

CRIBBS CAUSEWAY AEROBIC DIGESTER

Environmental Permit Application

Site Condition Report

Prepared for: Advetec Limited

Client Ref: 416.11475.00002

SLR Ref: 416.11475.00002
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SLR 

BASIS OF REPORT

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DOCUMENT REFERENCES

APPENDICES

Appendix A Groundsure Report

1.0 INTRODUCTION

SLR Consulting Limited (SLR) has been instructed by Advetec Limited (Advetec) to prepare a new bespoke environmental permit application for the proposed Cribbs Causeway Aerobic Digester (AD). The application involves an aerobic digestion system, operated by Incentive Facilities Management Limited (Incentive FM) and located beneath the Cribbs Causeway Shopping Centre, Patchway, Bristol BS34 5DG (hereafter referred to as 'the Site').

The activities at the Site will be regulated as a bespoke waste operation as per the Environmental Permitting (England and Wales) Regulations 2016 (as amended). A number of waste management activities as described in the Waste Framework Directive 2008 will be undertaken at the Site. These include:

- R3 - Recycling or reclamation of organic substances that are not used as solvents;
- R5 - Recycling/reclamation of other inorganic materials; and
- R12 - Exchange of wastes for submission to any of the operations numbered R1 to R 11.

A Site Location Plan is illustrated on Drawing EP1 and Site Layout Plan is illustrated on Drawing EP2.

This SCR relates to the entire proposed permit boundary. The SCR has been prepared in accordance with the Environment Agency's (EA) H5 Guidance Note on SCR¹. The objective of the SCR is to record and describe the condition of the land at the Site prior to operation. The SCR provides a point of reference and baseline environmental data so that when the EP is surrendered it can be demonstrated that there has been no deterioration in the condition of the land as a result of the operations, and ensure that the condition of the land is in a 'satisfactory state' on surrender of the EP.

Sections 1 to 3 of the EA's SCR template, comprise the following:

- Site details;
- Condition of the land at permit issue:
 - Geology;
 - Hydrogeology;
 - Hydrology;
- Pollution History;
- Evidence of historic contamination; and
- Permitted activities.

Sections 4 to 7 of the SCR template will be maintained during the life of the permit and Sections 8 to 10 will be completed and submitted in support of the application to surrender the EP.

1.1 Permit Application

Sections 1 to 3 of the SCR template have been completed as part of this EP application in relation to the entire proposed permit boundary.

Should the application be approved, Sections 4 to 7 of the SCR template will be maintained during the life of the permit.

¹ Environment Agency – H5 Site Condition Report – guidance and templates, Version 3.0, April 2013

Sections 8 to 10 will be completed and submitted in support if an application to surrender the EP was ever proposed.

2.0 SITE CONDITION REPORT H5 TEMPLATE

1.0 SITE DETAILS	
Name of the applicant	Incentive FM Limited
Activity address	Cribbs Causeway Shopping Centre, Patchway, Bristol BS34 5DG
National grid reference	ST 58779 80826
Document reference and dates for Site Condition Report at permit application and surrender	N/A
Document references for site plans (including location and boundaries)	<ul style="list-style-type: none">• Drawing EP1 Site Location Plan

Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 CONDITION OF THE LAND AT PERMIT ISSUE

<p>Environmental setting including:</p> <ul style="list-style-type: none"> • geology • hydrogeology • surface waters 	<p>Geology</p> <p>A review of the British Geological Survey (BGS)² mapping reveals that the Site is underlain by a bedrock of Westbury Formation and Cotham Member (undifferentiated) – Mudstone and Limestone, Interbedded, indicative of an environment once dominated by shallow seas.</p> <p>There are no superficial deposits recorded at the Site.</p> <p>Hydrogeology</p> <p>Review of the Multi-Agency Geographical information for Countryside (MAGIC)³ map reveals that the bedrock deposits underlying the Site are identified as a Secondary B Aquifer.</p> <p>Groundwater Vulnerability</p> <p>MAGIC map shows the Site lies in an area of High groundwater vulnerability with Soluble Rock Risk.</p> <p>Source Protection Zones</p> <p>The Site is not located within a groundwater Source Protection Zone.</p> <p>Hydrology</p> <p>The Flood Map for Planning⁴ identifies the Site as lying in a Flood Zone 1 which is defined as ‘land having a less than 1 in 1,000 annual probability of river or sea flooding’.</p> <p>The nearest surface water receptor to the site is a drain is situated 200m to the north-east of the site. A larger pond which is attached to a drain is located approximately 310m to the south-west of the site.</p> <p>The nearest significant body of water The Bristol Channel which is located approximately 6km to the west.</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures 	<p>Pollution Incidents</p> <p>Review of a Groundsure report (Appendix A) produced for the Site reveals there are no registered pollution incidents within 500m of the Site.</p> <p>Waste Management Activities</p> <p>Review of a Groundsure report reveals there are no registered waste management activities within 500m of the Site, including landfills and licensed waste sites. There are five waste exemptions recorded within 500m of the Site, these are as follows;</p> <ul style="list-style-type: none"> • The Mall, Cribbs Causeway 19m N, WEX003618 - treating waste exemption, crushing waste fluorescent tubes;

² British Geological Survey (BGS) Available at www.bgs.ac.uk, accessed in April 2021

³ Multi-Agency Geographical Information for the Countryside Map, available at www.magic.gov.uk, accessed in April 2021

⁴ Gov.uk Flood Map for Planning, available at <https://flood-map-for-planning.service.gov.uk/>, accessed in April 2021

- The Mall Cribbs Causeway 20m N, EPR/RF0935EH /A001 – treating waste exemption, crushing waste fluorescent tubes;
- The Mall Cribbs Causeway 20m N, EPR/WF0735D H/A001 – using waste exemption, use of waste in construction;
- The Mall Cribbs Causeway 38m NE, EPR/RF0501H A/A001 – using waste exemption, use of waste in construction; and
- Charlton Hayes Development 468m E, EPR/DE5586L U/A001 – treating waste exemption, screening and blending of waste.

Industrial Activities

Review of the Groundsure report reveals that there are 6 recent industrial land uses registered within 500m of the Site, these are all based within the Cribbs Causeway Shopping Centre or the immediately surrounding shopping units. The closest of these is Specsavers Hecare and Access Ability, both lie 19m N and involve the activity of disability and mobility equipment.

Another registered industrial land use of note is an electricity substation located 219m NE at Gloucestershire, BS34.

There is no history of licensed industrial activities being undertaken on site or within 500m of it.

Licensed Discharges to Controlled Waters

There are four licensed discharges to controlled waters within 500m of the Site, as identified within the Groundsure report. The closest of these lies 183m SW at The Mall, Cribbs Causeway, Bristol, BS4 5DG and involves the discharge of site drainage into the Henbury Trym under the licence number 102594.

Visible Evidence of Contamination

The operator is unaware of any known visible evidence of pollution or contamination in the Site area. As the Site is underground in a contained compound, there is limited opportunity or pollution or contamination to infiltrate the Site.

Damage to Pollution Prevention Measures

The operator is unaware of any damage to pollution prevention measures in place on Site.

Historical Land Uses

A review of the historical mapping provided within the Groundsure Report reveals that the area above ground where the Site lies and the neighbouring land was principally used as agricultural land, until 1998 when the Cribbs Causeway Shopping Centre was built. Within the Site boundary and the compound where the digester is proposed, the area has previously been used for storage of waste generated by the shopping centre awaiting transfer off-site.

Historical Mapping

A review of the historical mapping provided with the Groundsure report indicates the Site area was used for farmland prior to its conversion to commercial use.

The principal land uses of the Site boundary and immediately surrounding area, as summarised below;

- 1880 - The area within the Site boundary and immediately surrounding is open farmland. The village of Charlton lies 500m south-west of the Site. An unnamed stream (referred to as Hazel Brook on OS mapping) lies approximately 650m to the west of the Site at its closest point. There are two small ponds located in close proximity, 80m to the north and 80m to the south. A quarry is located 1km to the north of the Site. There are a number of areas of woodland surrounding the Site, including High Wood 550m to the north-east, Hayes Wood 750m to the south-east, Deer Park 800m to the north and some unmarked woodland within the village of Charlton 700m to the south. The closest transport connections is an unnamed lane 450m to the south and Highwood Lane 450m to the north. Two footpaths run 10m to the west and 100m to the east of the Site.
- 1912 – A railway network has been built approximately 1km south of the Site.
- 1935 – A tank is now marked 1.5km to the south-west. An area 1.8km to the north-east has become developed on with residential properties.
- 1954 – The village of Charlton no longer exists and has been replaced by a runway for the Filton Aerodrome. The aerodrome lies approximately 600m to the south and east of the Site and covers large areas of land to the east of the Site. The B4057 road has been constructed 450m east of the Site. A building has been constructed 450m north-east of the Site.
- 1966 – Previously open areas 750m to the east within Filton Airfield have become developed and multiple buildings can now be seen. The M5 motorway is under construction approximately 750m to the north and was completed up to a roundabout approximately 1km to the north-west. Beyond this the road is the A4018. The area of residential properties 1.8km to the north-east have further expanded.
- 1973 – A reservoir is now marked 400m to the north of the Site. Areas of land 1km to the south, 750m to the east, 600m to the north-east have all expanded and developed with residential, commercial and industrial premises. The M5 motorway has now been further developed beyond the roundabout and completed.
- 1988 – Large areas of land approximately 400m-750m to the north have become further developed with large infrastructures and

	<p>buildings now marked, including a Hypermarket and warehouses. Additional roads have been constructed around these buildings, the closest of which is Pegasus Road 250m north-east. The area of residential dwellings to 1.8km north-east of the Site has further expanded.</p> <ul style="list-style-type: none"> • 2001 – The Mall shopping centre, which sits above the location of the Site, is now built including additional infrastructure for the shopping centre including the car park and additional access roads 300m to the south. The reservoir to the north of the Site is now annotated as ‘covered’. • 2010 – Additional infrastructure has been built in the areas surrounding The Mall shopping centre, including a Superstore 650m north-west from the Site. Additional small roads connecting areas immediately around the shopping centre have been constructed. Bristol Gold Course is now marked, 1km north. Areas of residential dwellings have been expanded around the area which once was Filton Airfield, 1km east of the Site. • 2021 – The area of land once Filton Airfield have further expanded and the closest residential properties are now located approximately 750m to the east. Additional local roads to accommodate these residential dwellings have also been constructed. An electric car charging point is now marked approximately 150m to the north-east within the Cribbs Causeway car park.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	<ul style="list-style-type: none"> • Appendix A Groundsure Report
Baseline soil and groundwater reference data	N/A
Supporting information	<ul style="list-style-type: none"> • Appendix A Groundsure Report

3.0 PERMITTED ACTIVITIES	
Permitted activities	<p>The activities at the Site will be regulated as a bespoke waste operation as per the Environmental Permitting (England and Wales) Regulations 2016 (as amended).</p> <p>A number of waste management activities as described in the Waste Framework Directive 2008 will be undertaken at the Site. These include:</p> <ul style="list-style-type: none"> • R3 - Recycling or reclamation of organic substances that are not used as solvents; • R5 - Recycling/reclamation of other inorganic materials; and

	<ul style="list-style-type: none"> R12 - Exchange of wastes for submission to any of the operations numbered R1 to R 11.
Non-permitted activities undertaken	N/A
Document references for: <ul style="list-style-type: none"> plan showing activity layout; and environmental risk assessment. 	<ul style="list-style-type: none"> Drawing EP1 Site Location Plan

Note:

In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (Environmental Risk Assessment - EPR H1) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.

These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application.

4.0 CHANGES TO THE ACTIVITY	
Have there been any changes to the activity boundary?	<i>To be maintained during the life of the permit</i>
Have there been any changes to the permitted activities?	
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	
Checklist of supporting information	

5.0 MEASURES TAKEN TO PROTECT THE LAND	
<i>To be maintained during the life of the permit</i>	
Checklist of supporting information	

6.0 POLLUTION INCIDENTS AND REMEDIATION	
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<i>To be maintained during the life of the permit</i>	
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Checklist of supporting information	
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7.0 SOIL GAS AND WATER QUALITY MONITORING (WHERE UNDERTAKEN)	
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<i>To be maintained during the life of the permit</i>	
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Checklist of supporting information	
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APPENDIX A

Groundsure Report

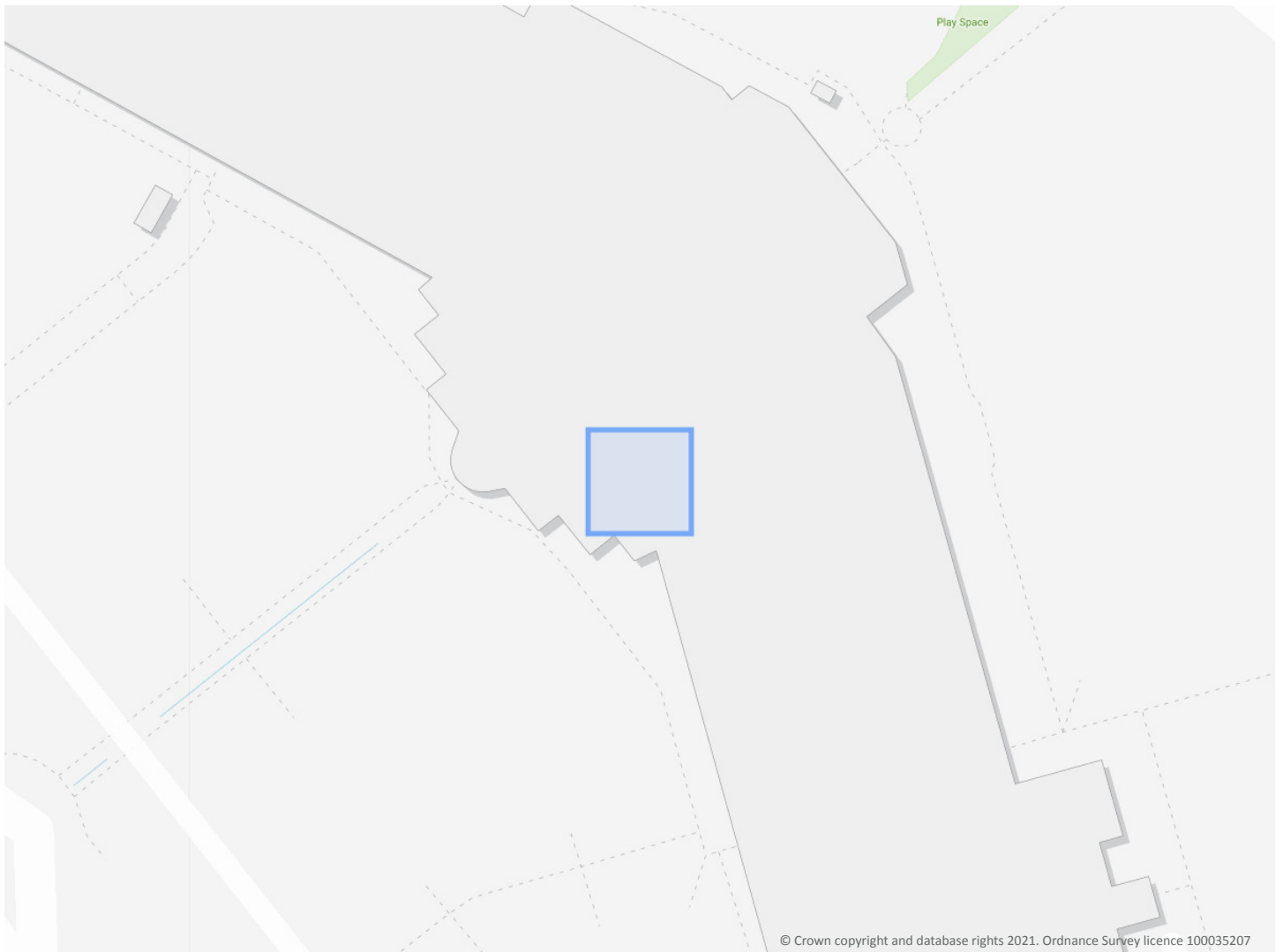
358778 180827

Order Details

Date: 31/03/2021
Your ref: EMS_681472_895619
Our Ref: EMS-681472_895619
Client: emapsite

Site Details

Location: 358778 180827
Area: 0.09 ha
Authority: [South Gloucestershire Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.13

groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	<u>Historical industrial land uses</u>	0	0	1	7	-
15	1.2	<u>Historical tanks</u>	0	0	0	8	-
16	1.3	<u>Historical energy features</u>	0	0	1	11	-
16	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
18	2.1	<u>Historical industrial land uses</u>	0	0	1	10	-
19	2.2	<u>Historical tanks</u>	0	0	0	16	-
20	2.3	<u>Historical energy features</u>	0	0	7	28	-
21	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
24	3.7	<u>Waste exemptions</u>	0	4	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
26	4.1	<u>Recent industrial land uses</u>	0	2	5	-	-
27	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
28	4.5	Sites determined as Contaminated Land	0	0	0	0	-



28	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
29	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
29	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	1	3	-
30	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
31	4.17	List 2 Dangerous Substances	0	0	0	0	-
31	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
31	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
32	5.1	Superficial aquifer	None (within 500m)				
33	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
35	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
36	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37	5.6	<u>Groundwater abstractions</u>	0	0	0	0	3
38	5.7	Surface water abstractions	0	0	0	0	0
39	5.8	Potable abstractions	0	0	0	0	0
39	5.9	Source Protection Zones	0	0	0	0	-
39	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
40	6.1	<u>Water Network (OS MasterMap)</u>	0	0	6	-	-



41	6.2	<u>Surface water features</u>	0	0	3	-	-
41	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
42	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
42	6.5	<u>WFD Groundwater bodies</u>	2	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
43	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
43	7.2	Historical Flood Events	0	0	0	-	-
43	7.3	Flood Defences	0	0	0	-	-
43	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
44	7.5	Flood Storage Areas	0	0	0	-	-
45	7.6	Flood Zone 2	None (within 50m)				
45	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
46	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
47	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
48	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	1
49	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
49	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
49	10.4	Special Protection Areas (SPA)	0	0	0	0	0
49	10.5	National Nature Reserves (NNR)	0	0	0	0	0
50	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	1
50	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	3
50	10.8	Biosphere Reserves	0	0	0	0	0
51	10.9	Forest Parks	0	0	0	0	0
51	10.10	Marine Conservation Zones	0	0	0	0	0
51	10.11	<u>Green Belt</u>	0	0	0	0	1
51	10.12	Proposed Ramsar sites	0	0	0	0	0



52	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
52	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
52	10.15	Nitrate Sensitive Areas	0	0	0	0	0
52	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
53	<u>10.17</u>	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
54	<u>10.18</u>	<u>SSSI Units</u>	0	0	0	0	1
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
55	11.1	World Heritage Sites	0	0	0	-	-
55	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
55	11.3	National Parks	0	0	0	-	-
55	11.4	Listed Buildings	0	0	0	-	-
56	11.5	Conservation Areas	0	0	0	-	-
56	11.6	Scheduled Ancient Monuments	0	0	0	-	-
56	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
57	<u>12.1</u>	<u>Agricultural Land Classification</u>	Grade 3 (within 250m)				
58	12.2	Open Access Land	0	0	0	-	-
58	12.3	Tree Felling Licences	0	0	0	-	-
58	12.4	Environmental Stewardship Schemes	0	0	0	-	-
58	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
59	13.1	Priority Habitat Inventory	0	0	0	-	-
59	13.2	Habitat Networks	0	0	0	-	-
59	13.3	Open Mosaic Habitat	0	0	0	-	-
59	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
60	<u>14.1</u>	<u>10k Availability</u>	Identified (within 500m)				
61	<u>14.2</u>	<u>Artificial and made ground (10k)</u>	0	0	0	4	-
63	14.3	Superficial geology (10k)	0	0	0	0	-



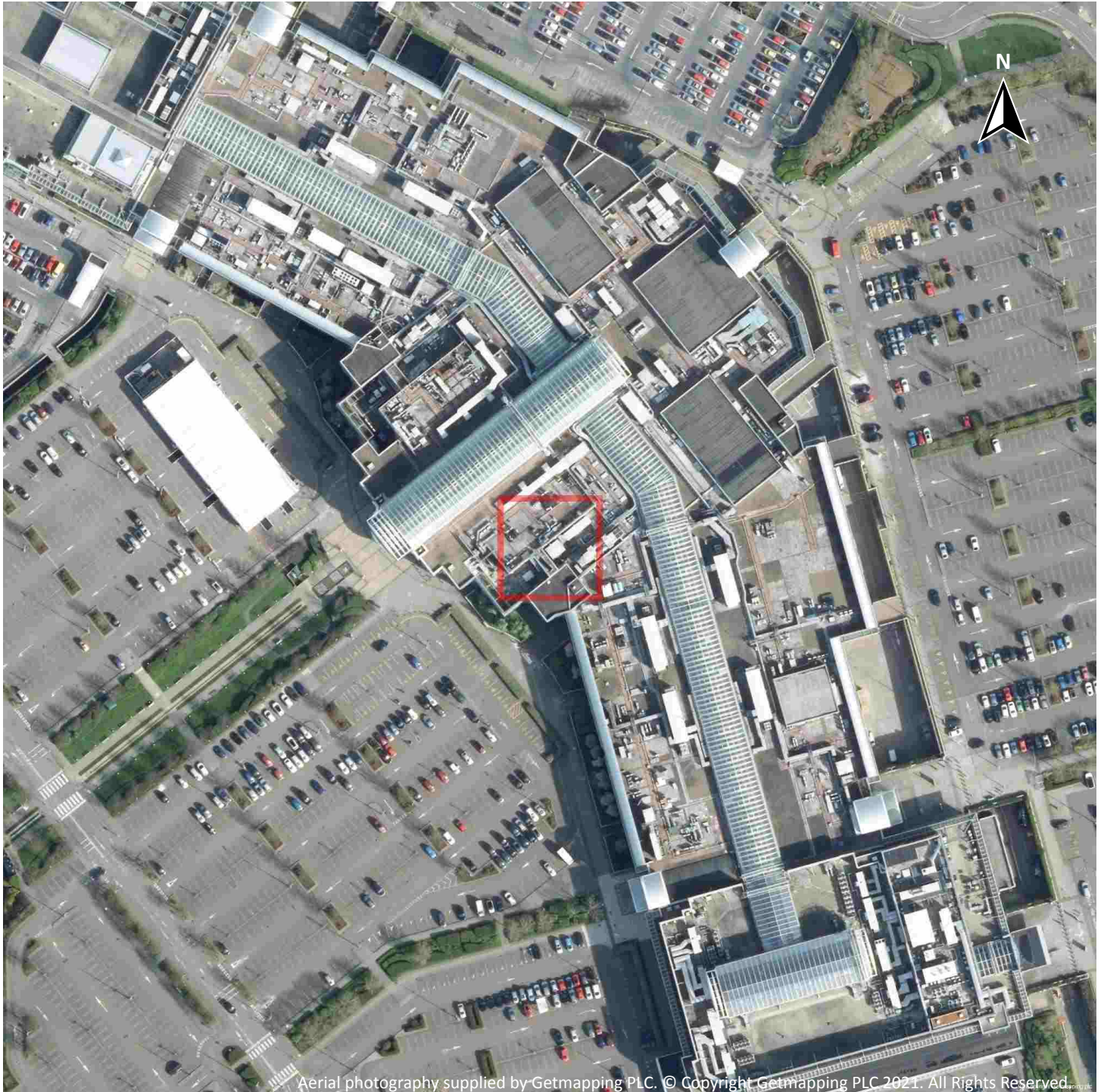
63	14.4	Landslip (10k)	0	0	0	0	-
64	14.5	<u>Bedrock geology (10k)</u>	1	0	1	6	-
65	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
66	15.1	<u>50k Availability</u>	Identified (within 500m)				
67	15.2	<u>Artificial and made ground (50k)</u>	0	0	0	4	-
68	15.3	Artificial ground permeability (50k)	0	0	-	-	-
69	15.4	Superficial geology (50k)	0	0	0	0	-
69	15.5	Superficial permeability (50k)	None (within 50m)				
69	15.6	Landslip (50k)	0	0	0	0	-
69	15.7	Landslip permeability (50k)	None (within 50m)				
70	15.8	<u>Bedrock geology (50k)</u>	1	0	1	6	-
71	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
71	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
72	16.1	<u>BGS Boreholes</u>	0	0	1	-	-
Page	Section	Natural ground subsidence					
73	17.1	<u>Shrink swell clays</u>	Negligible (within 50m)				
74	17.2	<u>Running sands</u>	Negligible (within 50m)				
75	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
76	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
77	17.5	<u>Landslides</u>	Very low (within 50m)				
78	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
80	18.1	Natural cavities	0	0	0	0	-
81	18.2	BritPits	0	0	0	0	-
81	18.3	Surface ground workings	0	0	0	-	-
81	18.4	<u>Underground workings</u>	0	0	0	0	7
82	18.5	Historical Mineral Planning Areas	0	0	0	0	-



82	18.6	Non-coal mining	0	0	0	0	0
82	18.7	Mining cavities	0	0	0	0	0
82	18.8	JPB mining areas	None (within 0m)				
82	18.9	Coal mining	None (within 0m)				
83	18.10	Brine areas	None (within 0m)				
83	18.11	Gypsum areas	None (within 0m)				
83	18.12	Tin mining	None (within 0m)				
83	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
84	19.1	Radon	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
85	20.1	BGS Estimated Background Soil Chemistry	1	0	-	-	-
85	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
85	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
86	21.1	Underground railways (London)	0	0	0	-	-
86	21.2	Underground railways (Non-London)	0	0	0	-	-
86	21.3	Railway tunnels	0	0	0	-	-
86	21.4	Historical railway and tunnel features	0	0	0	-	-
86	21.5	Royal Mail tunnels	0	0	0	-	-
87	21.6	Historical railways	0	0	0	-	-
87	21.7	Railways	0	0	0	-	-
87	21.8	Crossrail 1	0	0	0	0	-
87	21.9	Crossrail 2	0	0	0	0	-
87	21.10	HS2	0	0	0	0	-



Recent aerial photograph

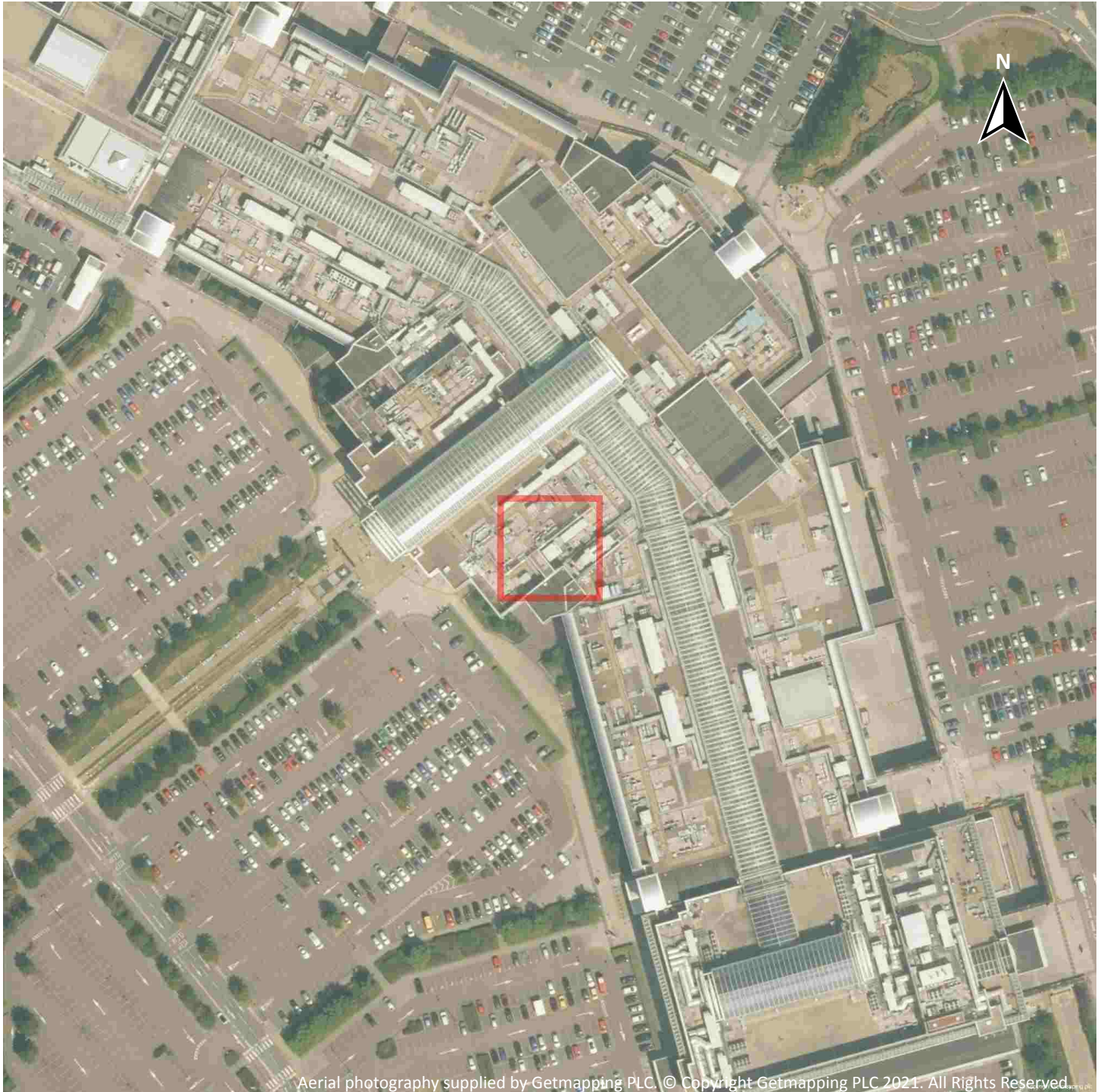


Capture Date: 03/04/2017

Site Area: 0.09ha



Recent site history - 2016 aerial photograph

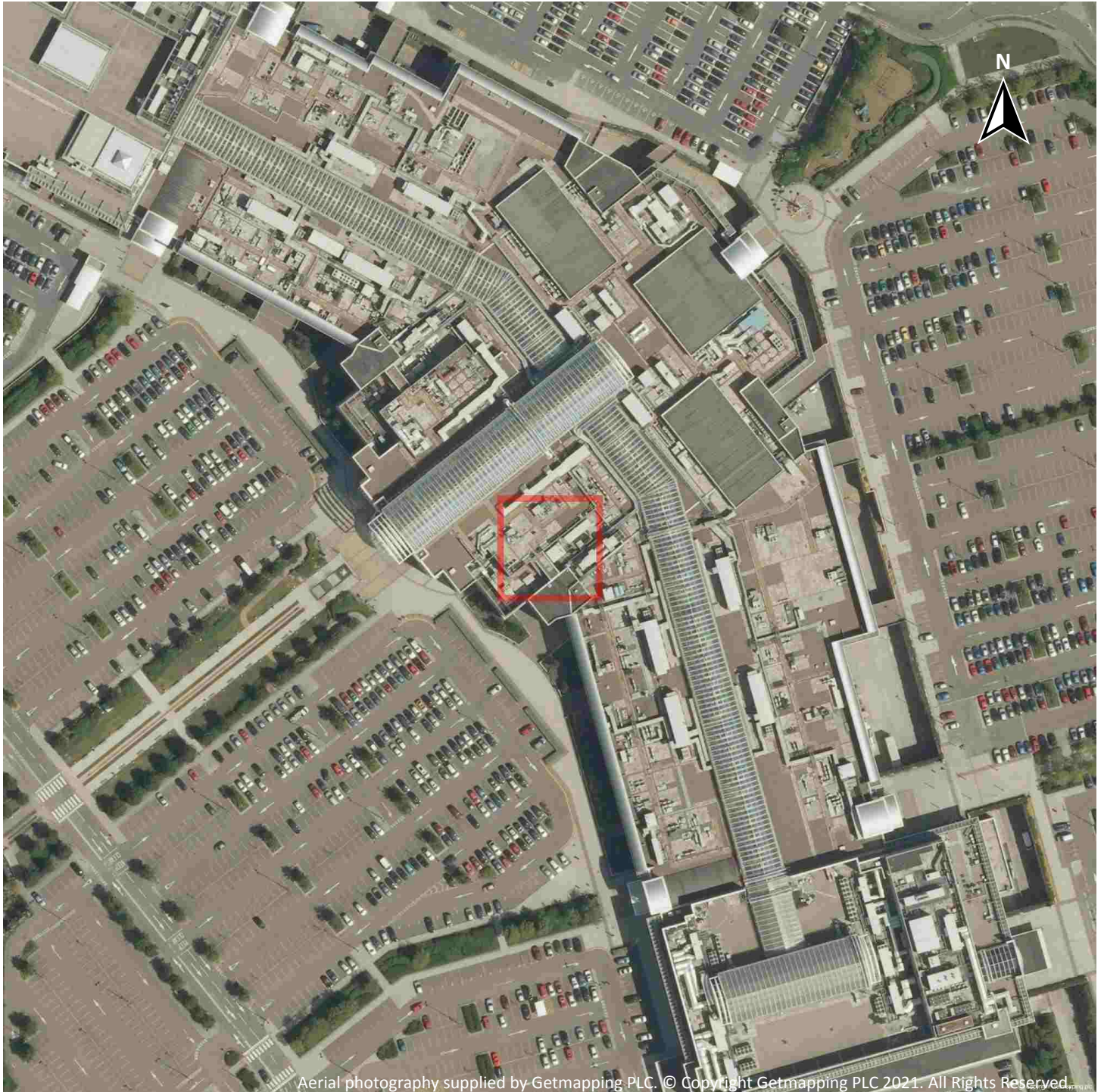


Capture Date: 05/10/2016

Site Area: 0.09ha



Recent site history - 2009 aerial photograph

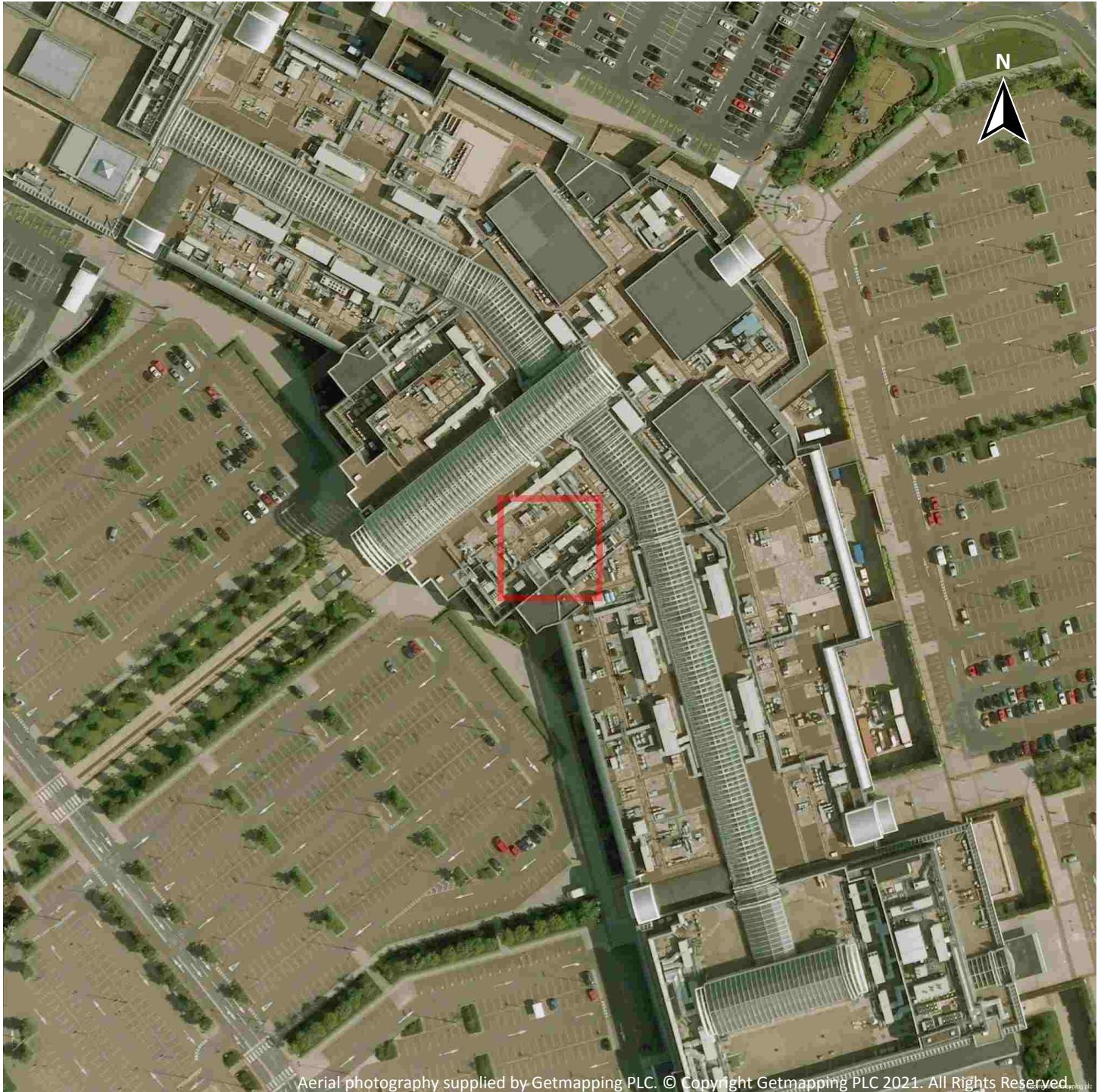


Capture Date: 01/06/2009

Site Area: 0.09ha



Recent site history - 2006 aerial photograph



Capture Date: 05/06/2006

Site Area: 0.09ha



Recent site history - 1999 aerial photograph

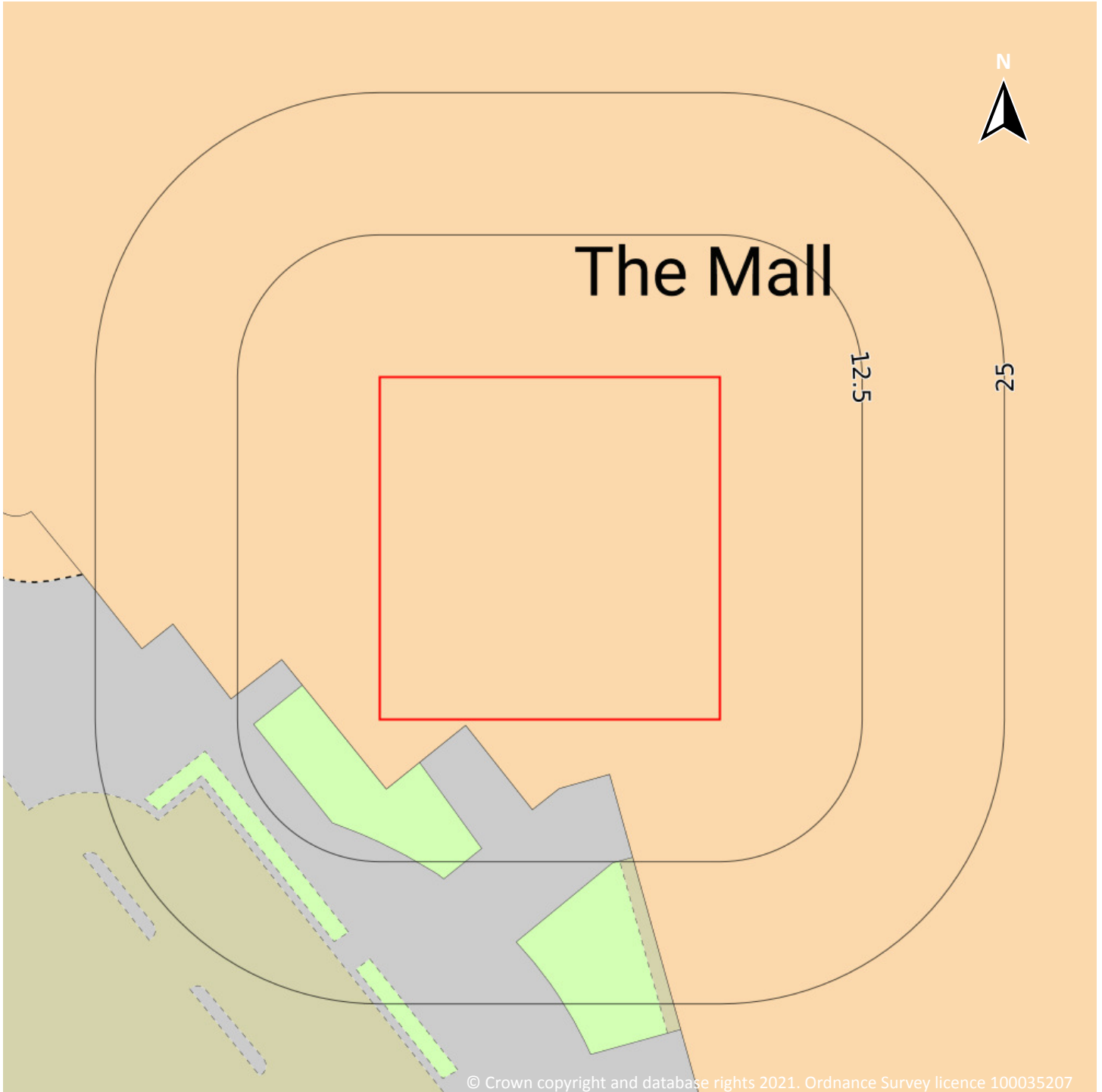


Capture Date: 24/07/1999

Site Area: 0.09ha



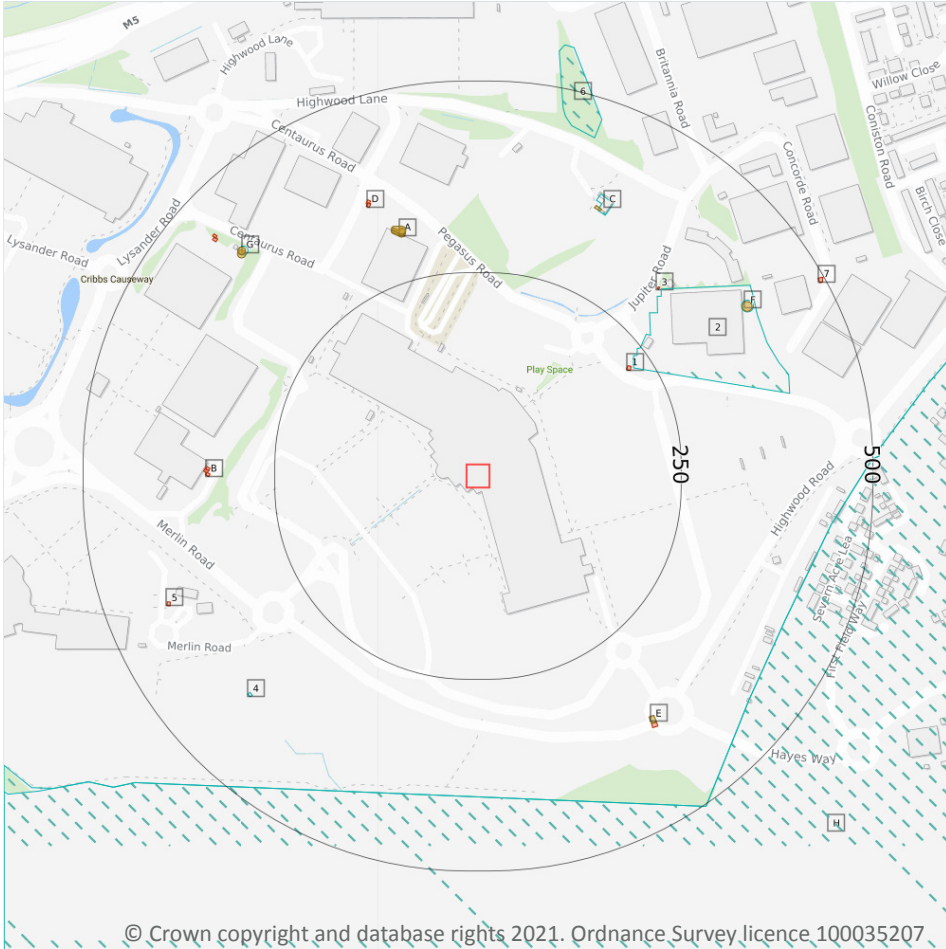
OS MasterMap site plan



Site Area: 0.09ha






1 Past land use



Site Outline

Search buffers in metres (m)

-  Historical industrial land uses
-  Historical tanks
-  Historical energy features

1.1 Historical industrial land uses

Records within 500m **8**

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
2	226m NE	Unspecified Warehouse	1989	1164588



ID	Location	Land use	Dates present	Group ID
C	358m NE	Pumping Station	1974 - 1989	1265428
F	387m NE	Unspecified Tank	1989	1176191
4	389m SW	Wind Pump	1912	1233717
G	397m NW	Unspecified Tank	1989	1176190
H	402m S	Airfield	1981 - 1989	1216402
H	402m S	Airfield	1969 - 1974	1240404
6	448m N	Unspecified Heap	1989	1163223

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

8

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	308m N	Tanks	1992	182777
A	310m N	Tanks	1992	179300
A	312m N	Tanks	1988	190361
C	360m NE	Unspecified Tank	1970	174317
E	364m SE	Unspecified Tank	1970 - 1990	191801
F	388m NE	Unspecified Tank	1989 - 1990	183170
G	396m NW	Unspecified Tank	1992 - 1998	190817
G	399m NW	Unspecified Tank	1988	188143

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

12

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	218m NE	Electricity Substation	1988 - 1999	109623
3	317m NE	Electricity Substation	1990	97995
B	334m W	Electricity Substation	1992 - 1998	102543
B	334m W	Electricity Substation	1999	112735
B	336m W	Electricity Substation	1988 - 1989	113528
D	358m N	Electricity Substation	1992 - 1998	111165
D	363m N	Electricity Substation	1988	113786
E	374m SE	Electricity Substation	1970 - 1990	112072
5	414m W	Electricity Substation	1999	98045
G	437m NW	Electricity Substation	1992 - 1998	113567
G	440m NW	Electricity Substation	1988	109757
7	491m NE	Electricity Substation	1985 - 1990	102583

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

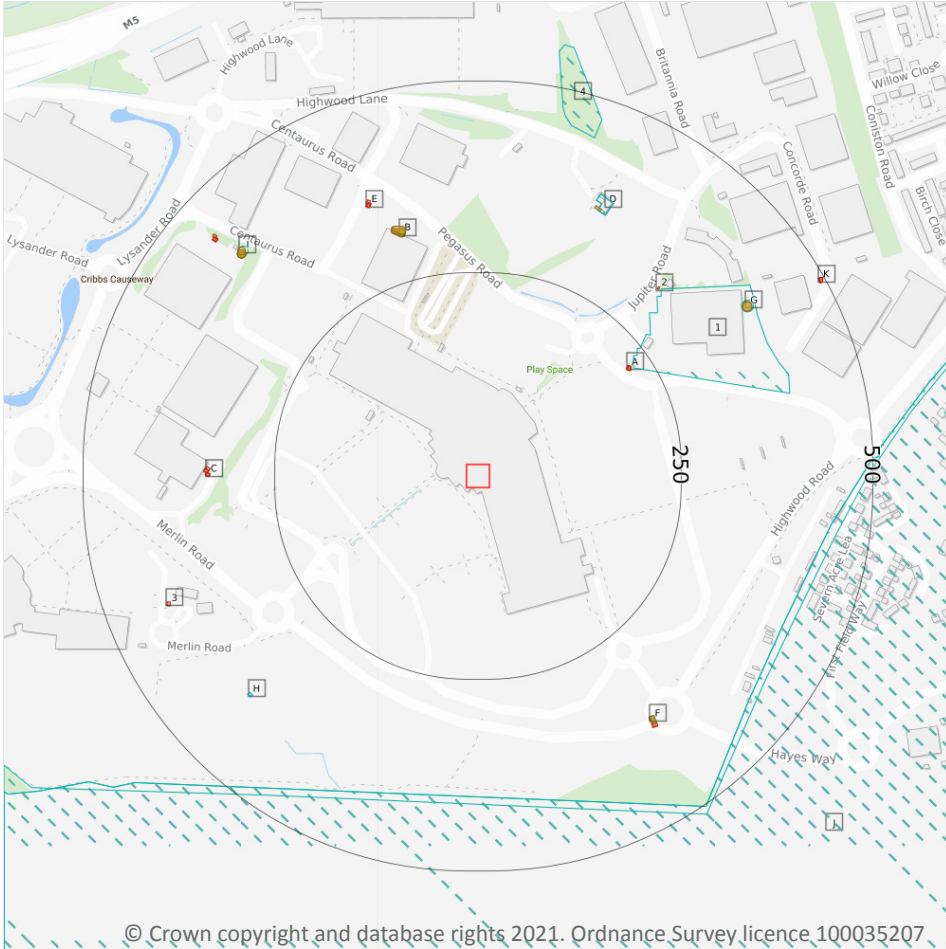
0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

2.1 Historical industrial land uses

Records within 500m **11**

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
1	226m NE	Unspecified Warehouse	1989	1164588
D	358m NE	Pumping Station	1974	1265428
D	358m NE	Pumping Station	1989	1265428



ID	Location	Land Use	Date	Group ID
G	387m NE	Unspecified Tank	1989	1176191
H	389m SW	Wind Pump	1912	1233717
H	389m SW	Wind Pump	1912	1233717
I	397m NW	Unspecified Tank	1989	1176190
J	402m S	Airfield	1974	1240404
J	402m S	Airfield	1989	1216402
J	412m S	Airfield	1969	1240404
4	448m N	Unspecified Heap	1989	1163223

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

16

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
B	308m N	Tanks	1992	182777
B	310m N	Tanks	1992	179300
B	310m N	Tanks	1992	179300
B	312m N	Tanks	1988	190361
D	360m NE	Unspecified Tank	1970	174317
F	364m SE	Unspecified Tank	1990	191801
F	365m SE	Unspecified Tank	1970	191801
G	388m NE	Unspecified Tank	1989	183170
G	388m NE	Unspecified Tank	1990	183170
I	396m NW	Unspecified Tank	1993	190817
I	396m NW	Unspecified Tank	1992	190817
I	396m NW	Unspecified Tank	1998	190817



ID	Location	Land Use	Date	Group ID
I	396m NW	Unspecified Tank	1992	190817
I	396m NW	Unspecified Tank	1992	190817
I	396m NW	Unspecified Tank	1993	190817
I	399m NW	Unspecified Tank	1988	188143

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

35

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
A	218m NE	Electricity Substation	1988	109623
A	218m NE	Electricity Substation	1988	109623
A	218m NE	Electricity Substation	1989	109623
A	218m NE	Electricity Substation	1998	109623
A	218m NE	Electricity Substation	1992	109623
A	218m NE	Electricity Substation	1999	109623
A	218m NE	Electricity Substation	1992	109623
2	317m NE	Electricity Substation	1990	97995
C	334m W	Electricity Substation	1998	102543
C	334m W	Electricity Substation	1992	102543
C	334m W	Electricity Substation	1992	102543
C	334m W	Electricity Substation	1999	112735
C	336m W	Electricity Substation	1988	113528
C	336m W	Electricity Substation	1988	113528
C	336m W	Electricity Substation	1989	113528
E	358m N	Electricity Substation	1993	111165



ID	Location	Land Use	Date	Group ID
E	358m N	Electricity Substation	1992	111165
E	358m N	Electricity Substation	1998	111165
E	358m N	Electricity Substation	1992	111165
E	358m N	Electricity Substation	1992	111165
E	358m N	Electricity Substation	1993	111165
E	363m N	Electricity Substation	1988	113786
F	374m SE	Electricity Substation	1990	112072
F	374m SE	Electricity Substation	1970	112072
3	414m W	Electricity Substation	1999	98045
I	437m NW	Electricity Substation	1993	113567
I	437m NW	Electricity Substation	1992	113567
I	437m NW	Electricity Substation	1998	113567
I	437m NW	Electricity Substation	1992	113567
I	437m NW	Electricity Substation	1992	113567
I	437m NW	Electricity Substation	1993	113567
I	440m NW	Electricity Substation	1988	109757
K	491m NE	Electricity Substation	1990	102583
K	492m NE	Electricity Substation	1985	102583
K	492m NE	Electricity Substation	1989	102583

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

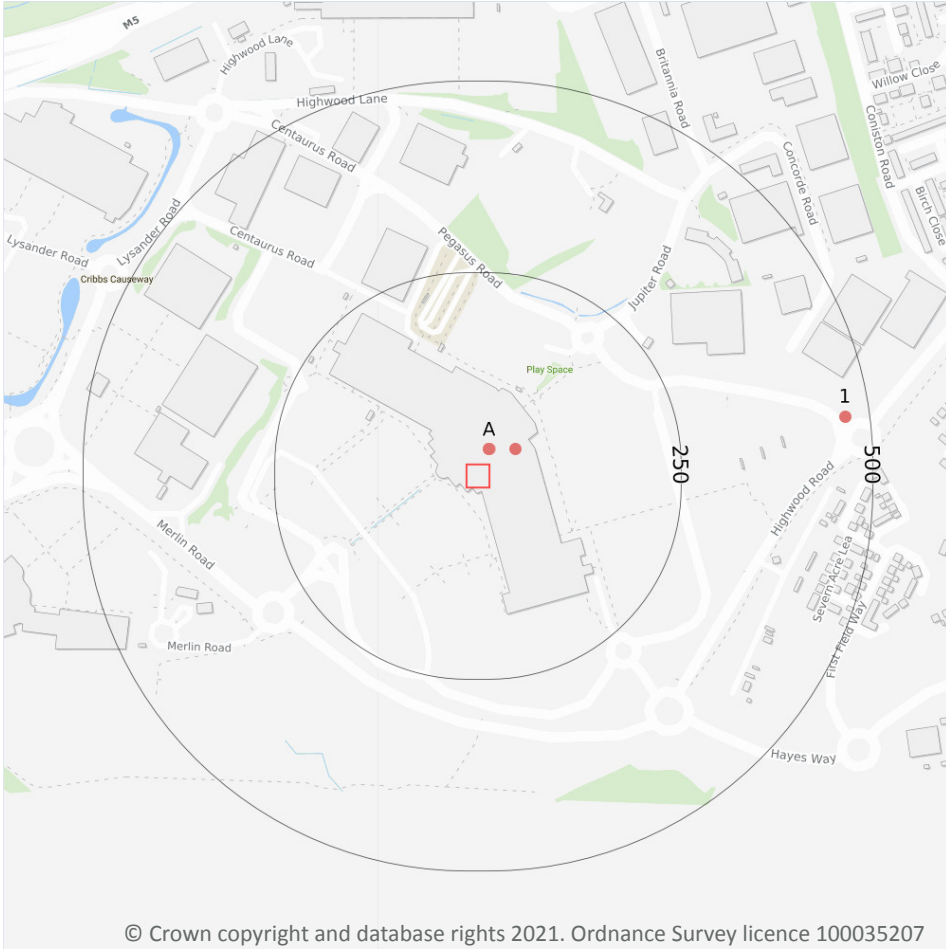
0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m

0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m

0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m

5

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 23**

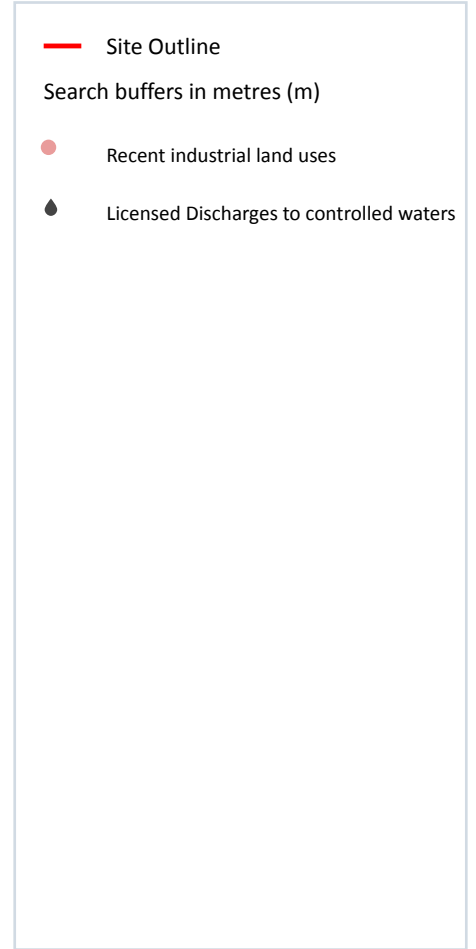
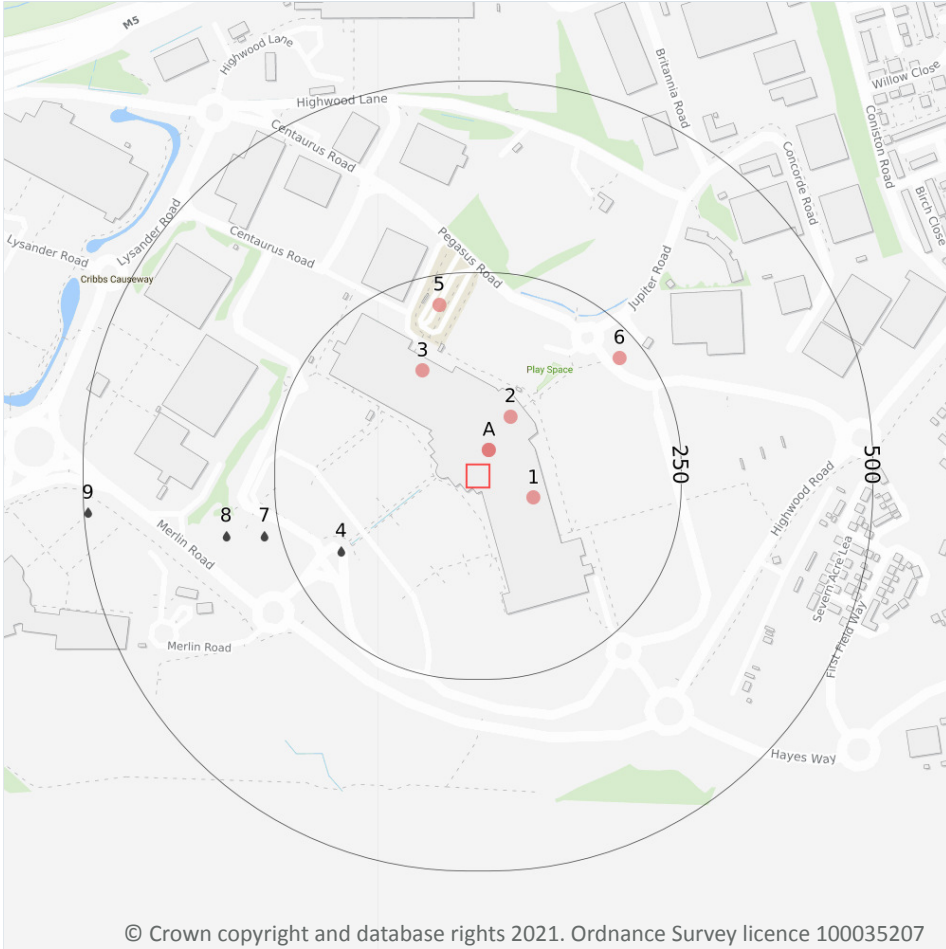


ID	Location	Site	Reference	Category	Sub-Category	Description
A	19m N	THE MALL, CRIBBS CAUSEWAY REGIONAL SHOPPING CENTRE, PATCHWAY, BRISTOL, BS34 5DG	WEX003618	Treating waste exemption	Not on a farm	Crushing waste fluorescent tubes
A	20m N	The Mall Cribbs Causeway Regional Shopping Centre Bristol Avon BS34 5DG	EPR/RF0935EH /A001	Treating waste exemption	Non-Agricultural Waste Only	Crushing waste fluorescent tubes
A	20m N	The Mall Cribbs Causeway Regional Shopping Centre Bristol Avon BS34 5DG	EPR/WF0735D H/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
A	38m NE	The Mall Cribbs Causeway Regional Shopping Centre Bristol Avon BS34 5DG	EPR/RF0501H A/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
1	468m E	Charlton Hayes Development Off Houghwood Road BRISTOL BS34 5DJ	EPR/DE5586L U/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m

7

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26**

ID	Location	Company	Address	Activity	Category
A	19m N	Specsavers Hearcare	Unit 30 Lower Level The Mall Cribbs Causeway, Patchway, Bristol, Gloucestershire, BS34 5DG	Disability and Mobility Equipment	Consumer Products
A	19m N	Access Ability	The Mall, Patchway, Bristol, Gloucestershire, BS34 5DL	Disability and Mobility Equipment	Consumer Products

ID	Location	Company	Address	Activity	Category
1	59m E	Tesla Bristol	The Mall, Cribbs Causeway Regional Shopping Centre, Patchway, Bristol, Gloucestershire, BS34 5DG	New Vehicles	Motoring
2	68m NE	Boots Hearing Care	116 The Mall, Cribbs Causeway Regional Shopping Centre, Patchway, Bristol, Gloucestershire, BS34 5UP	Disability and Mobility Equipment	Consumer Products
3	135m NW	Jessops Plc	Unit 4 The Mall, Patchway, Bristol, Gloucestershire, BS34 5GF	Photographic and Optical Equipment	Household, Office, Leisure and Garden
5	212m N	Bus Station	Gloucestershire, BS34	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
6	219m NE	Electricity Sub Station	Gloucestershire, BS34	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m	0
---------------------	---

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0
---------------------	---

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0
---------------------	---

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0
---------------------	---

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0
---------------------	---

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m

4

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 26**

ID	Location	Address	Details	
4	183m SW	THE MALL, CRIBBS CAUSEWAY, BRISTOL, BS34 5DG	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: 102594 Permit Version: 1 Receiving Water: HENBURY TRYM	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/07/2004 Effective Date: 18/05/2004 Revocation Date: -
7	271m W	HIGHWOOD LANE, RETAIL UNITS 1-4, PATCHWAY, BRISTOL	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 010138 Permit Version: 1 Receiving Water: TRIB OF RIVER HENBURY TRYM	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: - Effective Date: 01/11/1985 Revocation Date: 01/10/1996



ID	Location	Address	Details	
8	320m W	CRIBBS CAUSEWAY SHOPPING CENTRE, MERLIN ROAD, BRISTOL	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - WATER COMPANY (WTW) Permit Number: 012743 Permit Version: 1 Receiving Water: UN-NAMED WATERCOURSE	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 17/08/1995 Effective Date: 10/08/1995 Revocation Date: 22/04/1998
9	494m W	THE MALL, CRIBBS CAUSEWAY, BRISTOL, BS34 5DG	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: 102594 Permit Version: 1 Receiving Water: HENBURY TRYM	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/07/2004 Effective Date: 18/05/2004 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.17 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m

0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

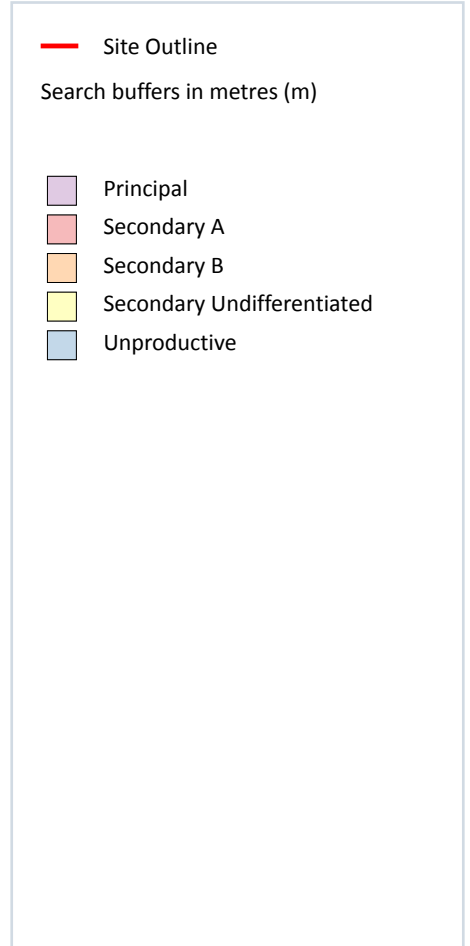
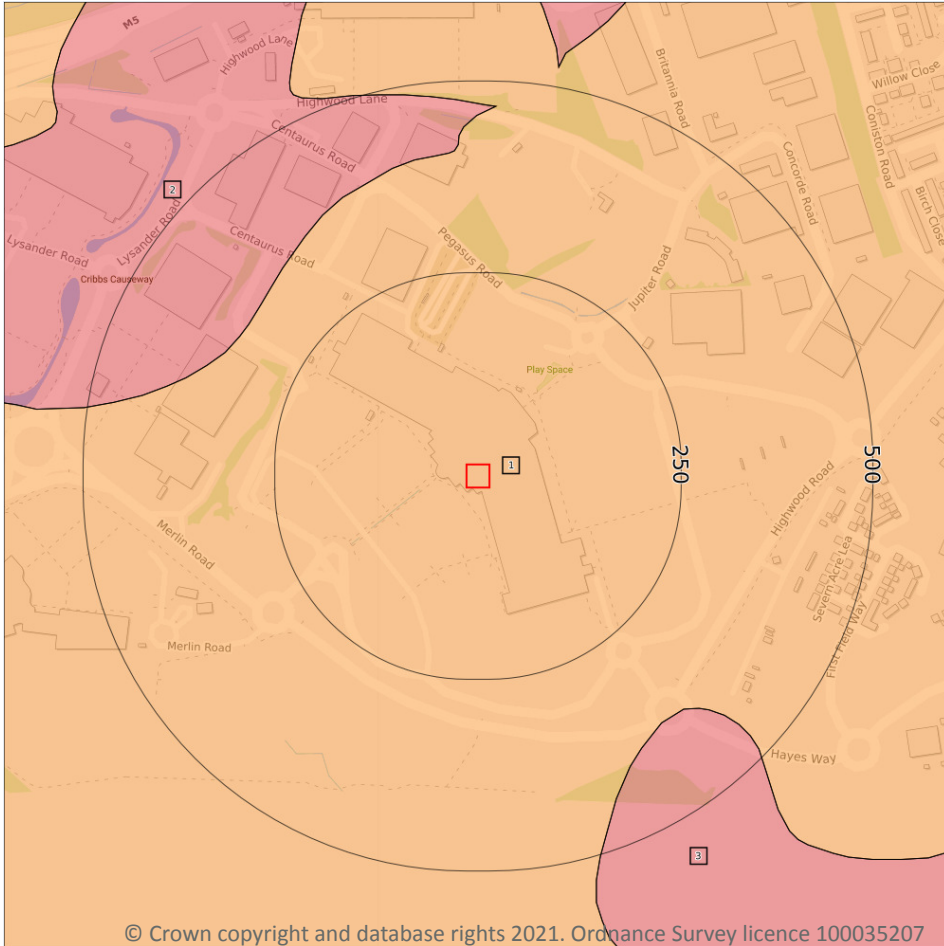
0

Aquifer status of groundwater held within superficial geology.

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 33**

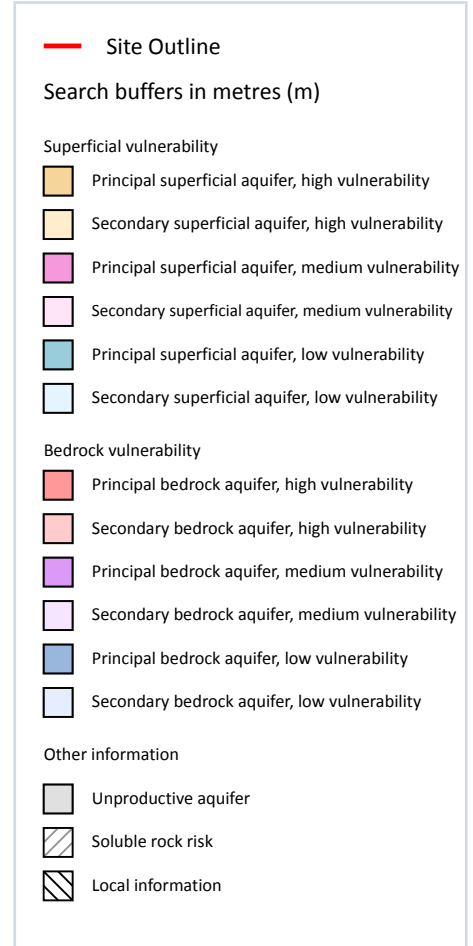
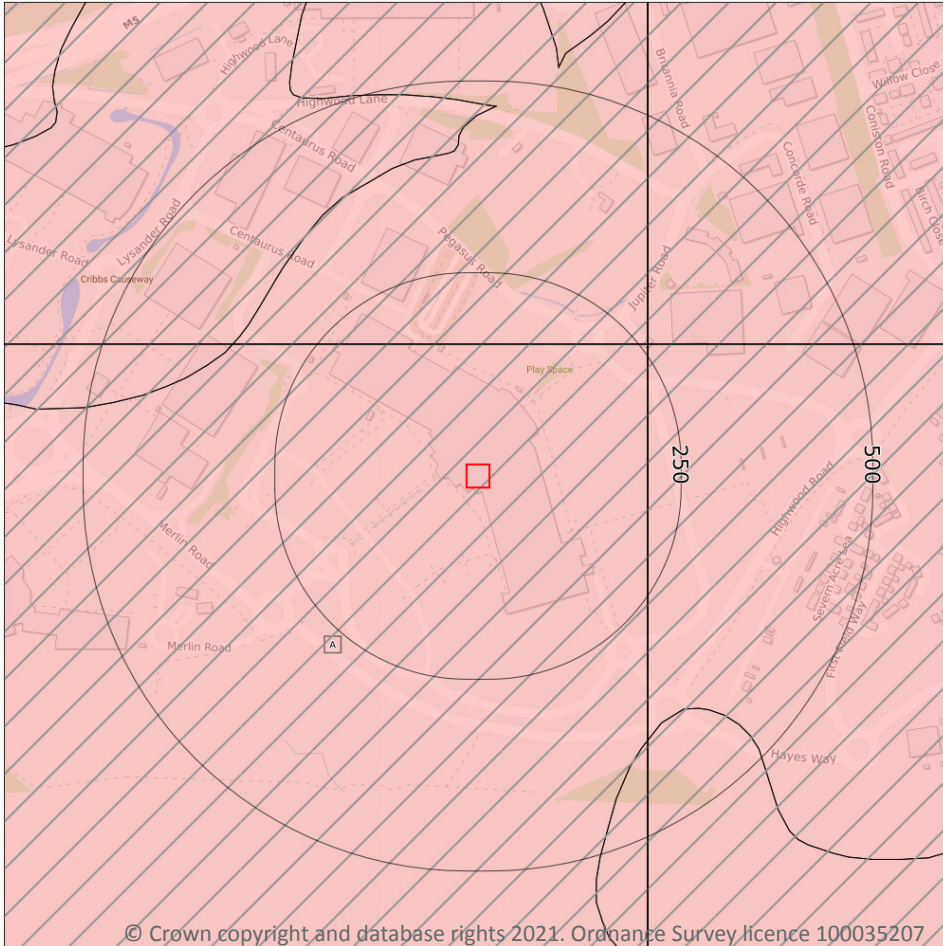
ID	Location	Designation	Description
1	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	338m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	380m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 35**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	1
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.	6.0%

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

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

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m

3

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

ID	Location	Details	
-	1273m SW	Status: Active Licence No: SW/054/0020/007 Details: Dewatering Direct Source: Ground Water - Fresh Point: BRISTOL TRIASSIC & CARBONIFEROUS LIMESTONE AT CATBRAIN Data Type: Point Name: J Murphy & Sons Limited Easting: 357667 Northing: 180166	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/07/2020 Expiry Date: 24/12/2021 Issue No: 1 Version Start Date: 10/07/2020 Version End Date: -
-	1500m S	Status: Active Licence No: 17/53/002/G/072 Details: Spray Irrigation - Direct Direct Source: Ground Water - Fresh Point: LIMESTONE Data Type: Point Name: Filton Golf Club Easting: 359300 Northing: 179400	Annual Volume (m ³): 8,281 Max Daily Volume (m ³): 91 Original Application No: - Original Start Date: 13/06/1992 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1852m SE	Status: Historical Licence No: 17/53/002/G/063 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: FILTON Data Type: Point Name: British Aerospace Plc Easting: 360100 Northing: 179500	Annual Volume (m ³): 9100 Max Daily Volume (m ³): 82 Original Application No: - Original Start Date: 11/03/1986 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m

0

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.



5.8 Potable abstractions

Records within 2000m **0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m **0**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

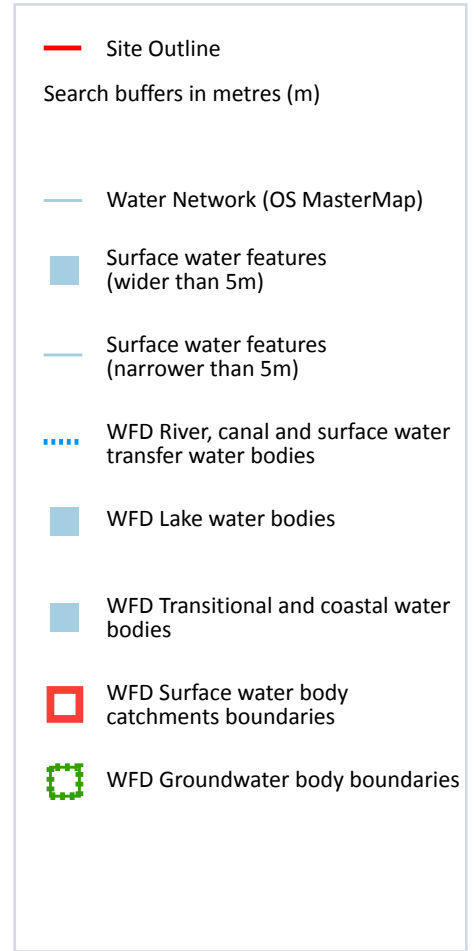
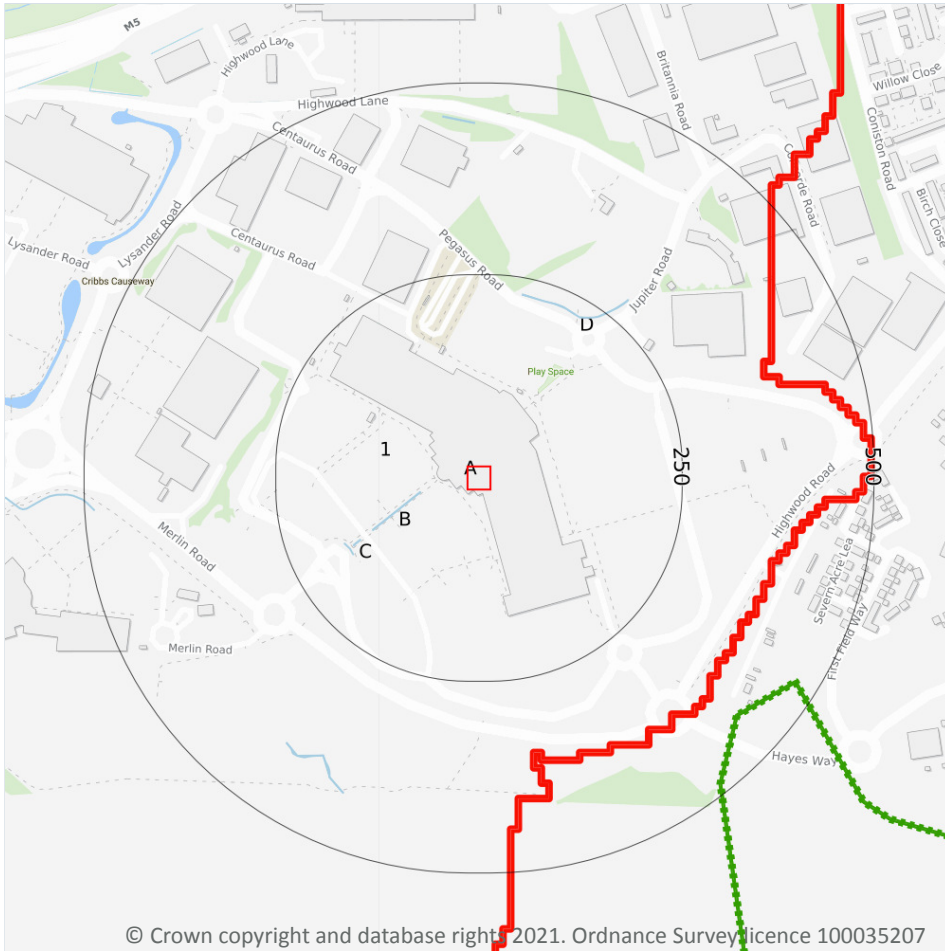
Records within 500m **0**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m

6

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 40**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	61m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	154m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	171m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	226m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	226m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	226m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

3

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 40**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 40**



ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River WB catchment	Trym - source to conf R Avon (Brist)	GB109053027530	Bristol Avon Urban	Avon Bristol and North Somerset Streams

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1
---------------------------	----------

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 40**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	534m NW	River	Trym - source to conf R Avon (Brist)	GB109053027530	Moderate	Good	Moderate	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	2
------------------------	----------

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 40**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Bristol Triassic	GB40902G804800	Poor	Poor	Good	2015
A	On site	Bristol Triassic	GB40902G804800	Poor	Poor	Good	2016

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

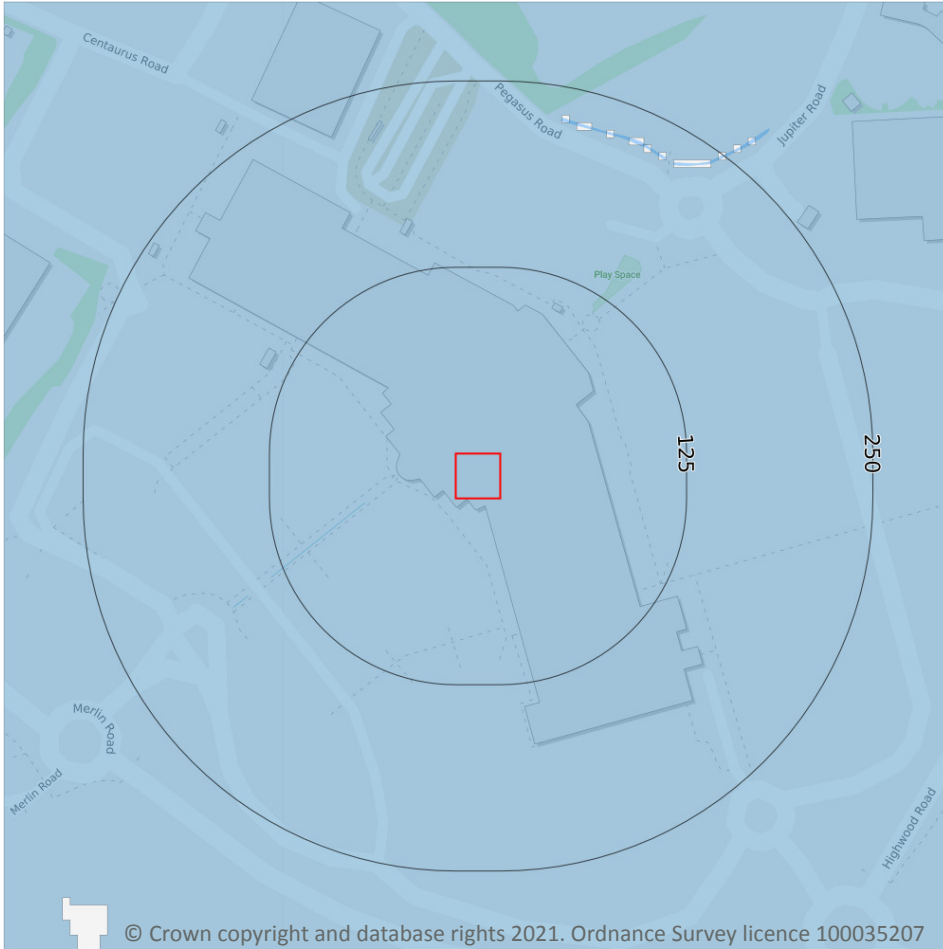
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

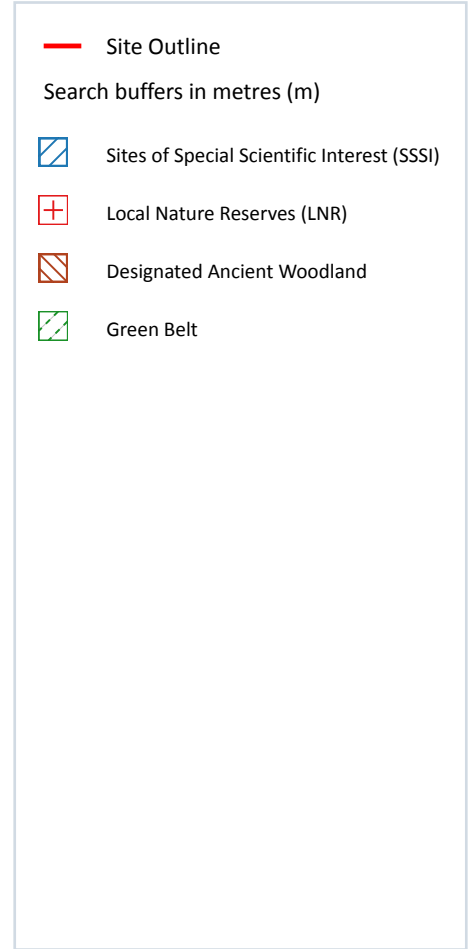
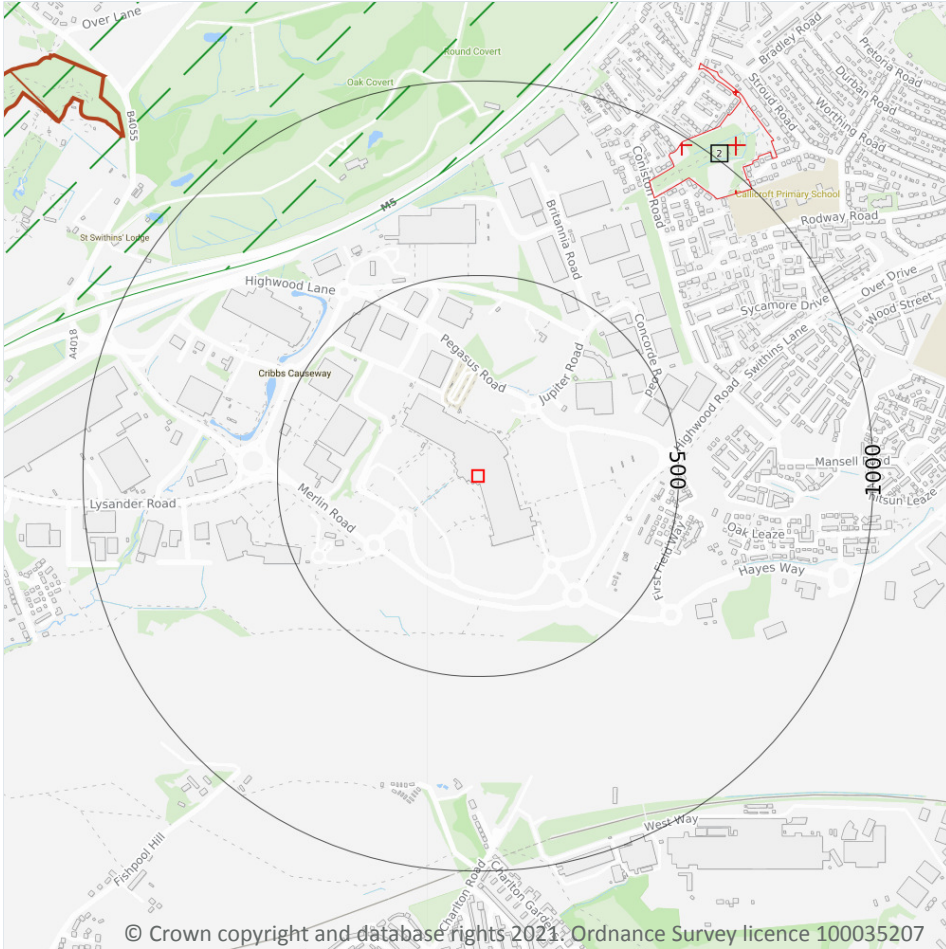
Negligible

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 47**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Data source
-	1560m S	Pen Park Hole	Natural England



This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.6 Local Nature Reserves (LNR)

Records within 2000m

1

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Data source
2	825m NE	Gorse Covert	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

3

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Woodland Type
3	1242m NW	Blackhorse Wood	Ancient & Semi-Natural Woodland
-	1424m N	Unknown	Ancient & Semi-Natural Woodland
-	1444m W	Blackhorse Wood	Ancient & Semi-Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

1

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Local Authority name
1	703m NW	Bath and Bristol	South Gloucestershire

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

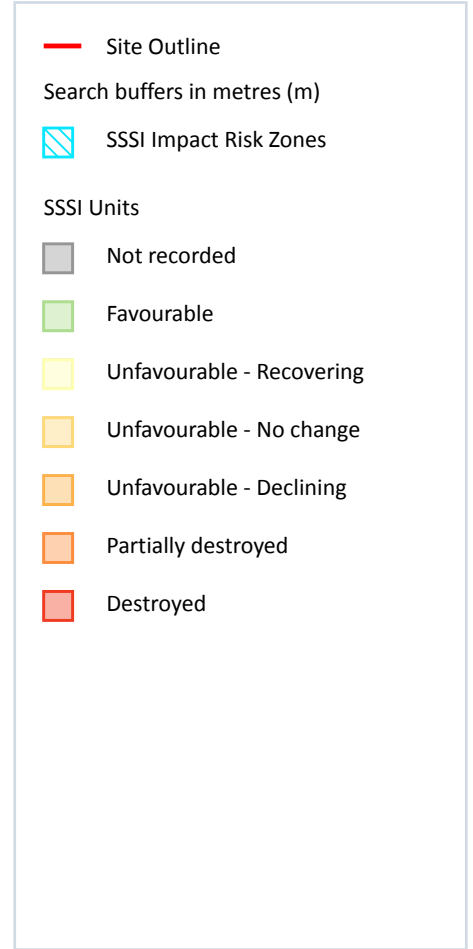
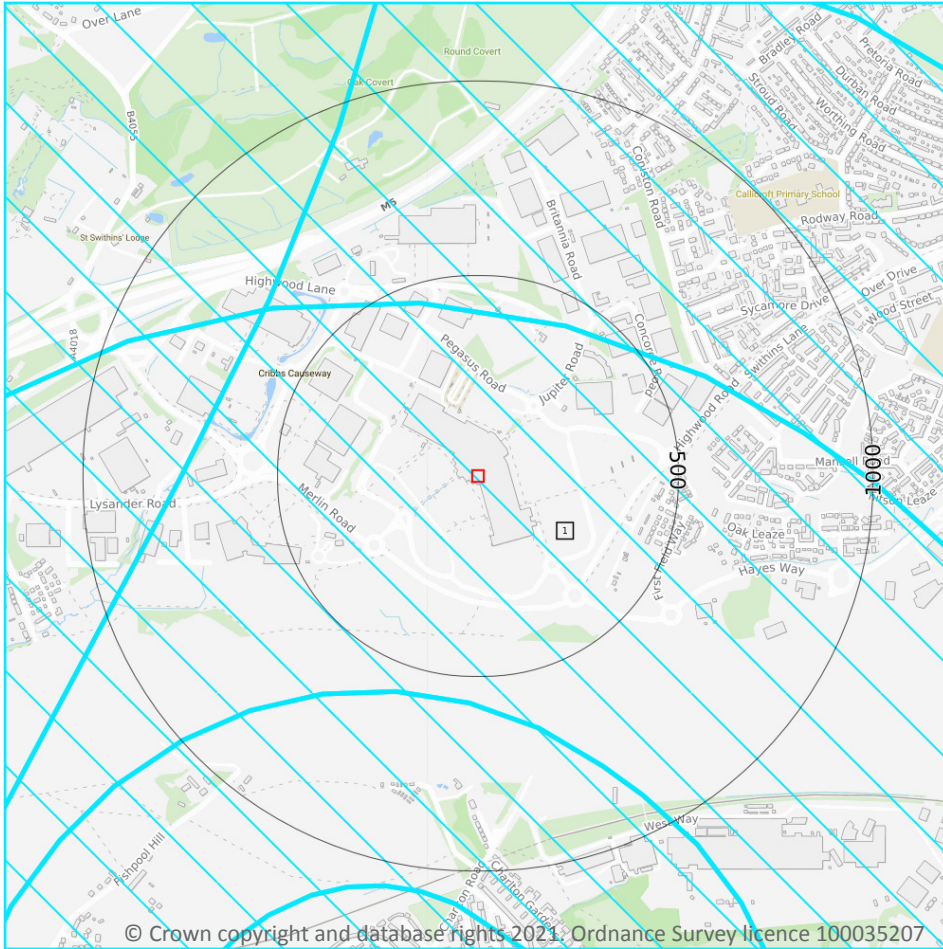
0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 53**

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals</p> <p>Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & manure stores > 250t).</p> <p>Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management</p> <p>Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location)</p> <p>Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.</p>

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

1

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 53**

ID: -
 Location: 1560m S
 SSSI name: Pen Park Hole
 Unit name: Pen Park Hole
 Broad habitat: Earth Heritage
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Cave invertebrate community	Favourable	11/01/2017
IC - Caves	Favourable	11/01/2017

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

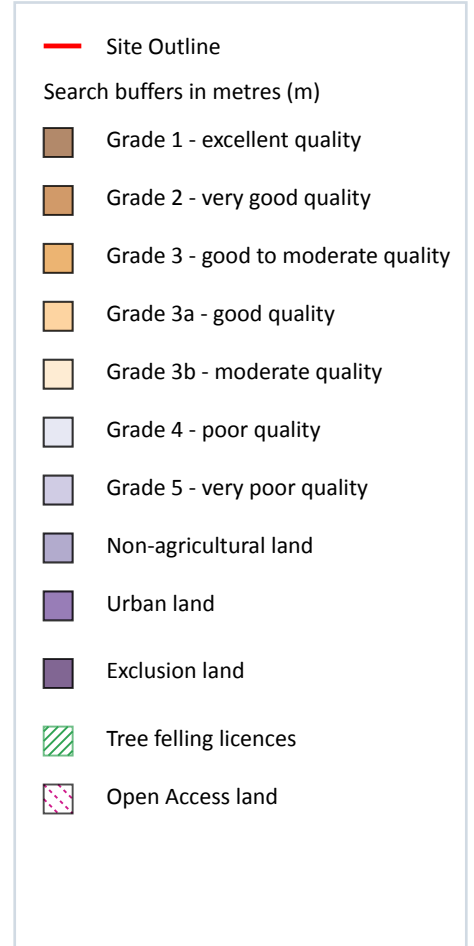
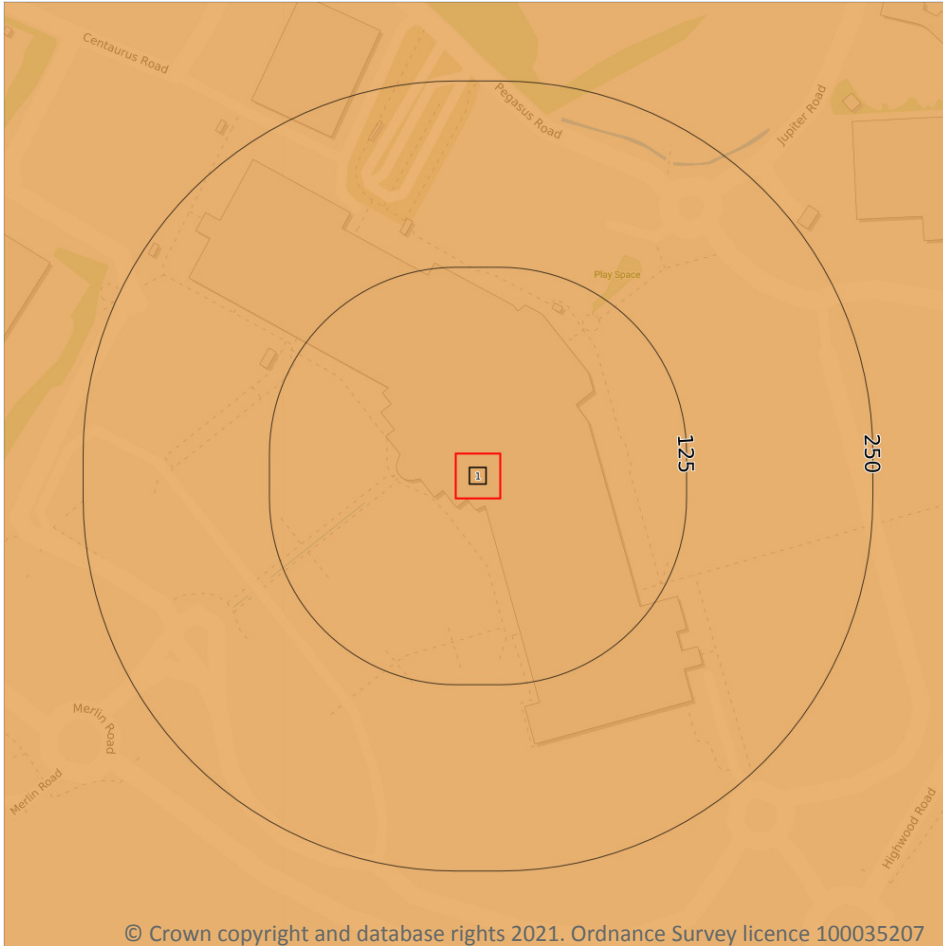
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.



12 Agricultural designations



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12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 57**

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

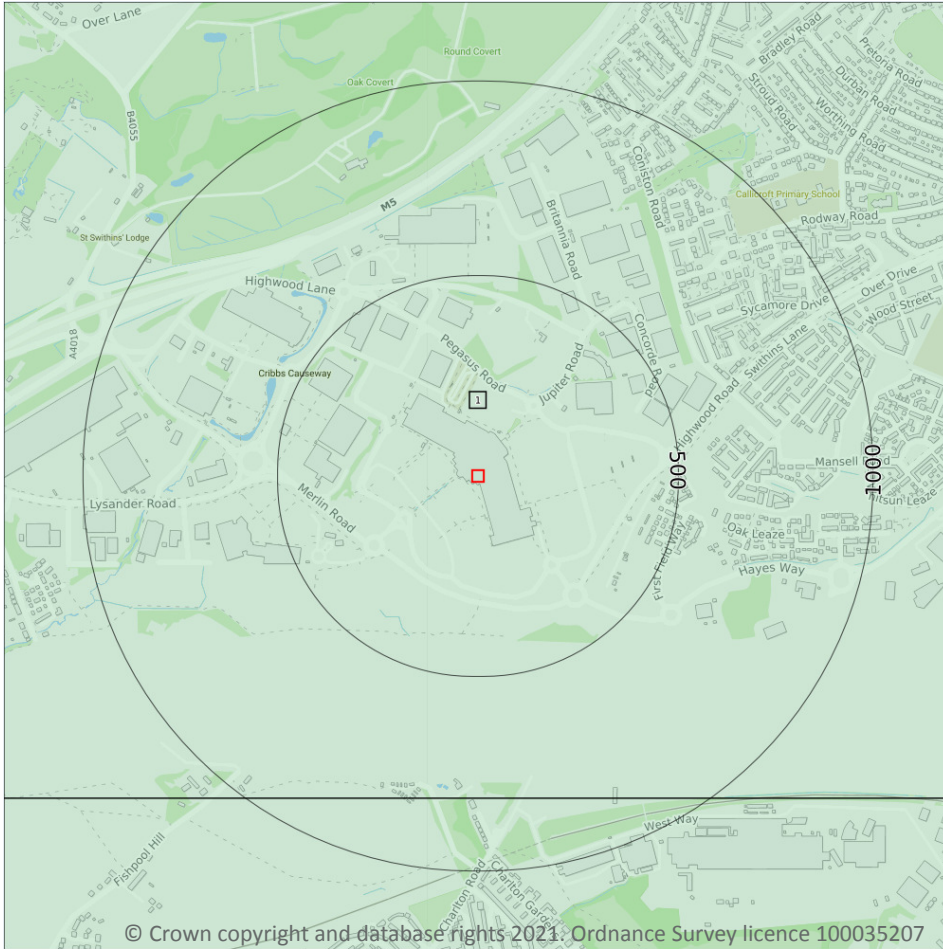
0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
 Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

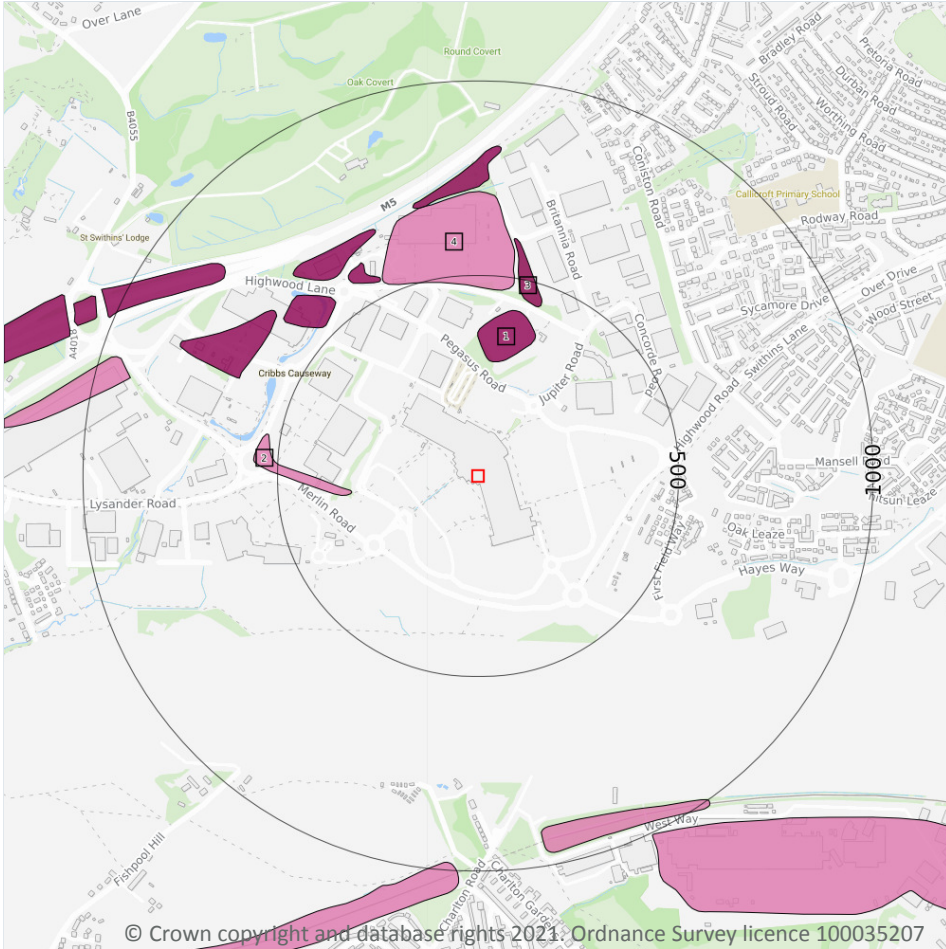
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 60**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	ST58SE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made 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 61**

ID	Location	LEX Code	Description	Rock description
1	280m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	311m W	WGR-VOID	Worked Ground (Undivided)	Void
3	442m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	464m N	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

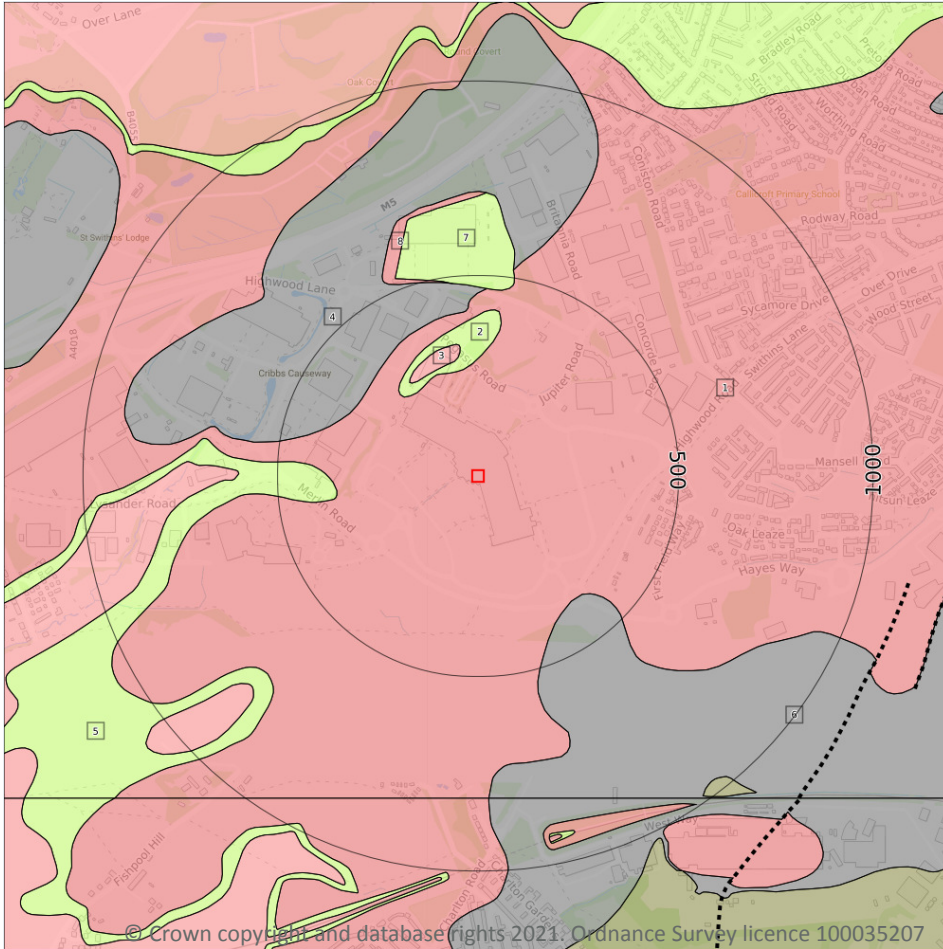
0

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

8

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 64**

ID	Location	LEX Code	Description	Rock age
1	On site	WBCT-MDST	Westbury Formation And Cotham Member (undifferentiated) - Mudstone	Rhaetian Age
2	244m NW	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian Age - Norian Age
3	268m NW	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch

ID	Location	LEX Code	Description	Rock age
4	338m NW	WCT-LMST	Wilmcote Limestone Member - Limestone	Hettangian Age - Rhaetian Age
5	349m W	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian Age - Norian Age
6	380m SE	WCT-LMST	Wilmcote Limestone Member - Limestone	Hettangian Age - Rhaetian Age
7	464m N	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian Age - Norian Age
8	483m N	WBCT-MDST	Westbury Formation And Cotham Member (undifferentiated) - Mudstone	Rhaetian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

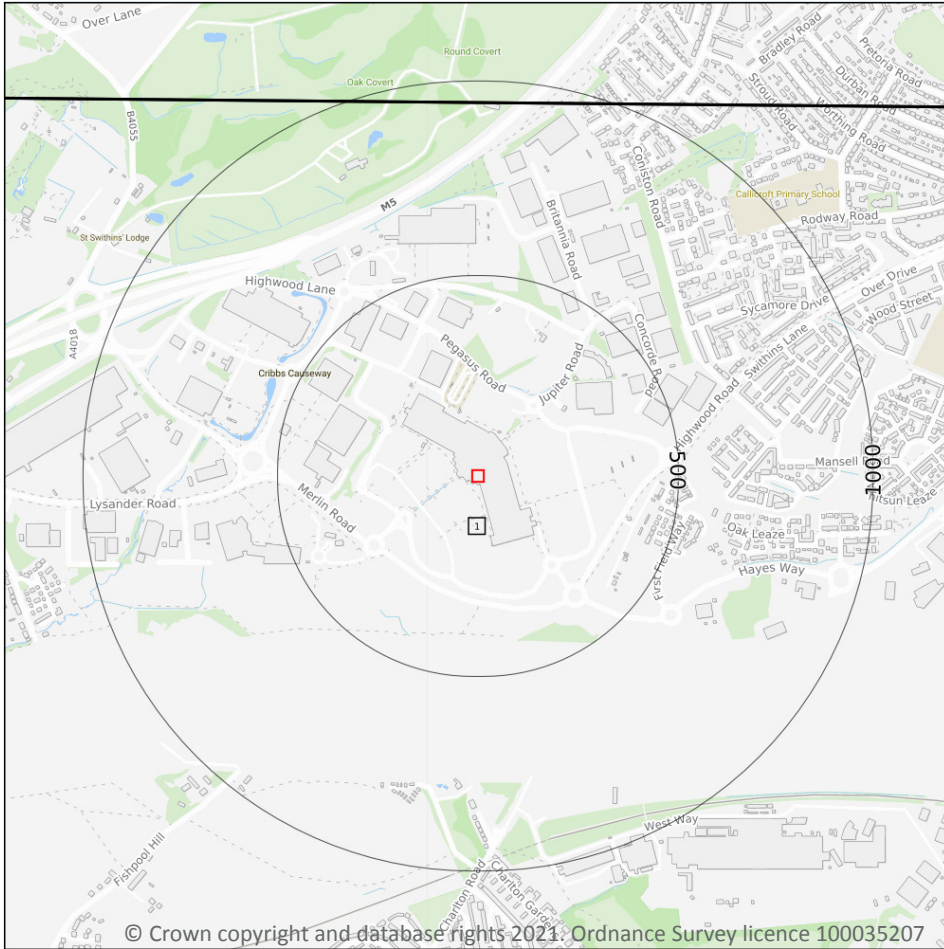
0

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.

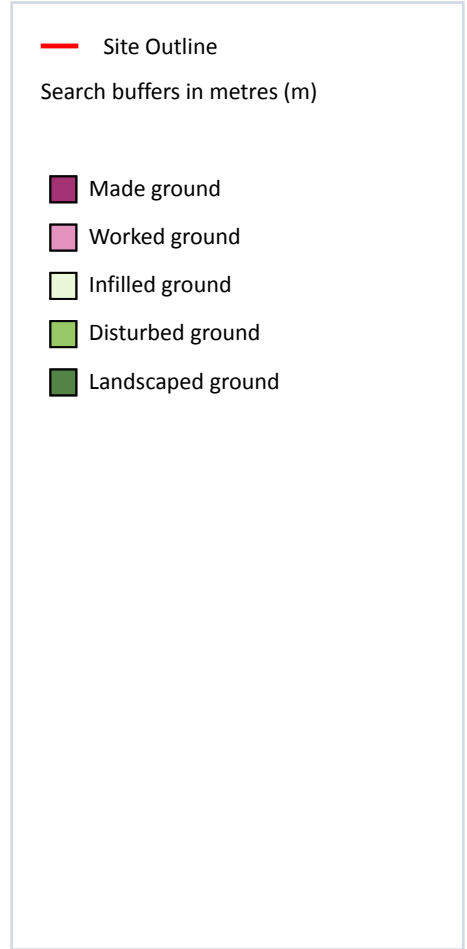
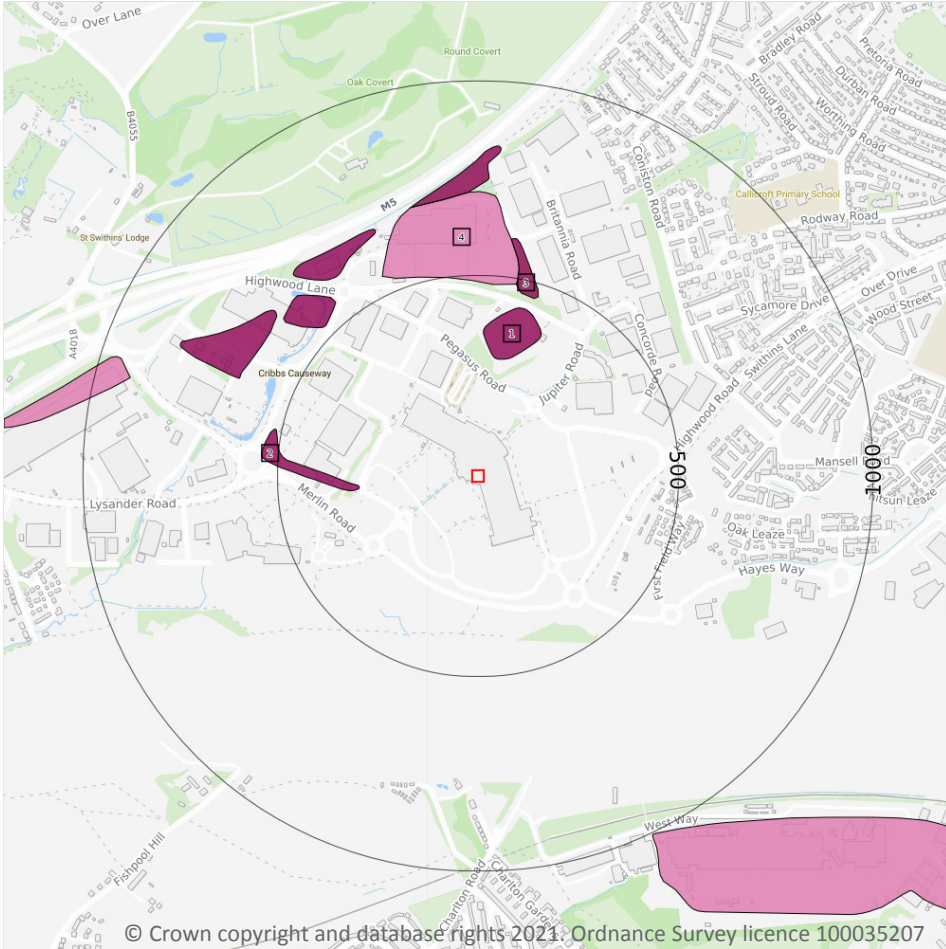
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 66**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW264_bristol_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made 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 67**

ID	Location	LEX Code	Description	Rock description
1	288m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	290m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	460m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	478m N	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID



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

15.4 Superficial geology (50k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

15.5 Superficial 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 superficial deposits (the zone between the land surface and the water table).

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

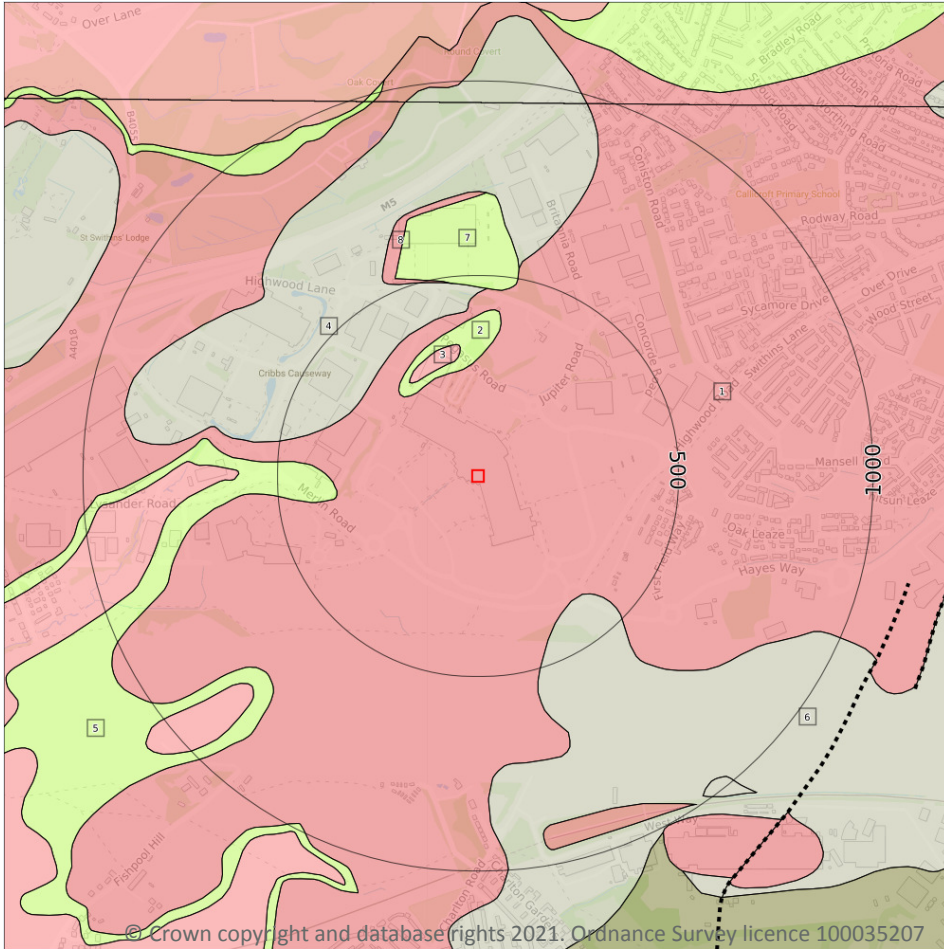
0

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

8

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 70**

ID	Location	LEX Code	Description	Rock age
1	On site	WBCT-MDLM	WESTBURY FORMATION AND COTHAM MEMBER (UNDIFFERENTIATED) - MUDSTONE AND LIMESTONE, INTERBEDDED	RHAETIAN
2	244m NW	BAN-MDST	BLUE ANCHOR FORMATION - MUDSTONE	NORIAN

ID	Location	LEX Code	Description	Rock age
3	268m NW	MMG-MDHA	MERCIA MUDSTONE GROUP - MUDSTONE AND HALITE-STONE	-
4	338m NW	WCT-LSMD	WILMCOTE LIMESTONE MEMBER - LIMESTONE AND MUDSTONE, INTERBEDDED	RHAETIAN
5	349m W	BAN-MDST	BLUE ANCHOR FORMATION - MUDSTONE	NORIAN
6	380m SE	WCT-LSMD	WILMCOTE LIMESTONE MEMBER - LIMESTONE AND MUDSTONE, INTERBEDDED	RHAETIAN
7	464m N	BAN-MDST	BLUE ANCHOR FORMATION - MUDSTONE	NORIAN
8	483m N	WBCT-MDLM	WESTBURY FORMATION AND COTHAM MEMBER (UNDIFFERENTIATED) - MUDSTONE AND LIMESTONE, INTERBEDDED	RHAETIAN

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	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

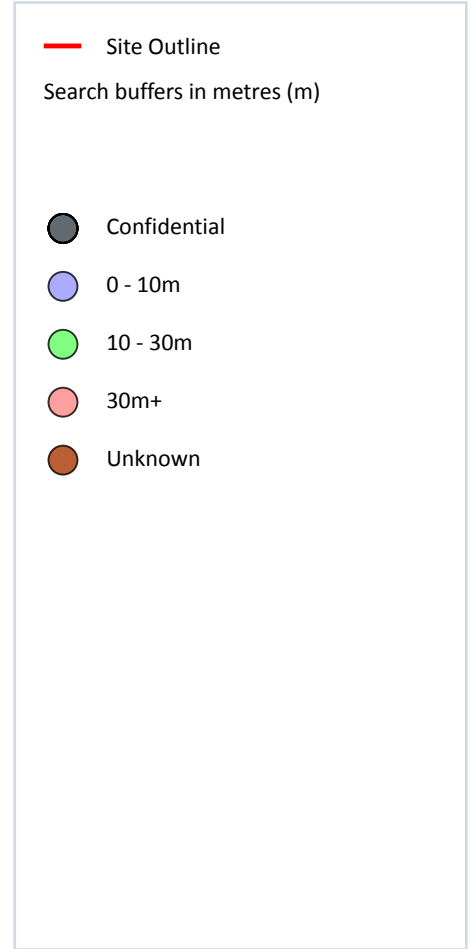
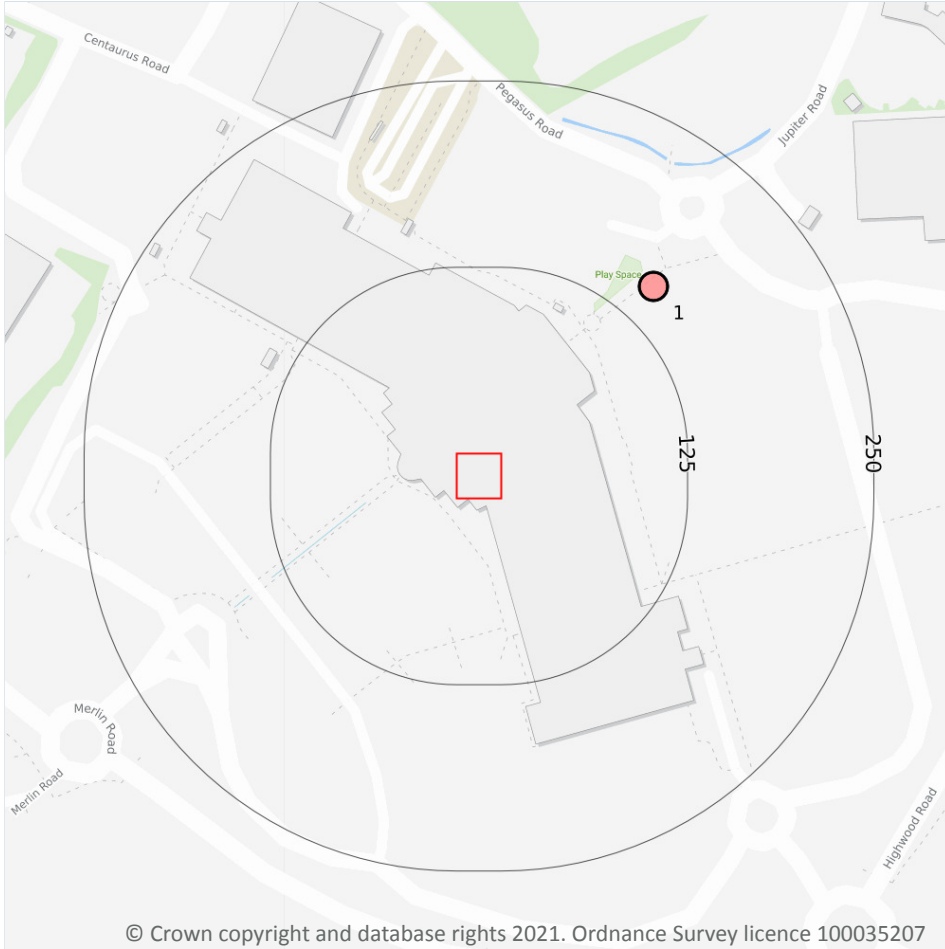
0

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



16.1 BGS Boreholes

Records within 250m

1

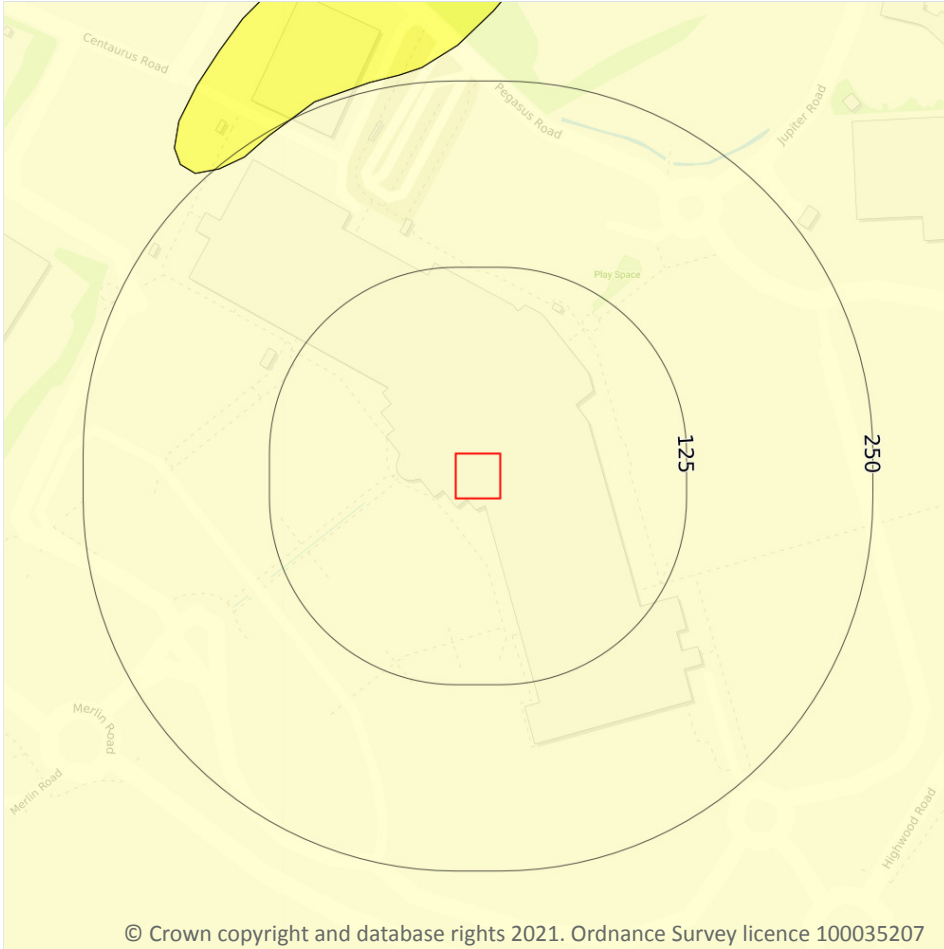
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 72**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	152m NE	358896 180955	THE MALL CRIBBS CAUSEWAY	70.0	N	20058451

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

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 73**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

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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 74**

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

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

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17.3 Compressible deposits

Records within 50m

1

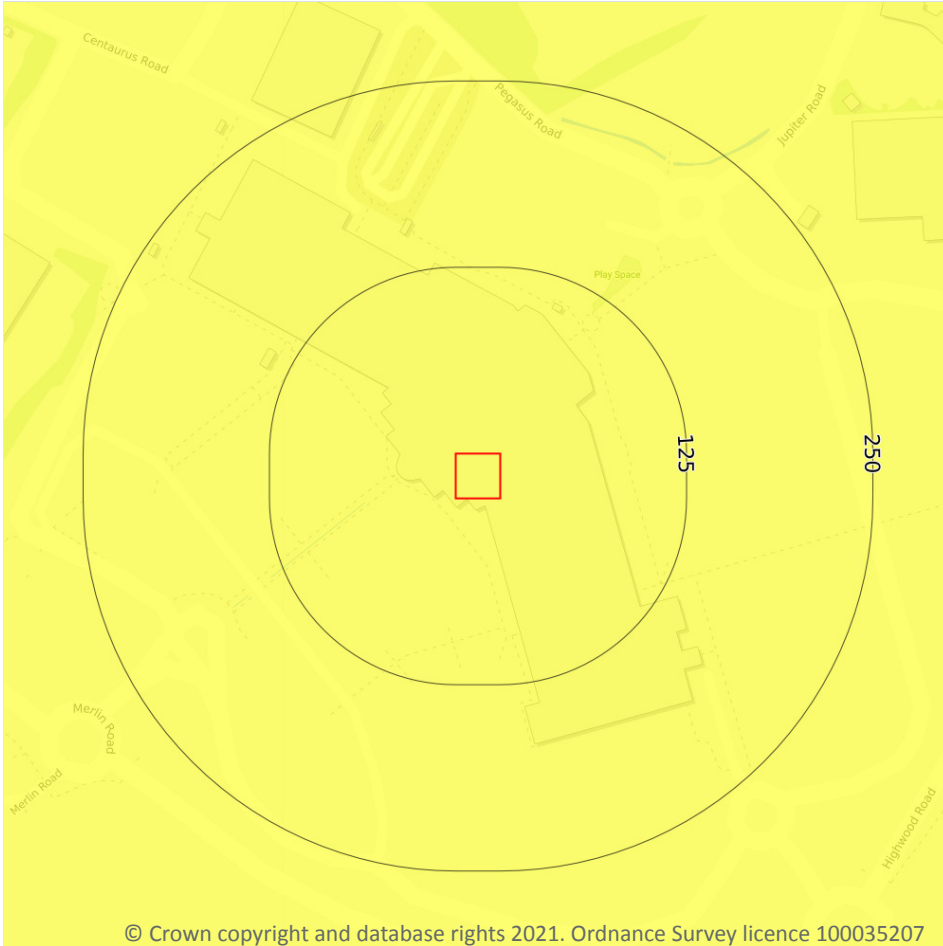
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 75**

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

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17.4 Collapsible deposits

Records within 50m

1

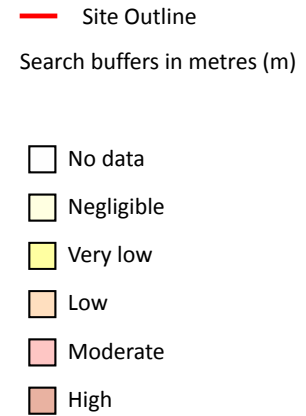
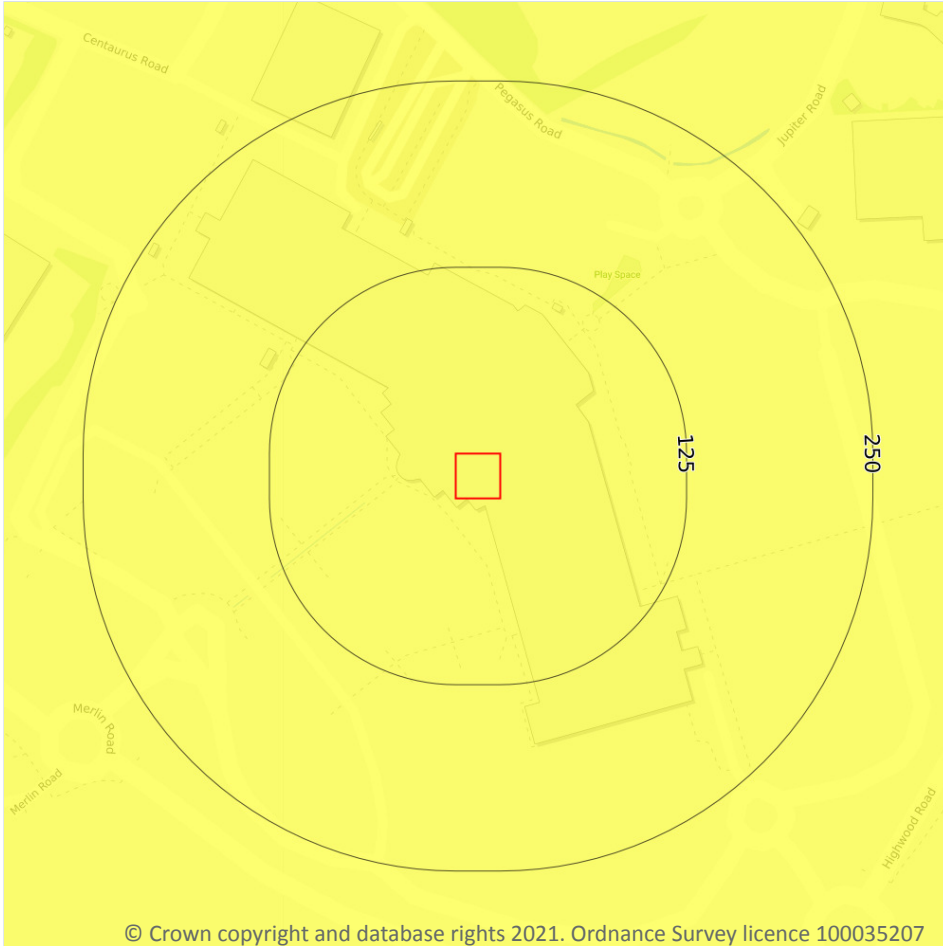
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 76**

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



17.5 Landslides

Records within 50m

1

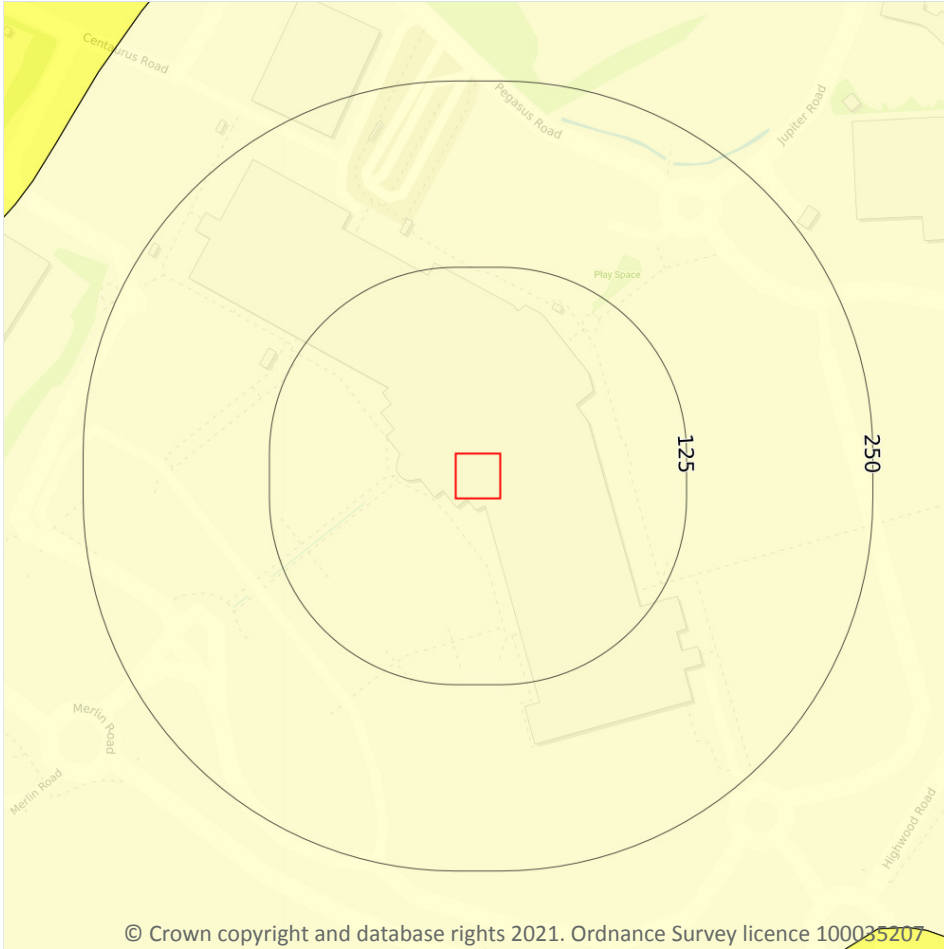
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 77**

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.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

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.

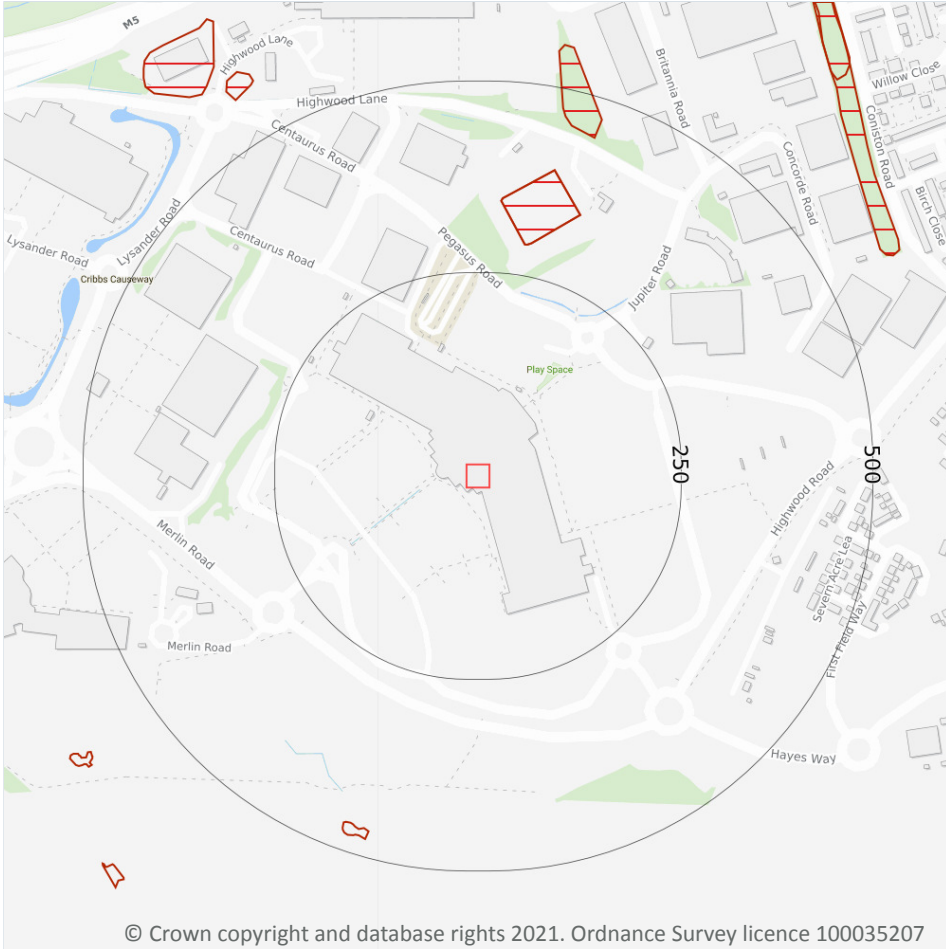
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 78**

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



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 Peter Brett Associates (PBA).

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

0

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.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

7

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 80**

ID	Location	Land Use	Year of mapping	Mapping scale
-	928m S	Tunnel	1921	1:10560
-	928m S	Tunnel	1938	1:10560
-	928m S	Tunnel	1912	1:10560
-	931m S	Tunnel	1991	1:10000
-	931m S	Tunnel	1938	1:10560
-	931m S	Tunnel	1974	1:10000
-	931m S	Tunnel	1983	1:10000

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 Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal 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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

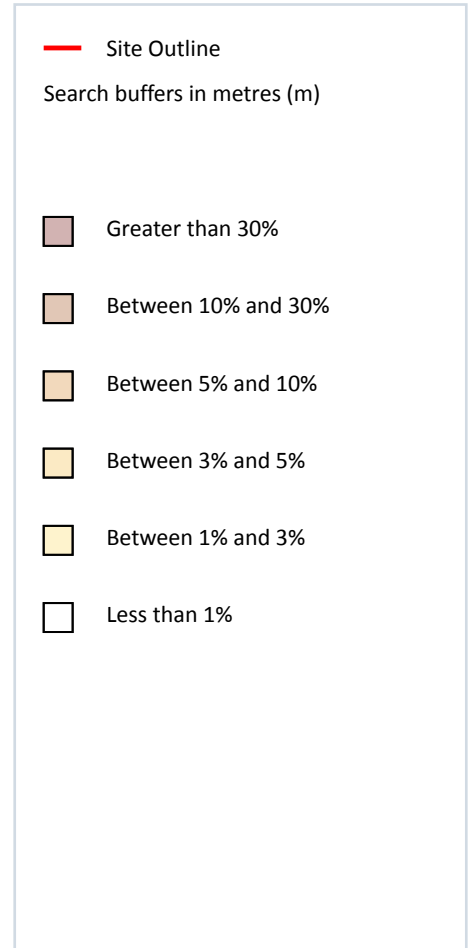
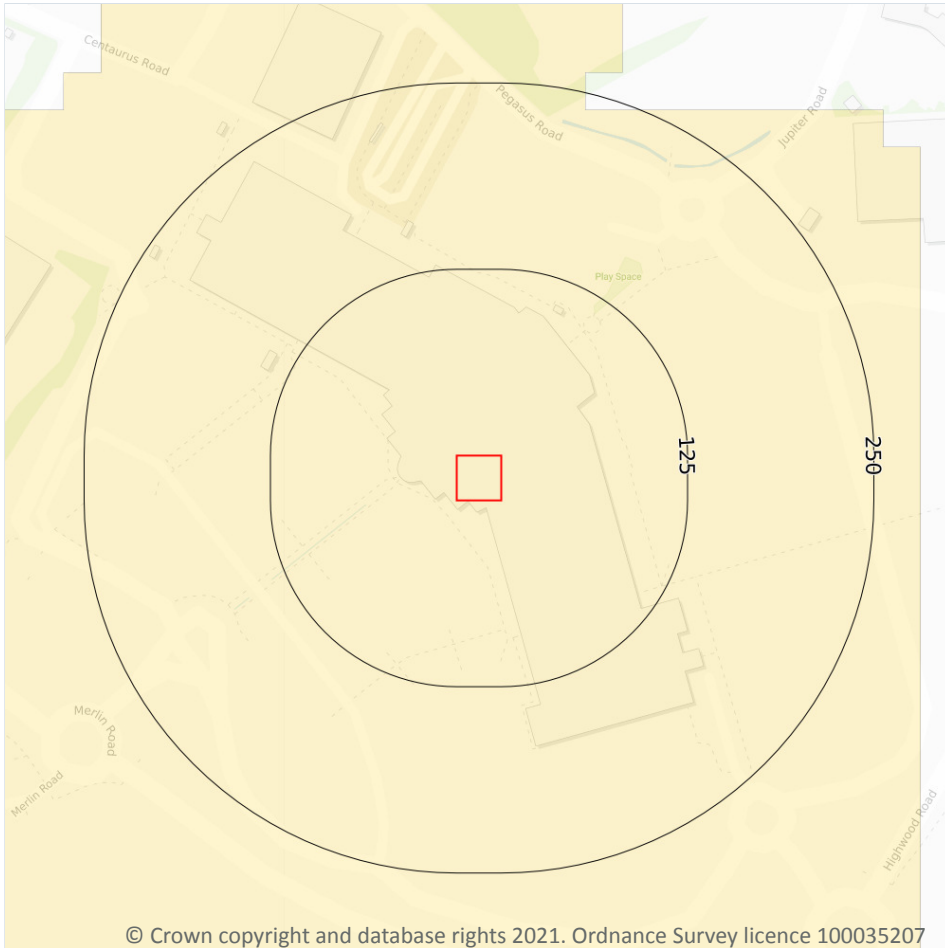
Records on site

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 84**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	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

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	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

21.1 Underground railways (London)

Records within 250m

0

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

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

0

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.

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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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

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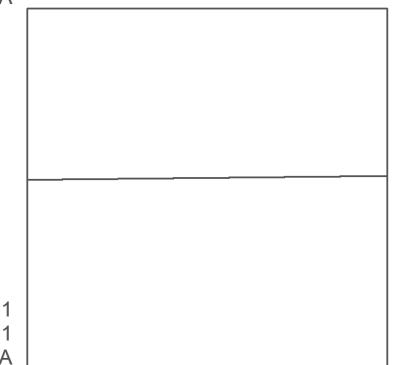
Map date: 1881

Scale: 1:2,500

Printed at: 1:2,500



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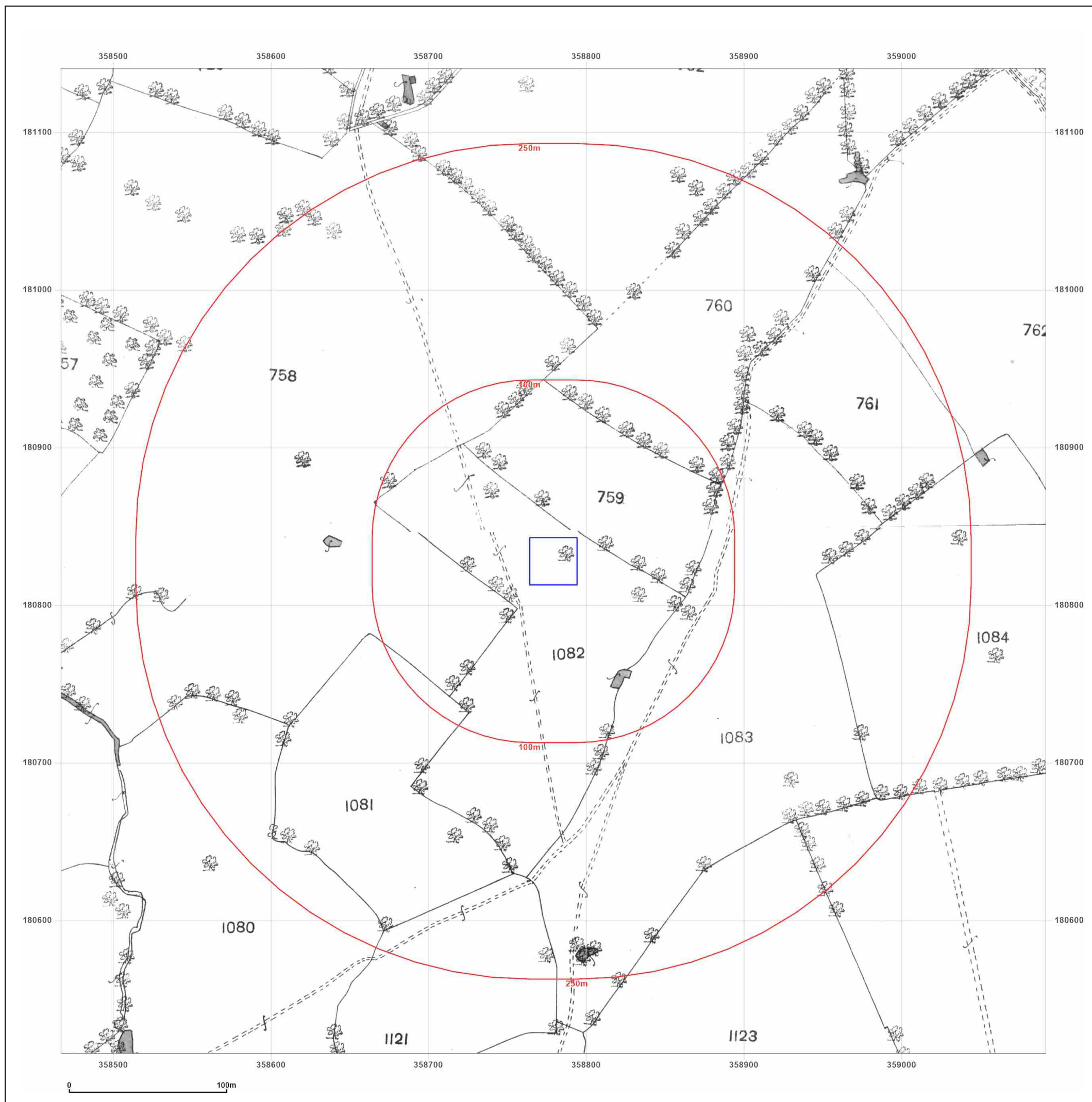


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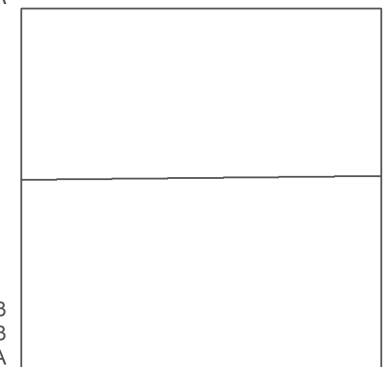
Map date: 1903

Scale: 1:2,500

Printed at: 1:2,500



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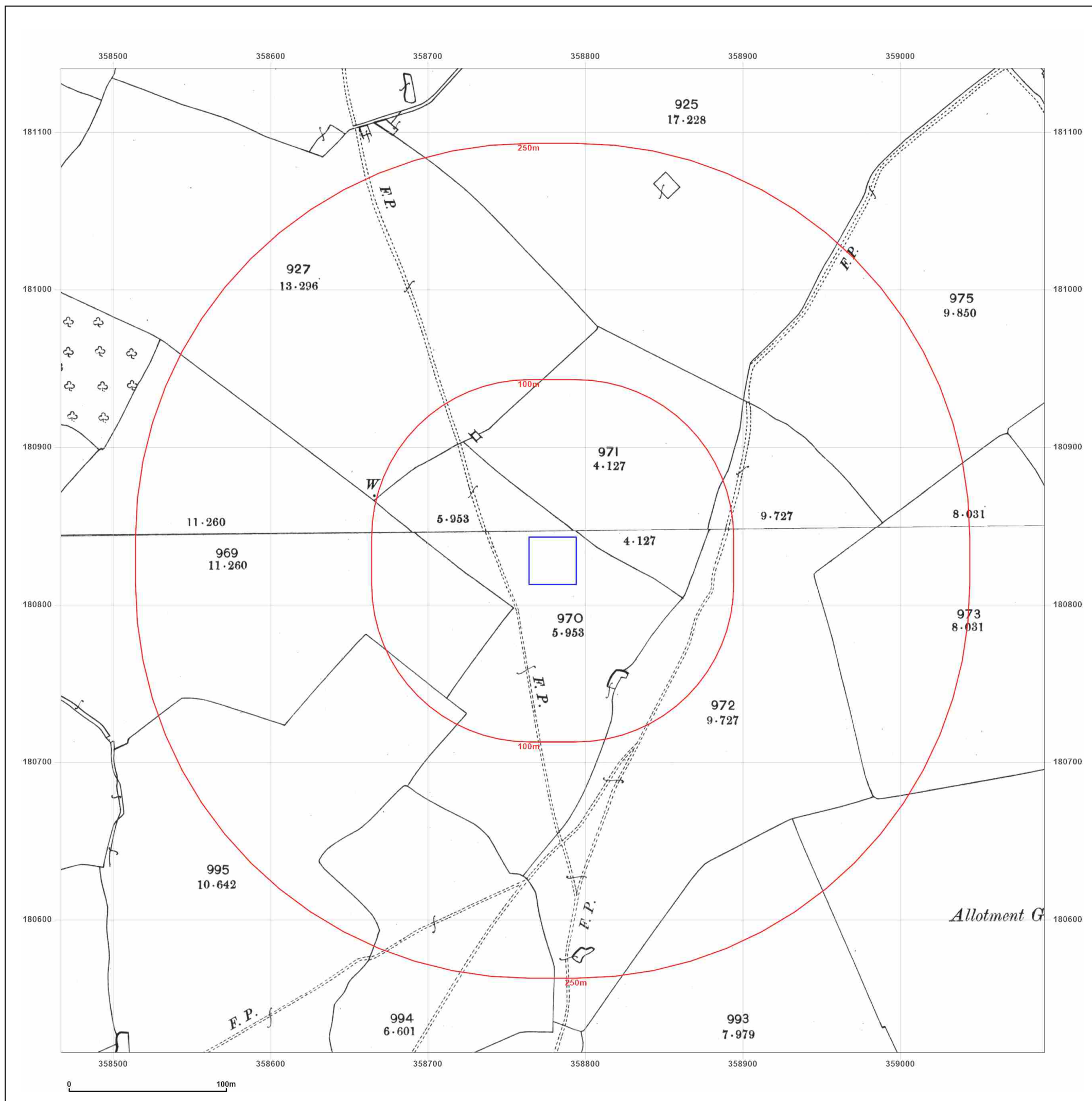


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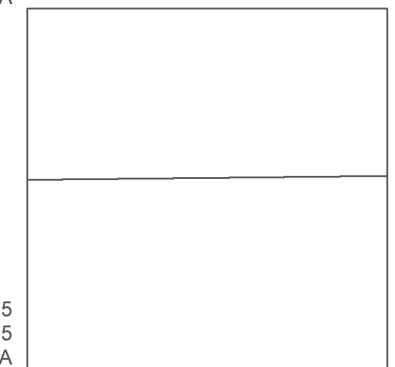
Map date: 1915

Scale: 1:2,500

Printed at: 1:2,500



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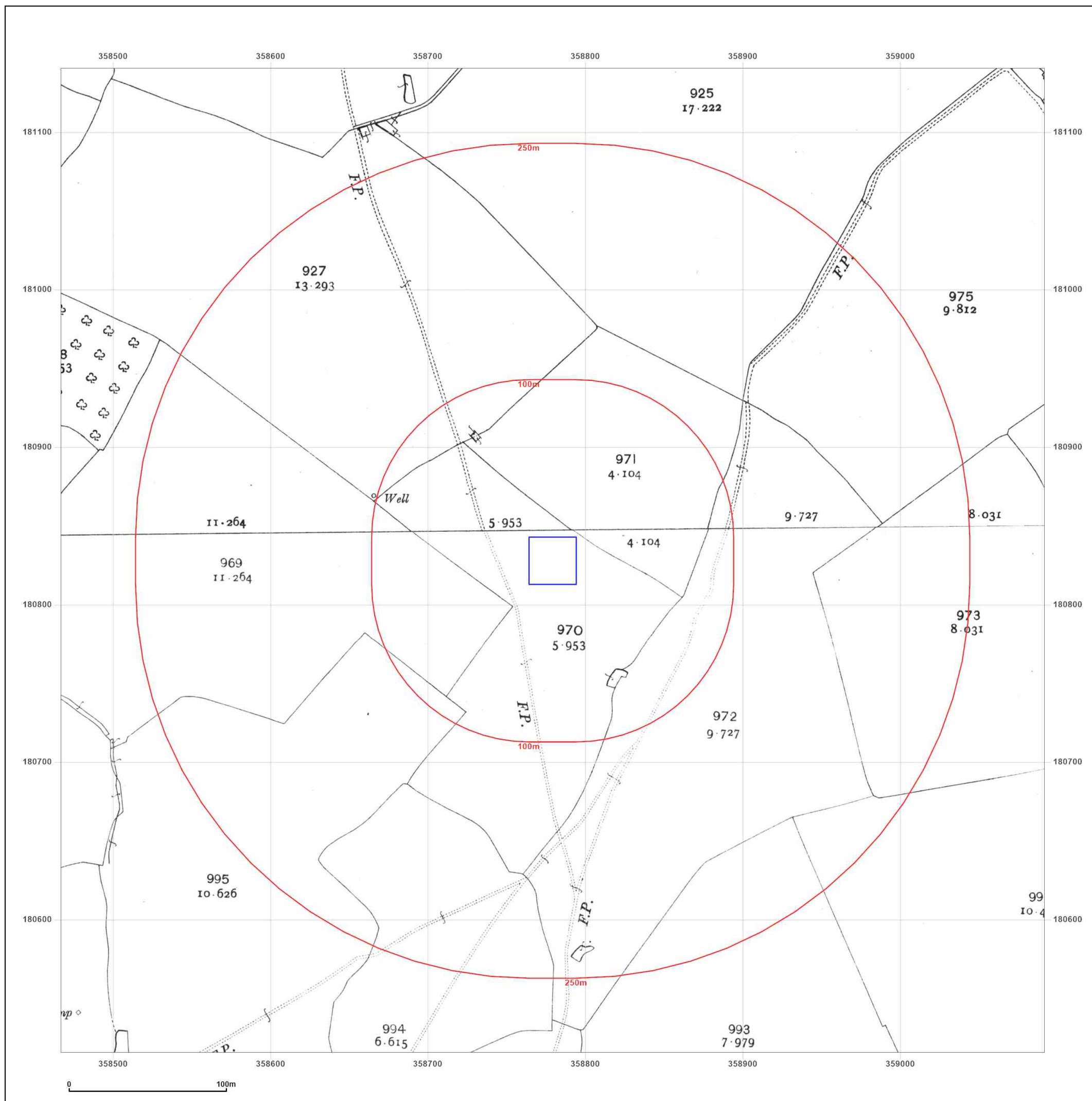


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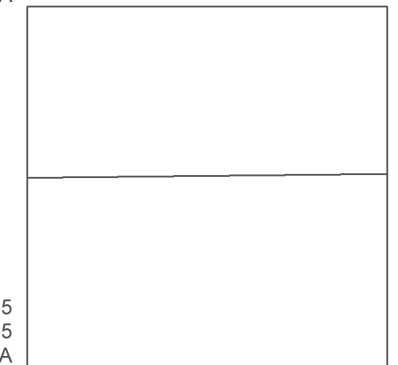
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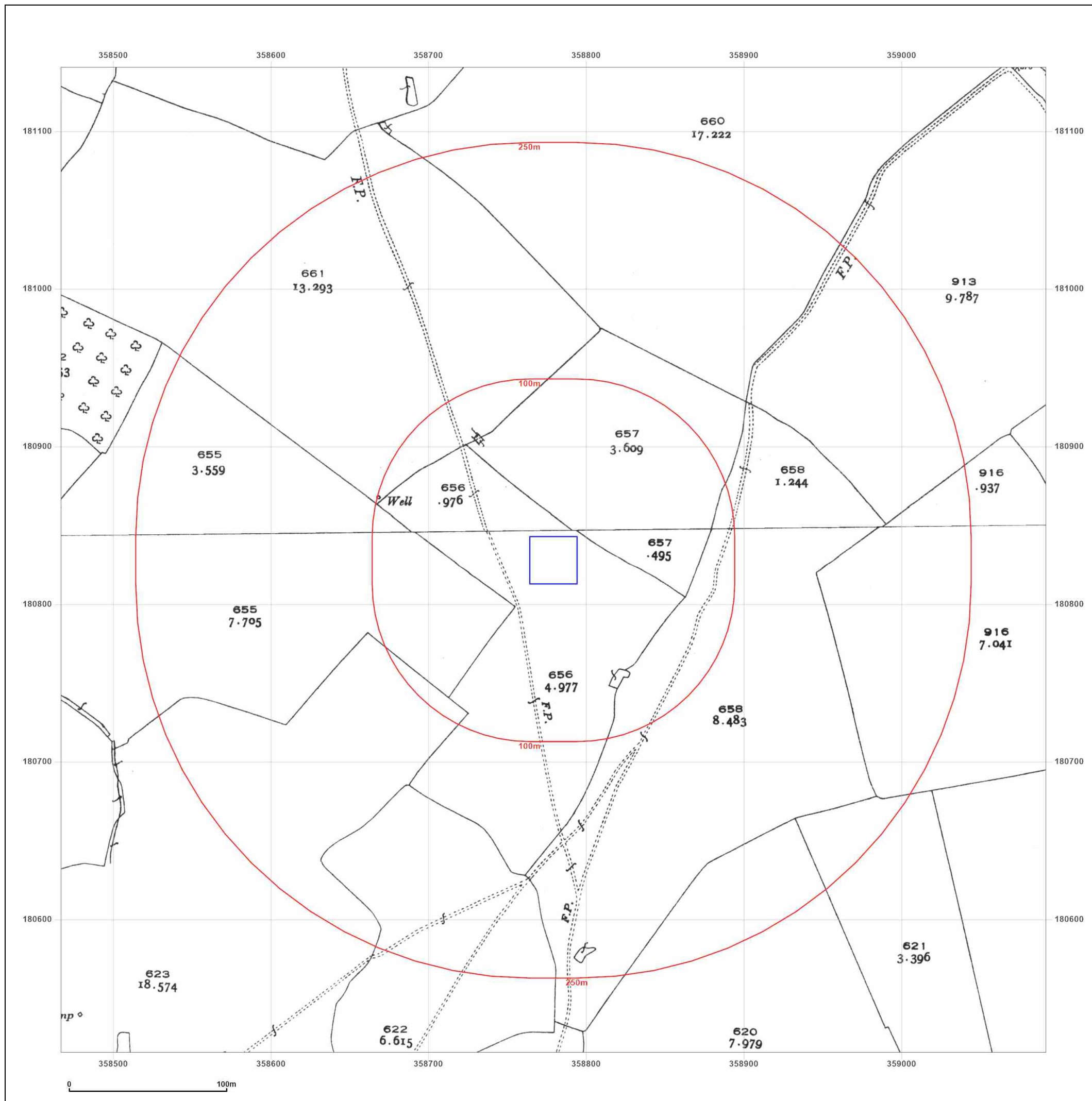


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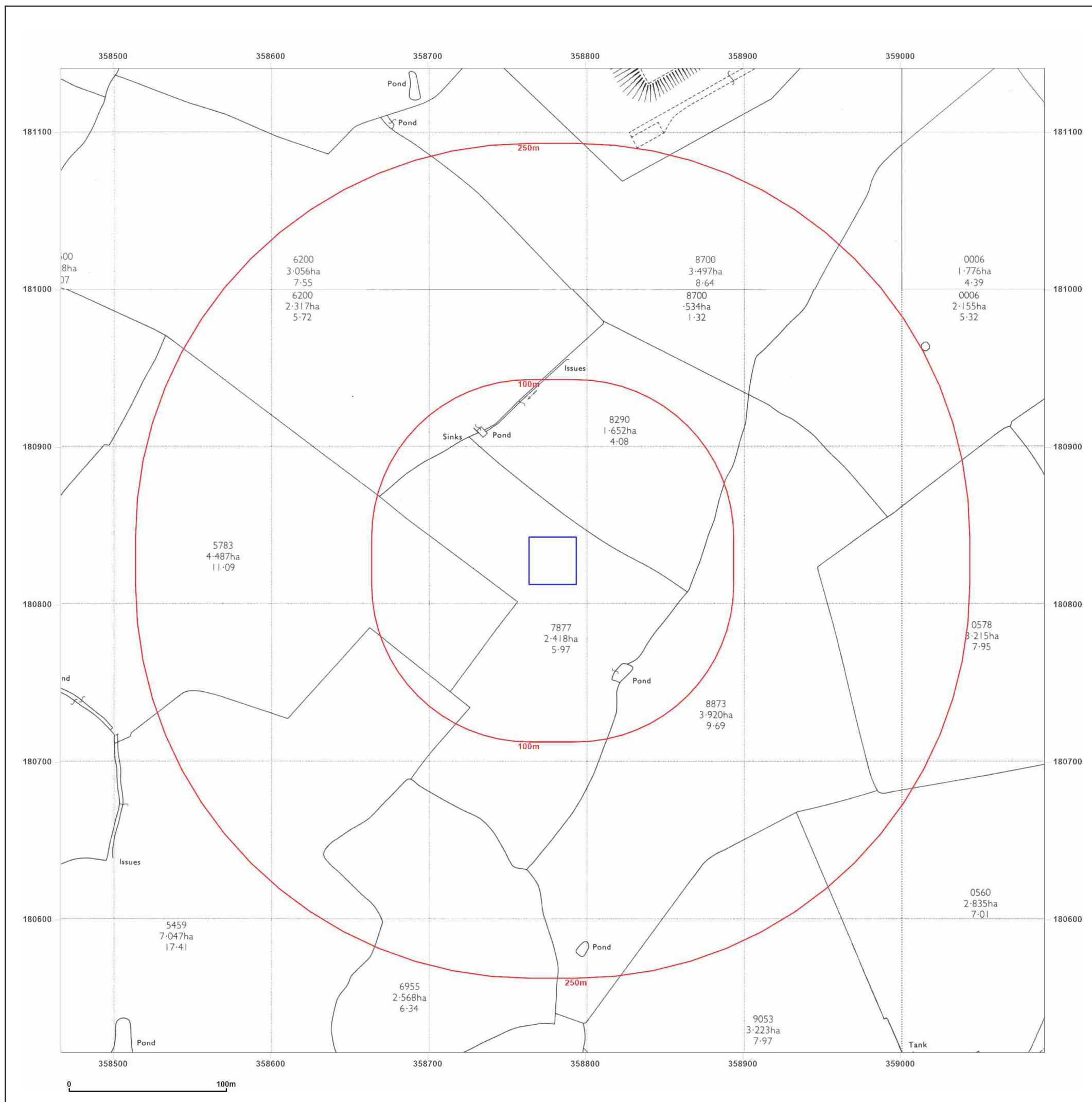
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Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500



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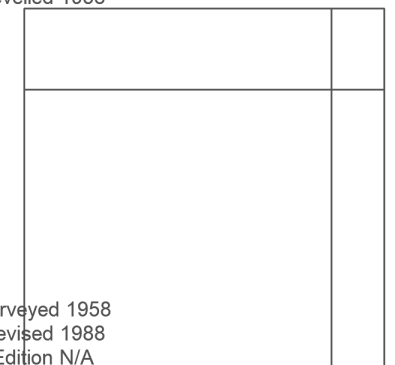
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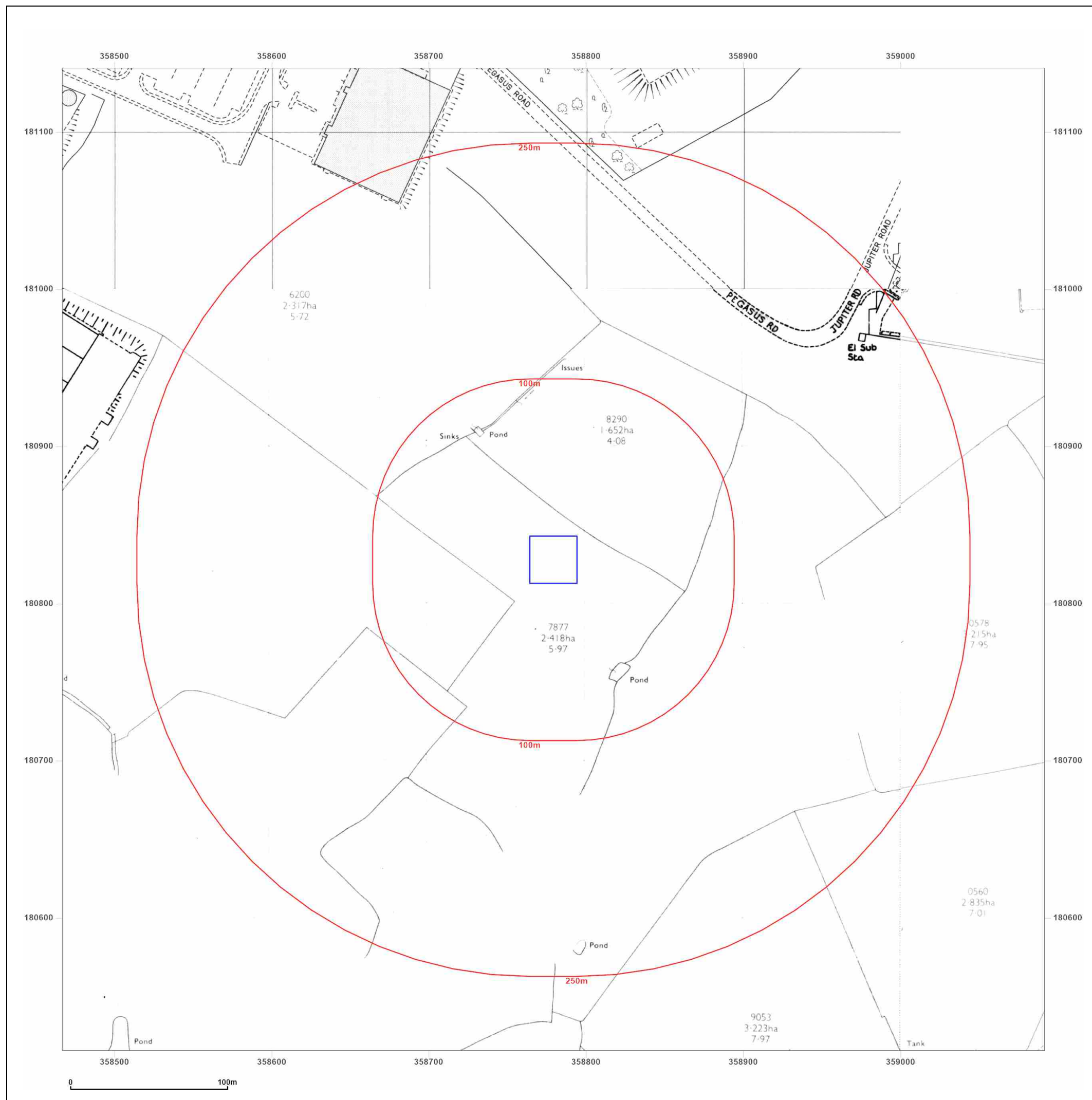


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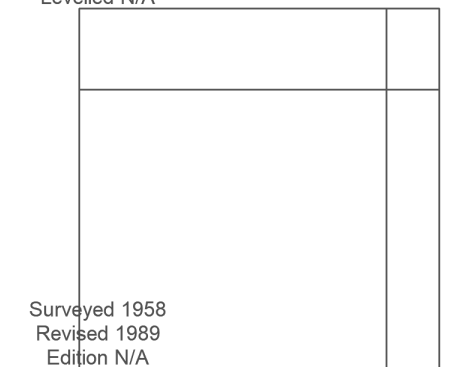
Map date: 1989-1992

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1992
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 Revised 1989
 Edition N/A
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 Levelled 1958

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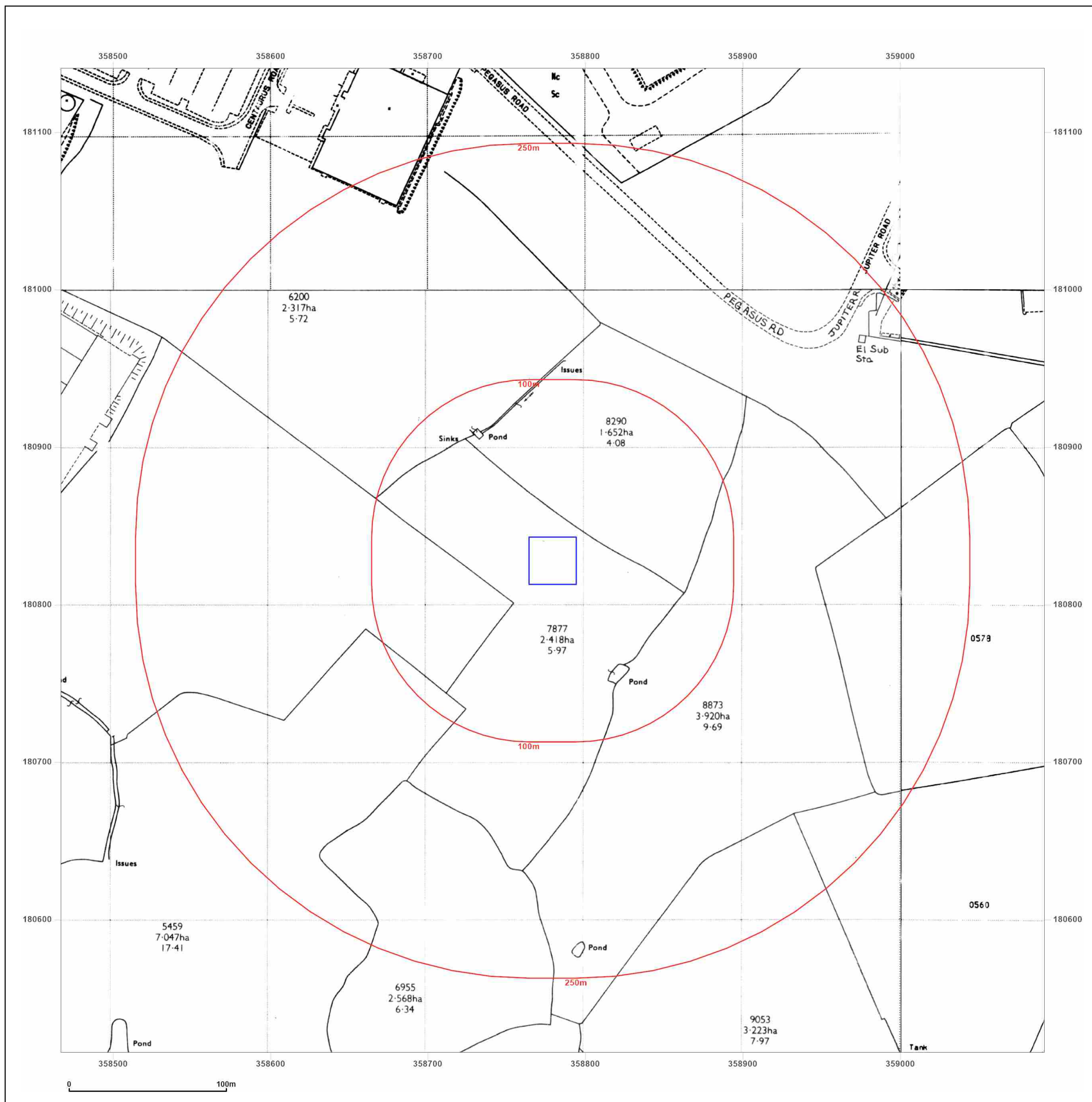


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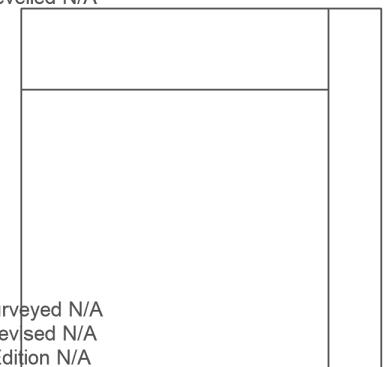
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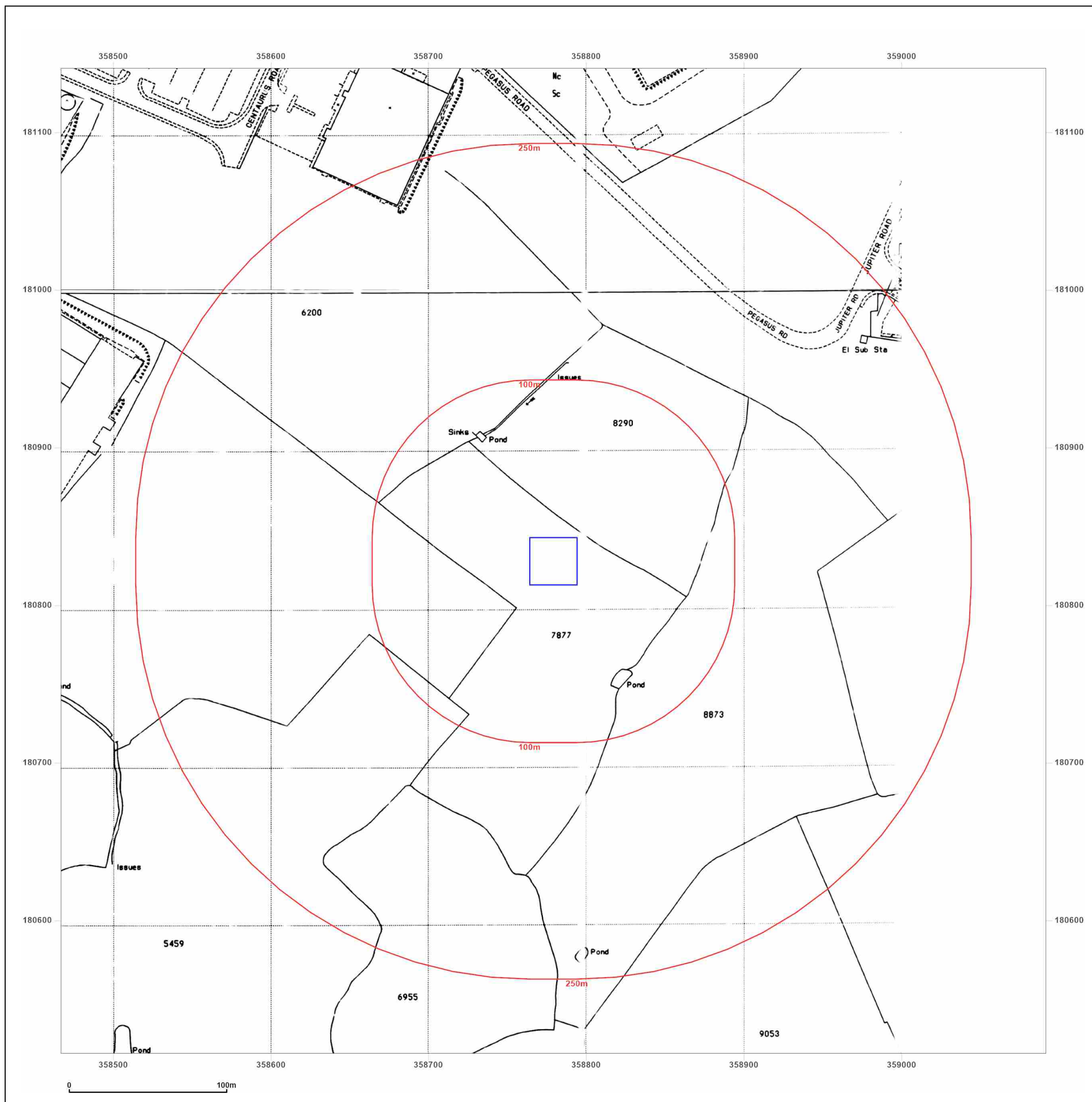


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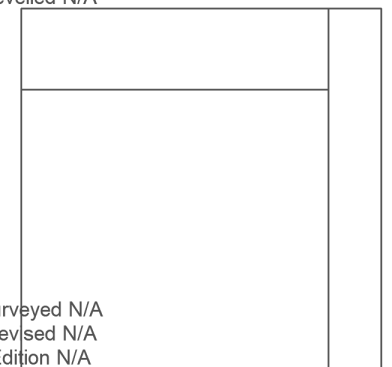
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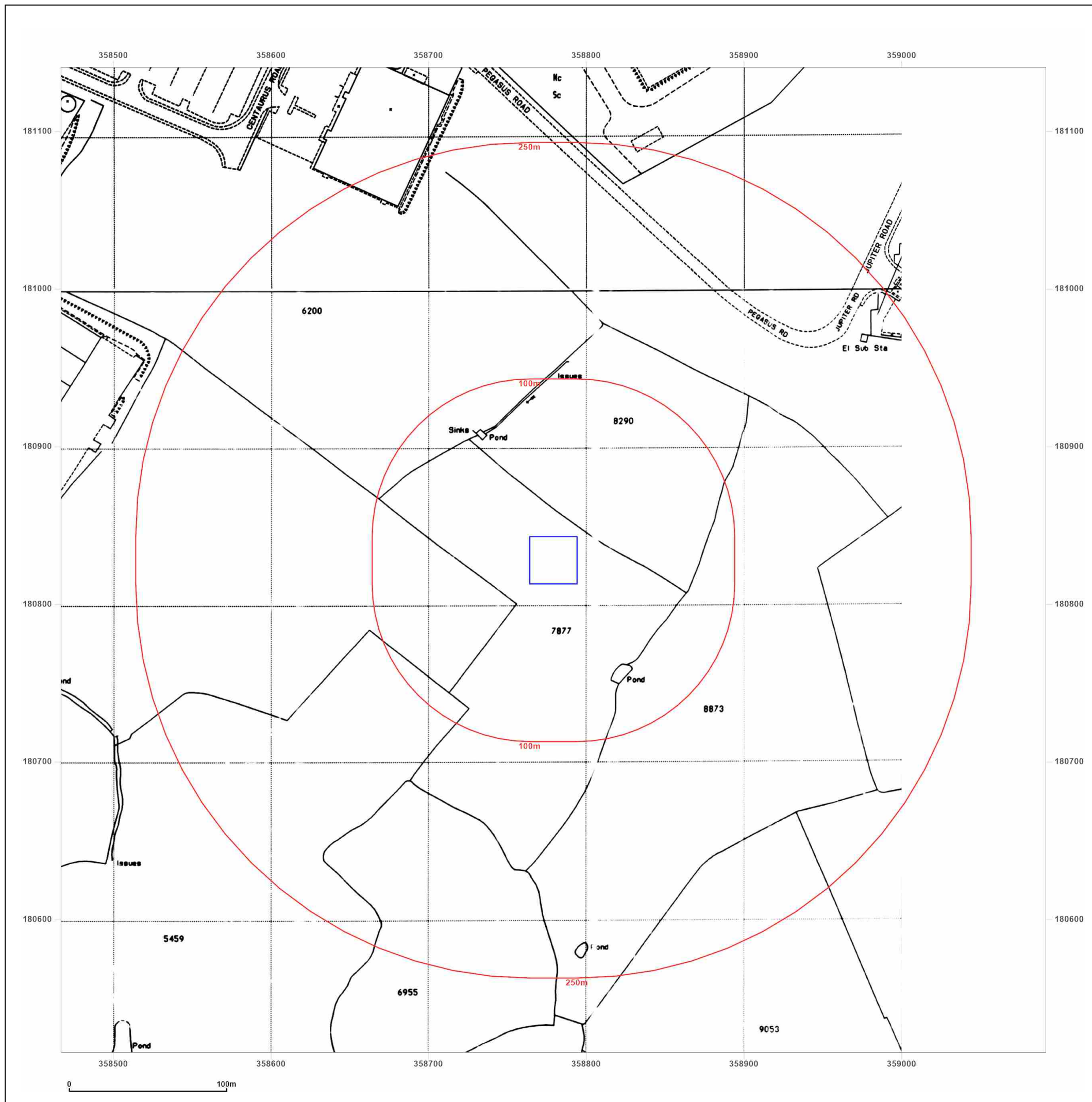


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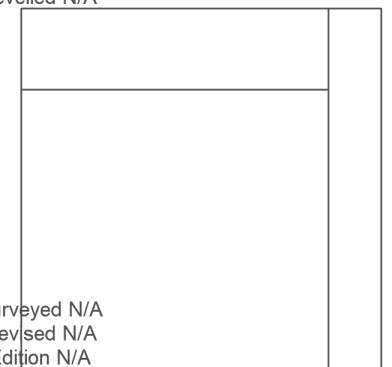
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Scale: 1:2,500

Printed at: 1:2,500



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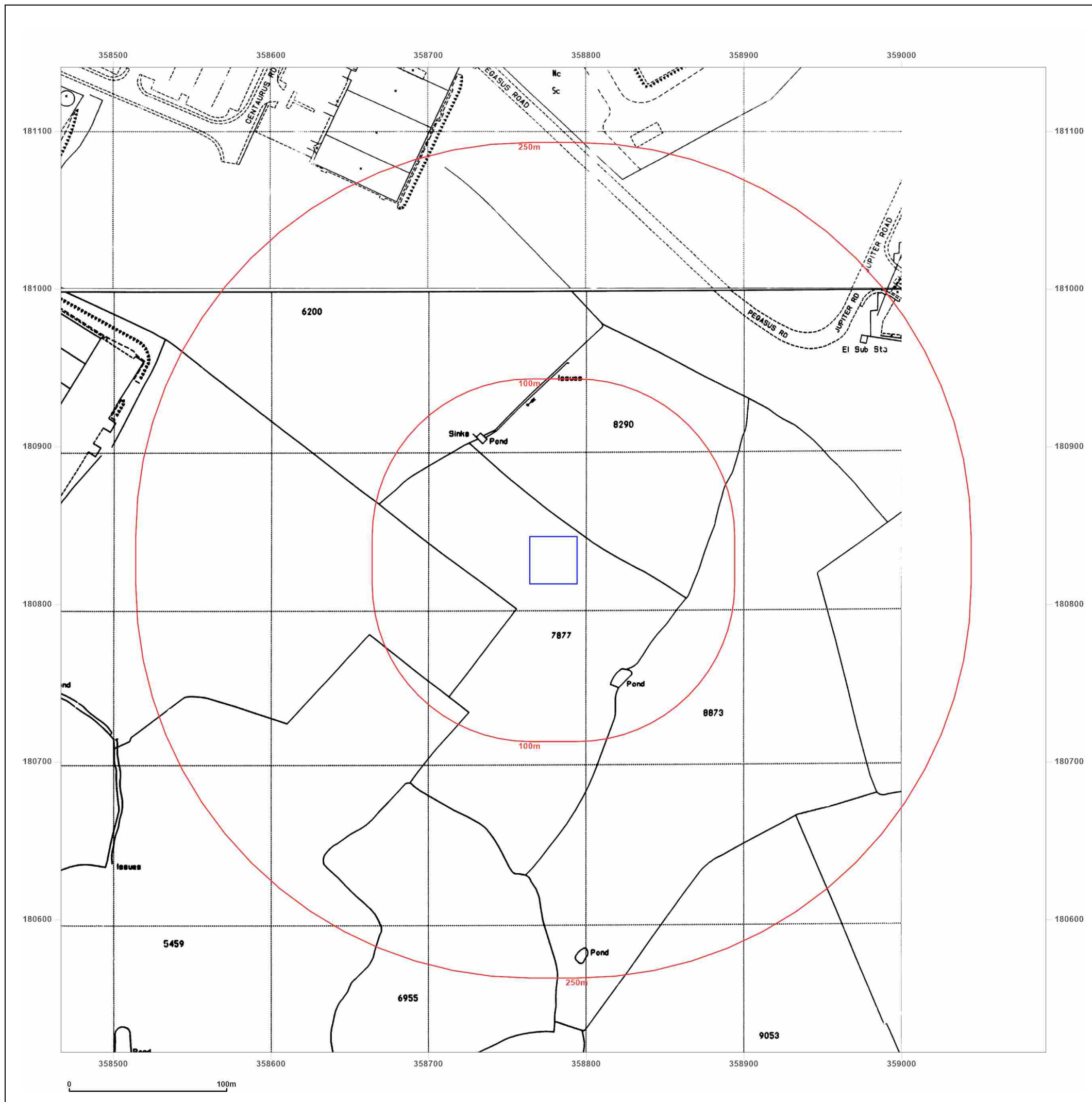


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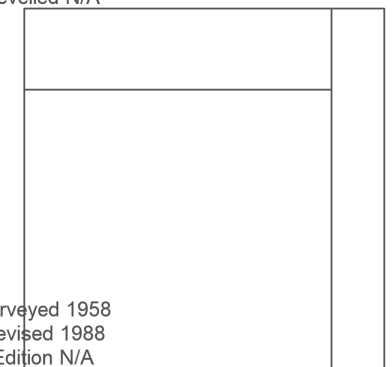
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Printed at: 1:2,500



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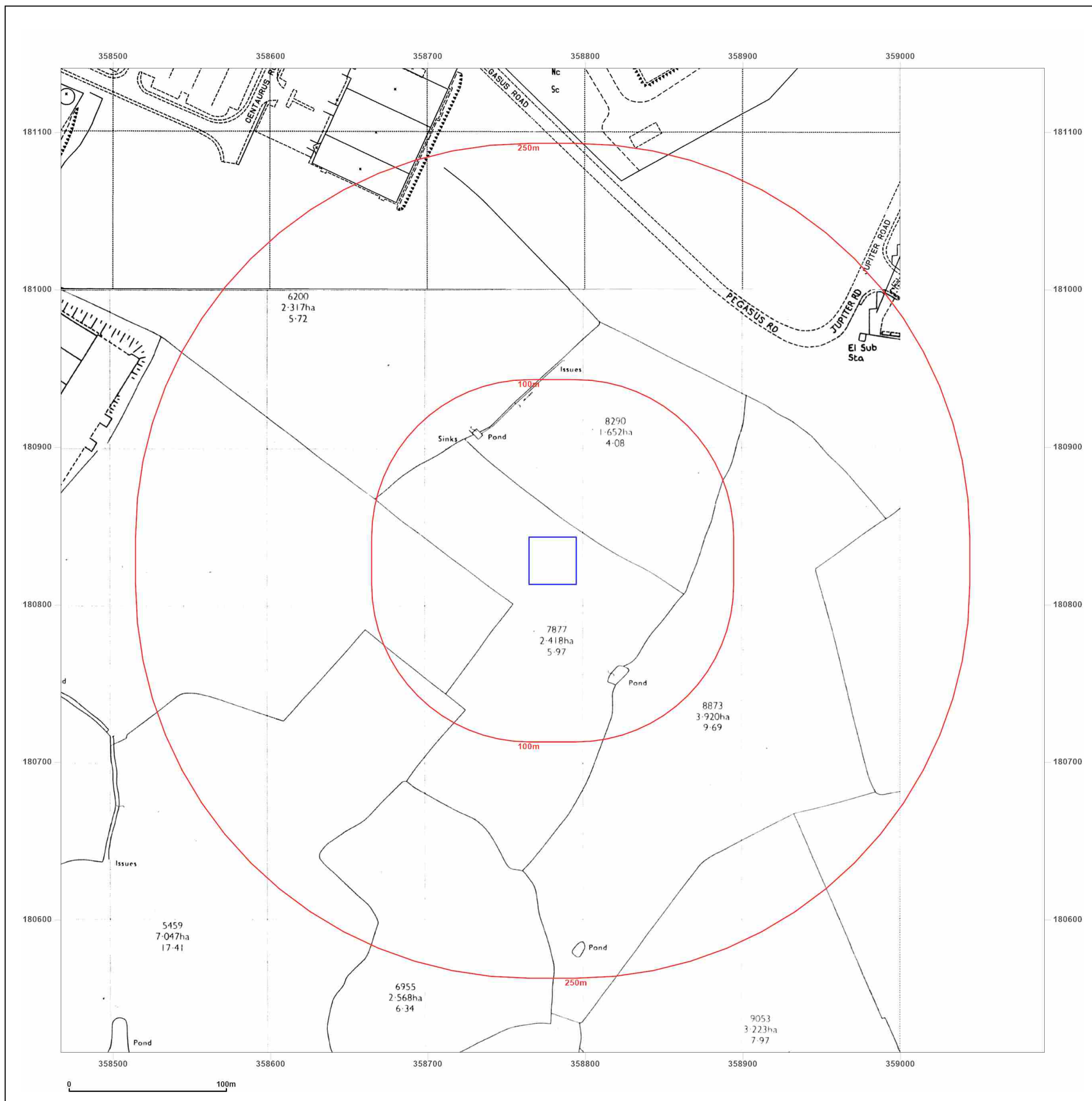


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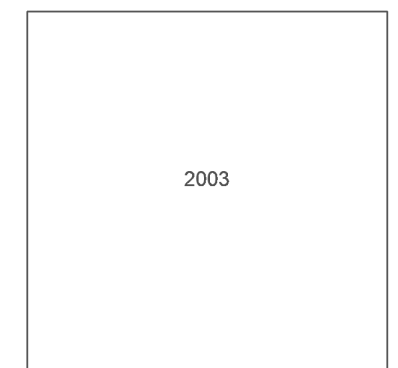
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Site Details:

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Report Ref: EMS-681472_895618
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Map Name: County Series

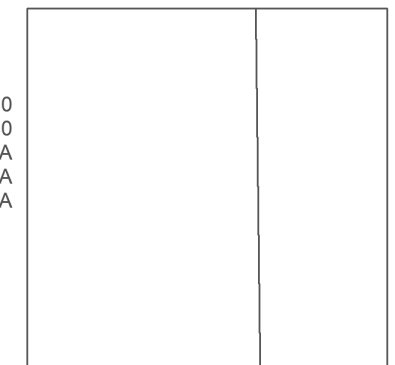
Map date: 1880

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1880
 Revised 1880
 Edition N/A
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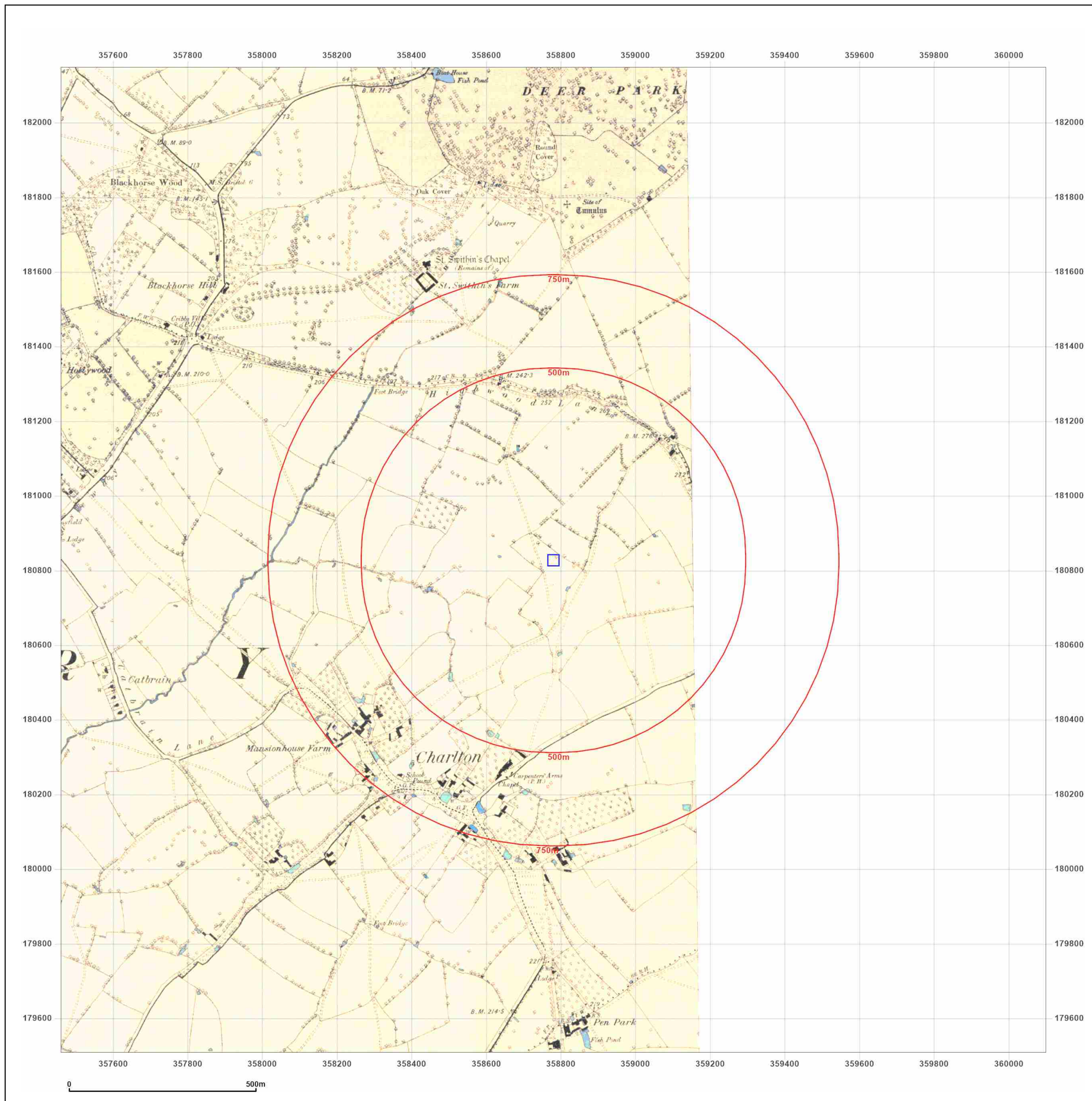


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Site Details:

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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1886

Scale: 1:10,560

Printed at: 1:10,560



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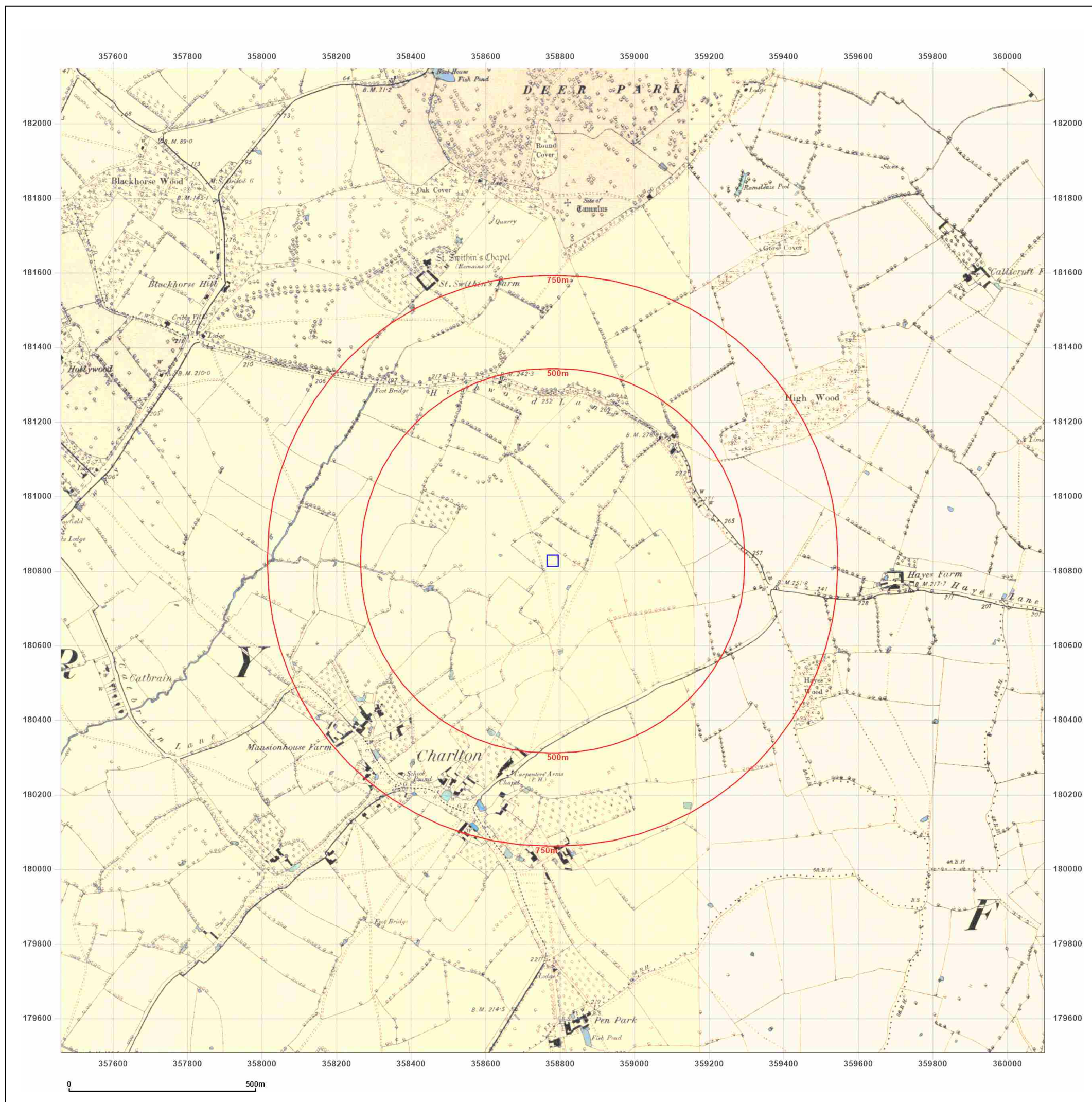


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0 500m

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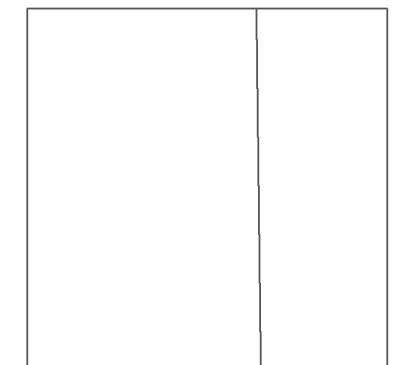
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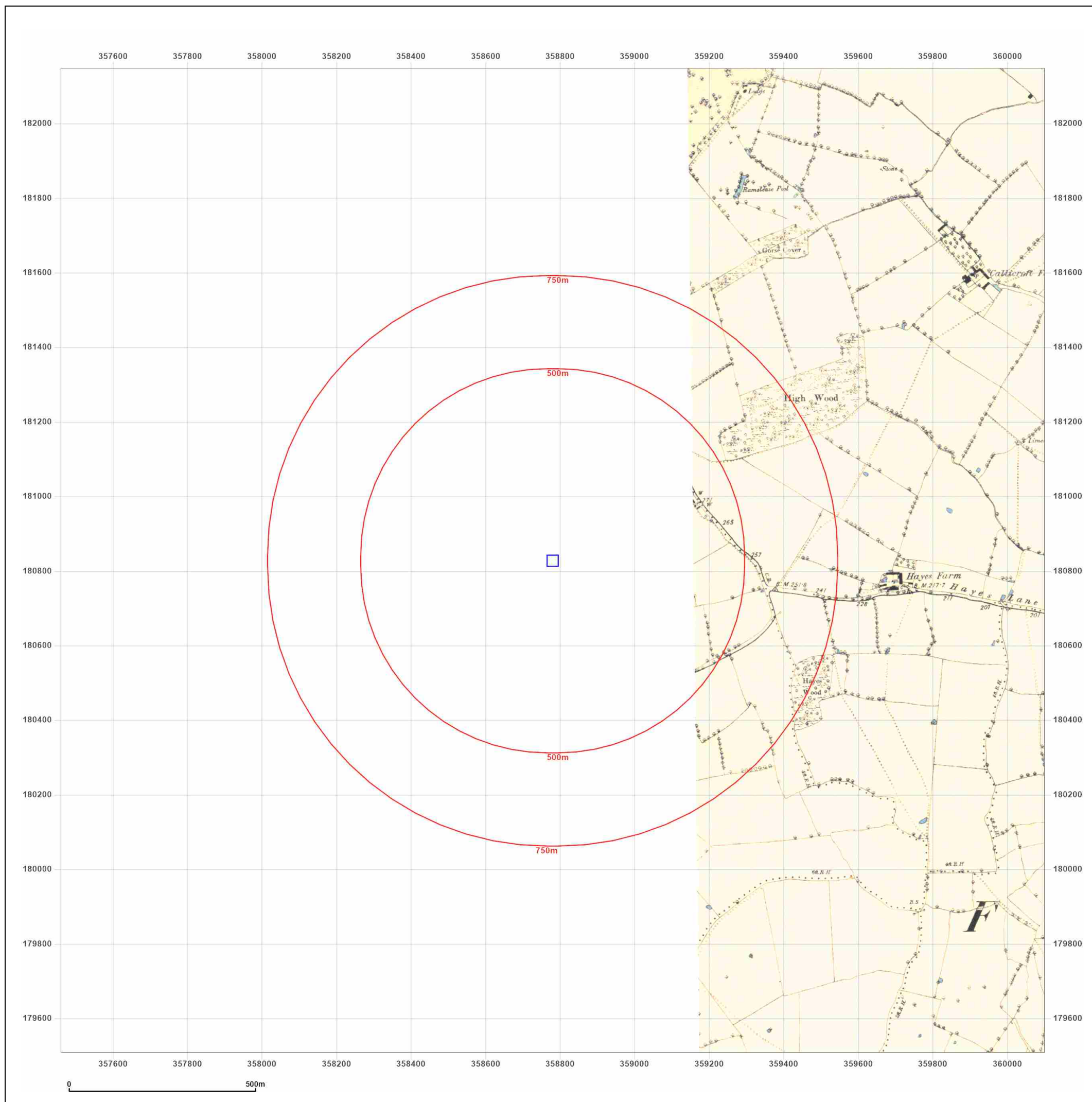
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Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1901

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1879
 Revised 1901
 Edition N/A
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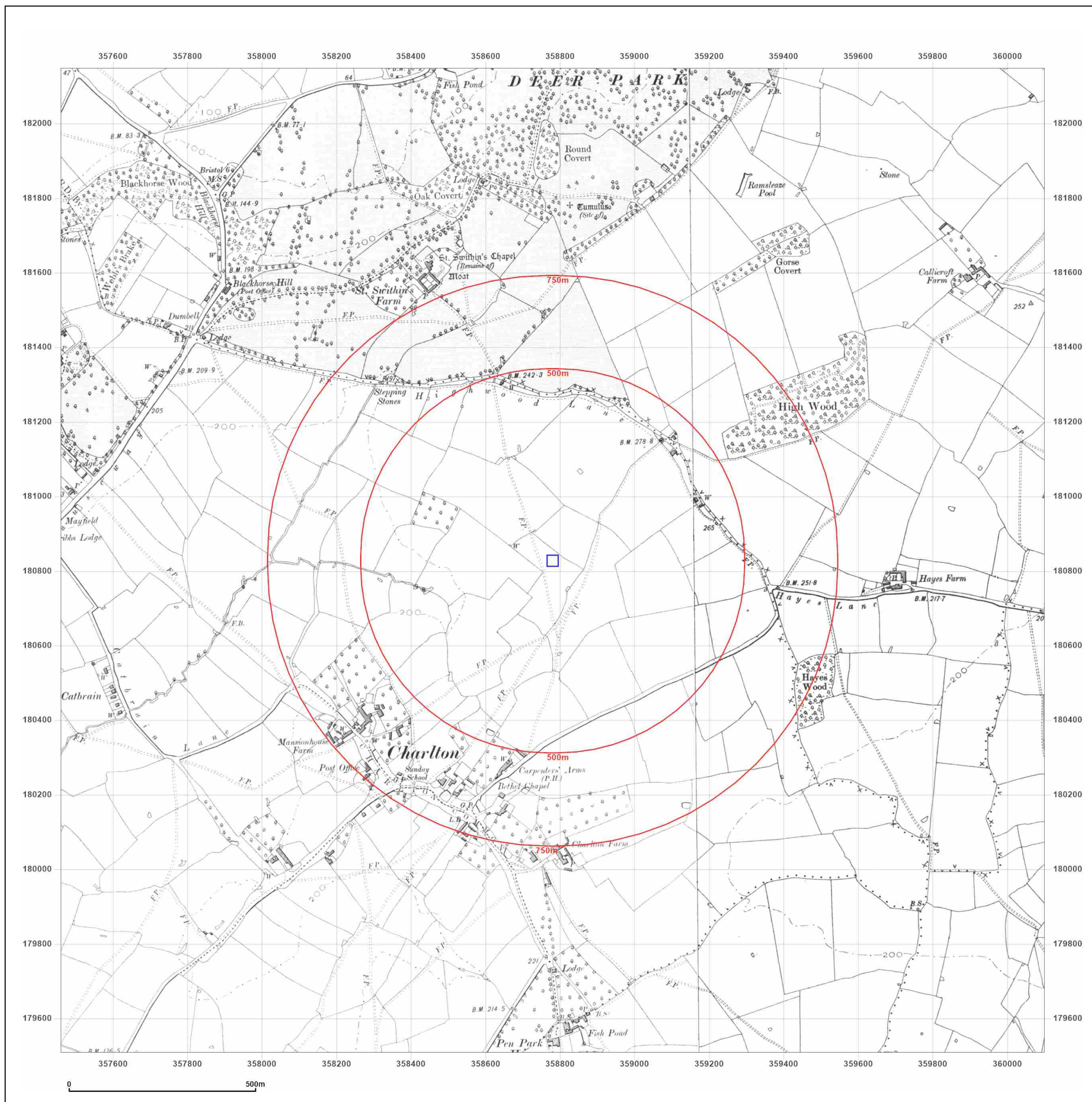


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Site Details:

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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1912

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised 1912
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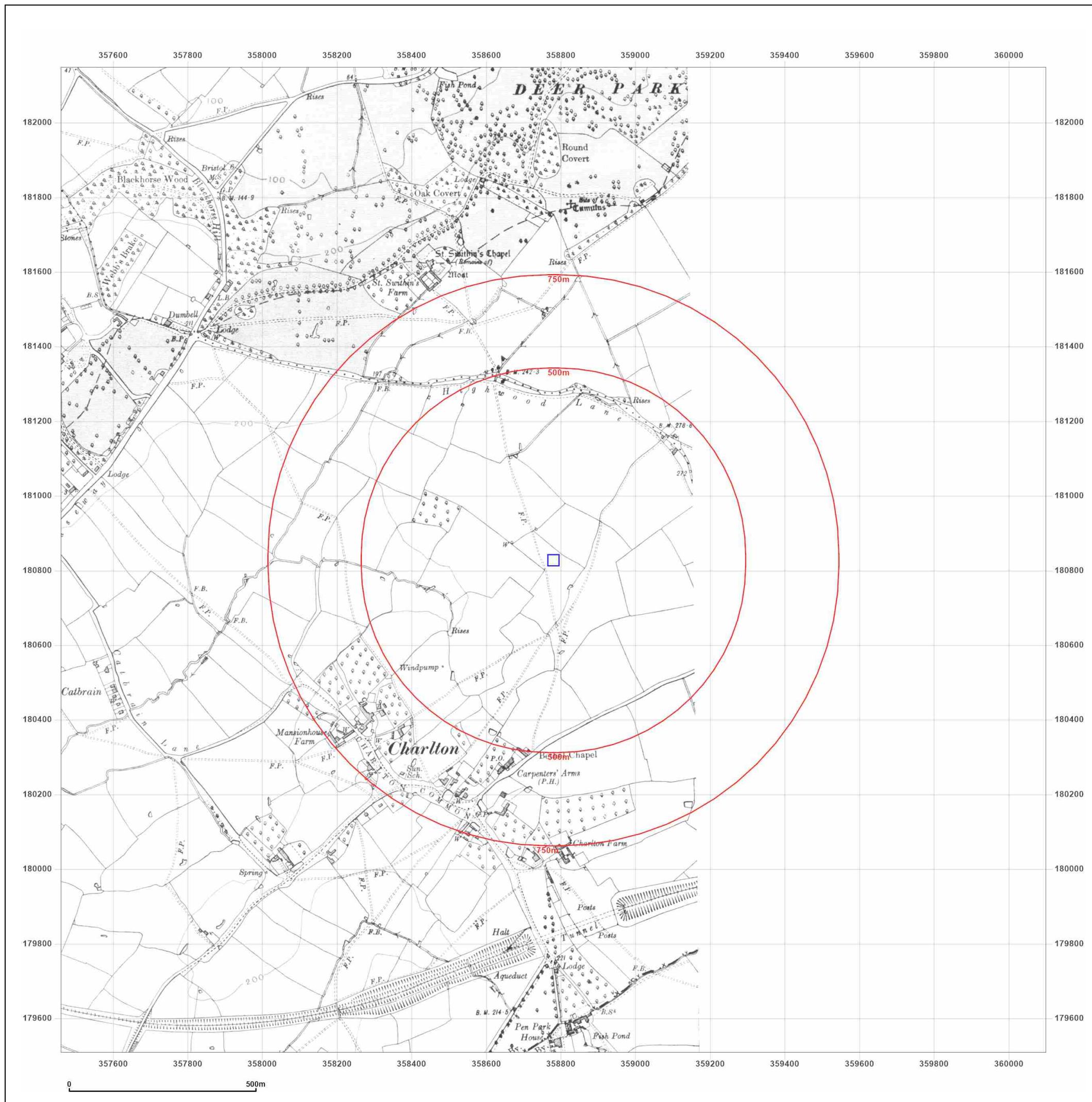


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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1912

Scale: 1:10,560

Printed at: 1:10,560



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 Revised 1912
 Edition N/A
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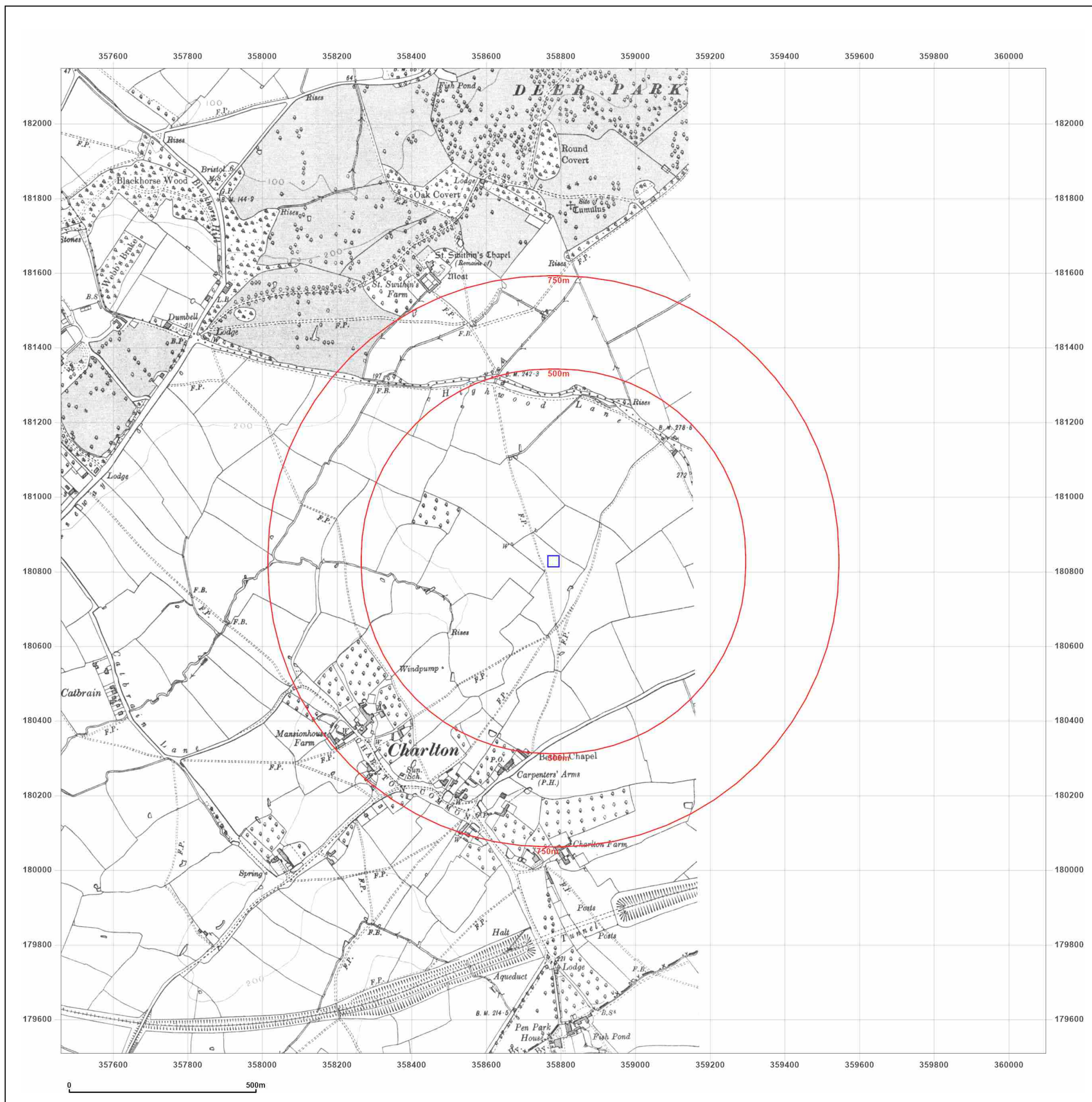


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0 500m

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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1921

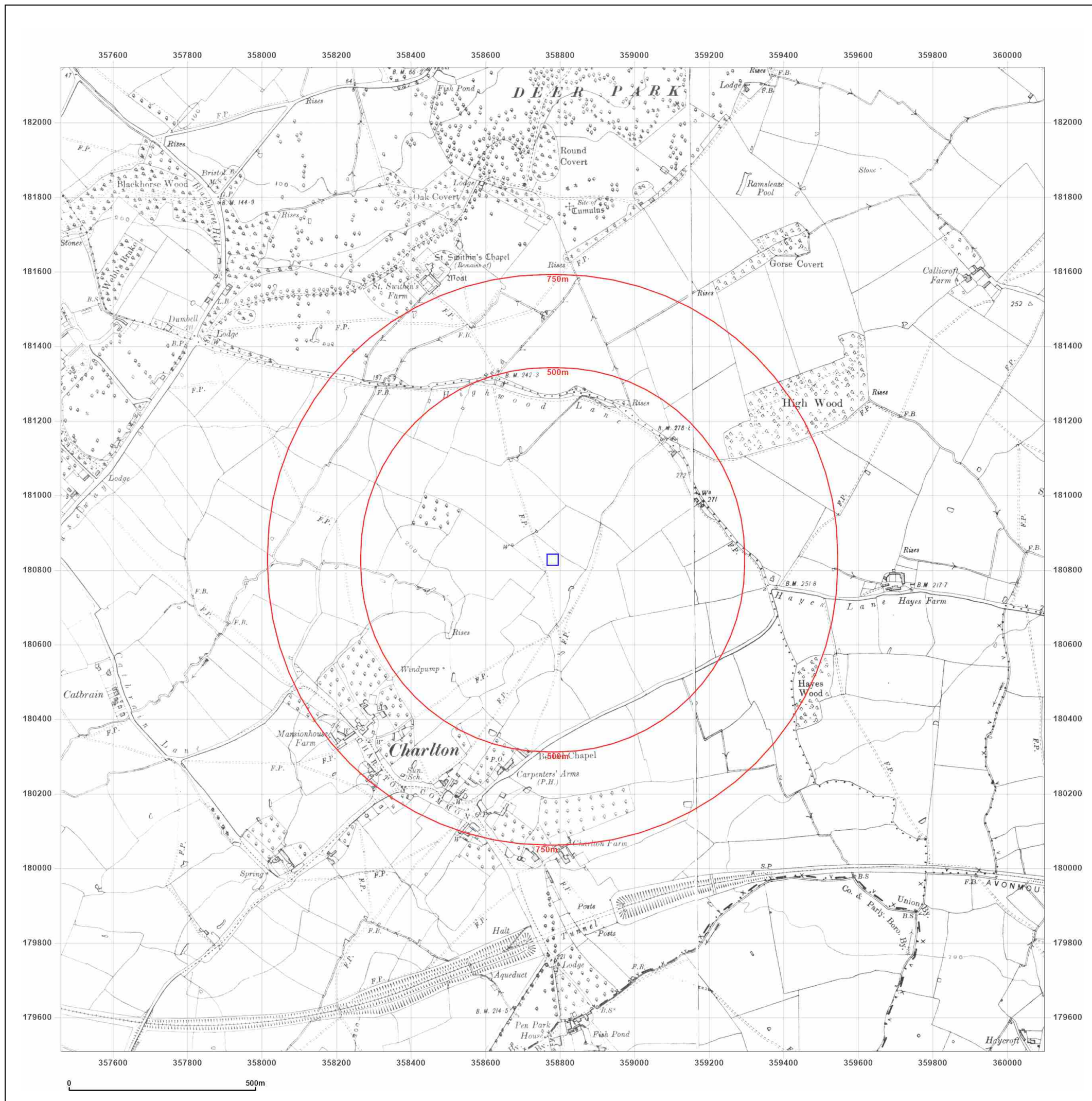
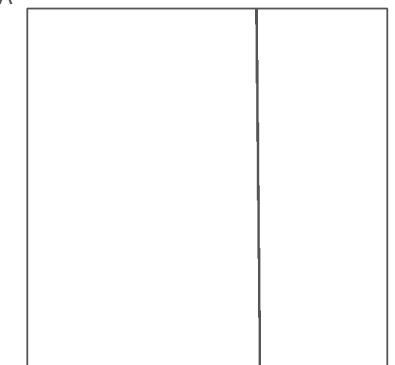
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 Revised 1921
 Edition N/A
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 Levelled N/A

Surveyed 1880
 Revised 1921
 Edition N/A
 Copyright N/A
 Levelled N/A



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Site Details:

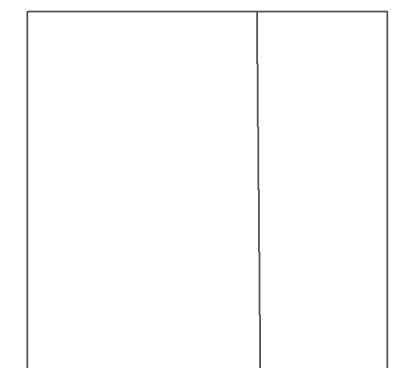
Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1921

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised 1918
 Edition 1921
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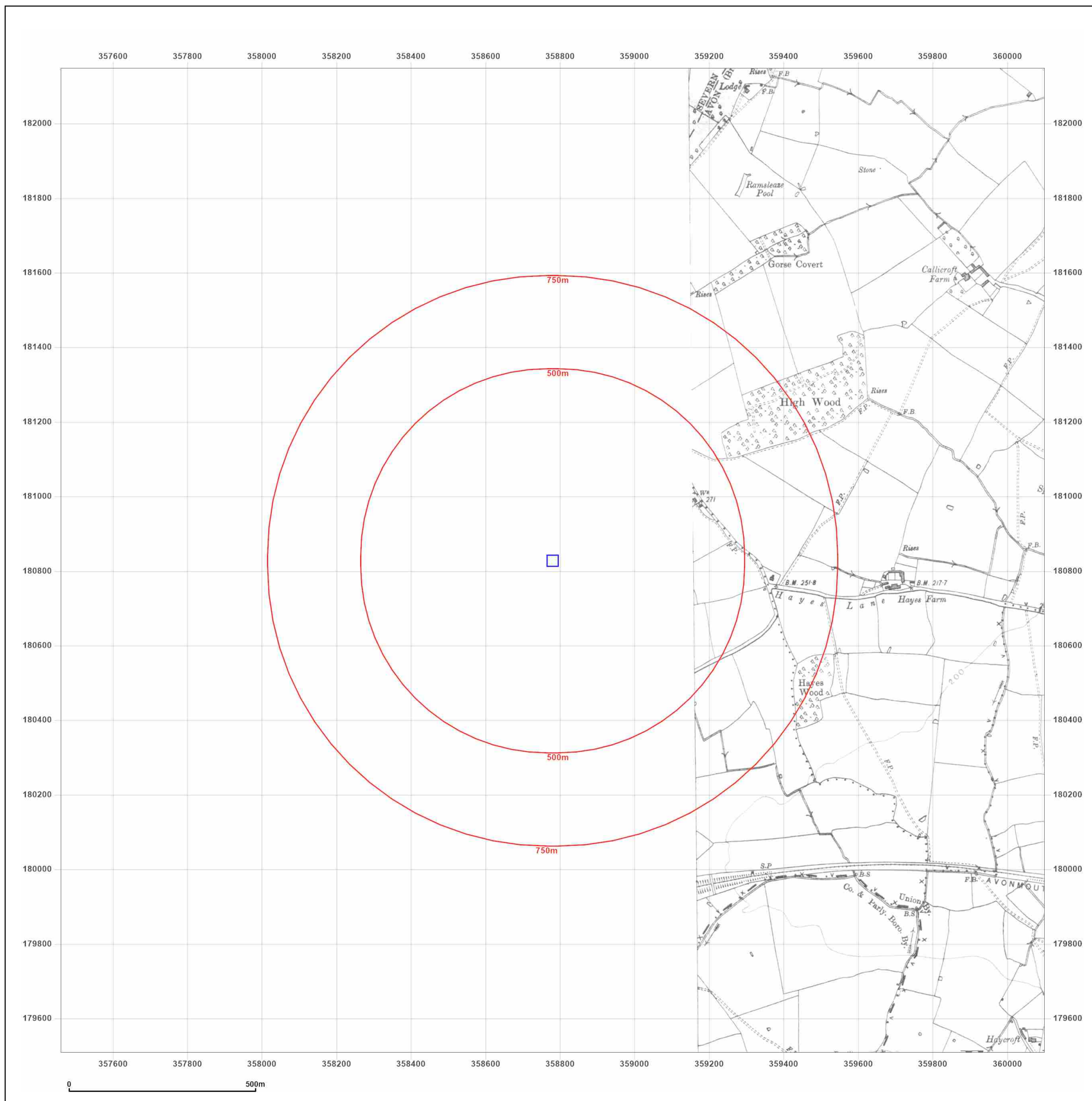


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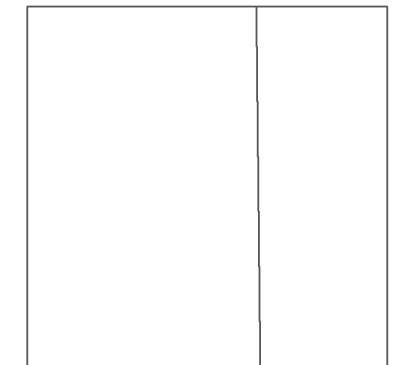
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1921

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised 1918
 Edition 1921
 Copyright N/A
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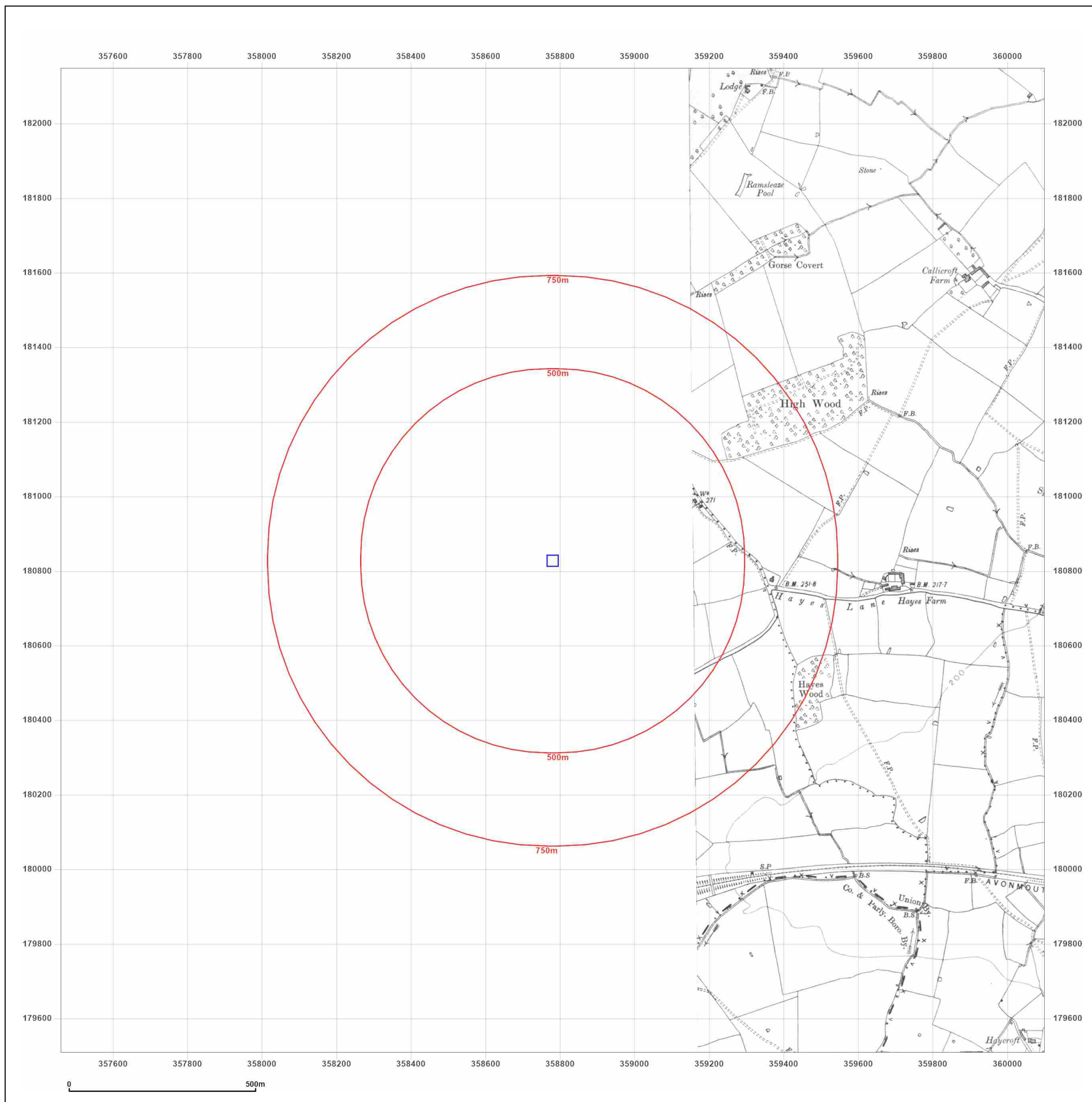


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Site Details:

Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1935-1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised 1935
 Edition N/A
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 Levelled N/A

Surveyed 1879
 Revised 1938
 Edition N/A
 Copyright N/A
 Levelled N/A



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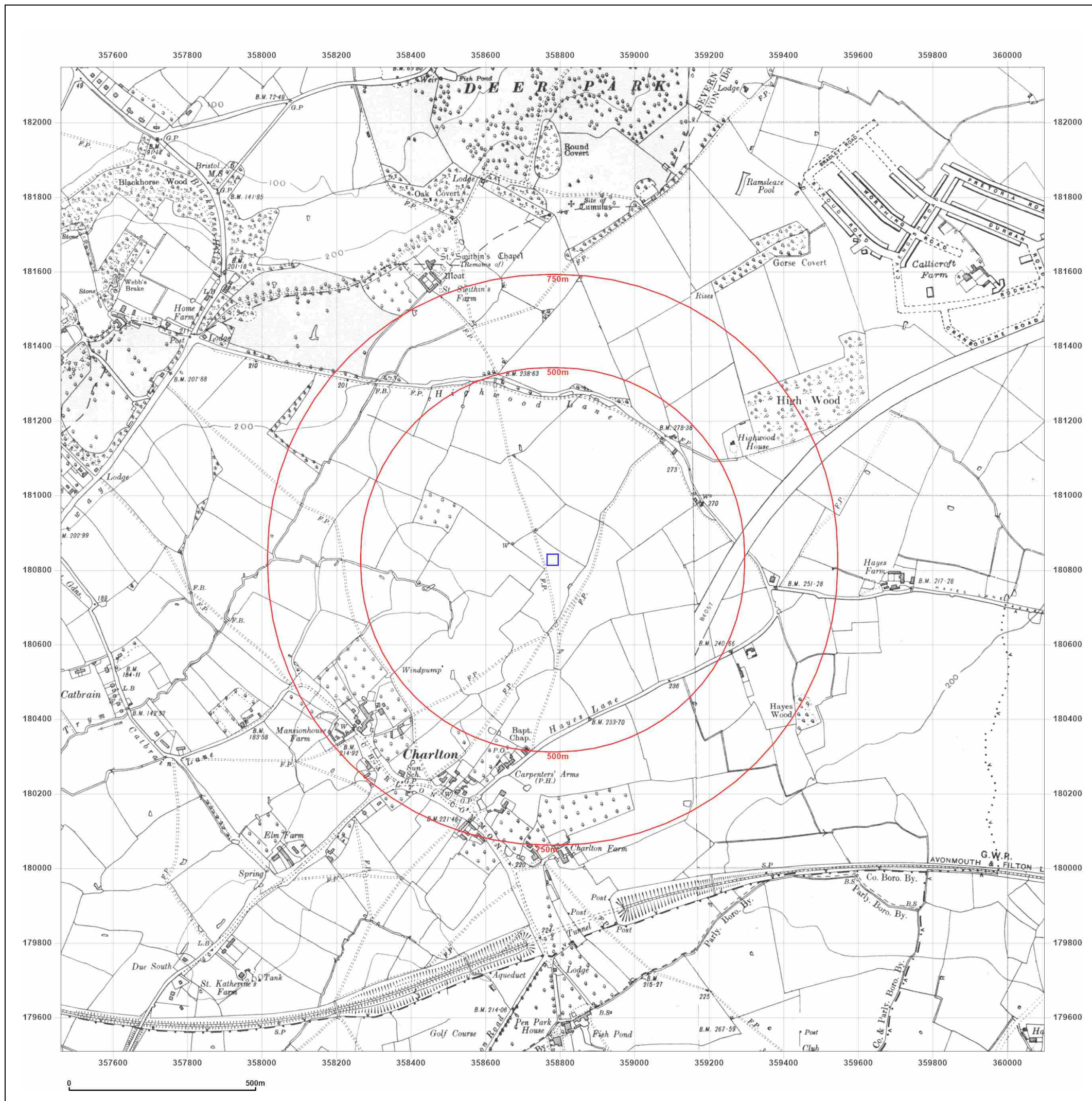


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Site Details:

Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: County Series

Map date: 1935-1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879
 Revised 1938
 Edition N/A
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 Levelled N/A

Surveyed 1879
 Revised 1935
 Edition N/A
 Copyright N/A
 Levelled N/A



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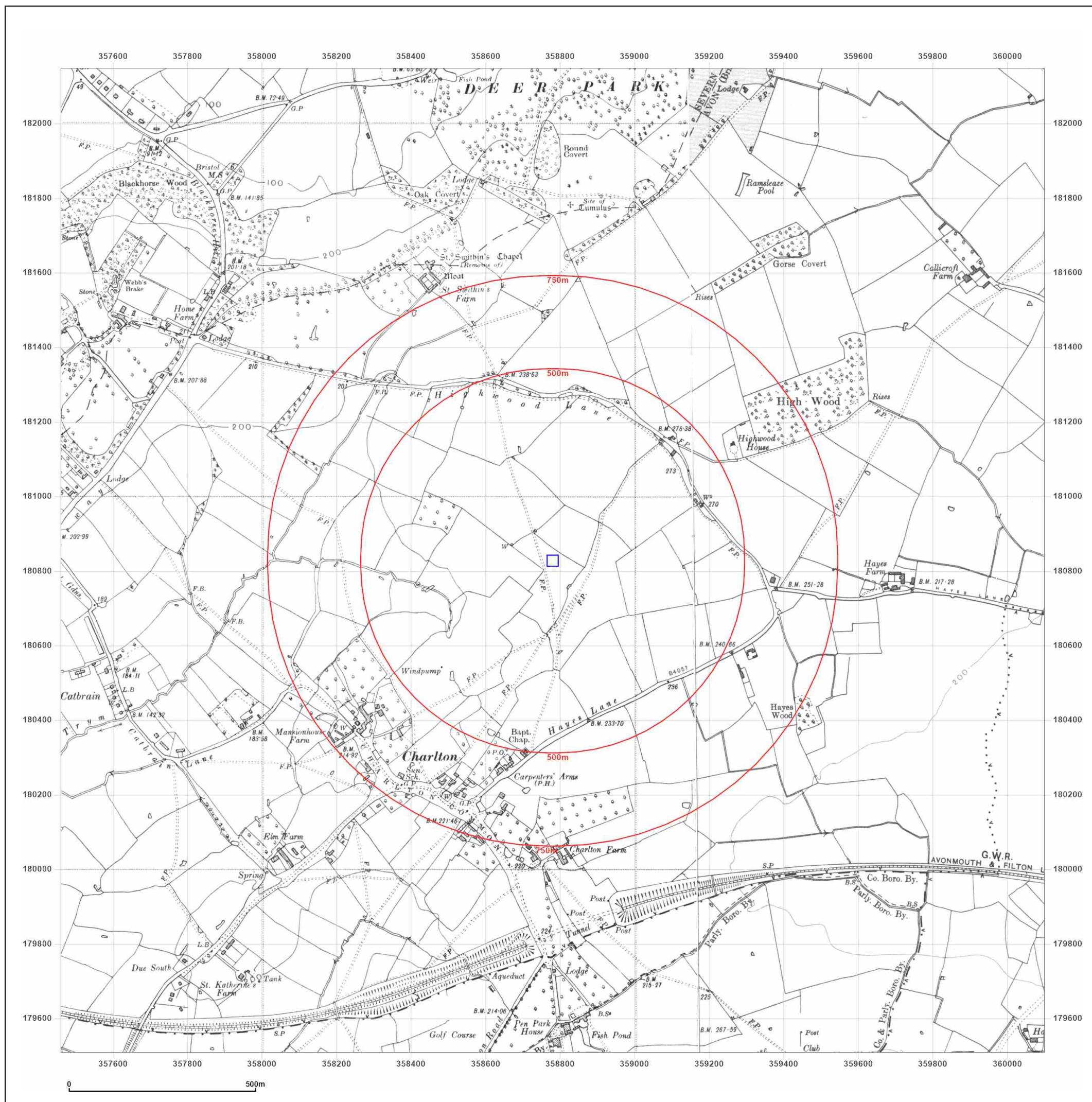


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Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: Provisional

Map date: 1954-1955

Scale: 1:10,560

Printed at: 1:10,560

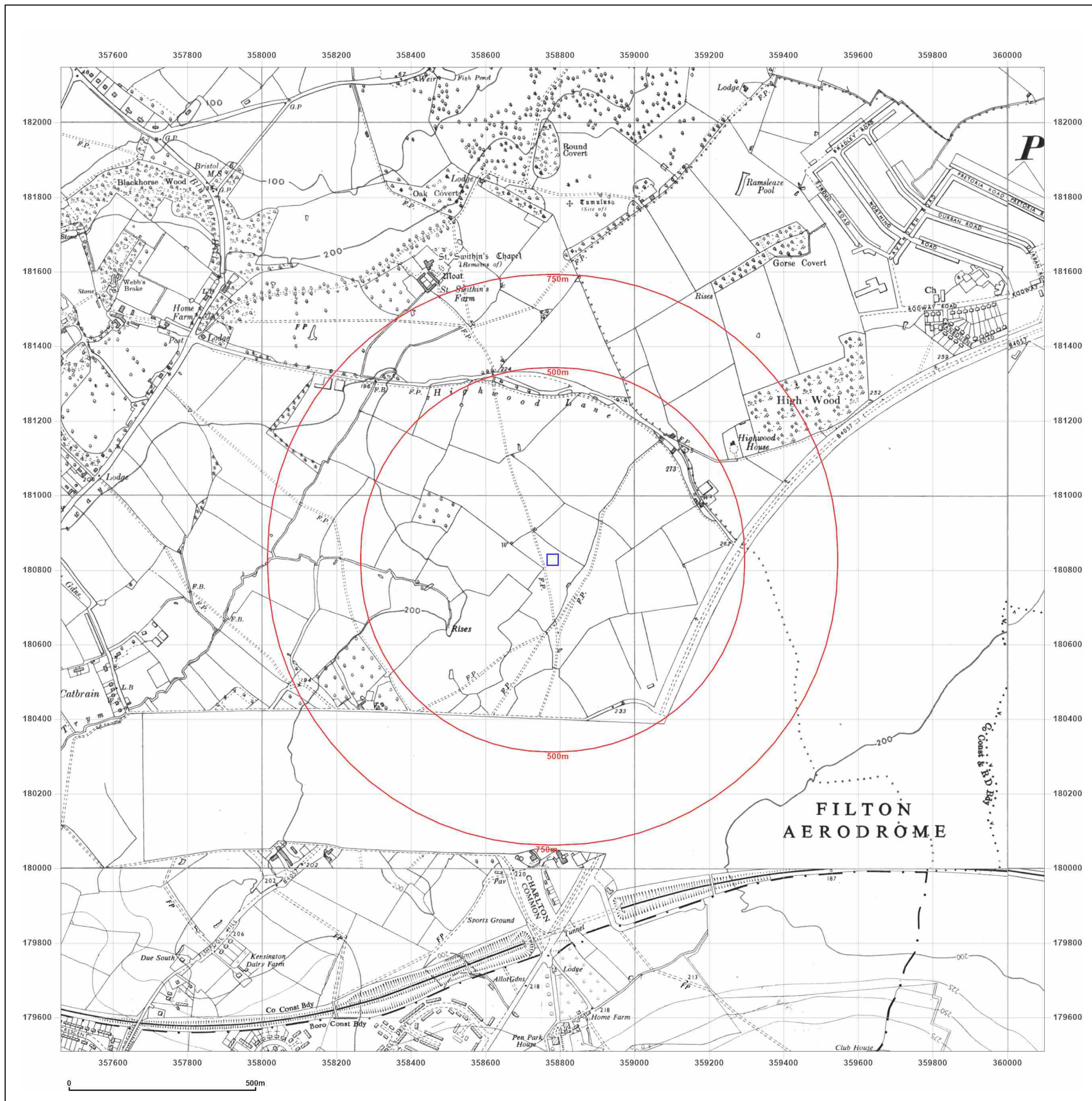


Surveyed N/A
 Revised 1954
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed N/A
 Revised 1954
 Edition 1955
 Copyright N/A
 Levelled N/A

Surveyed N/A
 Revised 1955
 Edition 1955
 Copyright N/A
 Levelled N/A

Surveyed N/A
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: Provisional

Map date: 1966-1969

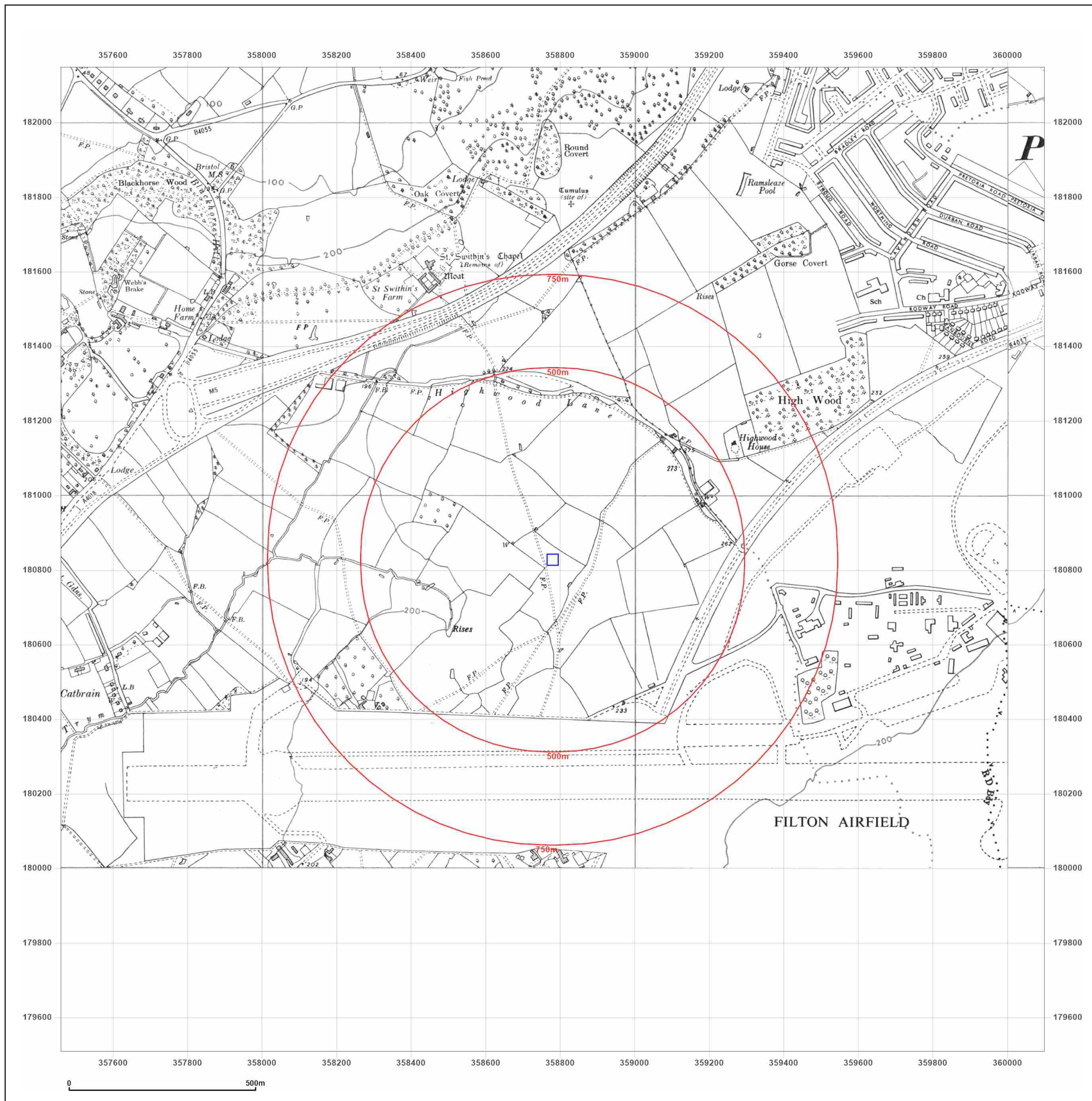
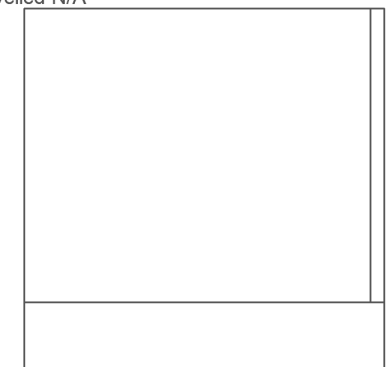
Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
 Revised 1969
 Edition 1969
 Copyright N/A
 Levelled N/A

Surveyed N/A
 Revised 1966
 Edition 1955
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Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 1973-1978

Scale: 1:10,000

Printed at: 1:10,000

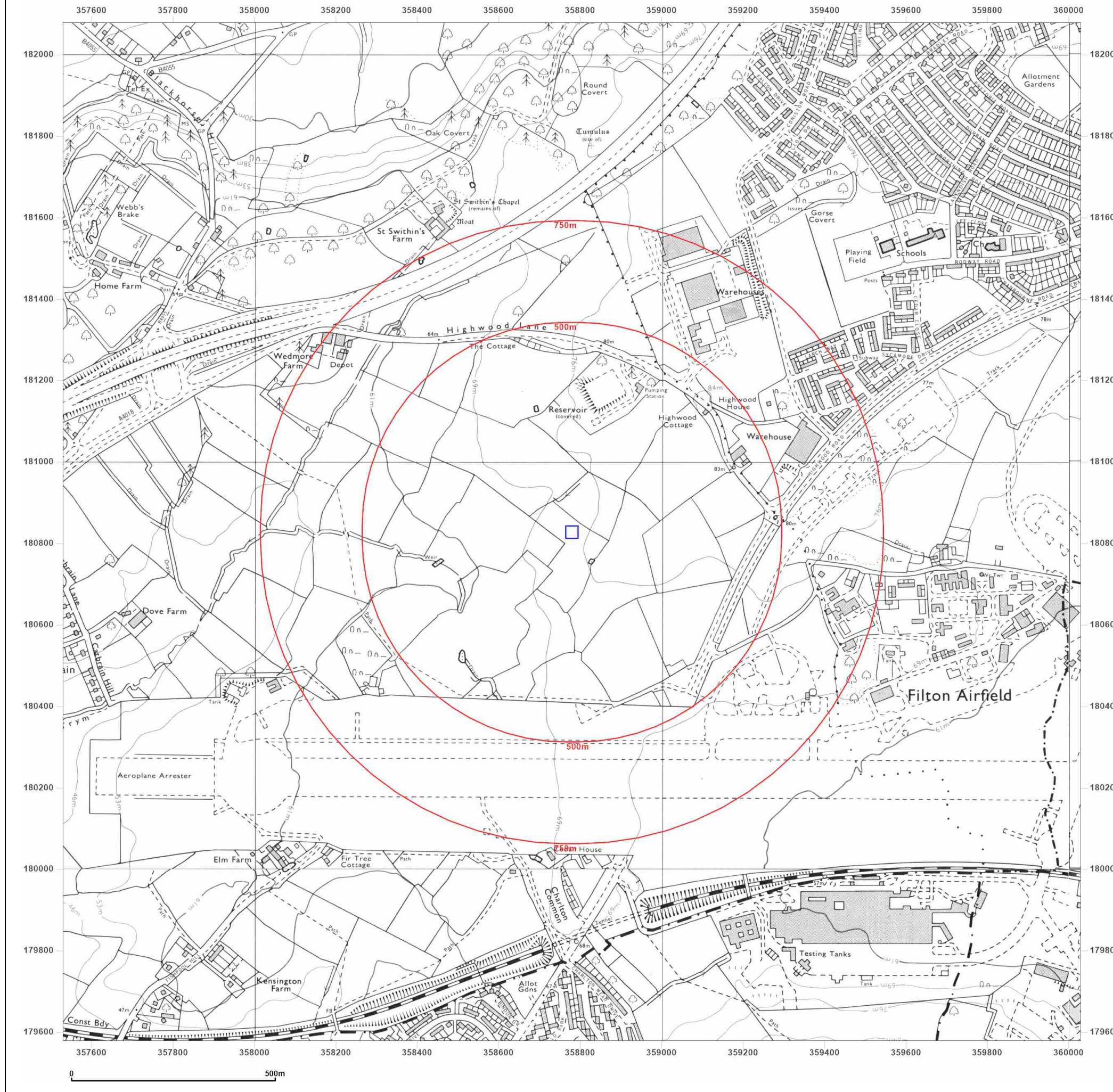
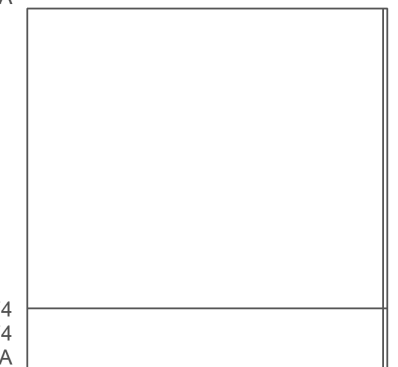


Surveyed 1974
 Revised 1974
 Edition N/A
 Copyright N/A
 Levelled N/A

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

Surveyed 1974
 Revised 1974
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1977
 Revised 1978
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Client Ref: EMS_681472_895618
Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 1988-1991

Scale: 1:10,000

Printed at: 1:10,000

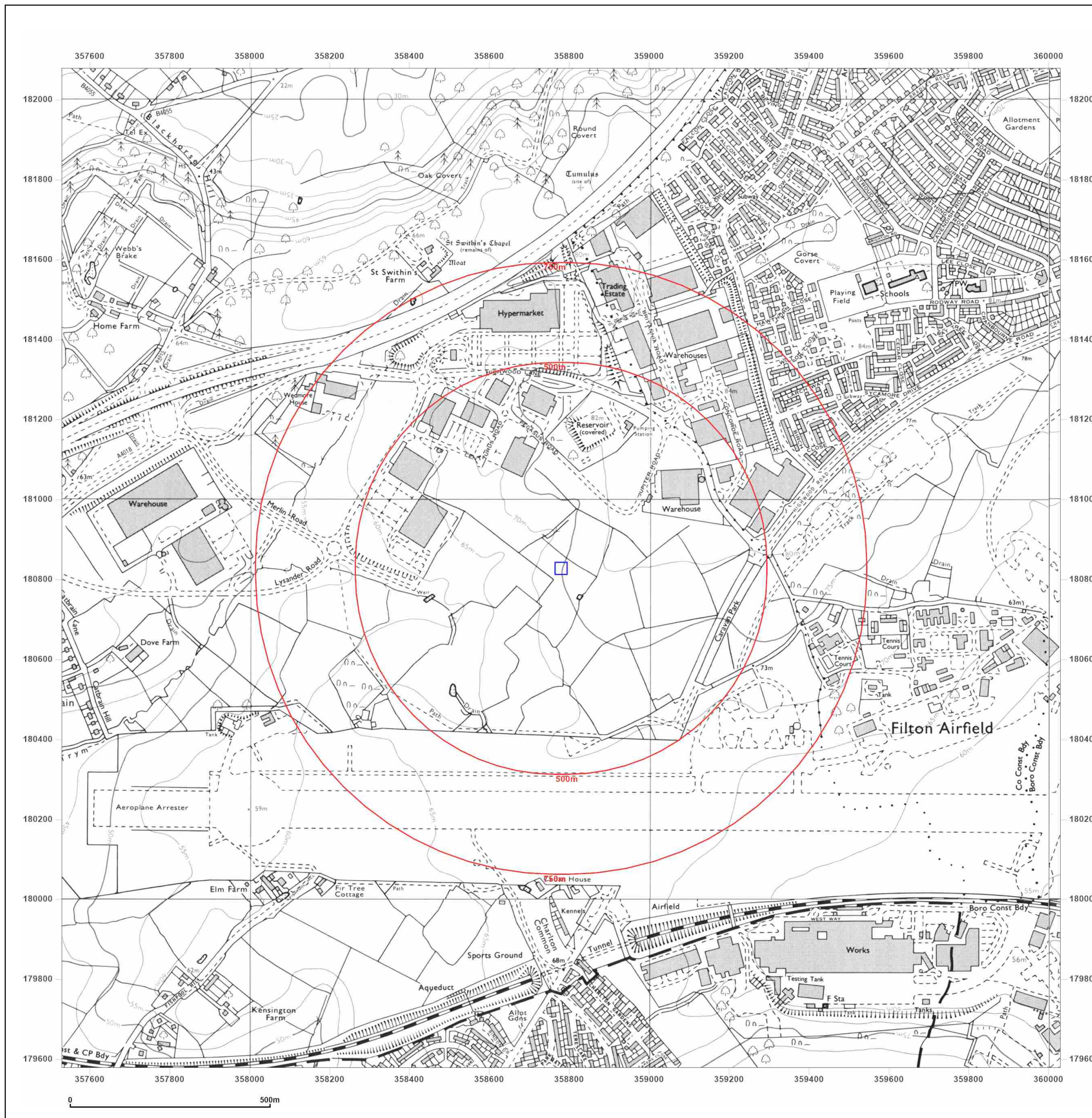
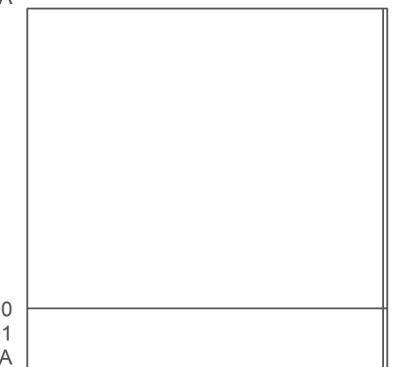


Surveyed 1988
 Revised 1989
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1984
 Revised 1988
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1990
 Revised 1991
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1988
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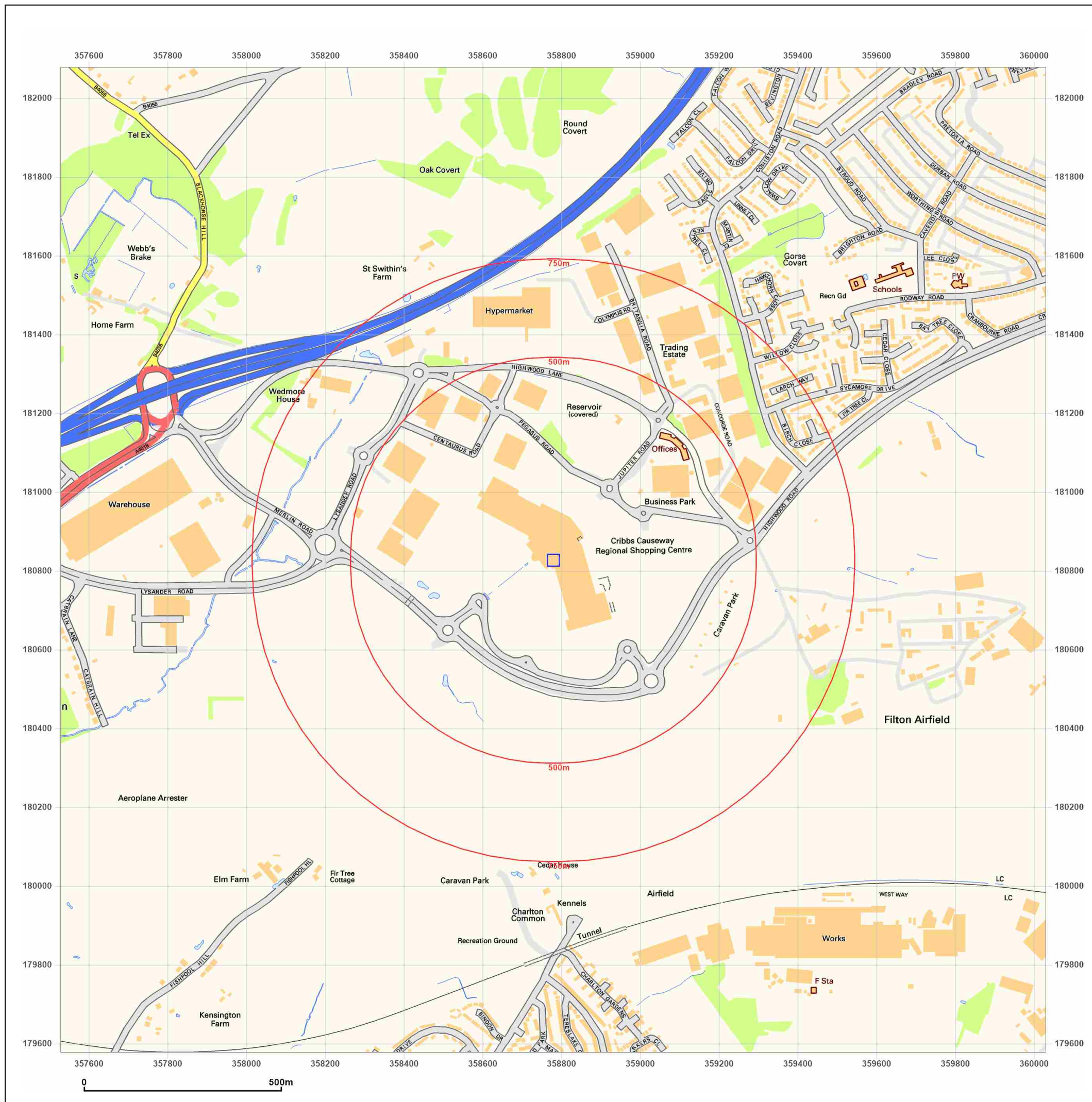
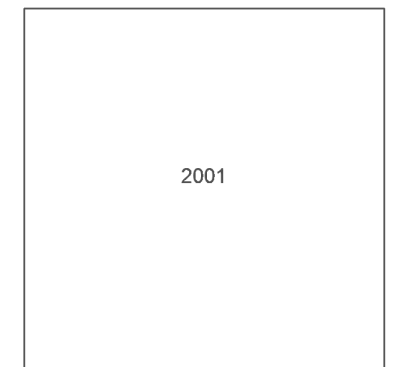
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

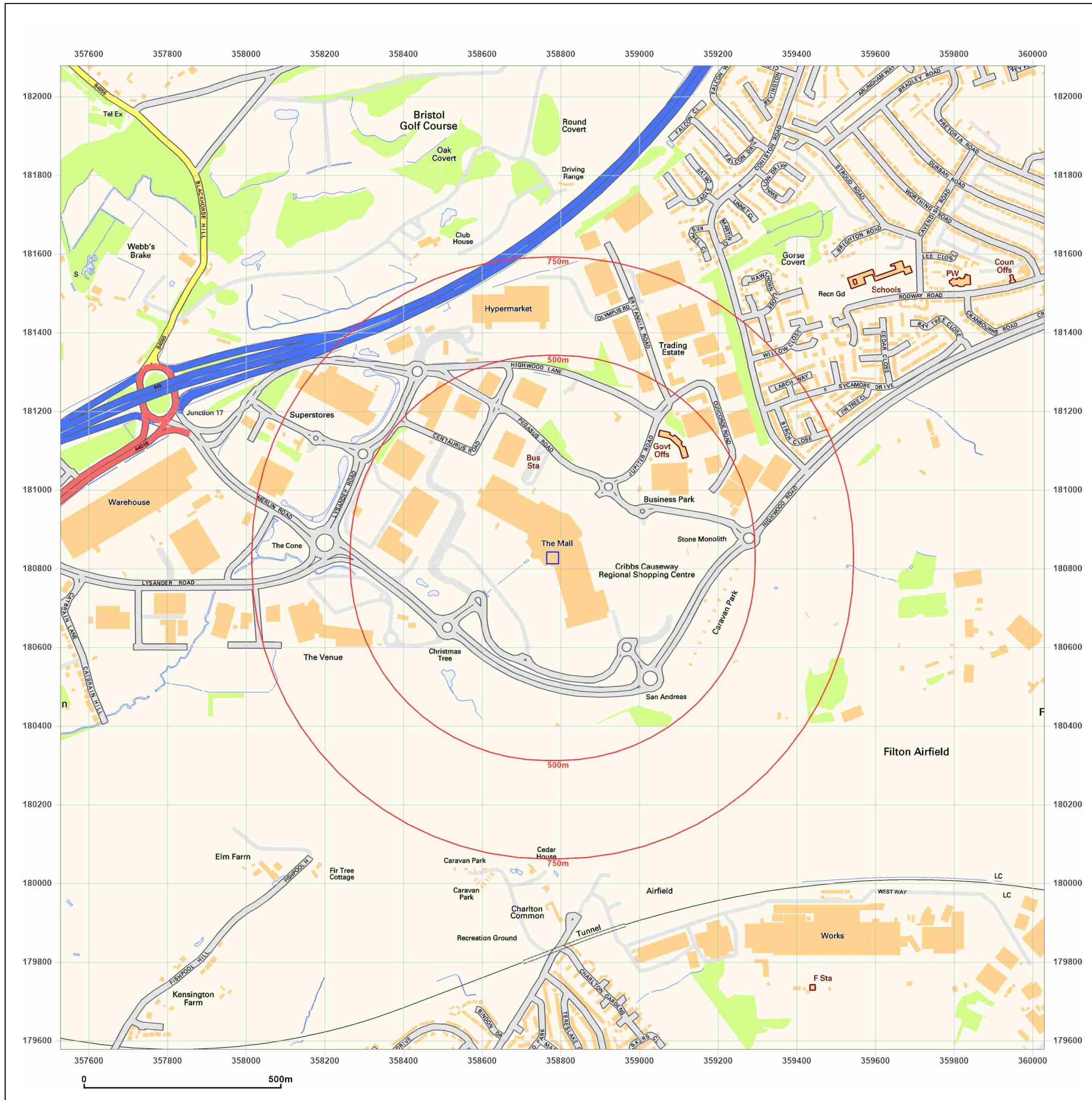
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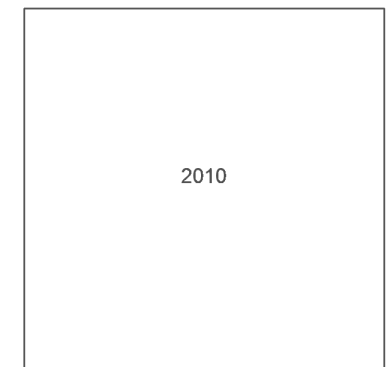
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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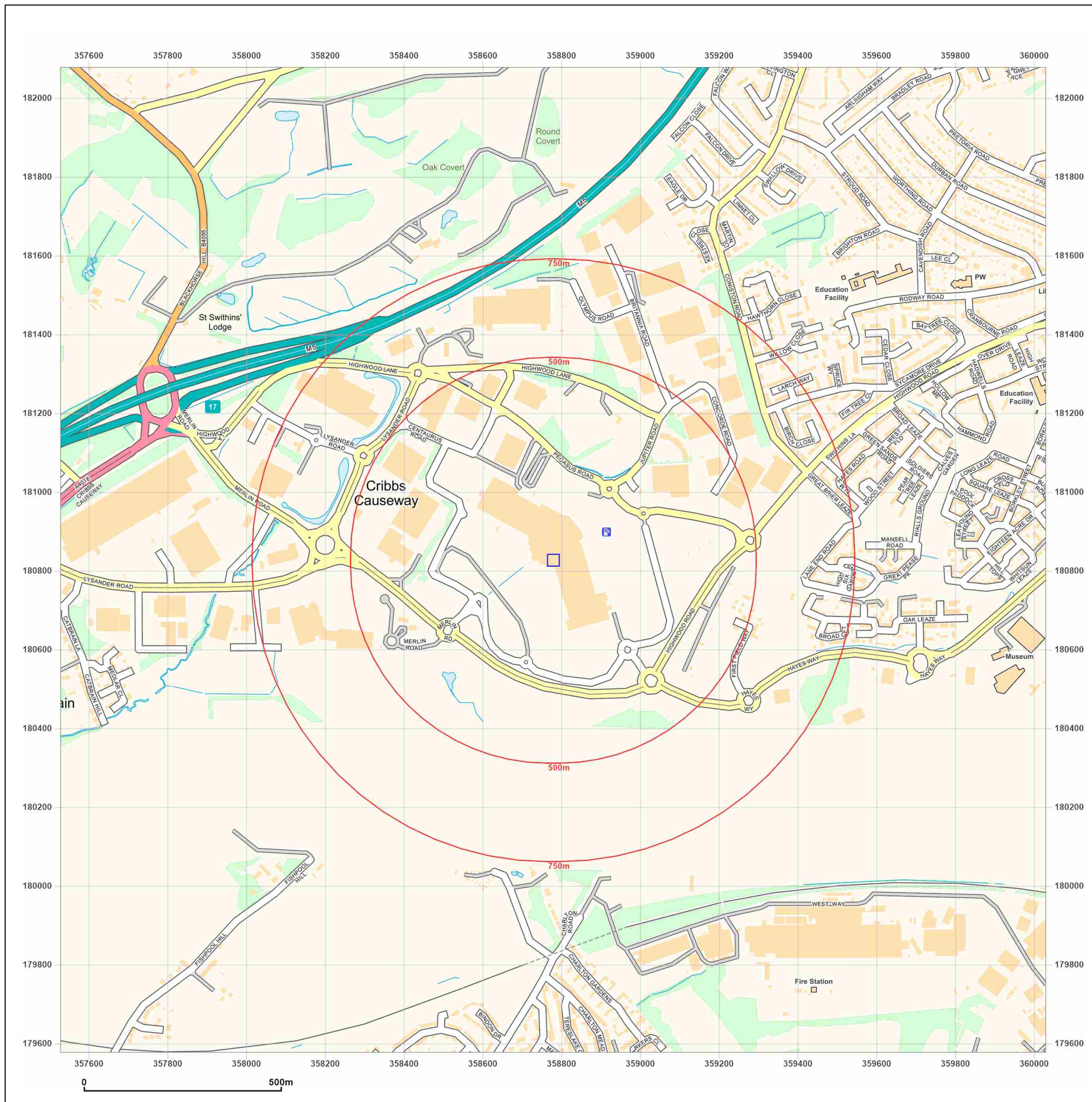
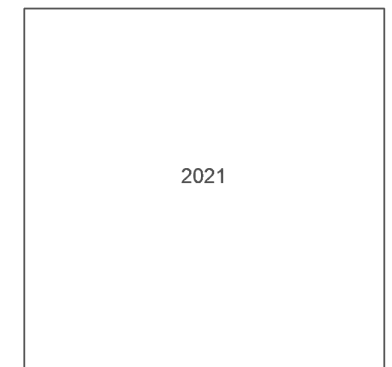
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Report Ref: EMS-681472_895618
Grid Ref: 358779, 180828

Map Name: National Grid

Map date: 2021

Scale: 1:10,000

Printed at: 1:10,000



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County Series 1:10,560 scale

VEGETATION

	Fir Wood		Deciduous Wood
	Mixed Wood		Brushwood
	Orchard		Reeds
	Rough Pasture		Furze
	Marsh		Osiers

ROADS

	Railway over Road		Road over Railway
	Road over River or Canal		Level Crossing
	Railway over River		Road over Stream
	Road over Stream		Sunken Road
	Raised Road		

RAILWAYS

	Double Lines of Railway		Single Lines of Railway and Tramway
--	-------------------------	--	-------------------------------------

GENERAL FEATURES

	Gravel Pit		Sand Pit
	Quarry		Shingle
	Other Pits		Antiquities, Site of
			Arrow, showing direction of flow of water
			Trigonometrical Station

BOUNDARIES

	County Boundary		Parliamentary Division Boundary
	Parish Boundary		Union Boundary
	Contours		Rural District Boundary

National Grid 1:10,000 scale

HEIGHTS (METRES)

Values are given in metres above mean sea level at Newlyn.

Surface heights determined by ground survey \pm 163m
air survey \pm 1m

Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

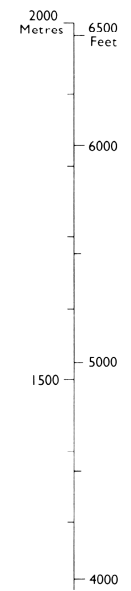
Contours are at 5 metres vertical interval.

ROCK FEATURES

	Loose rock		Vertical face
	Boulders		
	Outcrop		
	Scree		

CONVERSION SCALE

Metres - Feet



ABBREVIATIONS

BP,BS	Boundary Post or Stone	PO	Post Office
Ch	Church	PC	Public Convenience
CH	Club House	PH	Public House
F Sta	Fire Station	S	Stone
FB	Foot Bridge	Spr	Spring
Fn	Fountain	TCB	Telephone Call Box
GP	Guide Post	TCP	Telephone Call Post
MP,MS	Mile Post or Stone	TH	Town Hall
P	Pole or Post	W	Well
Pol Sta	Police Station	Y	Youth hostel

ROADS

	Road		Track		Path
--	------	--	-------	--	------

Where unfenced shown by pecked lines.

RAILWAYS

	Cutting		Embankment	} Standard gauge
	Multiple track		Single track	
	Road over		Level crossing	} Siding, tramway or mineral line
	Road under		Foot Bridge	
	Narrow gauge			

GENERAL FEATURES

	Antiquity, (site of)		Lake, loch or pond
	Boulders		Sloping masonry
	Building		Chalk pit, clay pit or quarry
	Pylon		Gravel pit
	Pole		Sand pit
	Glasshouse		Refuse or slag heap
	Triangulation station		

VEGETATION

	Bracken, rough grassland		Marsh		Coppice
	Scrub		Saltings		Orchard
	Heath		Reeds		Coniferous trees
					Non-coniferous trees

In some areas bracken () and rough grassland () are shown separately.



Historical Map Pack Legend

County Series & National Grid

1:10,560 scale

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County Series 1:2,500 scale

National Grid 1:2,500 / 1:1,250 scale



Historical Map Pack Legend

GENERAL FEATURES

Wood	Marsh	Reeds
Fir	Mixed Wood	Brush Wood
Osiers	Orchard	Bush
Rough Pasture	Furze	Ford
Stepping Stones	Ferry	Stepping Masonry
Flat Rock	Lock	Waterfall
Shingle	Gravel Pit	Quarry
Sand Pit	Refuse Heap	Clay Pit

Trigonometrical Station	Sluice
Altitude at Trigonometrical Station	Trough
Bench Mark	Spring
Surface Level	Well
Permanent Traverse Station	Mooring Ring
Antiquities (site of)	Mooring Post
Arrow denotes flow of water	Boundary Stone
	Boundary Post

GENERAL FEATURES

Non-coniferous Trees	Slopes	Antiquity (site of)
Coniferous Trees	Cliff	Culvert
Surveyed Trees	Cave Entrance	Direction of water flow
Orchard Trees	Rock	Electricity Pylon
Coppice, Osier	Boulders	Electricity Transmission Line
Scrub	Sloping Masonry	Triangulation Station
Bracken	Roofed Building	Traverse Station (permanent)
Heath	Glasshouse	Bench Mark
Rough Grassland	Archway	Surface Level
Marsh, Saltings	Change of boundary marking	Revision Point (instrumentally fixed)
Reeds	see AREAS notes	Revision Point & Bench Mark coincident

Top	Slopes	Quarry	Refuse Heap	Sloping Masonry
Flat Rock	Sand	Sand Pit	Culvert	Archway
Shingle	Boulders	Gravel Pit	Cliff Face	Glazed Roof Building

ROADS

Road over single stream	Road crossing railway
Road over River or Canal	

RAILWAYS

Railway crossing River or Canal	Railway crossing Road
Level Crossing	Embankment
Cutting	

BOUNDARIES

England & Wales

- County Boundary (geographical)
- County & Civil Parish Boundary coterminous
- Admin County or County Borough Boundary
- London Borough Boundary
- County District Boundaries based on civil parish

England, Wales & Scotland

- Civil Parish Boundary
- Boro (or Burgh) Const & Ward Bdy Co Const Bdy Parly & Ward Boundaries based on civil parish
- Boro (or Burgh) Const & Ward Bdy Co Const Bdy Parly & Ward Boundaries not based on civil parish

Scotland

- County Boundary (geographical)
- Co Cnl Bdy County Council Boundary
- Co of City Bdy County of the City Boundary
- Burgh Bdy Burgh Boundary
- Dist Bdy District Council Boundary

* Not with parish † Coincident with parish

ABBREVIATIONS

Trigonometrical Station	Sluice
Altitude at Trigonometrical Station	Trough
Bench Mark	Spring
Surface Level	Well
Permanent Traverse Station	Mooring Ring
Antiquities (site of)	Mooring Post
Arrow denotes flow of water	Boundary Stone
	Boundary Post

ABBREVIATIONS

Beer House	Fire Station	Mail Pick-up
Bench Mark	Guido Post	Mile Stone
Boundary Post	Gaa Valve Compound	National Trust
Boundary Stone	Hydrant or Hydraulic	Normal Tidal Limit
Crane	Hectares	National Trust for Scotland
Club House	Letter Box	Pillar, Pole or Post
Chimney	Lifeboat Station	Public Convenience
Capstan	Level Crossing	Police Call Box
Drinking Fountain	Loading Gauge	Public House
Dock	Lighthouse	Post Office
Electricity Pillar or Post	Lighting Tower	Traverse Station
Electricity Transmission Line	Metres	Well
Fire Alarm	Mean High Water	Pump
Fire Alarm Pillar	Mean High Water Springs	Police Telephone Pillar
Filter Bed, Foot Bridge	Mean Low Water	Reservoir
Fundamental Bench Mark	Mean Low Water Springs	Road House
Flagstaff	Mile or Mooring Post	Revision Point
		Stone
		Signal Box
		Signal Light
		Sluice
		Signal Post
		Spring
		Signal Station
		Telephone Call Box
		Telephone Call Post
		Tank or Track
		Trough
		Traverse Station
		Well
		Weighbridge
		Wind Pump
		Works
		Water Point
		Water Tap

County Series 1:1,250 scale ~ County Series & National Grid 1:2,500 scale

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