6	98	97	33	50

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

1

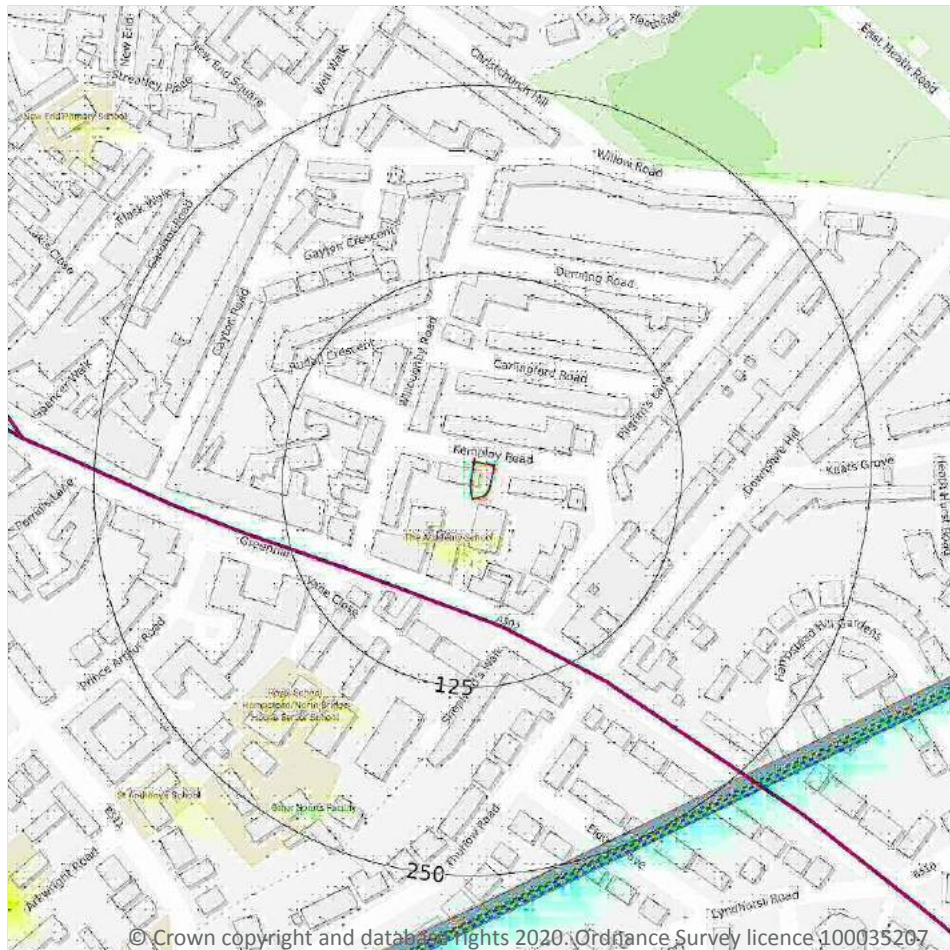
The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

Location	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Lead (mg/kg)	Tin (mg/kg)	Sample Type
18m SW	40.3	0.6	97.4	98.7	34.0	660.4	52.9	Topsoil

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m

1

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

Features are displayed on the Railway infrastructure and projects map on **page 96**

Location	Line Name	Line Section	Track Type	Depth (m bgl)	Operational hours
68m S	Northern Line	Northern Line	Tunnel	45.45	Mon-Thu: Early 0512 Late 2358 Fri-Sun: Early 0522

This data is sourced from publicly available information by Groundsure.



21.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

1

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on **page 96**

Location	Type
250m SE	Railway Tunnel

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

13

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 96**

Location	Land Use	Year of mapping	Mapping scale
242m SE	Tunnel	1958	10560
243m SE	Tunnel	1965	10560
243m SE	Tunnel	1974	10000
243m SE	Tunnel	1996	10000
243m SE	Tunnel	1991	1250
243m SE	Tunnel	1986	-
243m SE	Tunnel	1966	1250
243m SE	Tunnel	1977	1250
243m SE	Tunnel	1953	1250



Location	Land Use	Year of mapping	Mapping scale
243m SE	Tunnel	1965	2500
243m SE	Tunnel	1953	2500
244m SE	Tunnel	1986	1250
244m SE	Tunnel	1991	1250

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m 0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m 0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m 0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m 0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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APPENDIX C

Groundsure historic maps

Site Details:

13, KEMPLAY ROAD, LONDON,
NW3 1TA

Client Ref: 30451_13_Kemplay_Road
Report Ref: GS-6827929
Grid Ref: 526756, 185671

Map Name: County Series

Map date: 1873-1874

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1865
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Edition 1873
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Levelled N/A

Surveyed 1869
Revised 1869
Edition 1873
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1874
Edition N/A
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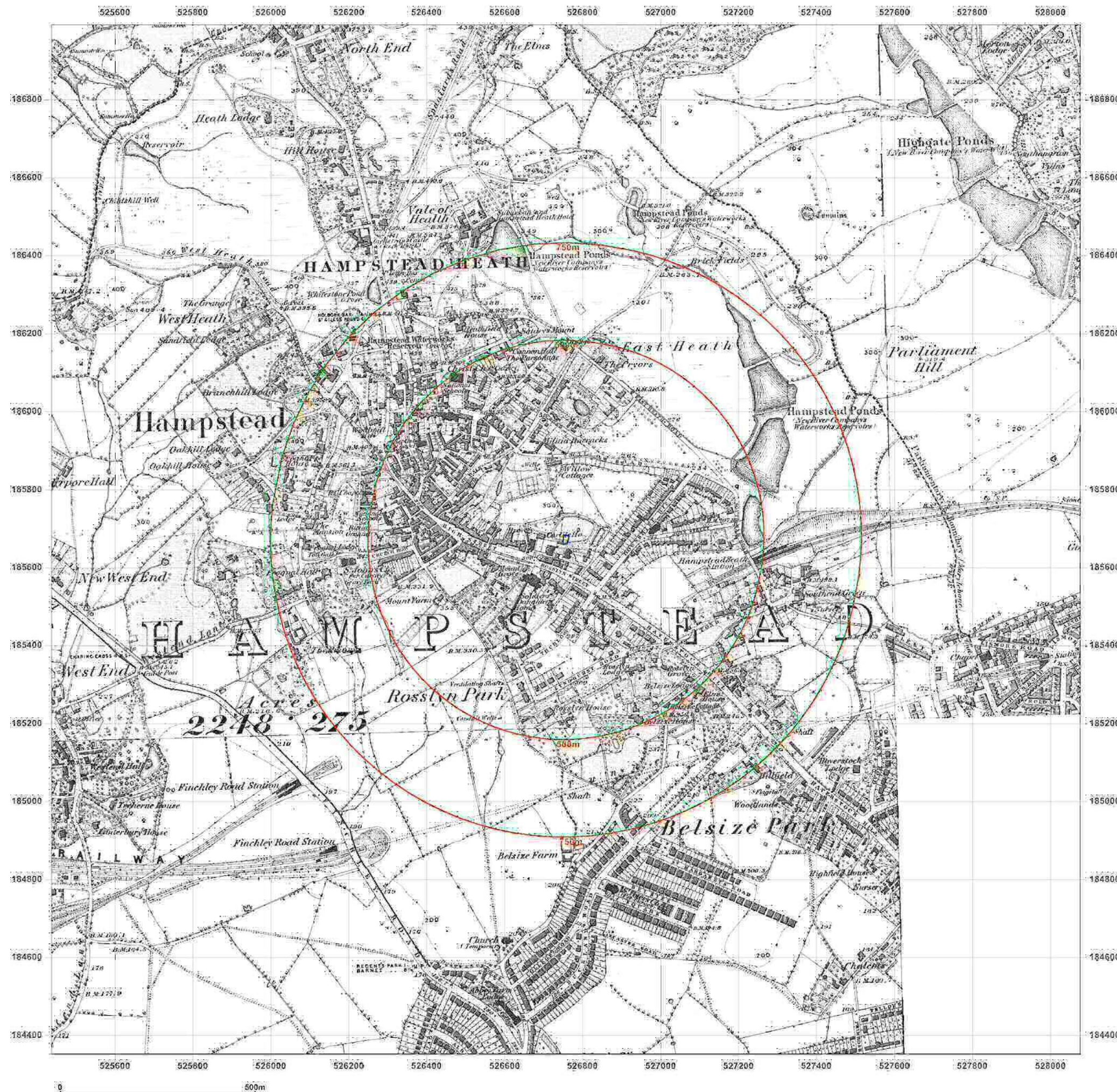


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Client Ref: 30451_13_Kemplay_Road
Report Ref: GS-6827929
Grid Ref: 526756, 185671

Map Name: County Series

Map date: 1894

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1894
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Report Ref: GS-6827929
Grid Ref: 526756, 185671

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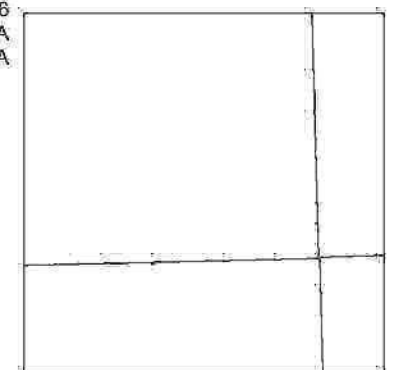
Map date: 1896

Scale: 1:10,560

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Surveyed 1891
Revised 1894
Edition 1896
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Surveyed 1871
Revised 1894
Edition 1896
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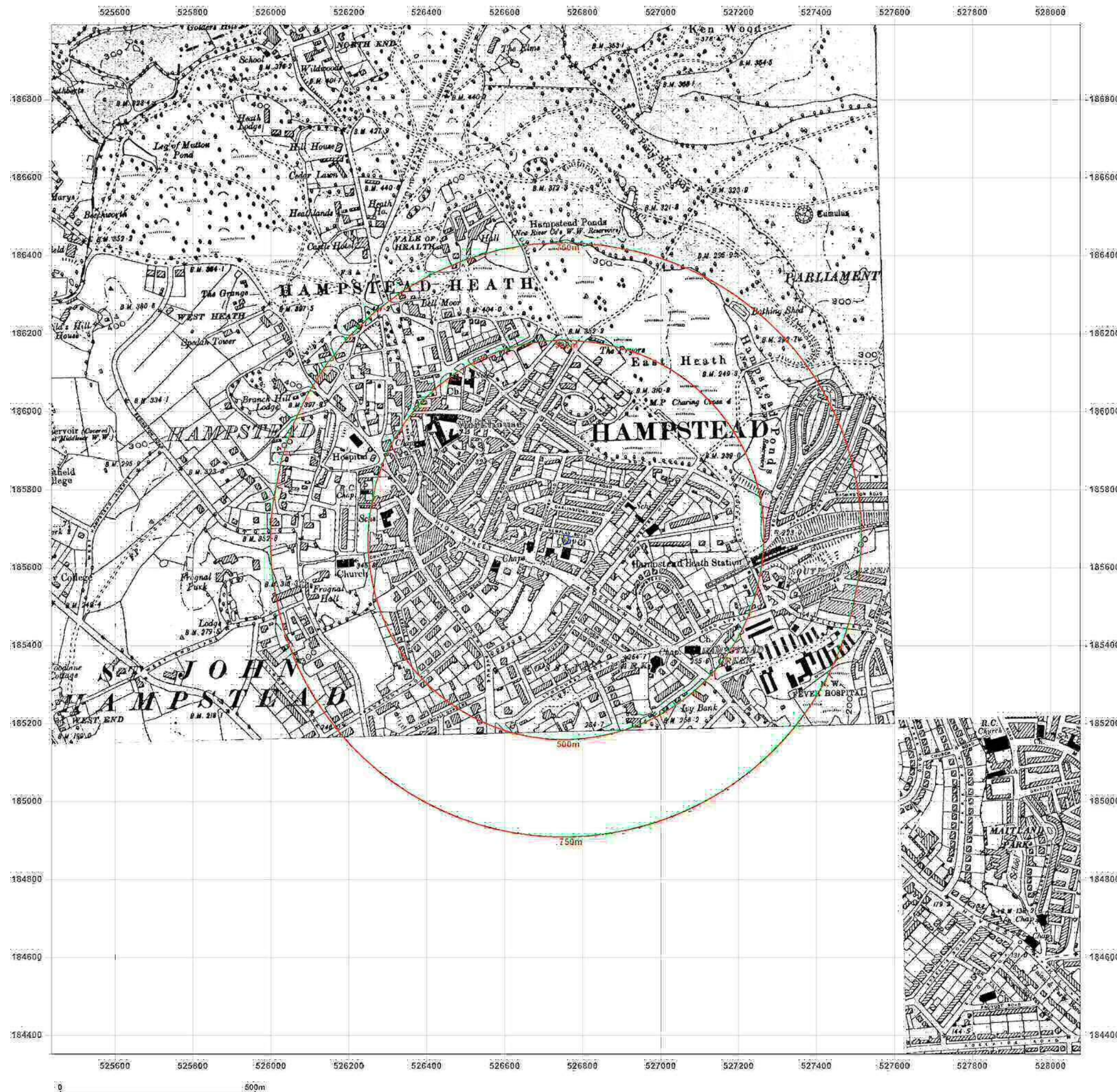


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Client Ref: 30451_13_Kemplay_Road
Report Ref: GS-6827929
Grid Ref: 526756, 185671

Map Name: County Series

Map date: 1920

Scale: 1:10,560

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Surveyed 1865
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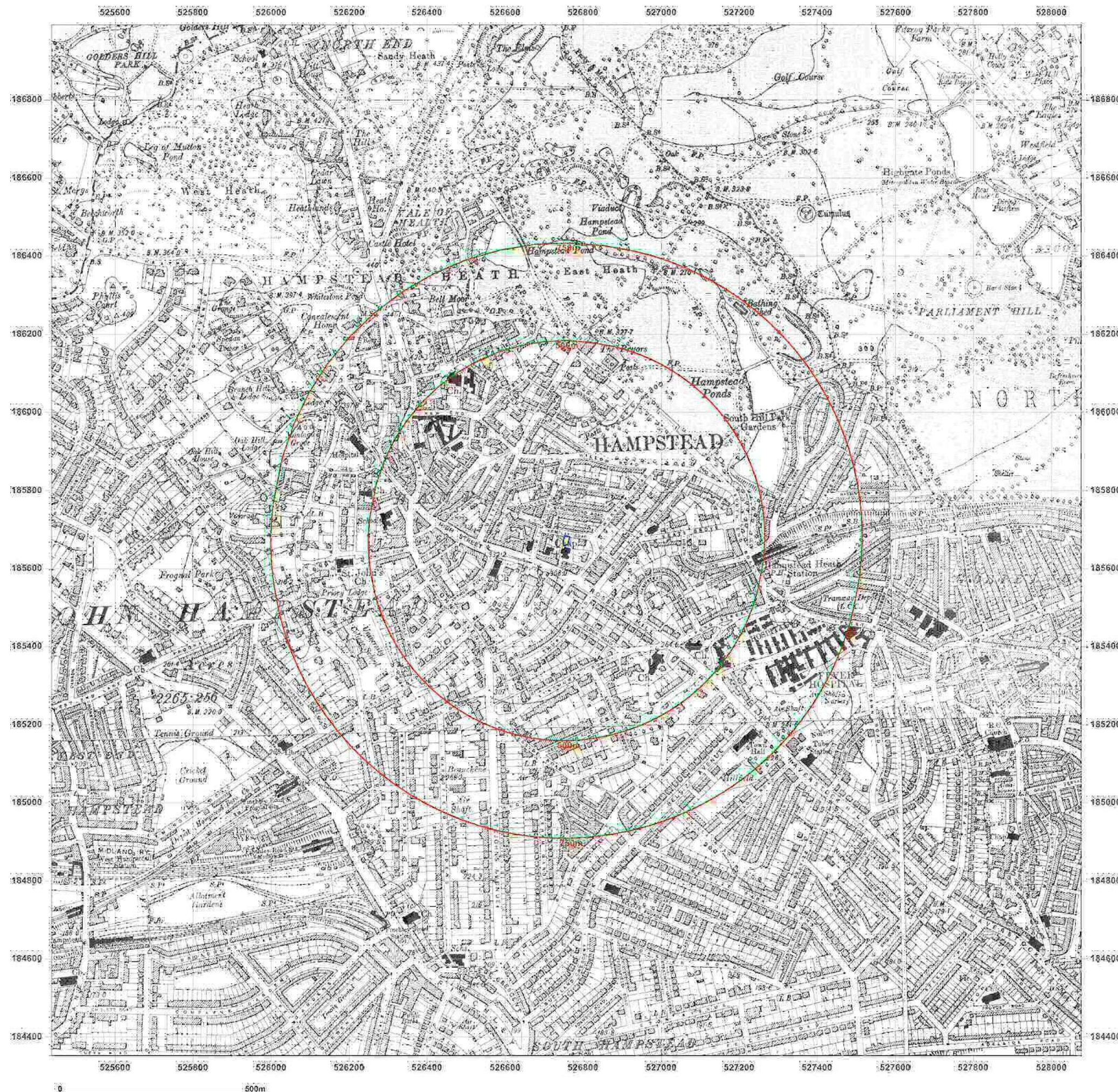


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Map Name: County Series

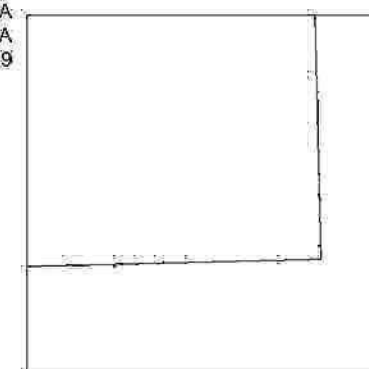
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Surveyed 1865
Revised 1938
Edition N/A
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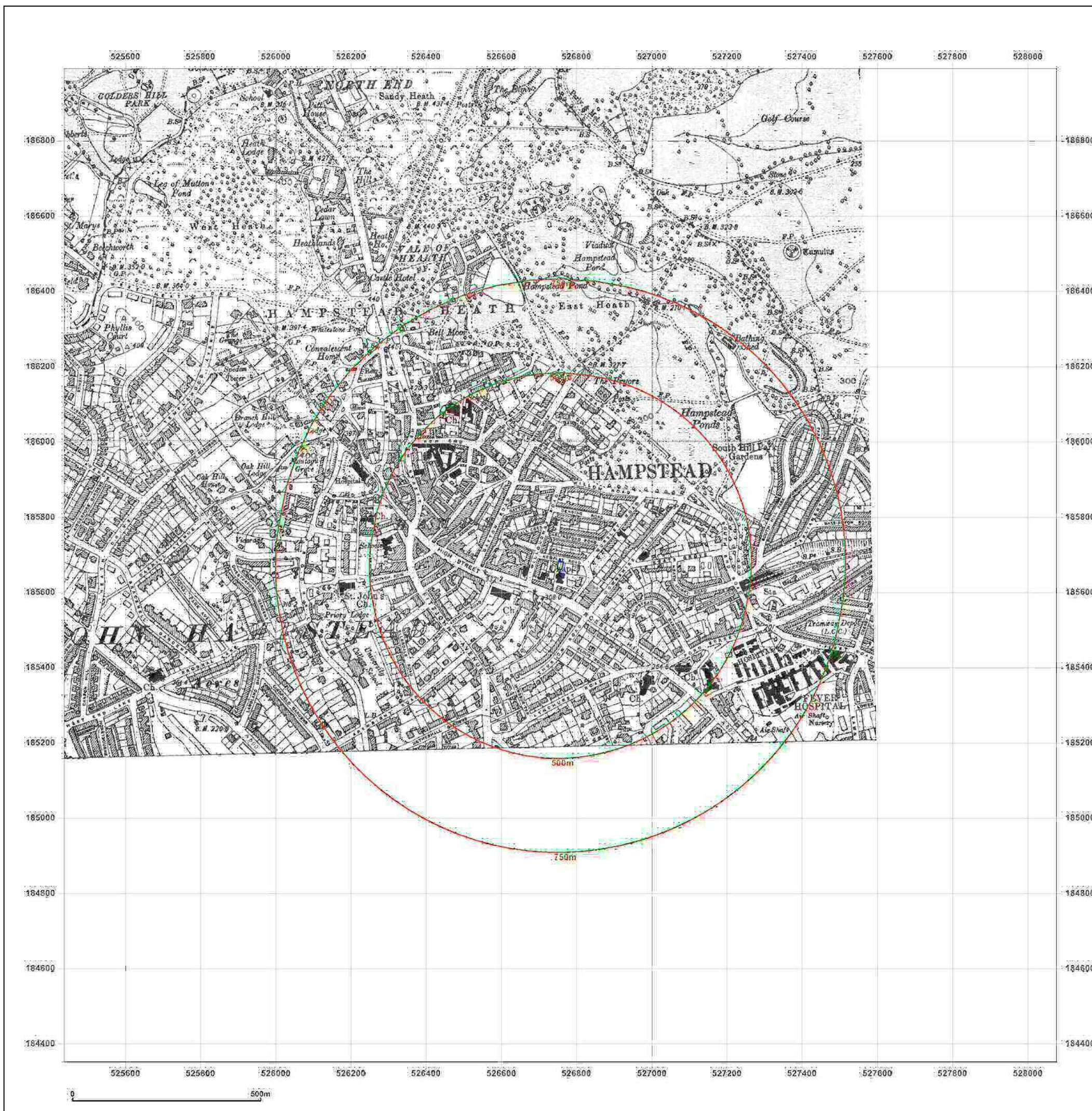


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Grid Ref: 526756, 185671

Map Name: Provisional

Map date: 1951

Scale: 1:10,560

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Map Name: Provisional

Map date: 1957-1958

Scale: 1:10,560

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Revised 1957
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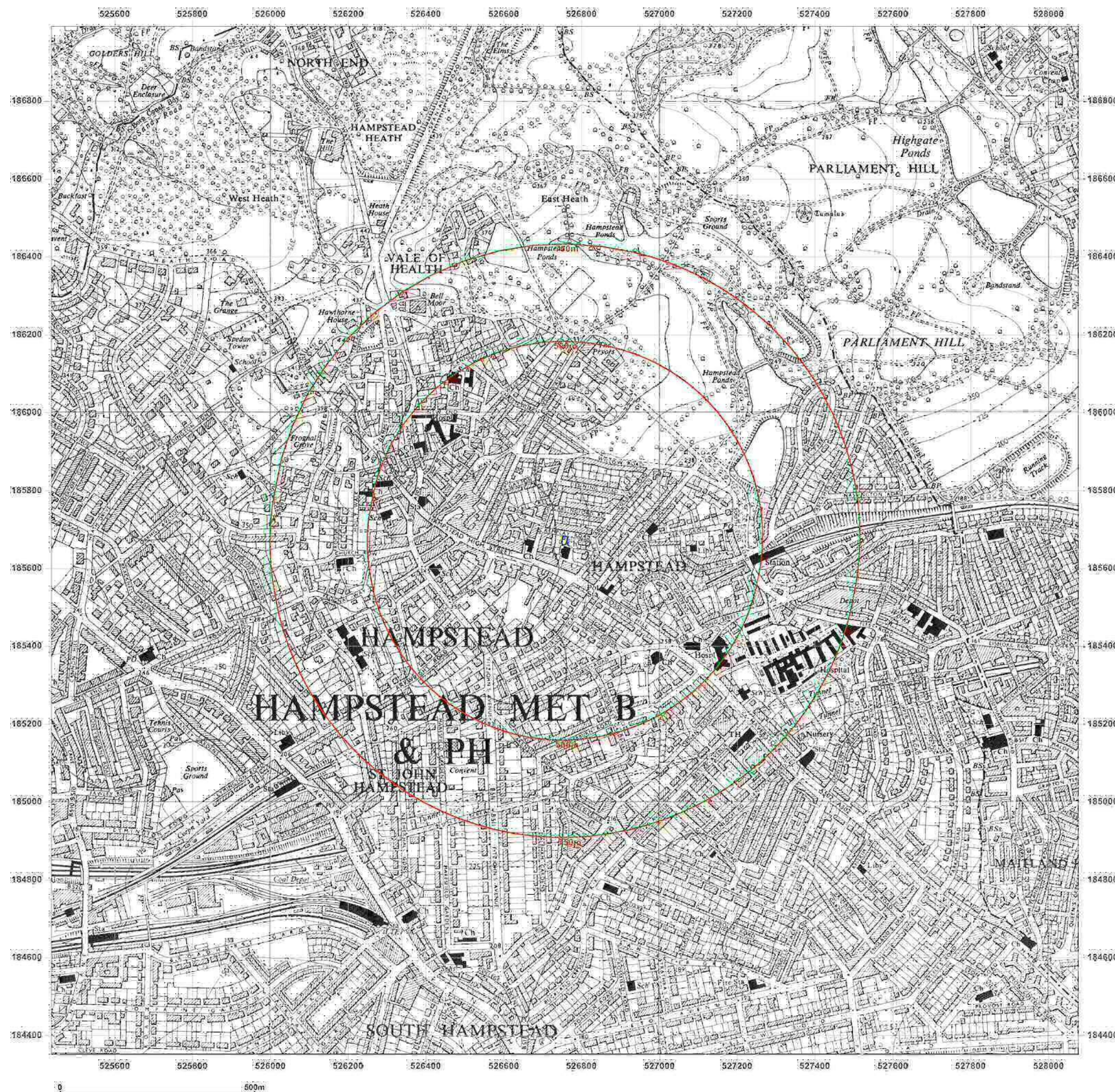


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Grid Ref: 526756, 185671

Map Name: Provisional

Map date: 1965-1968

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1968
Revised 1968
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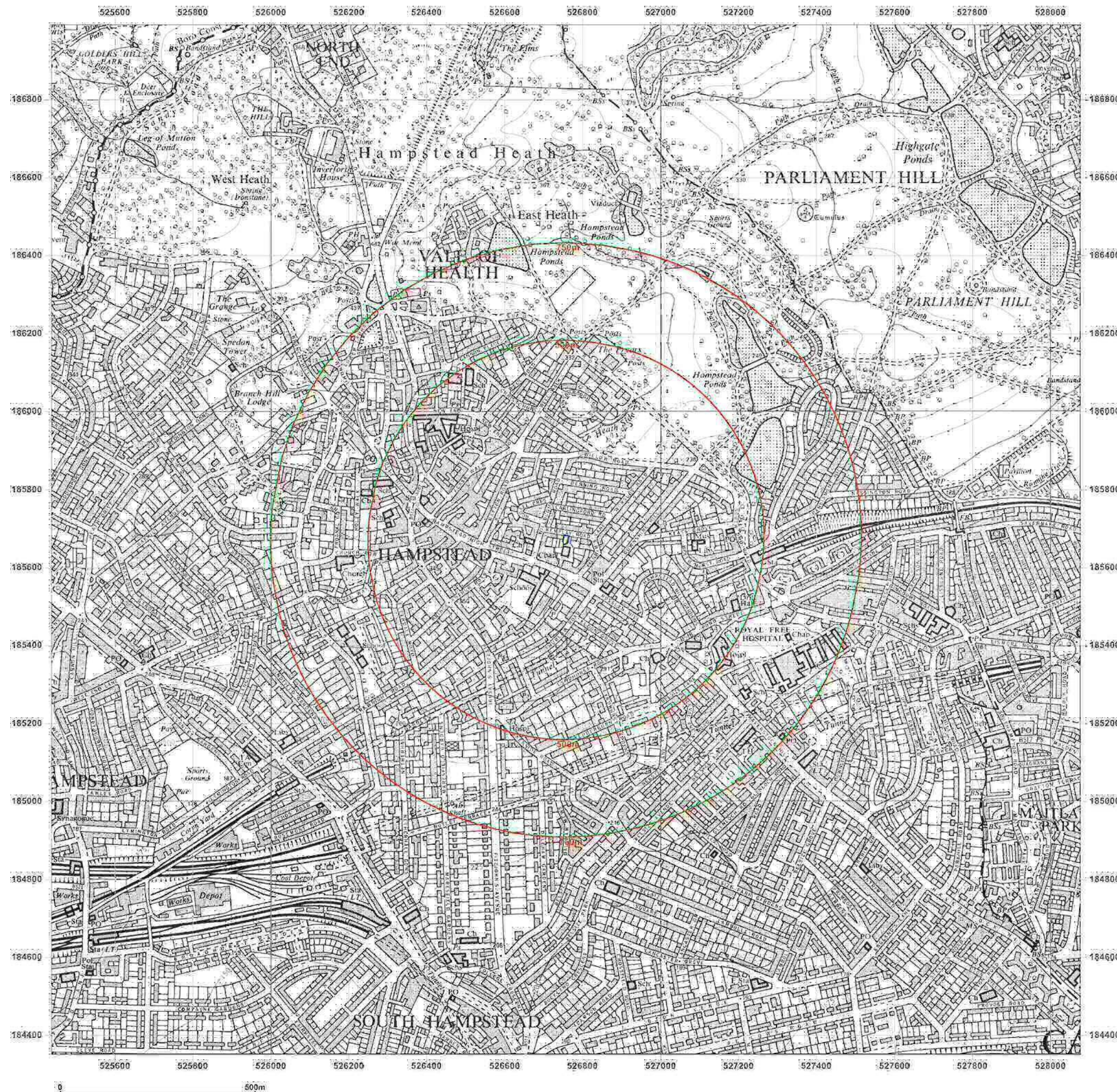


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Grid Ref: 526756, 185671

Map Name: National Grid

Map date: 1973-1974

Scale: 1:10,000

Printed at: 1:10,000



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Surveyed 1972
Revised 1973
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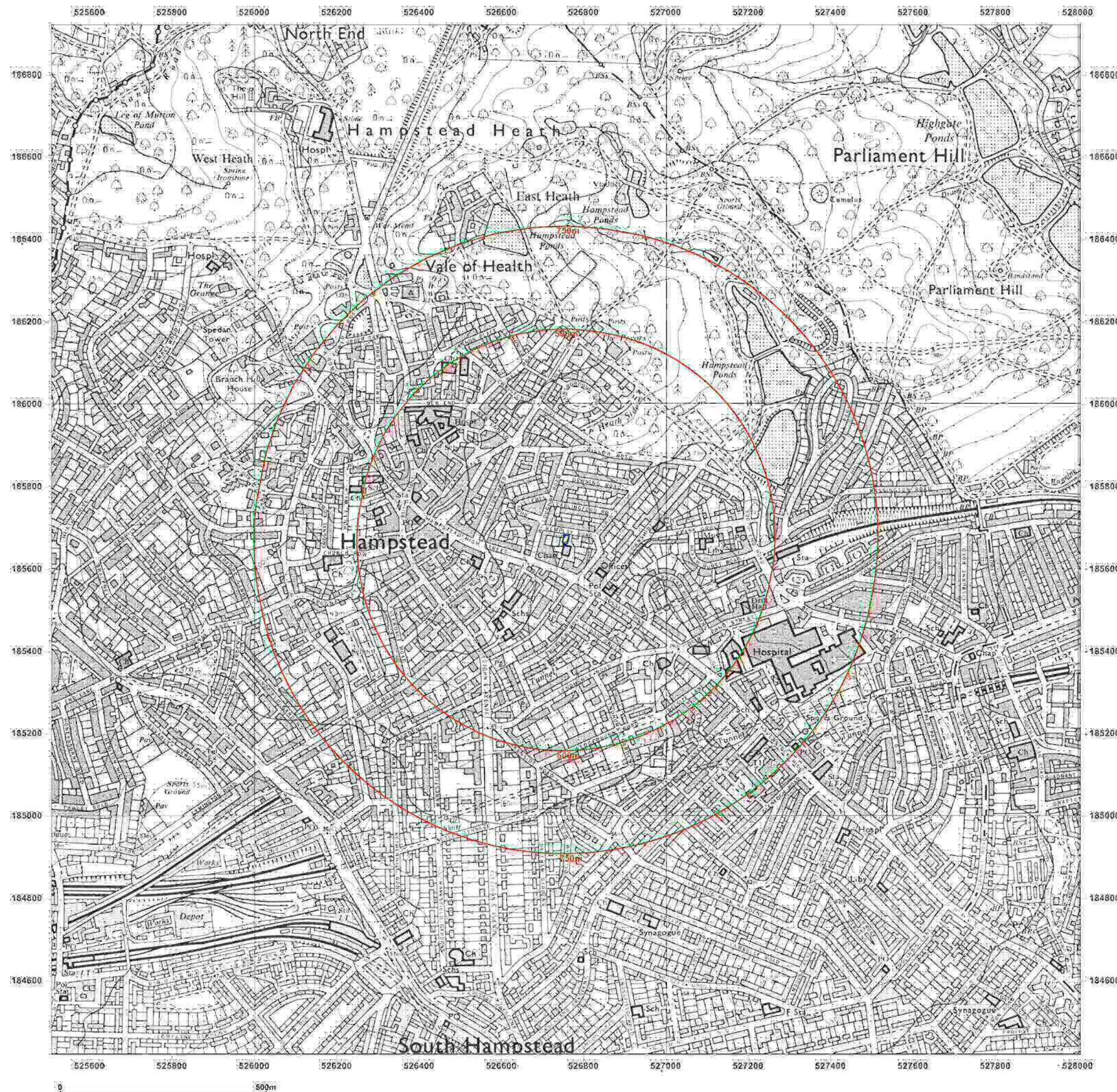


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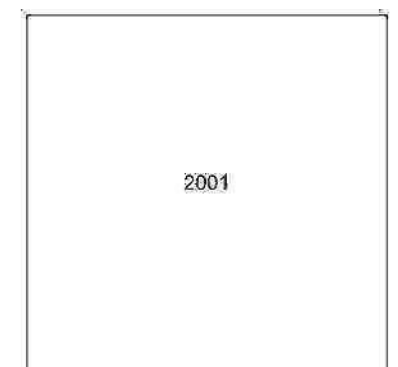
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Report Ref: GS-6827929
Grid Ref: 526756, 185671

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

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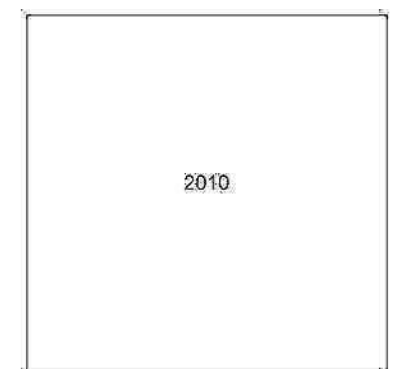
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Report Ref: GS-6827929
Grid Ref: 526756, 185671

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

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