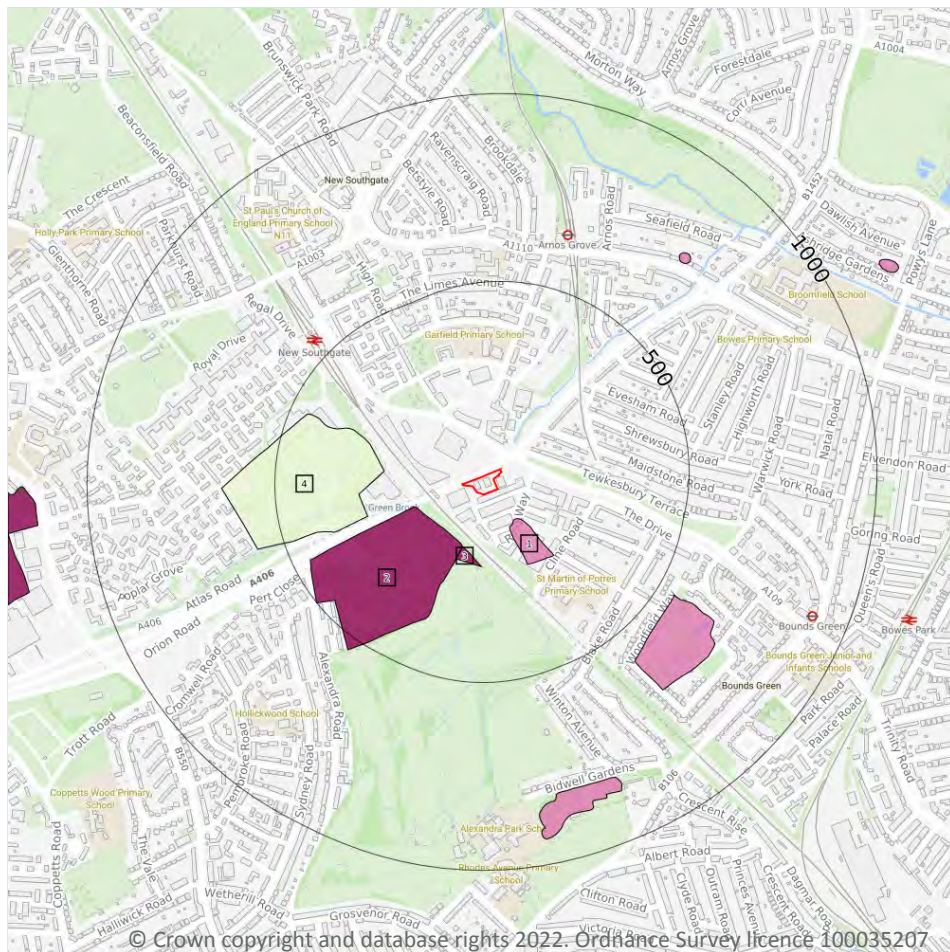


Geology 1:10,000 scale - Artificial and made ground



— Site Outline
Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

4

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 105**

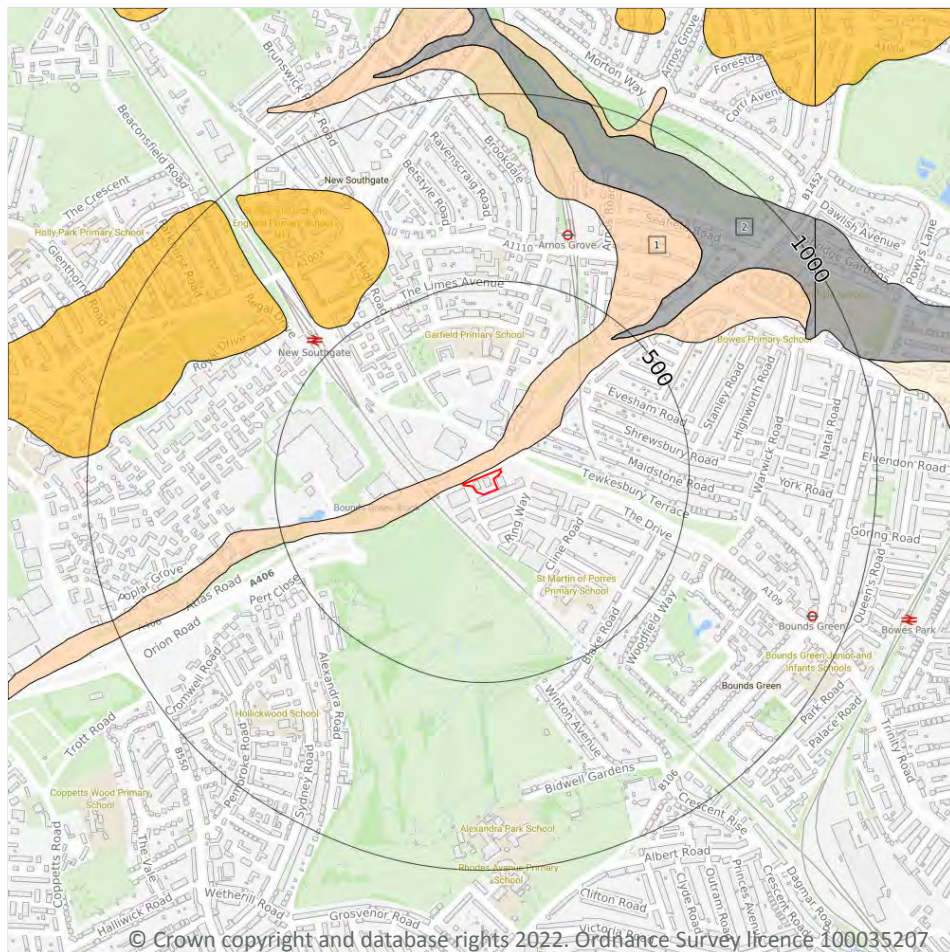
ID	Location	LEX Code	Description	Rock description
1	93m SE	WGR-UNKNOWN	Worked Ground (Undivided)	Unknown/unclassified Entry
2	124m SW	MGR-UNKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
3	149m S	MGR-UNKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry
4	212m W	WMGR-UNKNOWN	Infilled Ground	Unknown/unclassified Entry



This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

2

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 107**

ID	Location	LEX Code	Description	Rock description
1	3m W	RTDU-XSV	River Terrace Deposits (undifferentiated) - Sand And Gravel	Sand And Gravel
2	455m NE	ALV-C	Alluvium - Clay (unlithified Deposits Coding Scheme)	Clay

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

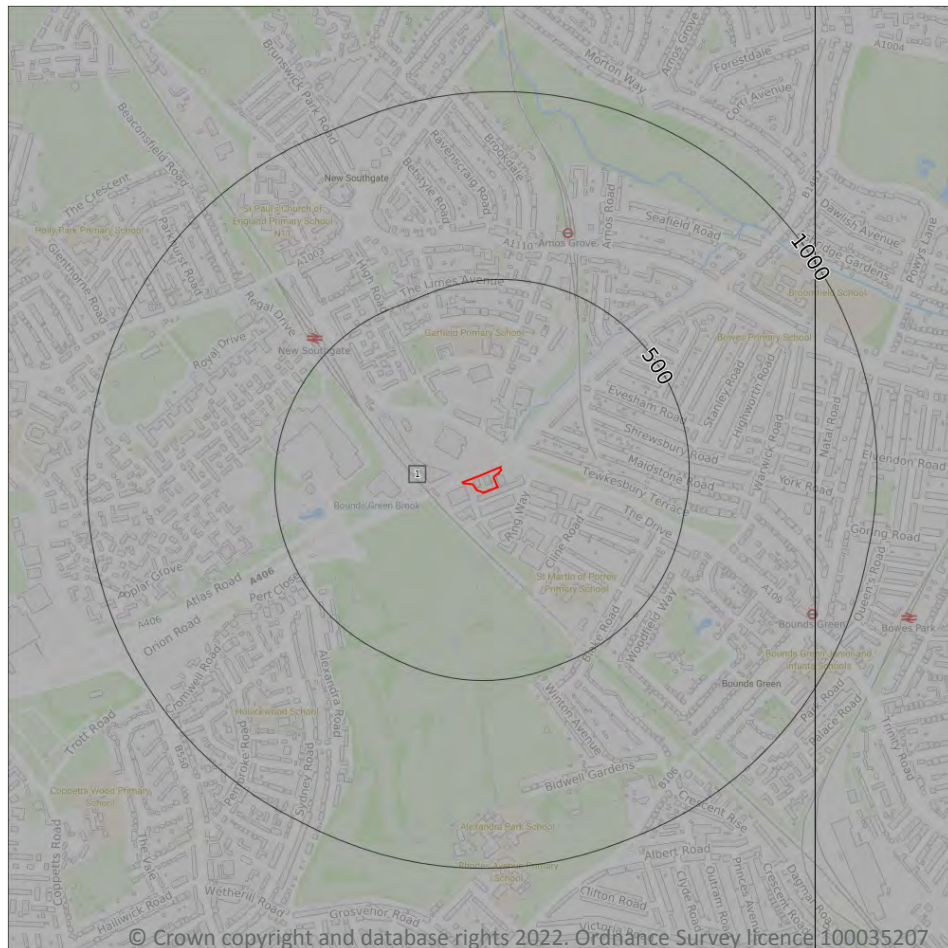
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 109**

ID	Location	LEX Code	Description	Rock age
1	On site	LC-CLAY	London Clay Formation - Clay	Eocene Epoch

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

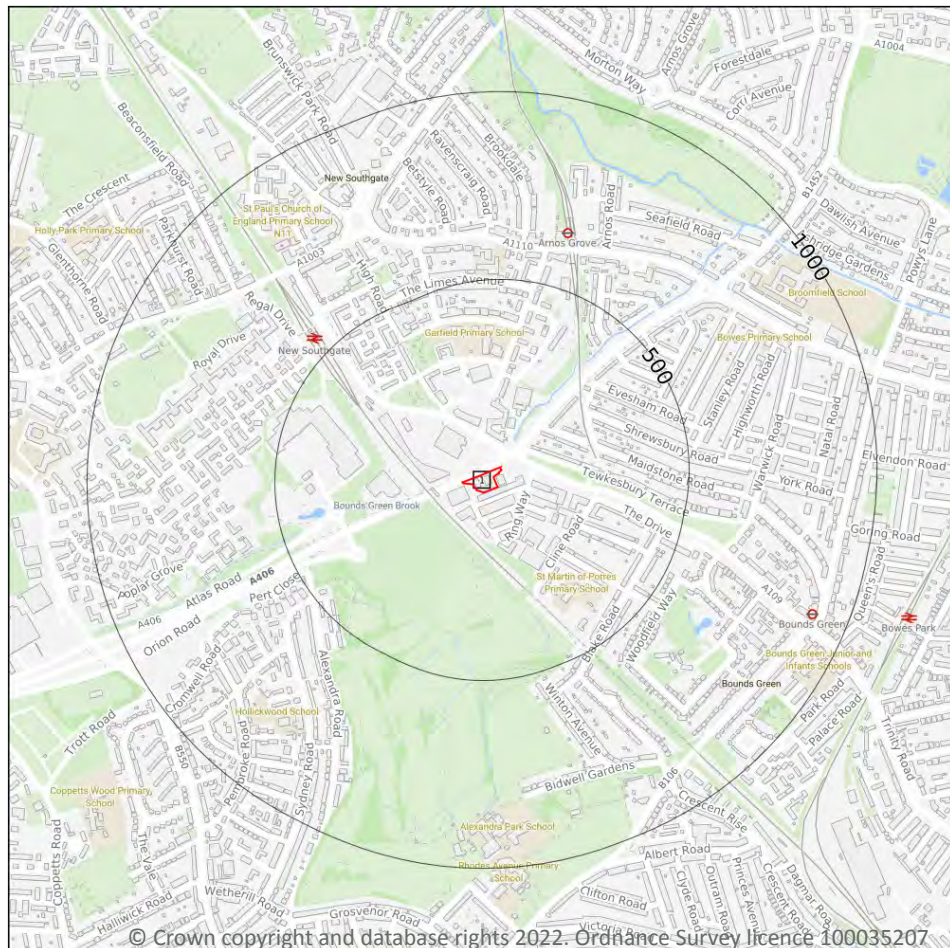
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

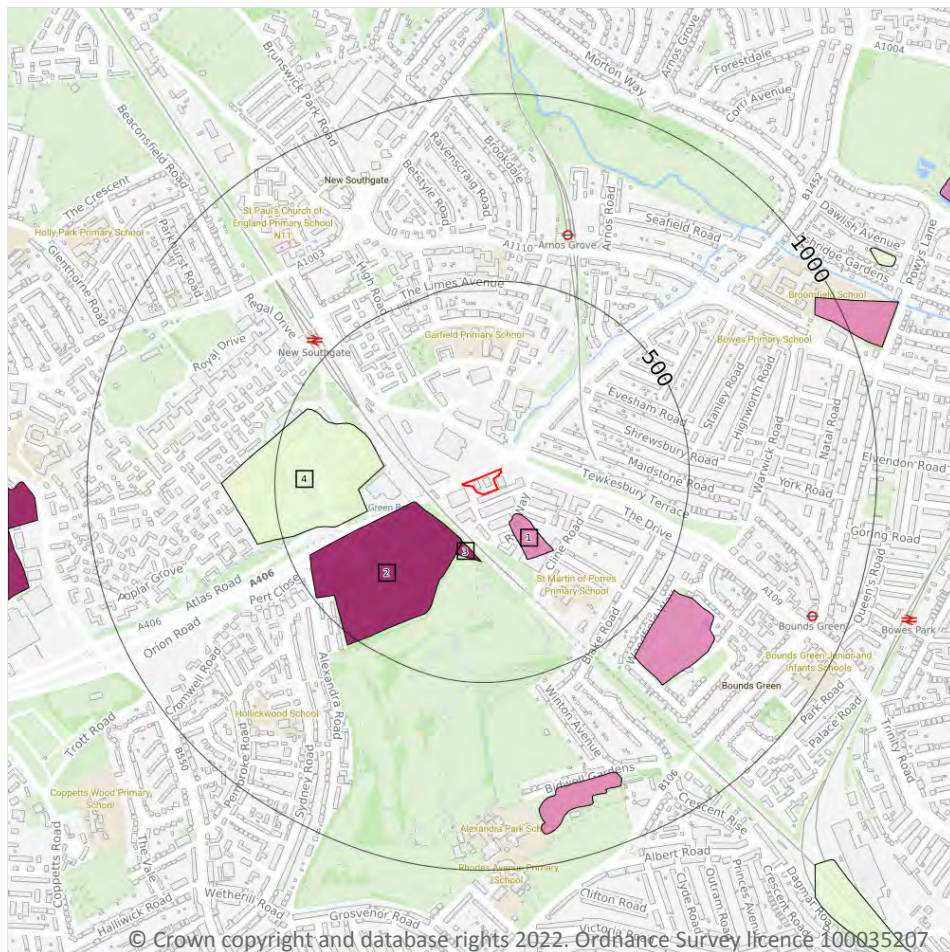
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 111**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW256_north_london_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



- Site Outline**
- Search buffers in metres (m)**
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

4

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 112**

ID	Location	LEX Code	Description	Rock description
1	81m SE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
2	113m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	137m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	215m W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT



This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

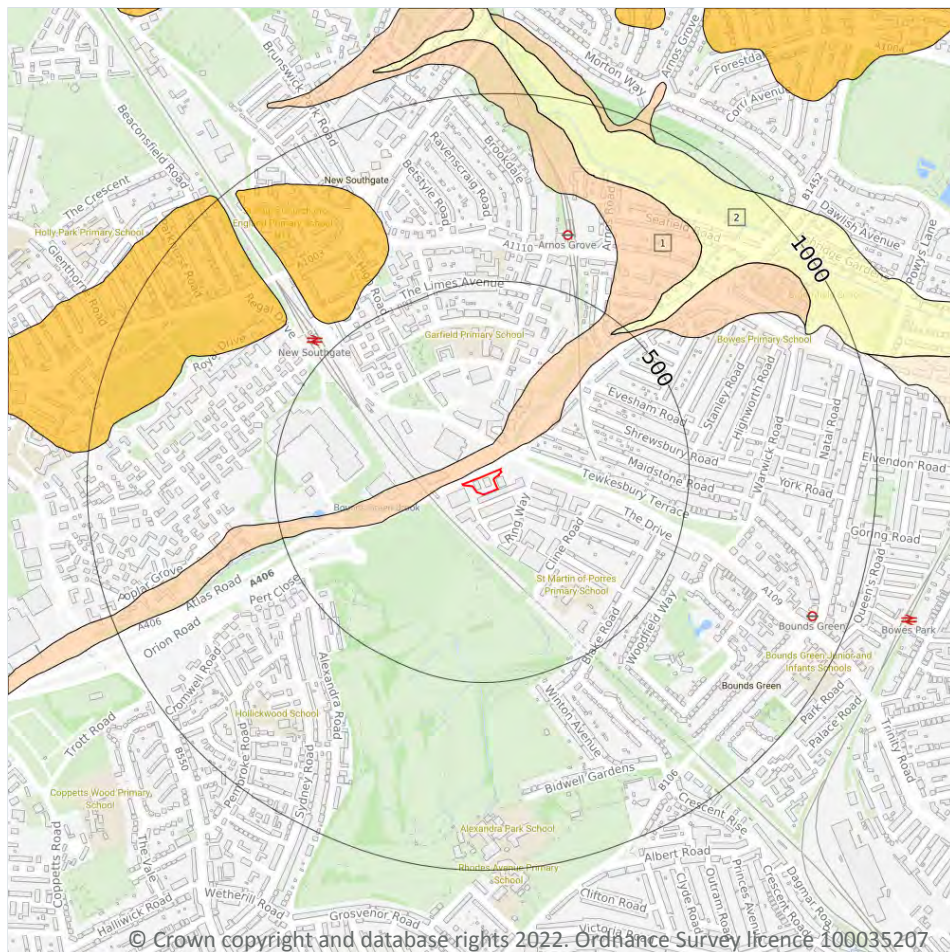
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



— Site Outline
Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

2

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 114**

ID	Location	LEX Code	Description	Rock description
1	16m W	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
2	465m NE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
16m W	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

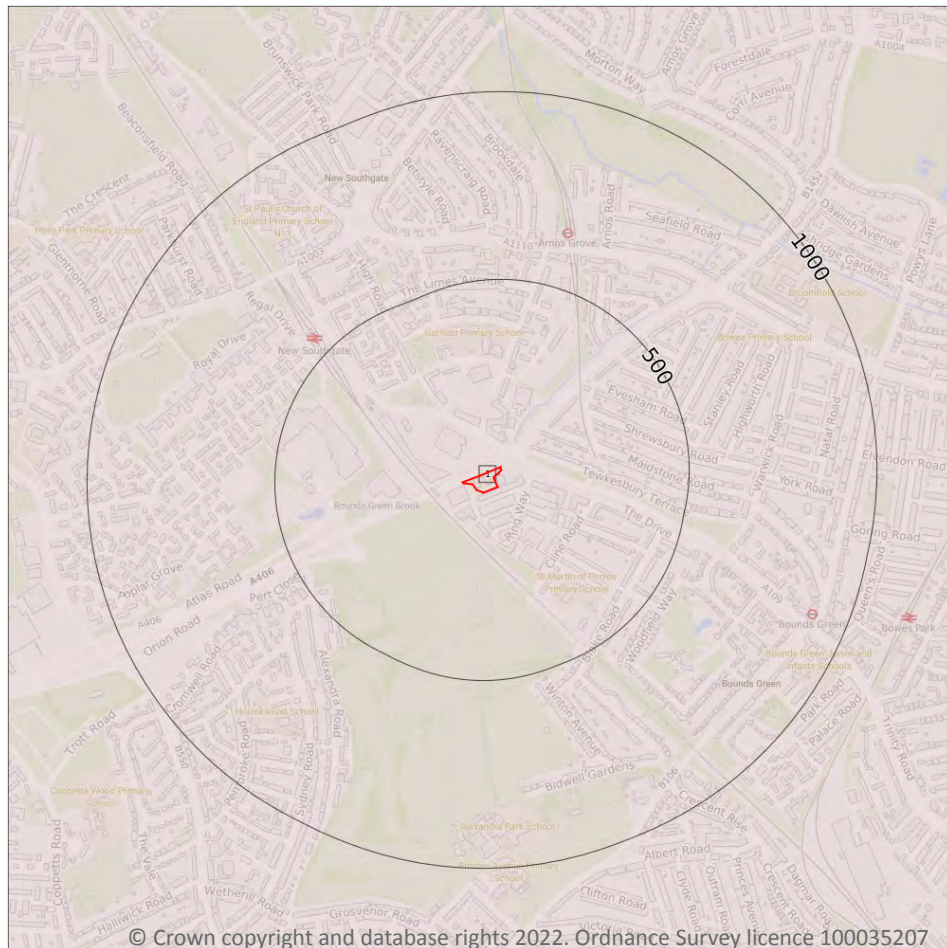
Records within 50m**0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 116**

ID	Location	LEX Code	Description	Rock age
1	On site	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	YPRESIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m

1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Moderate	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

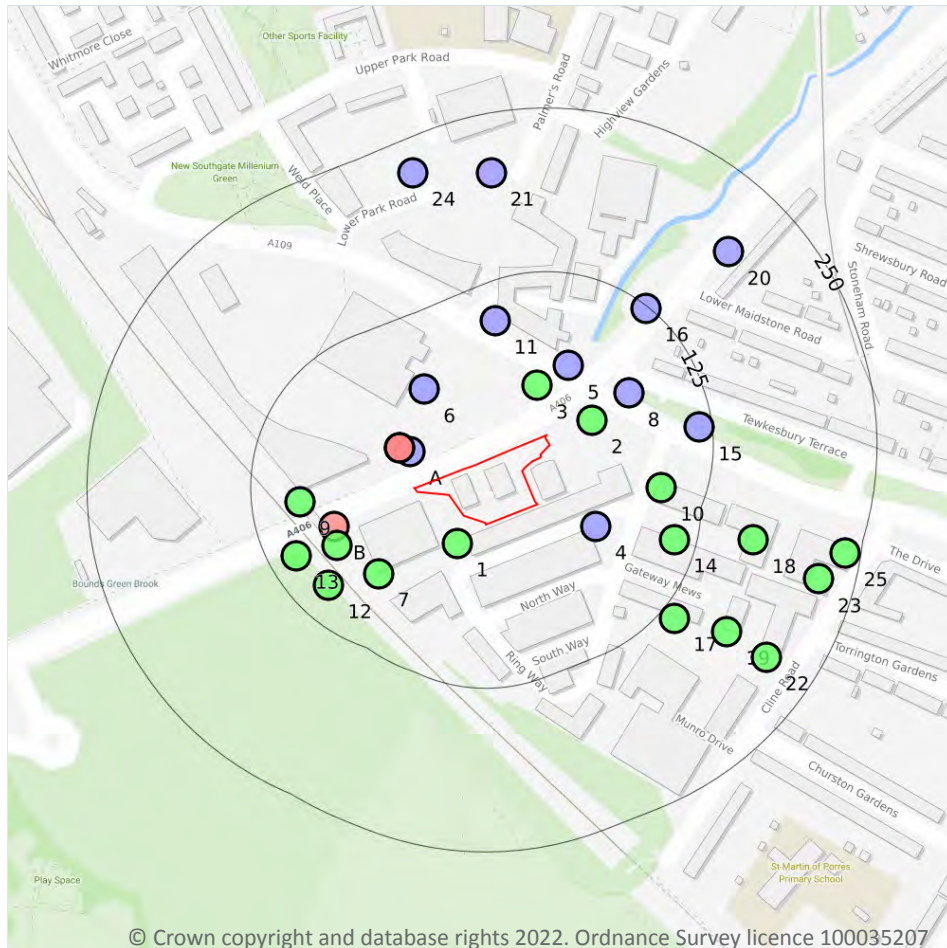
0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

30

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 118**

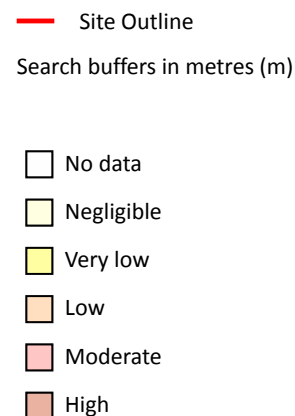
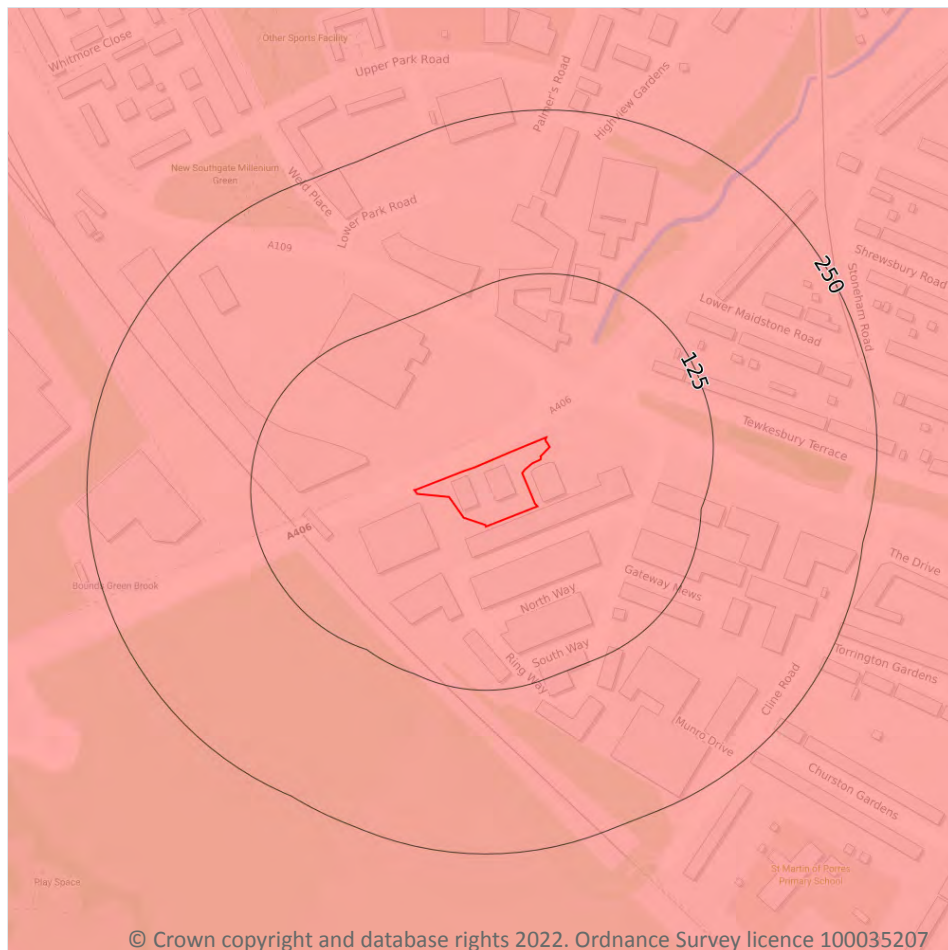
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	22m SW	529094 191787	A406 NORTH CIRCULAR RD 6	30.0	N	593901
A	27m W	529058 191857	A406 NORTH CIRCULAR RD TP 7	1.0	N	593902

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	33m W	529050 191860	SOUTHGATE GASWORKS	152.3	N	593944
A	33m W	529050 191860	SOUTHGATE GAS CO	106.68	N	593935
2	37m NE	529197 191881	A406 NORTH CIRCULAR RD 10	20.0	N	593905
3	39m NE	529155 191908	A406 NORTH CIRCULAR RD 9	20.0	N	593904
4	48m E	529200 191800	BOUNDS GREEN RD/CLINE RD TP1-9	3.0	N	593893
5	56m NE	529179 191923	A406 NORTH CIRCULAR RD TP 12	2.0	N	593907
6	68m NW	529069 191905	A406 NORTH CIRCULAR RD TP 8	1.0	N	593903
B	68m W	529000 191800	STATION ROAD SOUTHGATE	152.4	N	593936
7	69m SW	529034 191764	A406 NORTH CIRCULAR RD 5	20.0	N	593900
8	71m NE	529225 191902	A406 NORTH CIRCULAR RD TP 13	3.0	N	593908
B	74m W	529002 191786	A406 NORTH CIRCULAR RD 3	20.0	N	593898
9	88m W	528974 191819	A406 NORTH CIRCULAR RD 4	20.0	N	593899
10	91m E	529250 191830	BOUNDS GREEN RD/CLINE RD D	12.5	N	593888
11	96m N	529123 191957	A406 NORTH CIRCULAR RD TP 11	2.0	N	593906
12	98m SW	528996 191755	A406 NORTH CIRCULAR RD 2	20.0	N	593897
13	104m W	528971 191778	A406 NTH CIRCULAR ROAD BH1	30.0	N	593896
14	108m E	529260 191790	BOUNDS GREEN RD/CLINE RD C	10.5	N	593887
15	115m E	529279 191876	A406 NORTH CIRCULAR RD TP 14	2.0	N	593909
16	123m NE	529238 191967	A406 NORTH CIRCULAR RD TP 15	3.0	N	593910
17	136m SE	529260 191730	BOUNDS GREEN RD/CLINE RD F	10.54	N	593890
18	167m E	529320 191790	BOUNDS GREEN RD/CLINE RD G	10.5	N	593891
19	174m SE	529300 191720	BOUNDS GREEN RD/CLINE RD H	10.5	N	593892
20	197m NE	529301 192010	A406 NORTH CIRCULAR RD TP 16	2.0	N	593911
21	205m N	529120 192070	LOWER PARK ROAD SOUTHGATE BH4	8.83	N	12710017
22	210m SE	529330 191700	BOUNDS GREEN RD/CLINE RD A	20.0	N	593885
23	222m E	529370 191760	BOUNDS GREEN RD/CLINE RD B	10.5	N	593886
24	224m N	529060 192070	LOWER PARK ROAD SOUTHGATE BH3	6.55	N	12710016
25	238m E	529390 191780	BOUNDS GREEN RD/CLINE RD E	10.5	N	593889

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

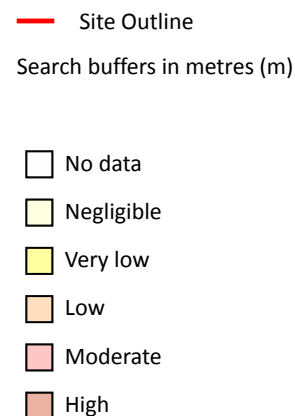
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 120**

Location	Hazard rating	Details
On site	Moderate	Ground conditions predominantly high plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

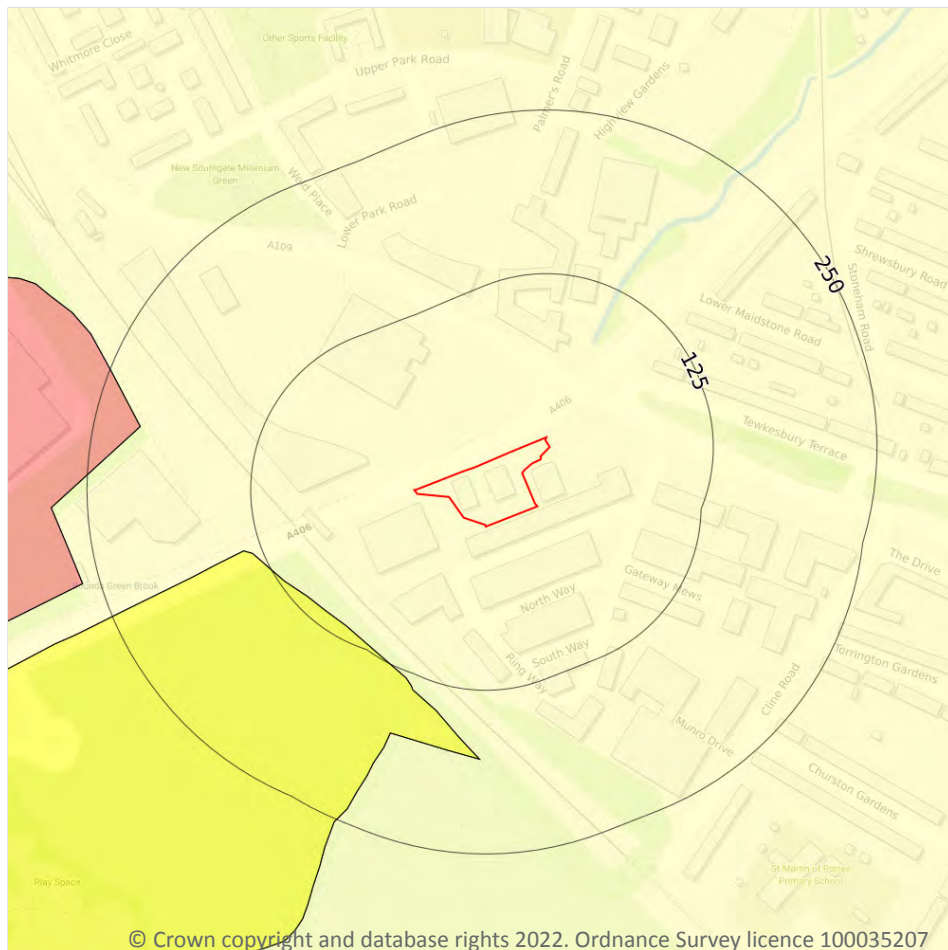
Features are displayed on the Natural ground subsidence - Running sands map on **page 121**

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline**
- Search buffers in metres (m)**
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 122**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline**
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

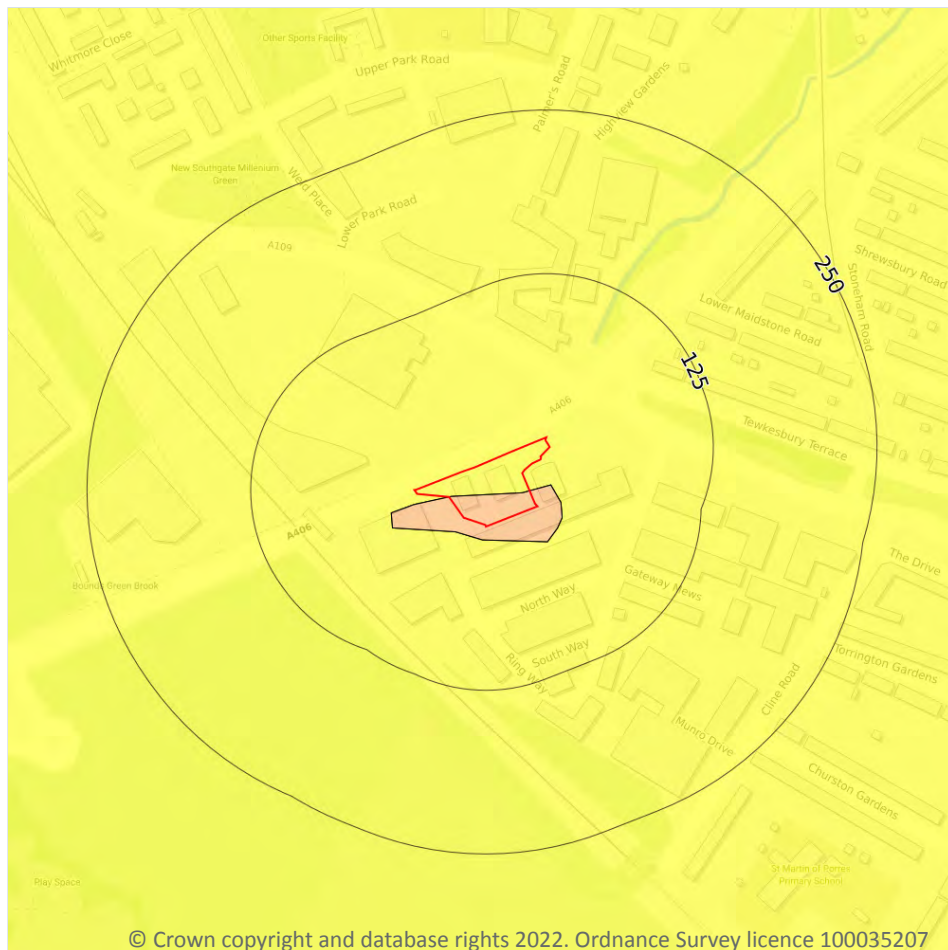
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 123**

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 124**

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

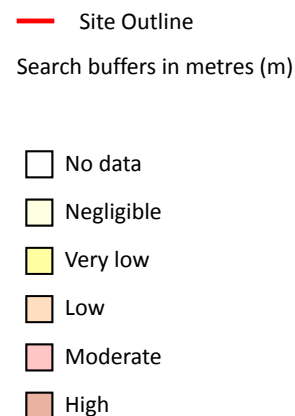


Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

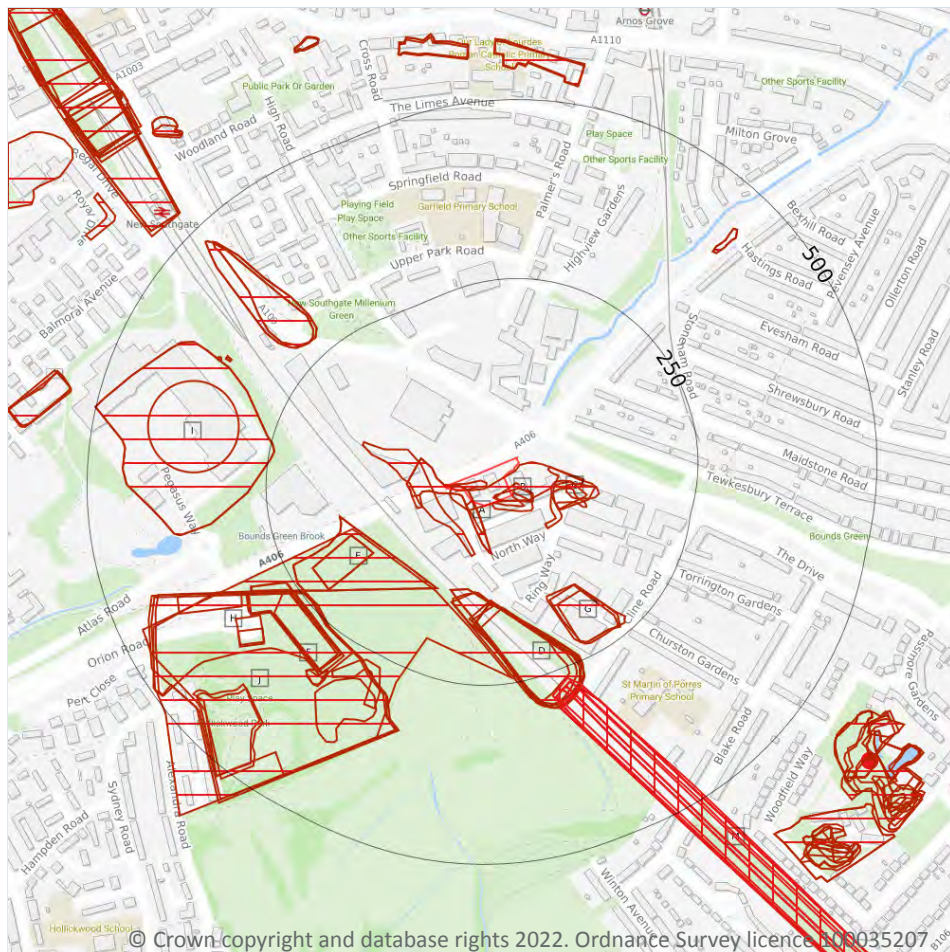
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 126**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

38

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 128**

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Ground Workings	1938	1:10560
A	On site	Unspecified Ground Workings	1938	1:10560
A	On site	Unspecified Ground Workings	1912	1:10560
A	On site	Unspecified Ground Workings	1920	1:10560
B	On site	Unspecified Pit	1938	1:10560
B	On site	Unspecified Pit	1951	1:10560
B	On site	Unspecified Ground Workings	1962	1:10560
B	0m S	Unspecified Ground Workings	1938	1:10560
A	18m W	Unspecified Ground Workings	1895	1:10560
C	42m E	Unspecified Ground Workings	1938	1:10560
C	54m E	Unspecified Ground Workings	1938	1:10560
C	55m E	Unspecified Heap	1951	1:10560
C	73m E	Refuse Heap	1962	1:10560
D	118m S	Cuttings	1879	1:10560
D	118m S	Cuttings	1869	1:10560
E	120m SW	Sewage Works	1912	1:10560
E	120m SW	Sewage Works	1920	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	121m S	Cuttings	1911	1:10560
D	121m S	Cuttings	1894	1:10560
F	124m SW	Sewage Works	1951	1:10560
D	132m S	Cuttings	1938	1:10560
D	134m S	Cuttings	1987	1:10000
D	134m S	Cuttings	1980	1:10000
D	134m S	Cuttings	1962	1:10560
D	134m S	Cuttings	1973	1:10000
E	136m SW	Filter Beds	1912	1:10560
E	136m SW	Filter Beds	1920	1:10560
D	138m S	Cuttings	1920	1:10560
D	144m S	Cuttings	1951	1:10560
G	149m SE	Unspecified Pit	1911	1:10560
G	152m SE	Unspecified Pit	1894	1:10560
G	163m SE	Unspecified Pit	1920	1:10560
H	243m SW	Sewage Works	1920	1:10560
I	243m W	Refuse Heap	1980	1:10000
I	243m W	Refuse Heap	1973	1:10000
J	244m SW	Sewage Works	1938	1:10560
J	246m SW	Sewage Works	1911	1:10560
J	246m SW	Sewage Works	1894	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

11

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining, ground workings and natural cavities map on **page 128**



ID	Location	Land Use	Year of mapping	Mapping scale
M	266m S	Tunnels	1894	1:10560
M	271m SE	Tunnels	1913	1:10560
M	271m SE	Tunnels	1938	1:10560
M	276m S	Tunnel	1869	1:10560
M	276m S	Tunnel	1879	1:10560
M	276m S	Tunnel	1879	1:10560
M	285m SE	Tunnel	1987	1:10000
M	285m SE	Tunnel	1980	1:10000
M	285m SE	Tunnel	1962	1:10560
M	285m SE	Tunnel	1973	1:10000
M	285m SE	Tunnels	1940	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.



18.7 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site

0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site

0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.13 Clay mining

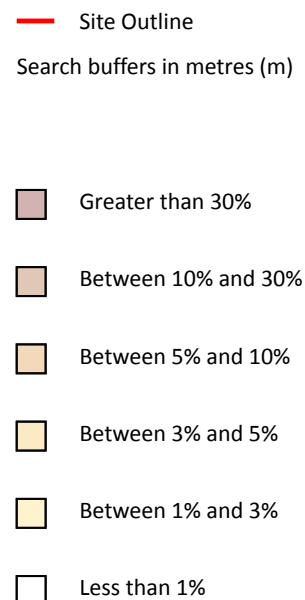
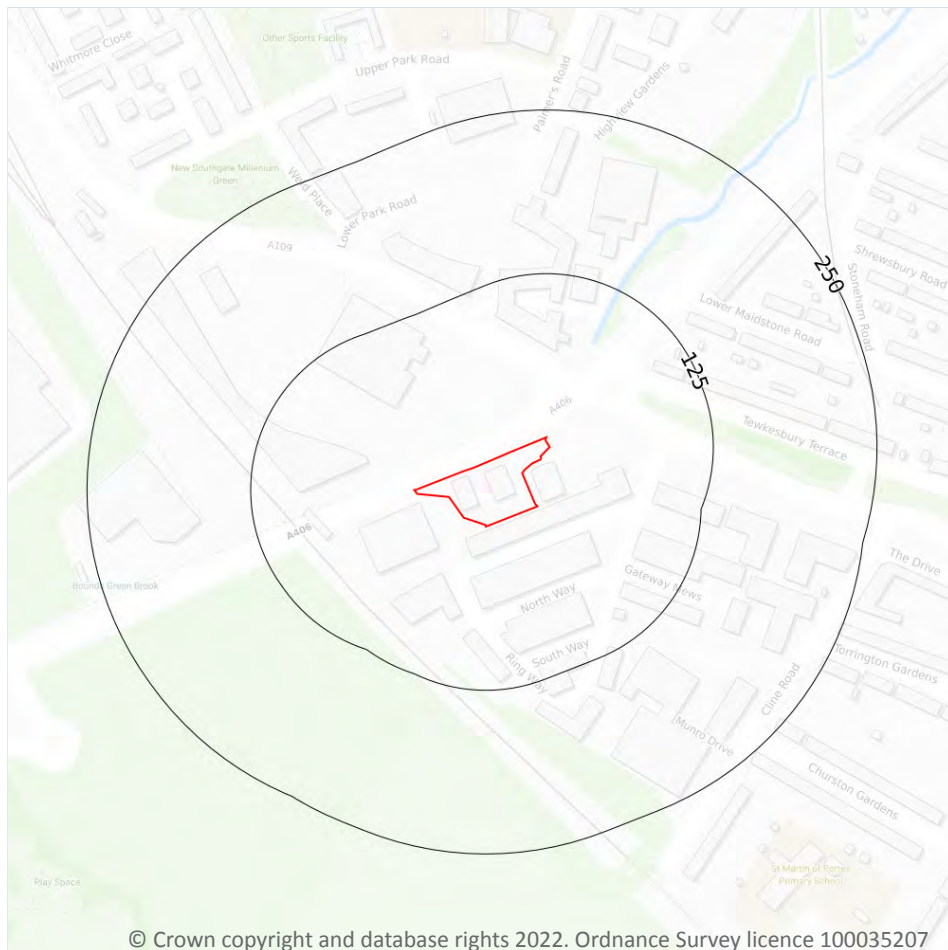
Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 134**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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
16m W	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

8

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	43	7.5	643	442	1.3	93	141	34	35
On site	70	12.3	1207	829	1.5	103	212	39	51
2m S	56	9.8	887	609	1.3	98	167	36	45
8m SW	37	6.5	482	331	1.2	92	114	31	32
30m NE	61	10.7	1059	728	1.5	100	195	38	47
35m E	78	13.6	1400	962	1.6	106	238	40	54
48m E	64	11.2	1143	785	1.4	103	196	38	51



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)
49m NE	70	12.3	1274	875	1.5	103	218	39	52

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

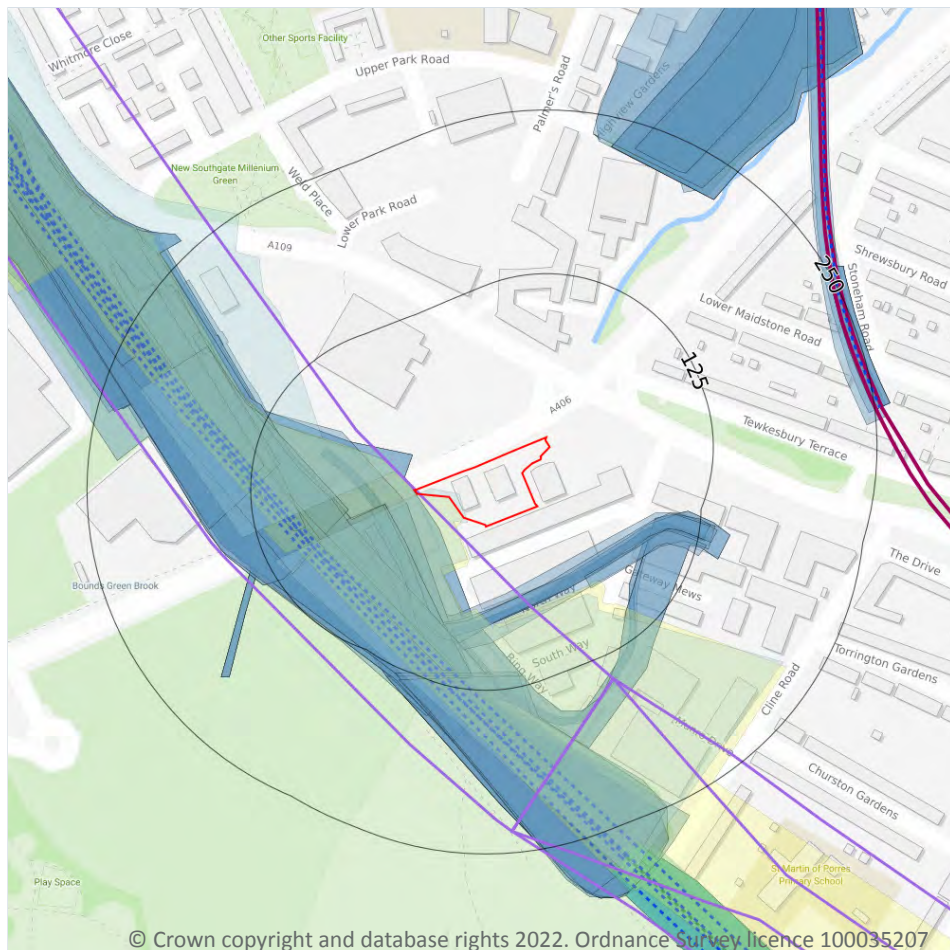
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The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

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
- 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 137**

Location	Line Name	Line Section	Track Type	Depth (m bgl)	Operational hours
243m NE	Piccadilly Line	Piccadilly Line	Surface Track	0	Mon-Thu: Early 0449 Late 0059, Fri-Sat: 24hr service, Sun: Late 0056

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

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

82

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 137**

Location	Land Use	Year of mapping	Mapping scale
1m W	Railway Sidings	1980	10000
1m W	Railway Sidings	1973	10000
11m W	Mineral Railway Sidings	1962	10560
11m W	Railway Sidings	1962	10560
24m W	Mineral Railway Sidings	1969	2500
25m W	Railway Sidings	1938	10560
25m W	Railway Sidings	1912	10560
25m W	Railway Sidings	1920	10560
25m W	Tramway Sidings	1938	10560
26m W	Mineral Railway Sidings	1967	1250
26m W	Tramway Sidings	1951	10560
27m W	Mineral Railway Sidings	1950	1250



Location	Land Use	Year of mapping	Mapping scale
27m W	Railway Sidings	1969	2500
28m W	Mineral Railway Sidings	1950	2500
28m W	Railway Sidings	1950	2500
28m W	Railway Sidings	1967	1250
28m W	Railway Sidings	1950	1250
32m W	Tramway Sidings	1936	2500
36m W	Railway Sidings	1936	2500
40m W	Railway Sidings	1938	10560
53m W	Railway Sidings	1866	10560
53m W	Railway Sidings	1864	10560
53m SW	Railway Sidings	1951	10560
62m W	Railway Sidings	1913	2500
64m W	Railway Sidings	1968	1250
64m W	Railway Sidings	1950	1250
65m SE	Tramway Sidings	1938	10560
66m SW	Railway	1913	-
66m SW	Railway	1936	-
66m SW	Railway	1896	-
66m SW	Railway Sidings	1896	2500
66m W	Railway Sidings	1950	2500
68m W	Railway Sidings	1950	2500
70m W	Railway Sidings	1968	1250
71m W	Railway Sidings	1950	1250
71m SW	Railway Sidings	1898	2500
72m SW	Railway Sidings	1898	10560
75m W	Railway Sidings	1914	2500
81m W	Railway Sidings	1866	2500
81m W	Railway Sidings	1864	10560



Location	Land Use	Year of mapping	Mapping scale
88m W	Railway Sidings	1938	10560
105m W	Railway Sidings	1895	10560
112m S	Railway Sidings	1938	10560
115m S	Railway Sidings	1920	10560
115m W	Railway Sidings	1914	2500
115m W	Railway Sidings	1936	2500
115m W	Railway Sidings	1938	2500
116m W	Railway Sidings	1897	10560
117m S	Railway	1935	-
117m S	Railway	1880	-
118m S	Railway Sidings	1896	2500
120m S	Railway Sidings	1913	2500
120m S	Railway Sidings	1935	2500
167m W	Railway Sidings	1867	2500
215m NE	Railway Sidings	1951	10560
220m NE	Railway Sidings	1962	10560
220m NE	Railway Sidings	1987	10000
220m NE	Railway Sidings	1980	10000
220m NE	Railway Sidings	1973	10000
222m W	Railway Sidings	1913	2500
223m NE	Railway Sidings	1938	10560
227m NE	Railway Sidings	1938	10560
228m NE	Railway Sidings	1992	1250
228m W	Railway Sidings	1969	2500
229m W	Railway Sidings	1950	2500
230m NE	Railway Sidings	1936	2500
230m NE	Railway Sidings	1973	1250
230m NE	Railway Sidings	1961	1250



Location	Land Use	Year of mapping	Mapping scale
230m NE	Railway Sidings	1950	1250
230m W	Railway Sidings	1896	2500
231m NE	Railway Sidings	1950	2500
231m W	Railway Sidings	1968	1250
232m W	Railway Sidings	1992	1250
233m W	Railway Sidings	1950	1250
233m W	Railway Sidings	1914	2500
233m W	Railway Sidings	1898	2500
233m W	Railway Sidings	1936	2500
236m W	Railway Sidings	1938	10560
241m E	Railway Sidings	1969	2500
241m E	Railway Sidings	1950	2500
245m W	Railway Sidings	1968	1250
245m W	Railway Sidings	1950	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

10

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

Features are displayed on the Railway infrastructure and projects map on **page 137**

Location	Name	Type
81m SW	East Coast Main Line	rail
85m SW	East Coast Main Line	rail
86m SW	Not given	Multi Track
88m SW	East Coast Main Line	rail
93m SW	East Coast Main Line	rail
128m S	Not given	Multi Track
181m W	Not given	Multi Track
237m W	Not given	Multi Track
245m E	Not given	Multi Track
246m E	Not given	Multi Track

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

3

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

Features are displayed on the Railway infrastructure and projects map on **page 137**



Location	Route Type	Name	Under consultation
On site	Tunnelled route	Central Core	No
144m SE	Tunnelled route	Option via Wood Green	Yes
144m SE	Tunnelled route	Option via Turnpike Lane and Alexandra Palace	Yes

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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Grid Ref: 529113, 191836

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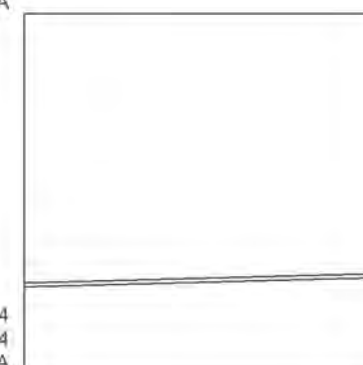
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Scale: 1:2,500

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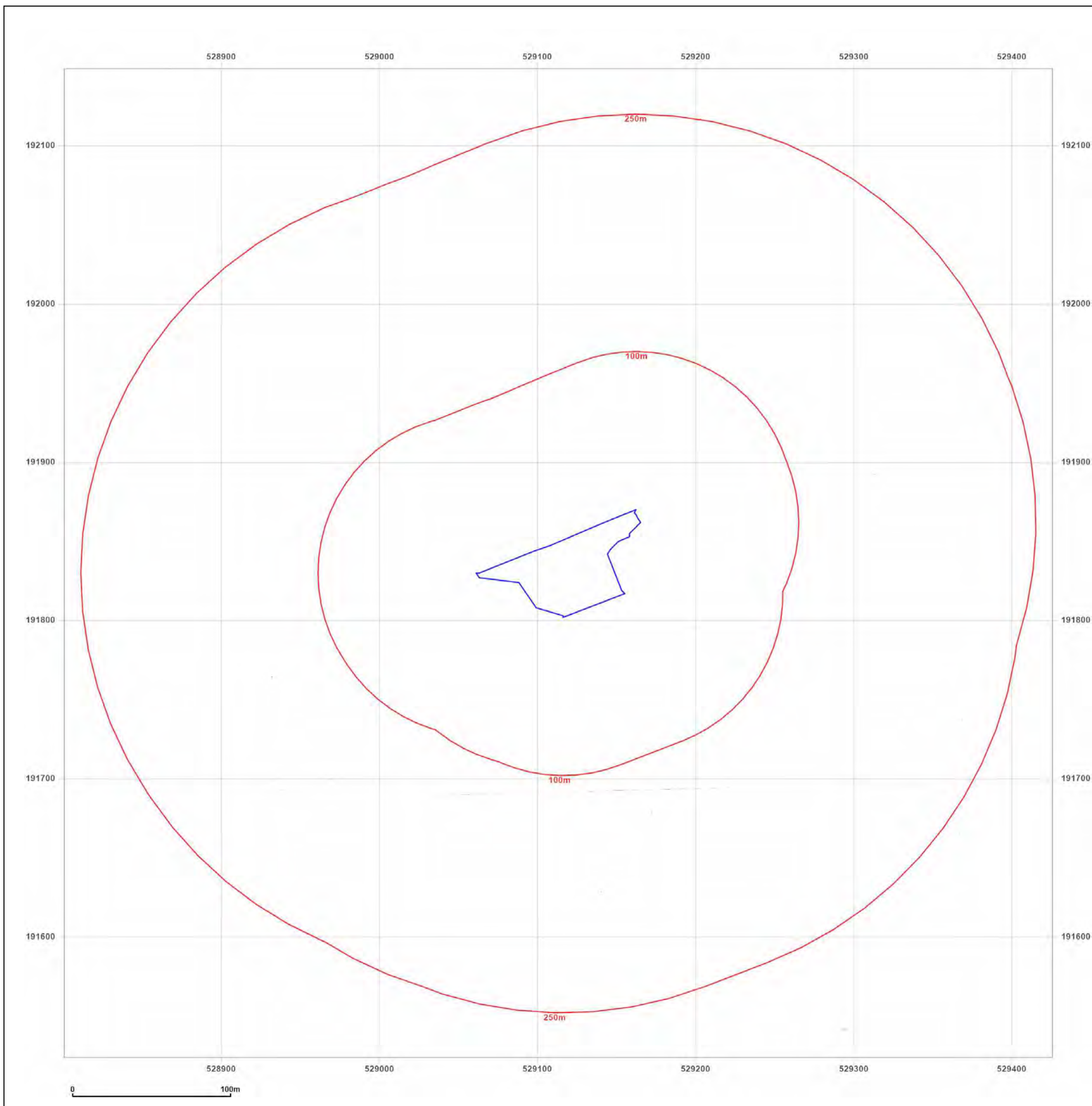


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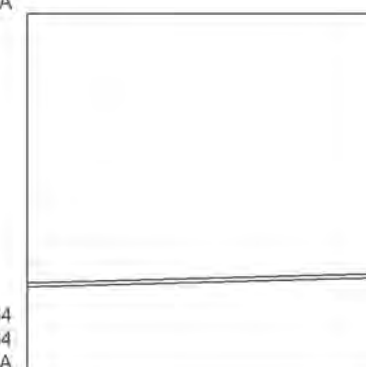
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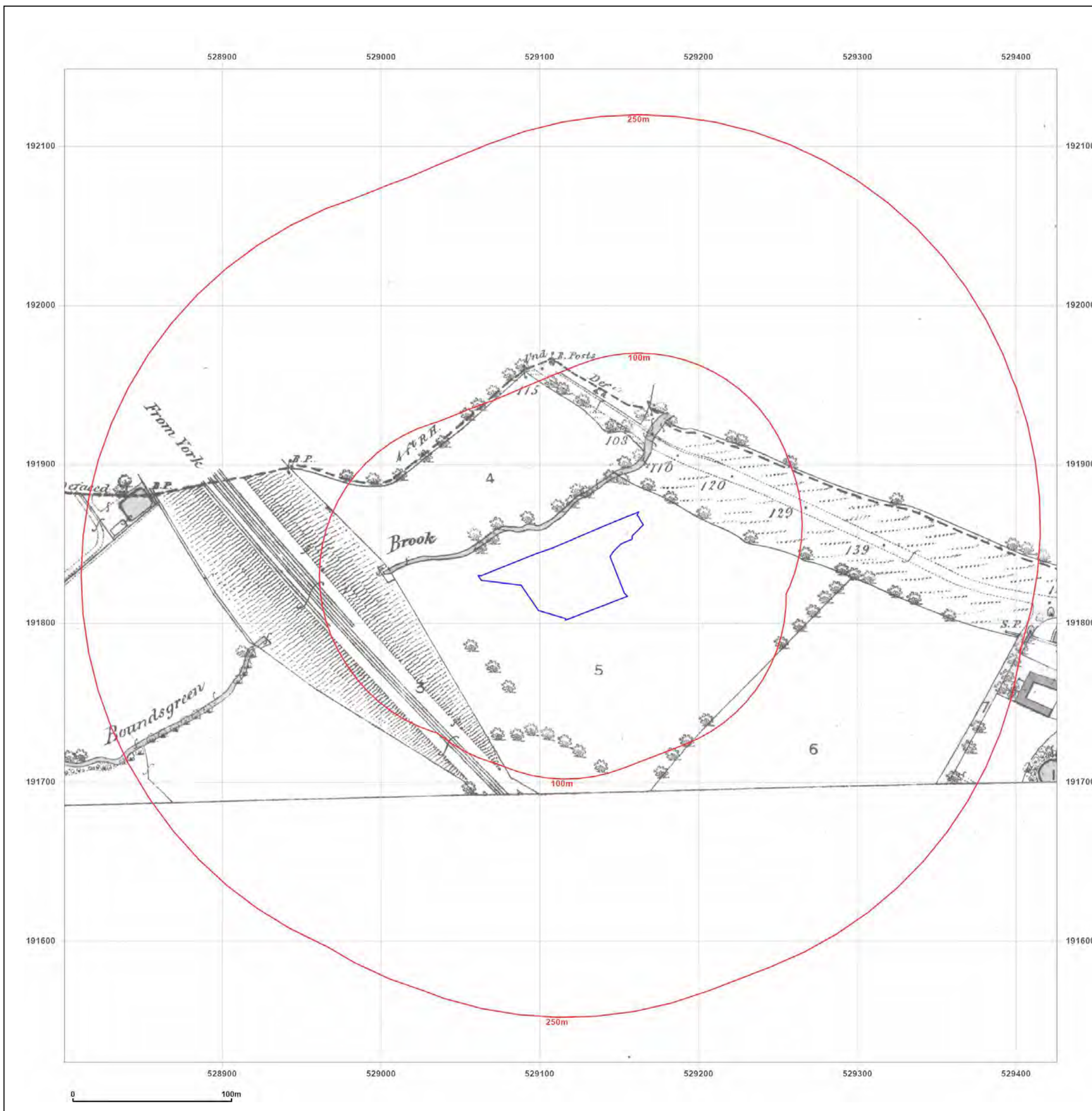


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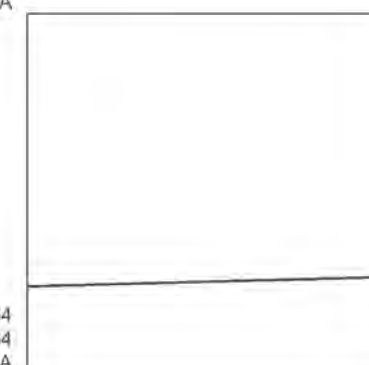
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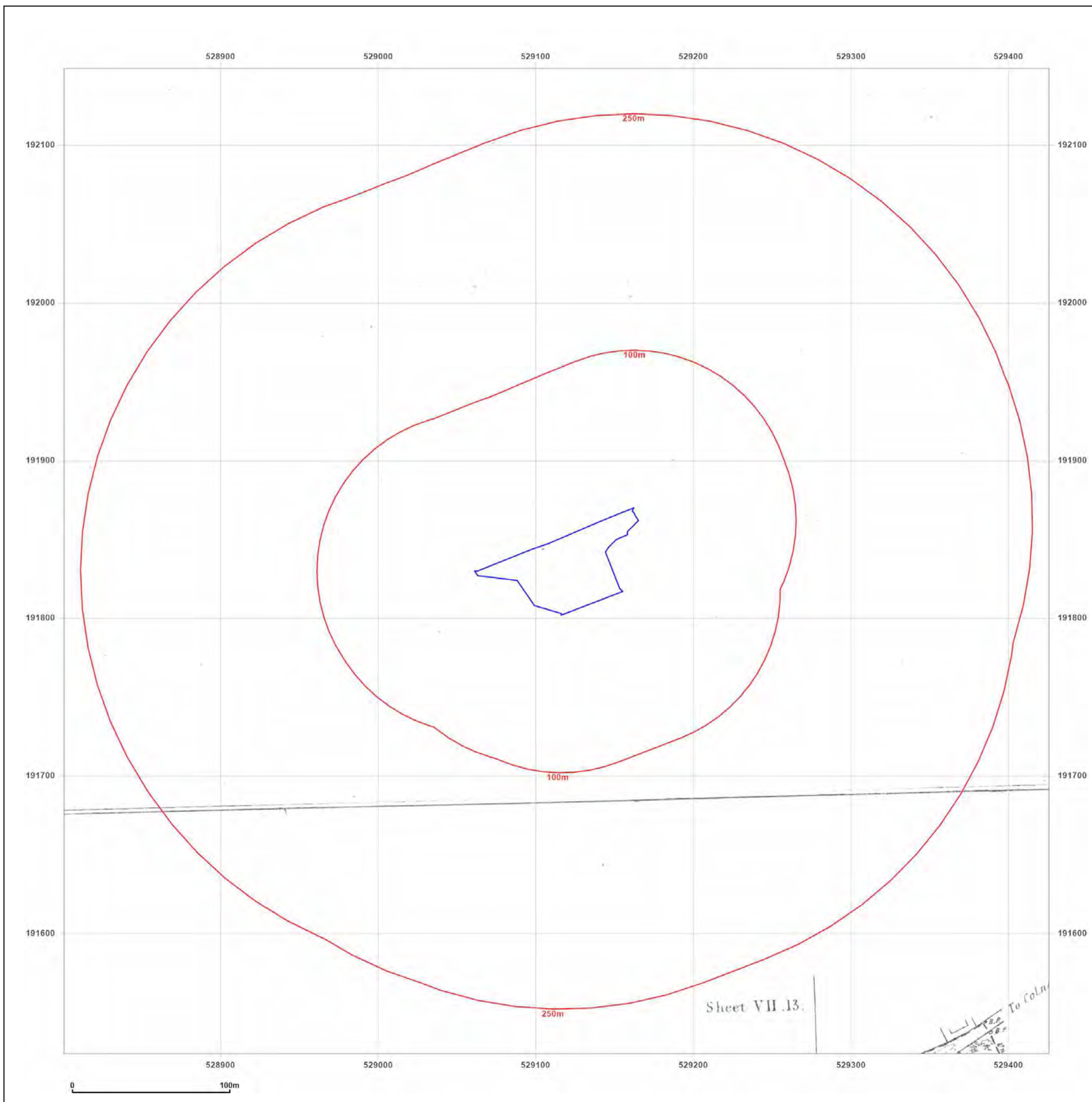


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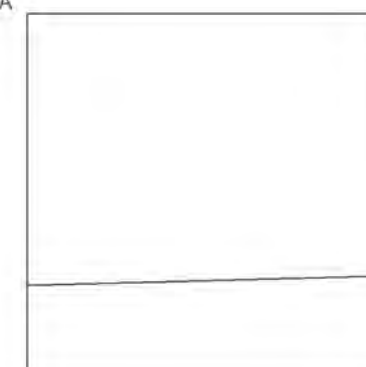
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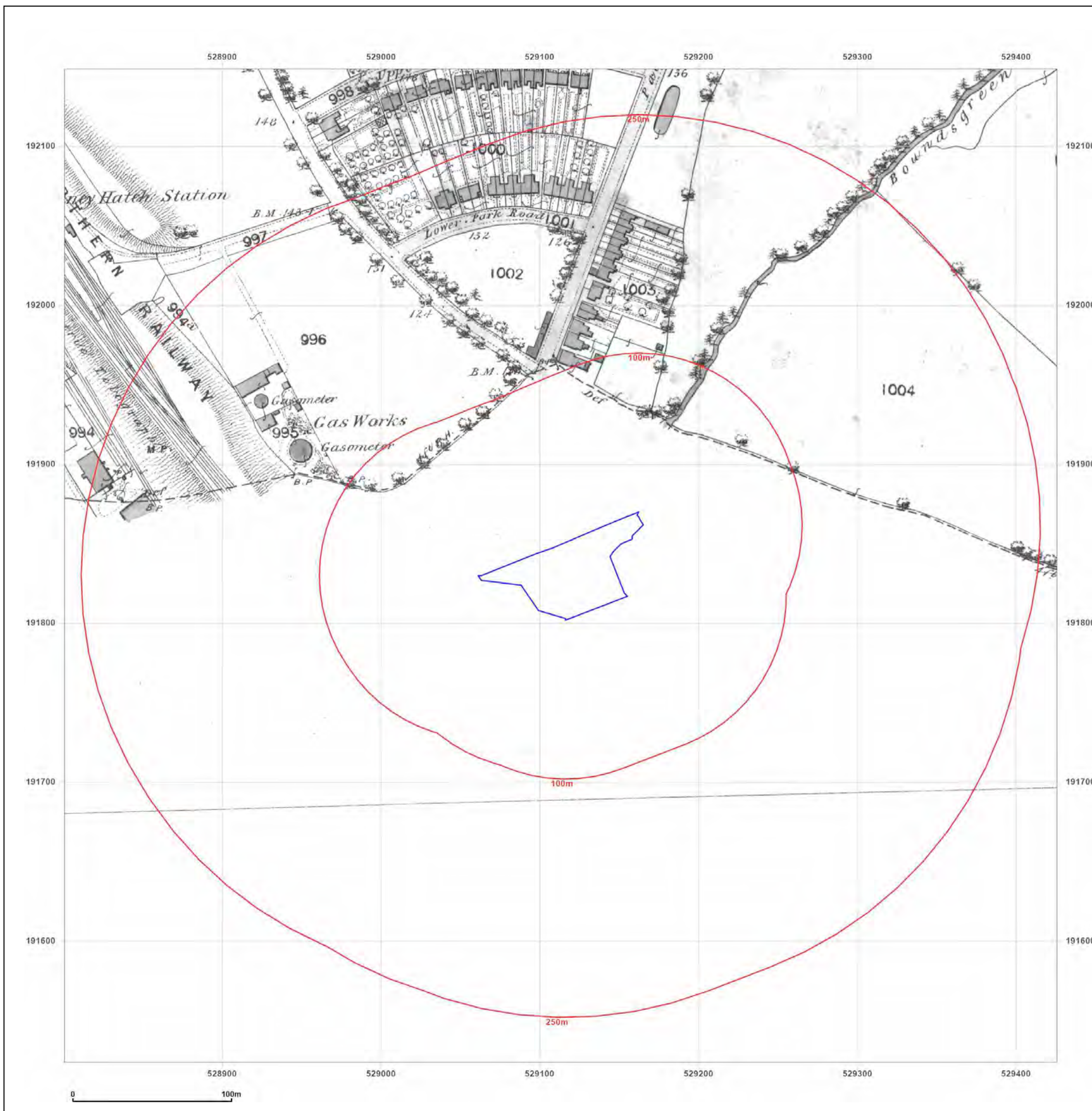


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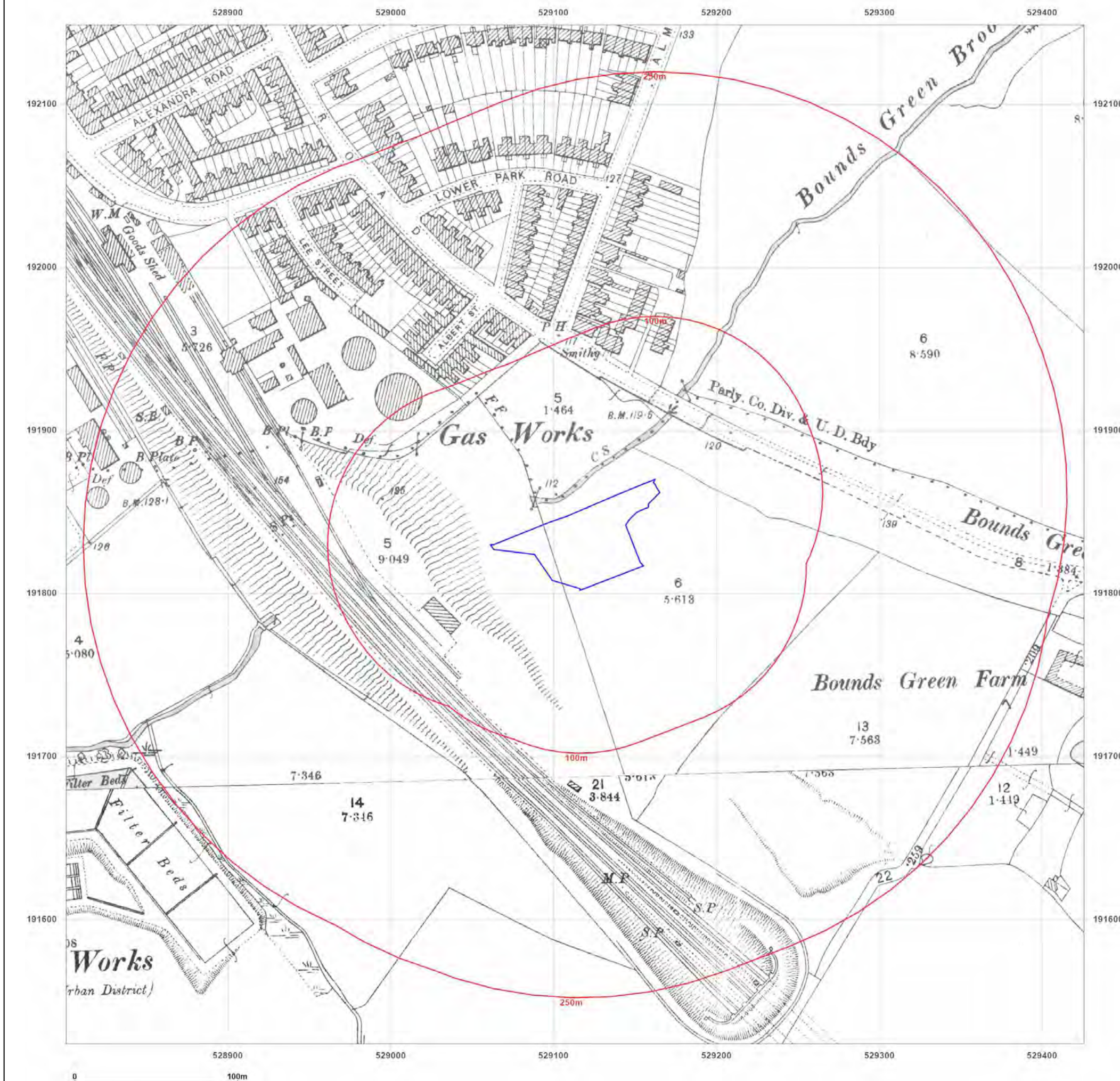


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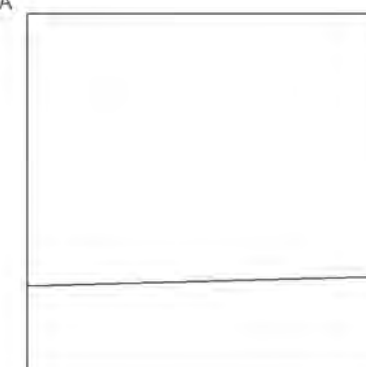
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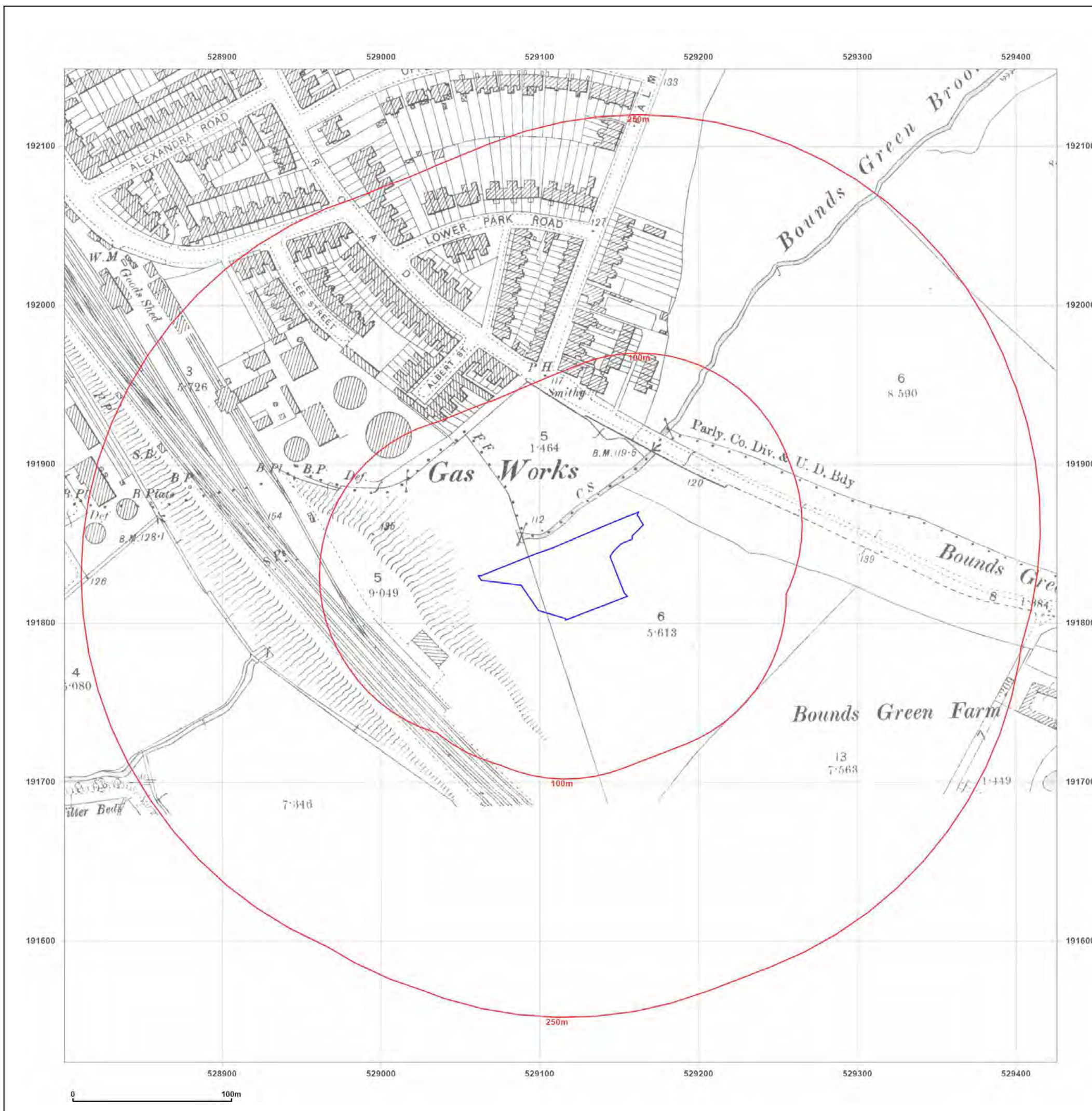


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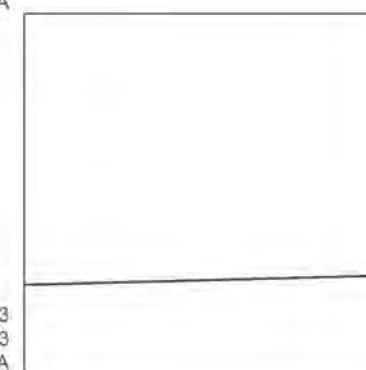
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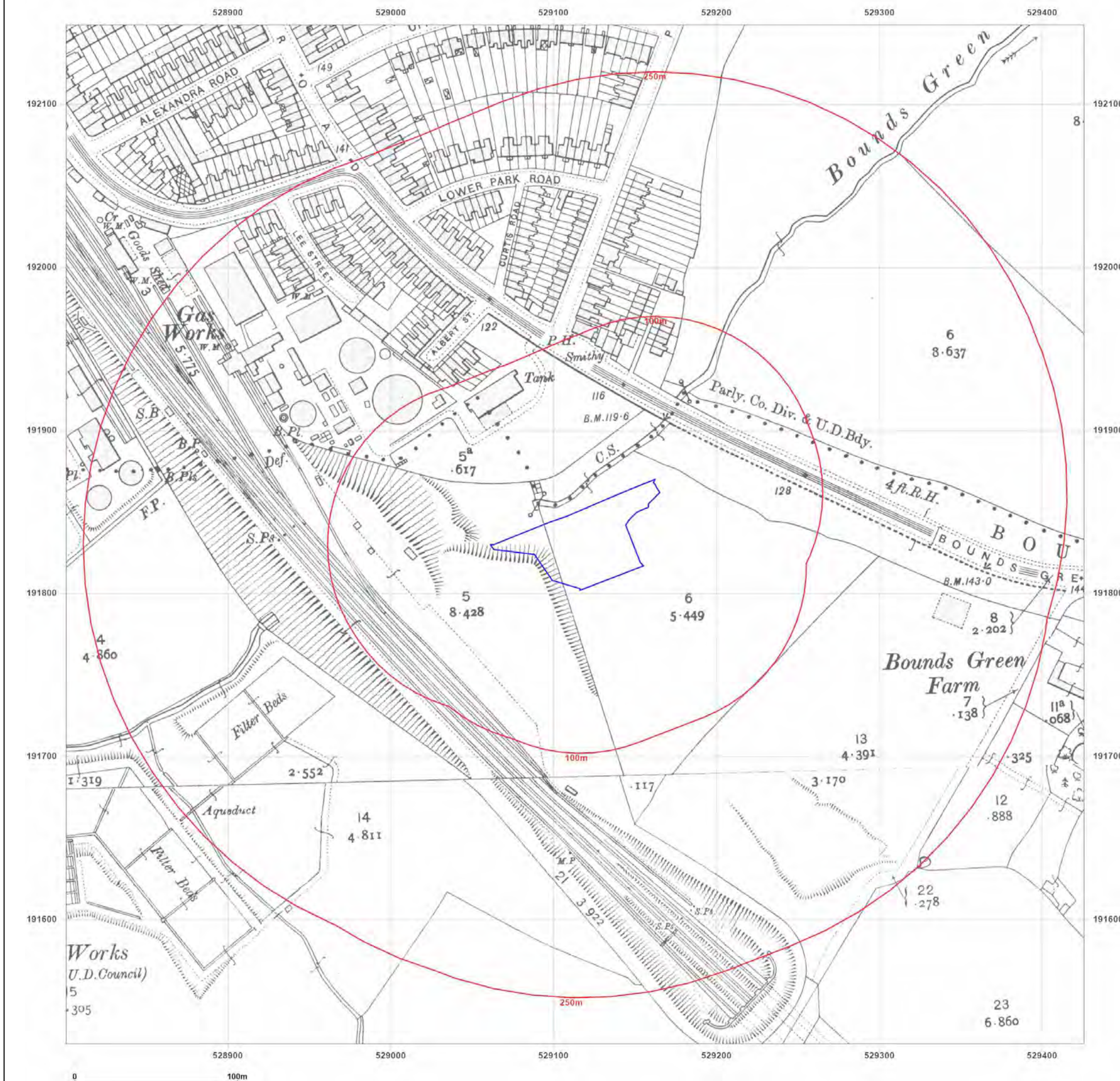


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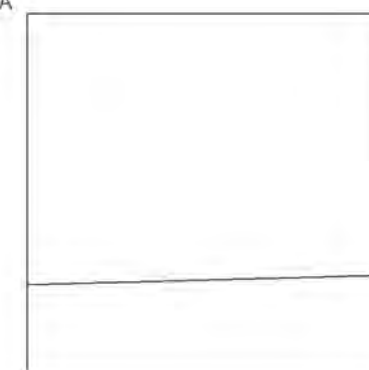
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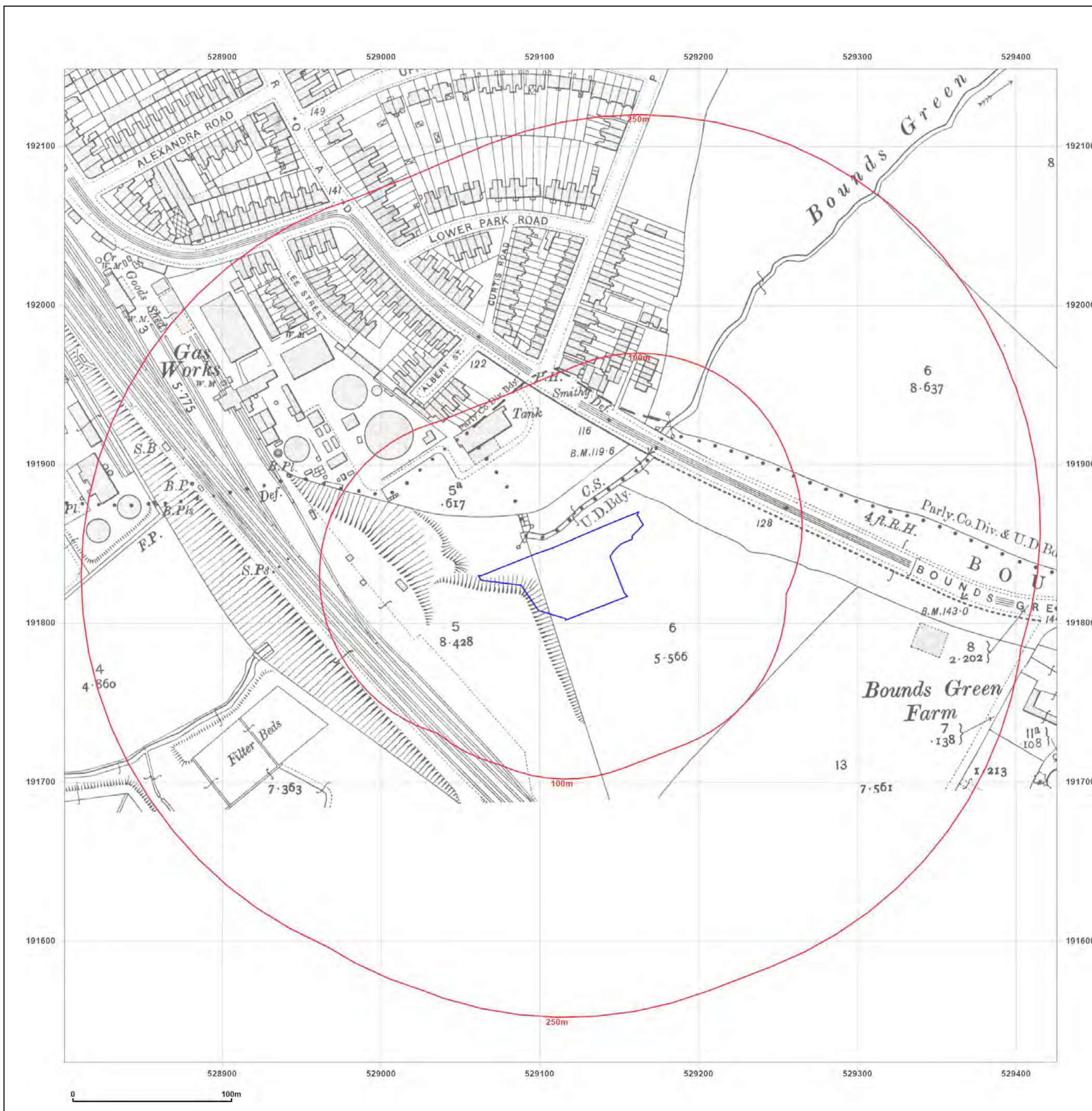


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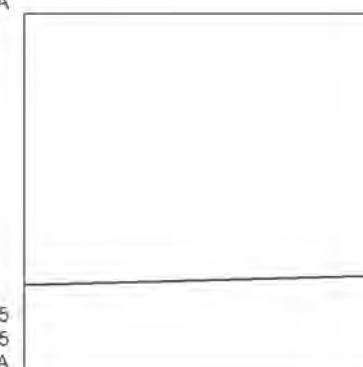
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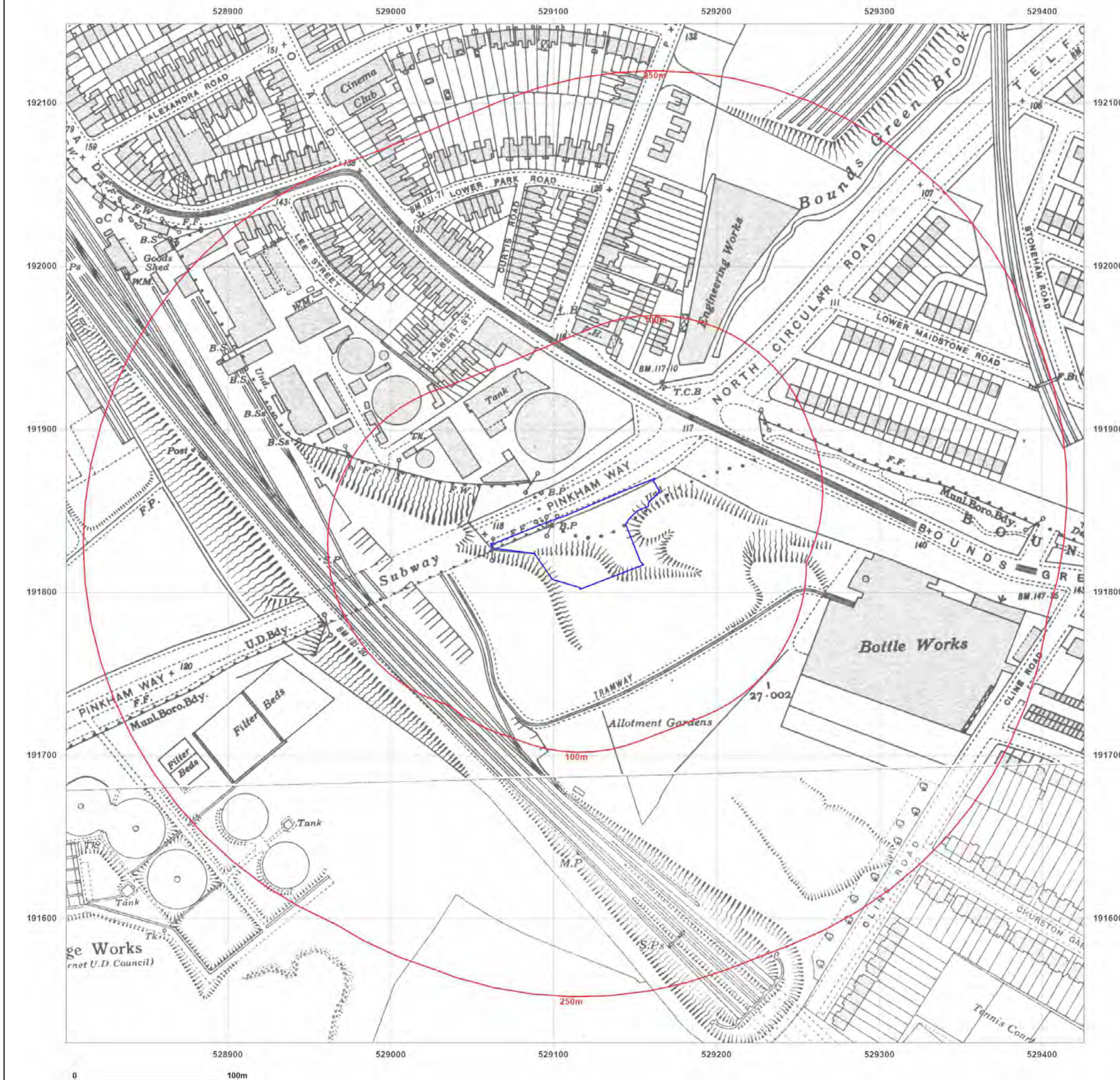


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Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1951

Scale: 1:1,250

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 Revised N/A
 Edition 1951
 Copyright N/A
 Levelled 1934

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 Levelled 1934

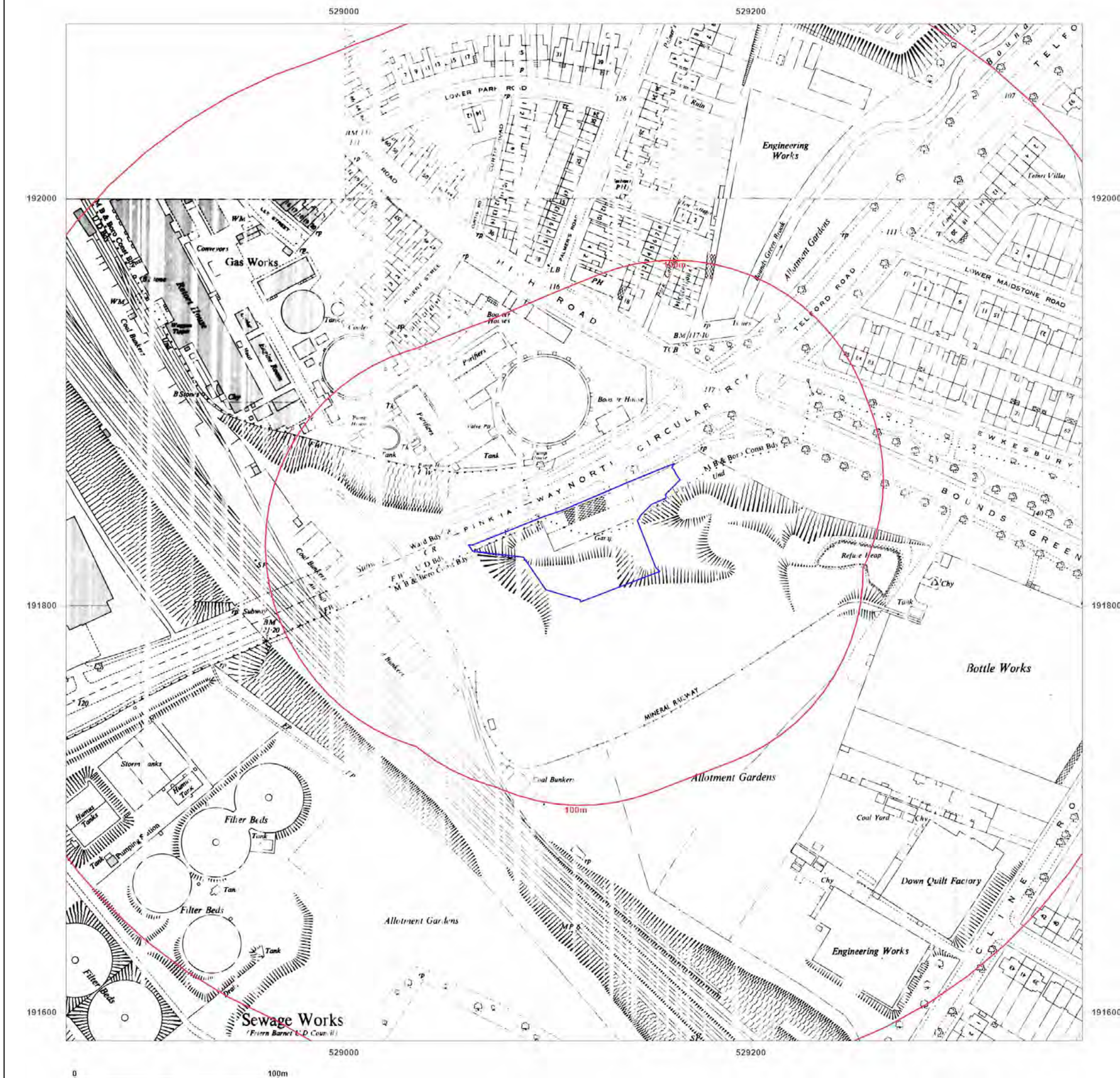


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Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1949-1952

Scale: 1:2,500

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Surveyed 1950
 Revised 1950
 Edition N/A
 Copyright N/A
 Levelled N/A

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 Edition 1952
 Copyright N/A
 Levelled 1934

Surveyed 1950
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 Levelled 1934

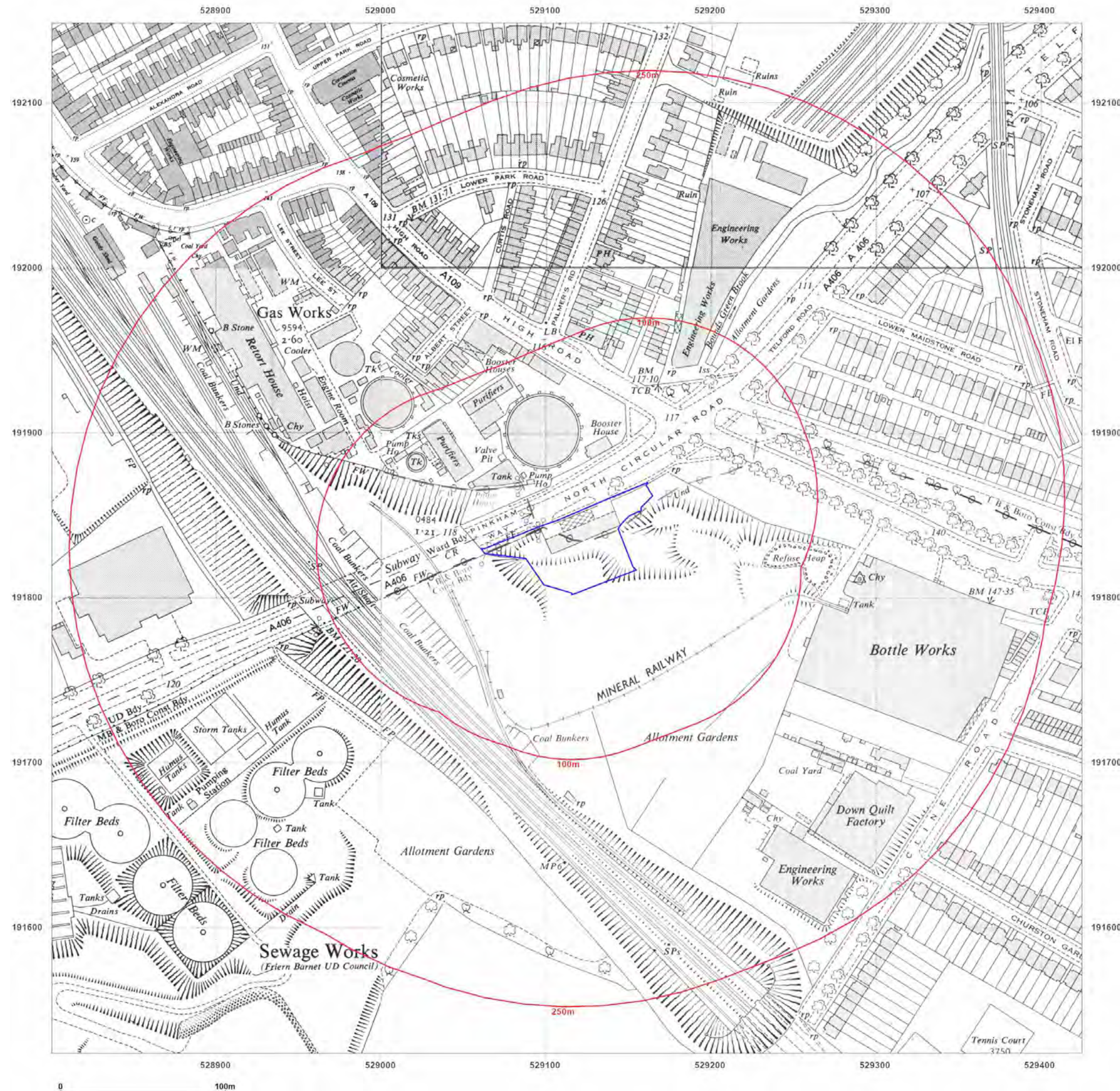


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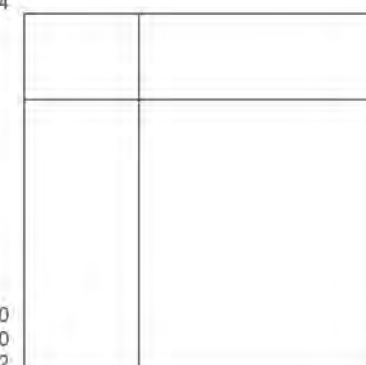
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 Edition 1951
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 Levelled 1934



Surveyed 1950
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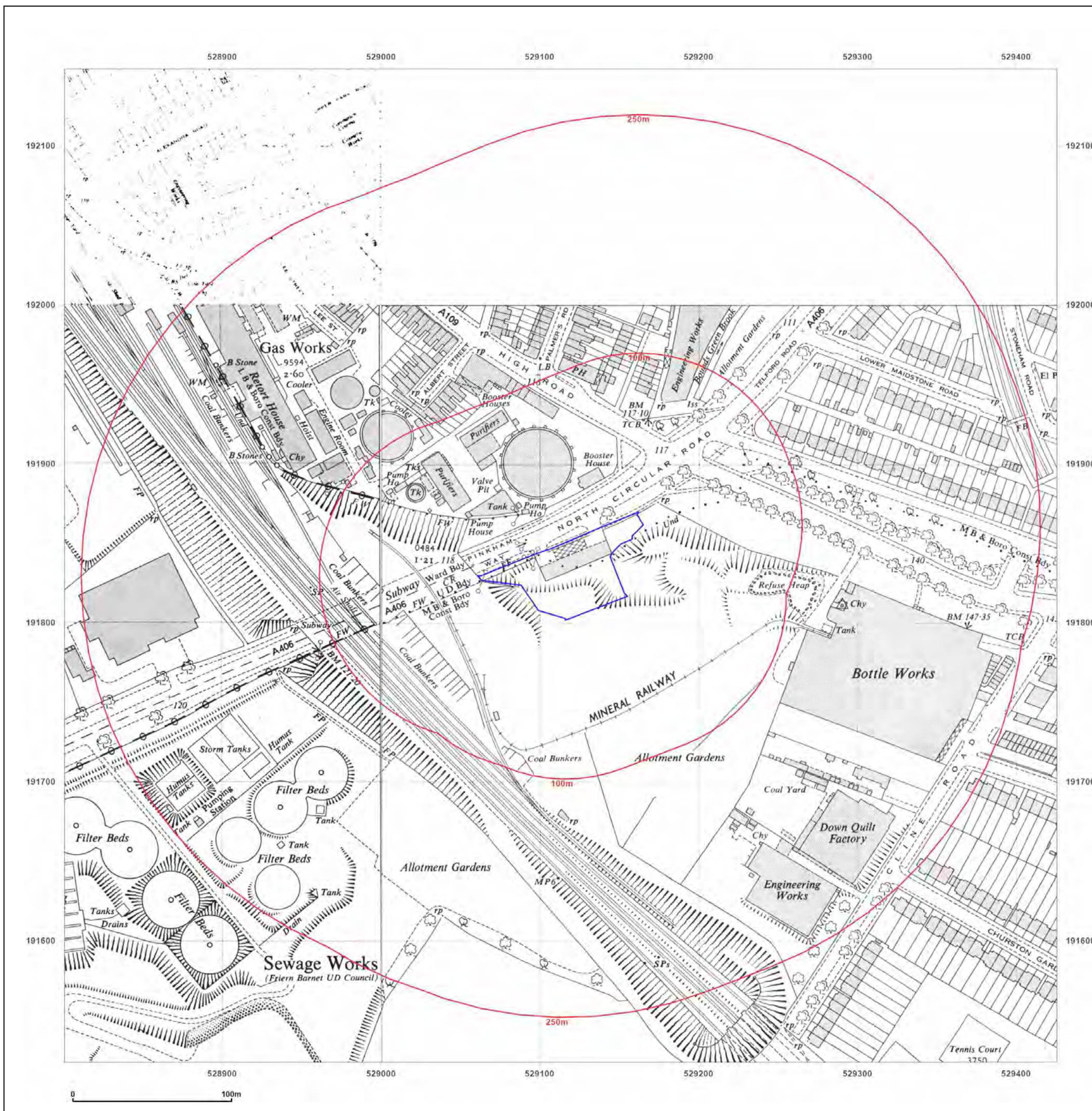


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Production date: 06 December 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1967-1968

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
 Revised 1967
 Edition N/A
 Copyright 1968
 Levelled 1956

Surveyed 1950
 Revised 1966
 Edition N/A
 Copyright 1967
 Levelled 1956

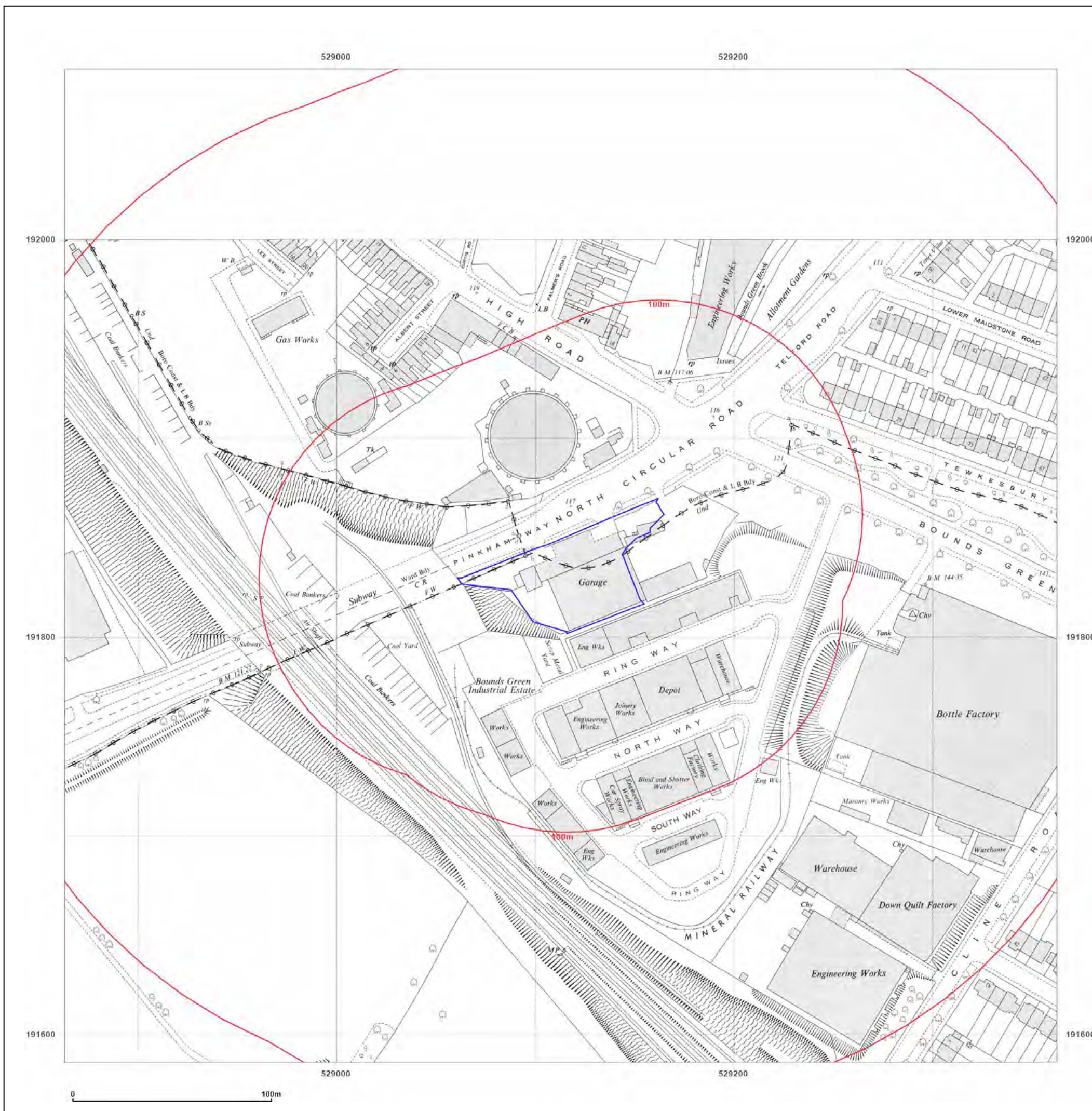


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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1965-1968

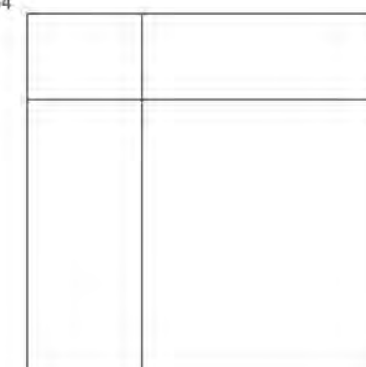
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Surveyed N/A
 Revised 1965
 Edition 1951
 Copyright N/A
 Levelled 1934

Surveyed N/A
 Revised 1965
 Edition N/A
 Copyright N/A
 Levelled 1956



Surveyed N/A
 Revised 1968
 Edition N/A
 Copyright N/A
 Levelled 1956

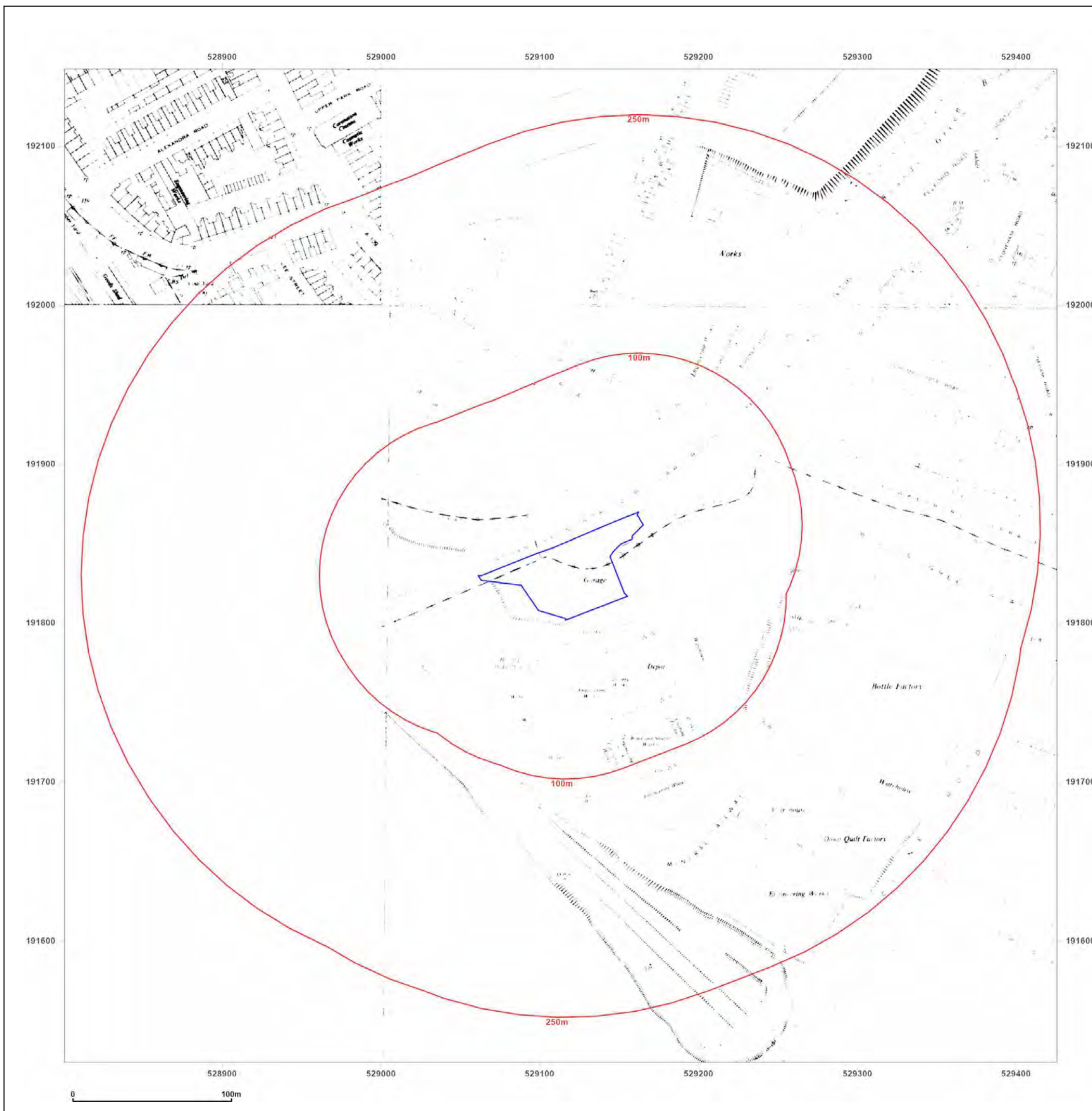


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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1967
 Revised 1967
 Edition N/A
 Copyright 1970
 Levelled 1956

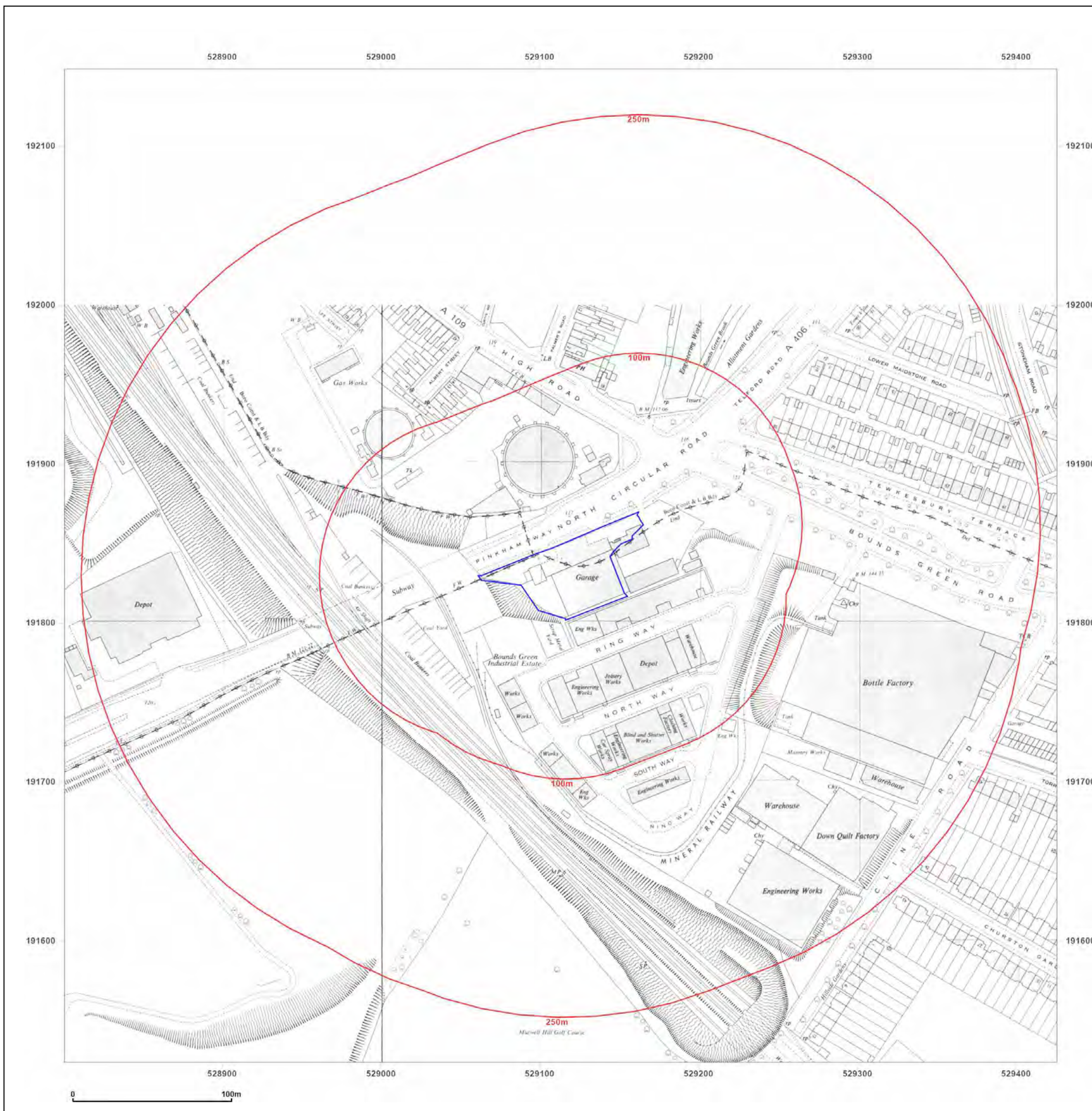


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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1973

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1949
 Revised 1972
 Edition N/A
 Copyright 1973
 Levelled 1956

Surveyed 1949
 Revised 1972
 Edition N/A
 Copyright 1973
 Levelled 1956

	Surveyed N/A Revised N/A Edition N/A Copyright 1973 Levelled N/A



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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

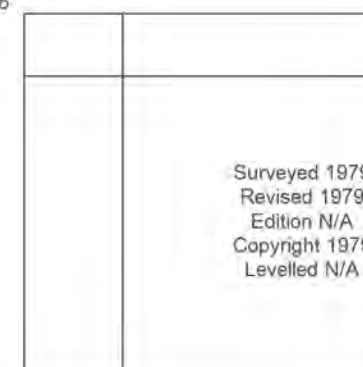
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 Edition N/A
 Copyright 1983
 Levelled 1956



Surveyed 1979
 Revised 1979
 Edition N/A
 Copyright 1979
 Levelled N/A

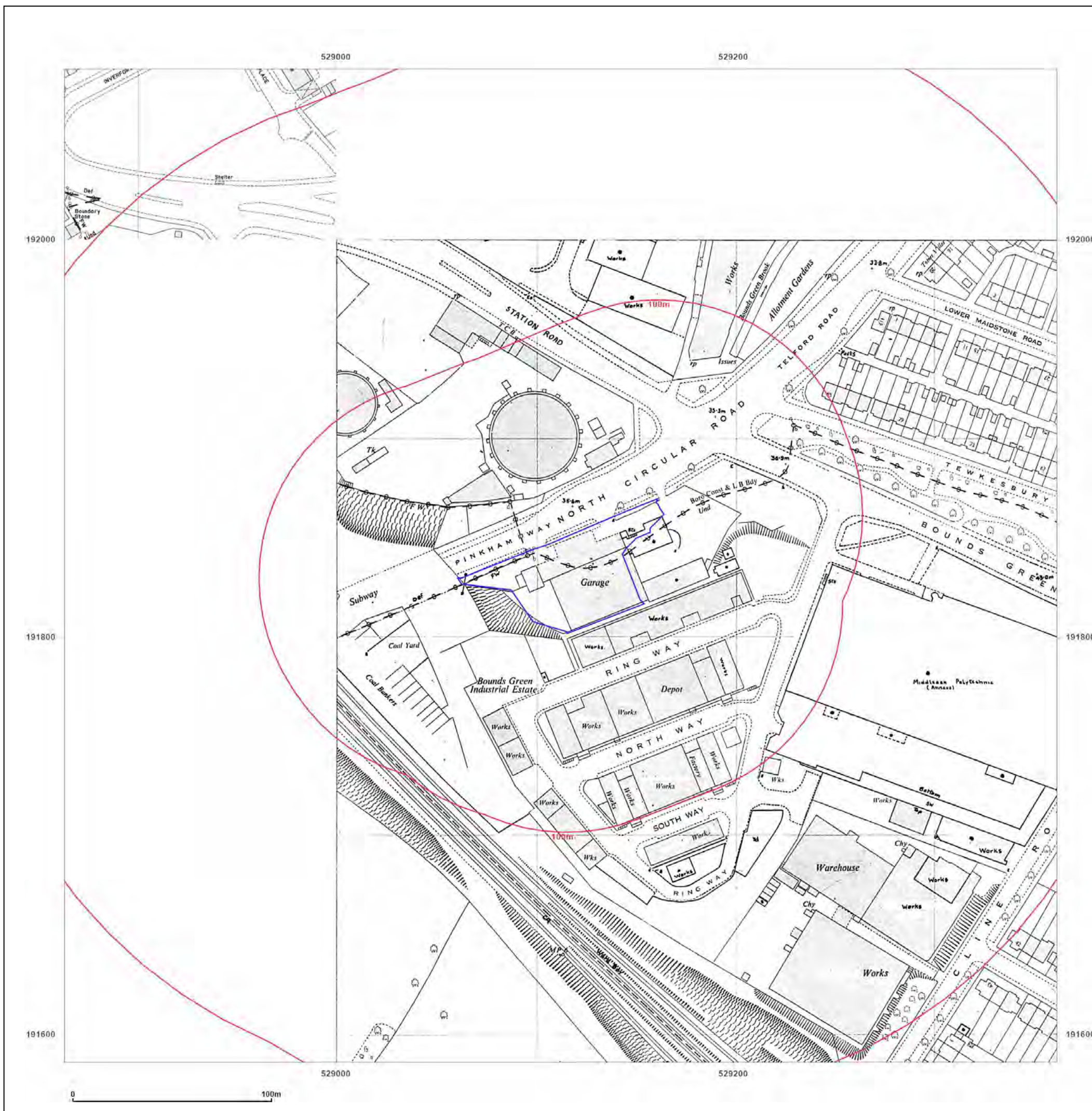


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Production date: 06 December 2022

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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1991-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1992
 Levelled N/A

Surveyed N/A
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 Edition N/A
 Copyright 1992
 Levelled N/A

Surveyed N/A
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 Edition N/A
 Copyright 1991
 Levelled N/A

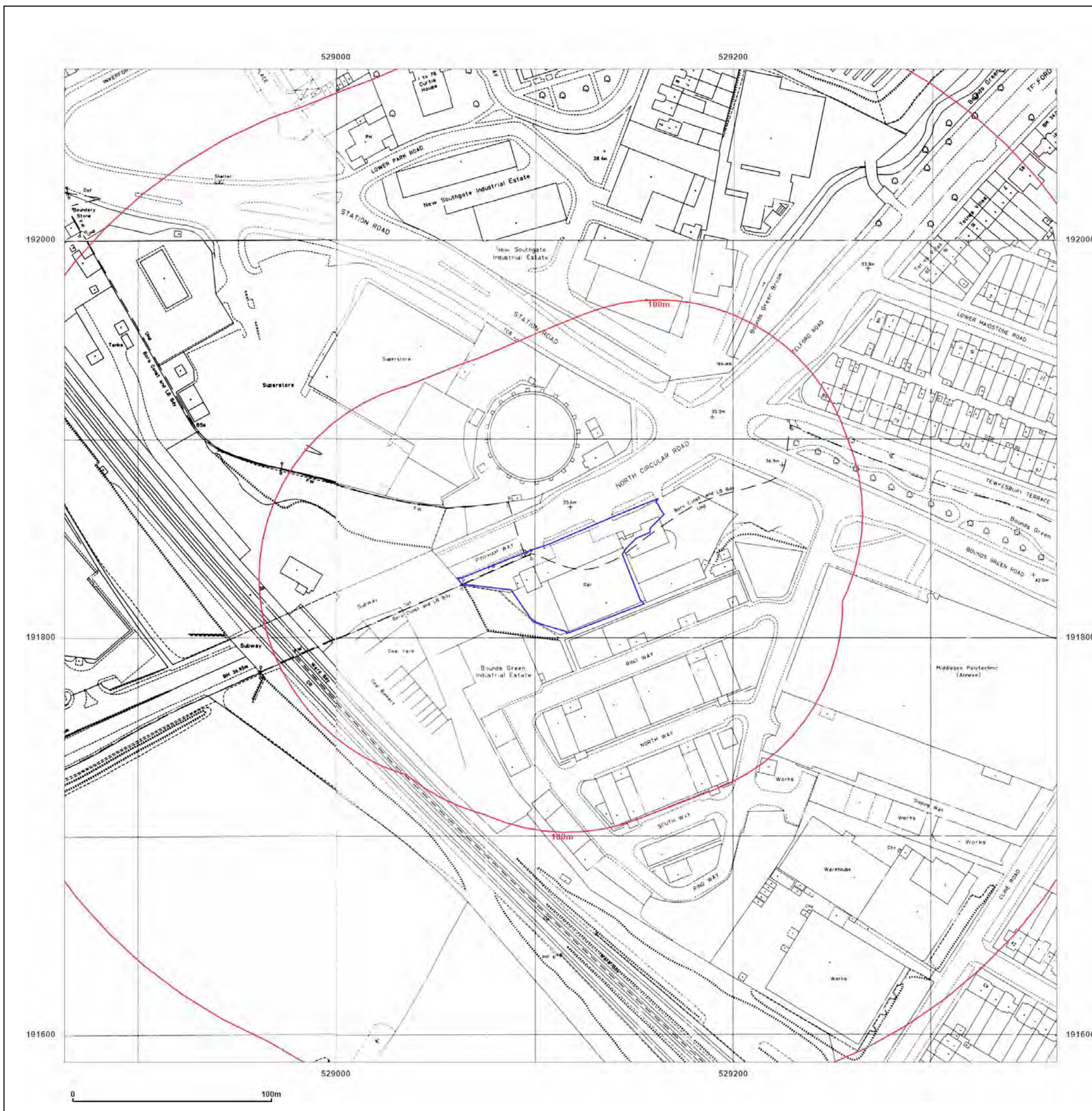


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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1993
 Revised 1993
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1992
 Levelled N/A

Surveyed N/A
 Revised N/A
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Production date: 06 December 2022

Map legend available at:
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Site Details:

529125, 191834

Client Ref: 14071085_-_bp_Pinkham_Way
Report Ref: GS-9243173
Grid Ref: 529113, 191836

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Production date: 06 December 2022

Map legend available at:
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Appendix C

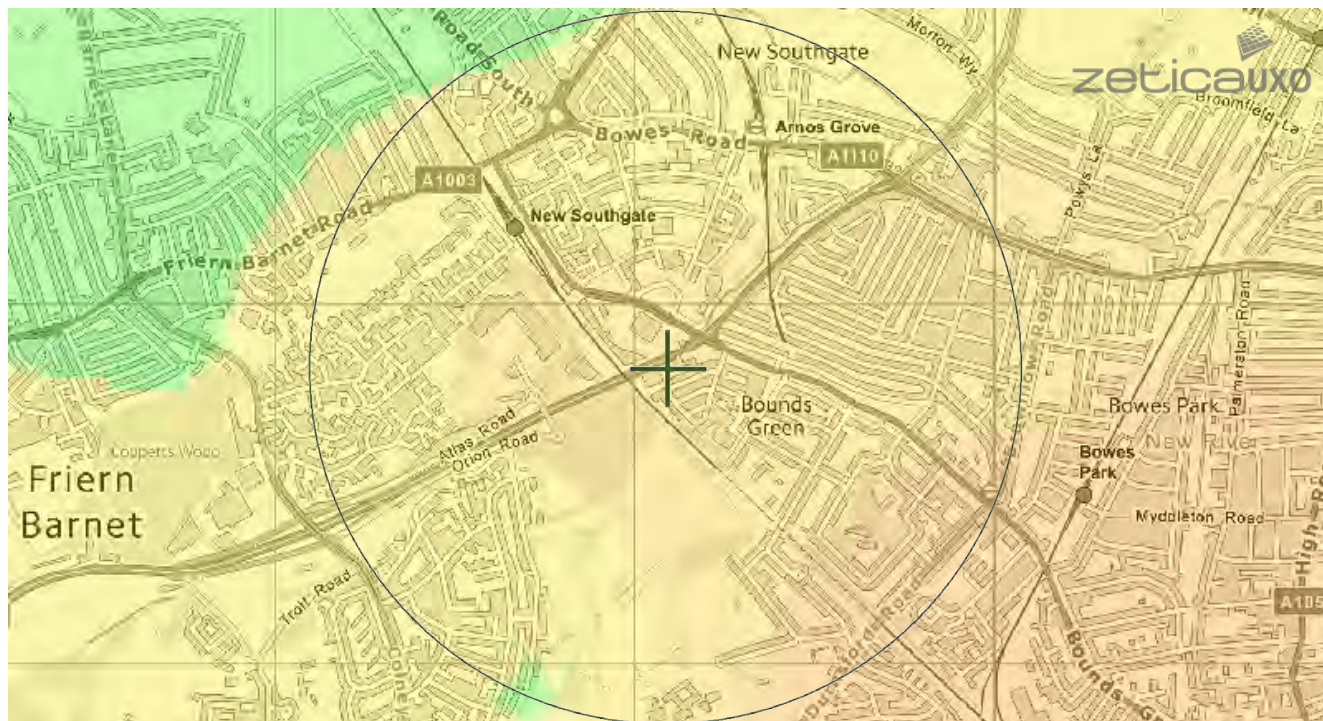
Preliminary UXO Risk Assessment

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Location: N11 2UU,
Map Centre: 529097,191825



LEGEND

London Bomb Risk



military	industry	UXO find	Other
transport	dock	Luftwaffe targets	
utilities	abandoned bombs	Bombing decoy	

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

Relative UXB risk across London

The relative risk for the London area is established by plotting the recorded bombing densities.

These are represented as counts of high explosive bombs in km2 area. The areas coloured green represent a record of less than 10 bombs per km2.

Compared to other areas of the UK, this still represents a significant density. However, this is much lower than parts of Central London, where the red colouration indicates in excess of 150 bombs falling per km2, representing a very significant bombing density.

What do I do if my site is in a moderate or high density area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites with a moderate or high bombing density.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low probability for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682
email: uxo@zetica.com
web: www.zeticauxo.com

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.



Pre-Desk Study Assessment

Site:	BP Pinkham Way, Southgate, London
Client:	Arcadis
Contact:	Merrill Rosario
Date:	9 th December 2022
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Military barracks and training areas. ■ Anti-Aircraft (AA) guns.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: ■ Transport infrastructure and public utilities. ■ Industries important to the war effort, including engineering works. ■ Military barracks, camps, and training areas. ■ AA and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	None.
WWII Bombing	During WWII the Site was located in the Municipal Borough (MB) of Southgate, which officially recorded 221No. High Explosive (HE) bombs with a regional bombing density of 60.2 bombs per 405 hectares (ha). Records have been found indicating that several HE bombs fell in close proximity to the Site.
Post-WWII Military Activity on or Affecting the Site	None identified.
Recommendation	It is recommended that a detailed desk study is commissioned to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the Site.
Further information	For information about Zetica's detailed UXO desk studies and other UXO services, please visit our website: www.zeticauxo.com .

Details and downloadable resources covering the most common sources of UXO hazard affecting sites in the UK can be found [here](#).

If you have any further queries, please don't hesitate to get in contact with us at uxo@zetica.com or 01993 886 682.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

Appendix D

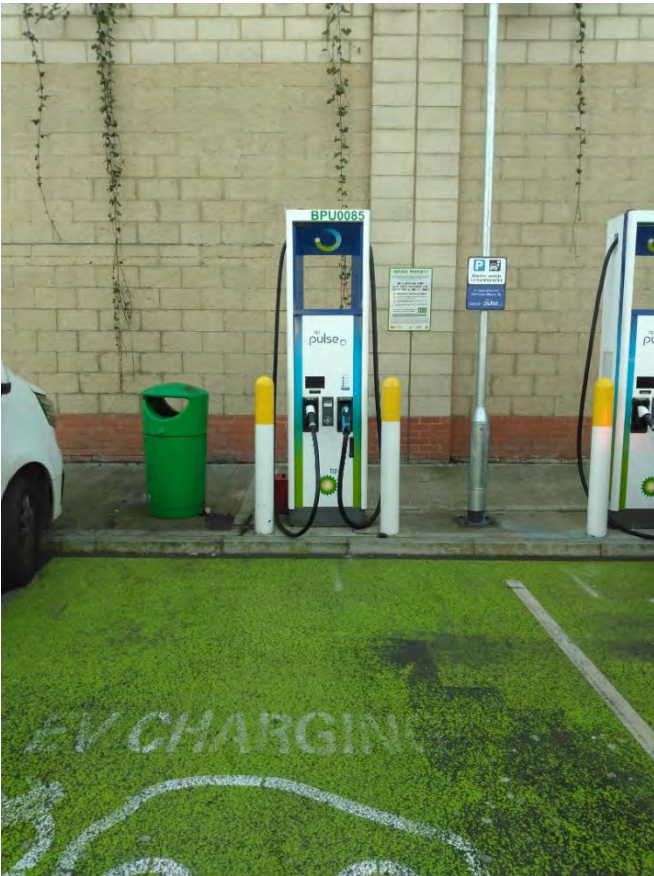
Petroleum Officers Response and Site Records

AWAITED AT THE TIME OF WRITING

Appendix E

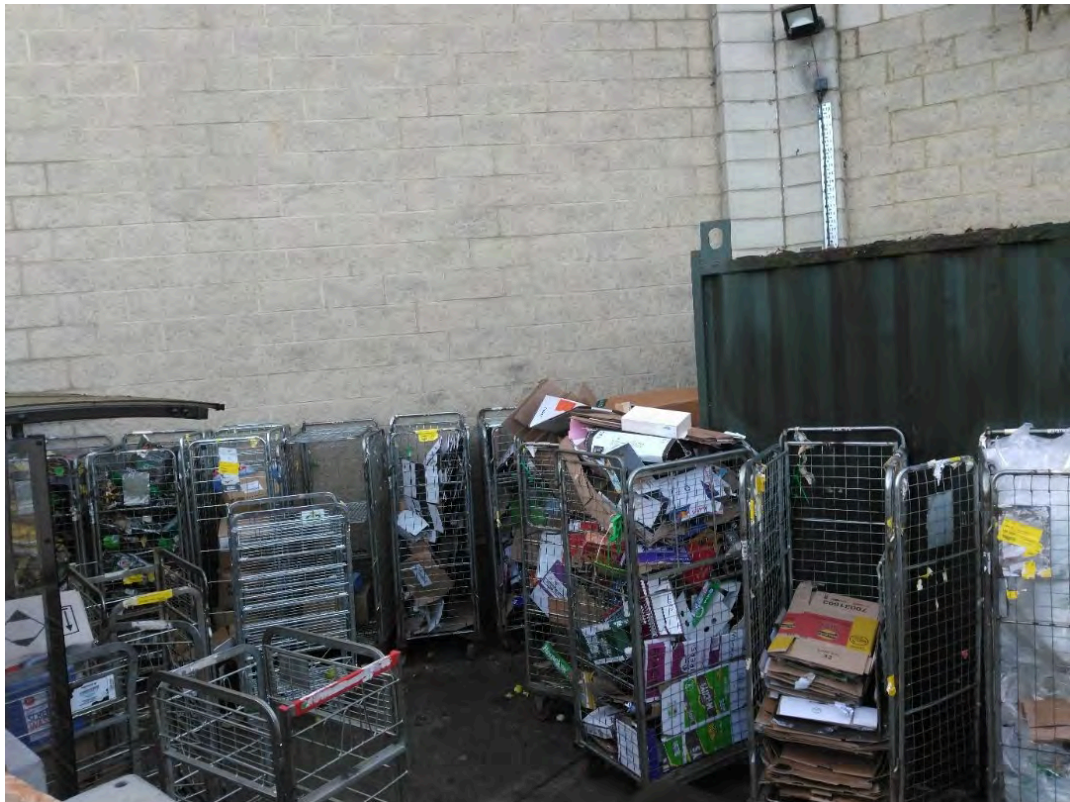
Photographic Record

CLIENT:	bp Pulse			
PROJECT:	Plate No.	10058657	SITE NAME:	
			Bp Pinkham Way, North Circular Road, London N11 2UU	
Description: View of Forecourt facing West	1			
Description: View of Forecourt and neighbouring subway facing West	2			

CLIENT:	bp Pulse			
PROJECT:	Plate No.	10058657	SITE NAME:	
			Bp Pinkham Way, North Circular Road, London N11 2UU	
Description: View of dispenser unit with staining	3			
Description: View of EV Charging Station	4			

CLIENT:	bp Pulse			
PROJECT:	Plate No.	10058657	SITE NAME:	
Description:	5			
				

CLIENT:	bp Pulse				
PROJECT:	Plate No.	10058657	SITE NAME:		Bp Pinkham Way, North Circular Road, London N11 2UU
Description: View of retail unit	7				
Description: View of back of retail unit facing east. Some evidence of fly tipping is observed	8				

CLIENT:	bp Pulse				
PROJECT:	Plate No.	10058657	SITE NAME:		Bp Pinkham Way, North Circular Road, London N11 2UU
Description:	9				
Description:	10				

CLIENT:	bp Pulse			
PROJECT:	Plate No.	10058657	SITE NAME:	
				Bp Pinkham Way, North Circular Road, London N11 2UU
Description: BH1 located at southeast of the Site	11			
Description: BH2 located south of the forecourt	12			

CLIENT:	bp Pulse			
PROJECT:	Plate No.	10058657	SITE NAME:	
				Bp Pinkham Way, North Circular Road, London N11 2UU
Description: BH3 located northeast of the Site	13			
Description: BH4 located northeast of the Site	14			

Appendix F

Risk Assessment Methodology

Risk Assessment Methodology

The environmental risk assessment aims to assess the significance of each potential contaminant linkage. The key to the classification is that the designation of risk is based upon the consideration of both:

- **The magnitude of the potential consequence (i.e. severity).** It takes into account both the potential severity of the hazard and the sensitivity of the receptor.
- **The magnitude of probability (i.e. likelihood).** It takes into account both the presence of the hazard and receptor and the integrity of the pathway.

The Likelihood Probability Classifications of SPR Linkage being realised is presented in Table X below:

Classification	Definition
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.
Likely	There is pollutant 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.
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution

Table 1 Likelihood classifications of Source Pathway Receptor Linkage

Classification	Human Health	Controlled Water	Ecology
Severe	Highly elevated concentrations likely to result in “significant harm” to human health as defined by the EPA 1990, Part 2A, if exposure occurs.	Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.	Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population.
Medium	Elevated concentrations which could result in “significant harm” to human health as defined by the EPA 1990, Part 2A if exposure occurs.	Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce.	Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population.
Mild	Exposure to human health unlikely to lead to “significant harm”.	Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce.	Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population.
Minor	No measurable effects on humans	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.

Table 2 Hazard Consequence Classifications for Receptor Types from Contamination Impact

Likelihood	Unlikely	Low Likelihood	Likely	High Likelihood
Potential Consequence:				
Severe	Moderate / Low Risk	Moderate Risk	High Risk	Very High Risk
Medium	Low Risk	Moderate / Low Risk	Moderate Risk	High Risk
Mild	Very Low Risk	Low Risk	Moderate / Low Risk	Moderate Risk
Minor	Very Low Risk	Very Low Risk	Low Risk	Low Risk

Table 3 Risk Matrix

Risk	Definition
Low	It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.
Moderate	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

Table 4 Risk Definitions

Arcadis (UK) Limited

Unit 5 St Mellons Business Park
Arcadis Cymru House
Fortran Road
Cardiff
CF3 0EY

T: +44 (0)2920 926 700

[arcadis.com](https://www.arcadis.com)