



CONTAMINATED LAND RISK ASSESSMENT

Phase 1 Desk Study Report

Site Address

10 Church End
Markyate
St Albans
AL3 8PY

Client

Gleneden Plant Sales Ltd

Report Reference

PH1-2023-000075

Prepared by

STM Environmental Consultants Ltd

Date

13/10/2023



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2 DOCUMENT CONTROL



CONTAMINATED LAND RISK ASSESSMENT Phase 1 Desk Study Report



Site Address:	10 Church End Markyate St Albans AL3 8PY
Site Coordinates:	505968, 216797
Prepared for:	Gleneden Plant Sales Ltd
Report Reference:	PH1-2023-000075
Version No:	1.0
Date:	13/10/2023
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3 DISCLAIMER

This report and any information or advice which it contains, is provided by STM Environmental Consultants Ltd (STM) and can only be used and relied upon by Gleneden Plant Sales Ltd (Client). Any party other than the Client using or placing reliance upon any information contained in this report, do so at their own risk.




STM has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. However, STM gives no warranty, representation or assurance as to the accuracy or completeness of any information, assessments or evaluations presented within this report.



It is noted that some of the findings presented in this report are based on information obtained from third parties (i.e. Environmental Search Report). Whilst we assume that all information is representative of the site and of present conditions, we can offer no guarantee as to its validity regarding the short term or long-term history of the Site.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

It should be noted that this report has been produced for environmental purposes only. It should not in any way be construed to be or used to replace a geotechnical survey, structural survey, asbestos survey, buried services survey, unexploded ordnance survey or Invasive Plant Survey.

4 EXECUTIVE SUMMARY

SECTION	SUMMARY
Site Location And Size	The site is located at 10 Church End, Markyate, St Albans, AL3 8PY. It is centred at national grid reference 505968, 216797 and has an area of approximately 0.01ha.
Current Site Use	The site currently comprises a disused two-storey commercial building with a single storey side structure which was previously used as a Storeroom/Workshop. There is evidence of fly tipping to the rear of the property. The main current uses in the immediate surrounding area include Industrial, commercial and potentially Agricultural uses.
Proposed Development	The development proposal is for the ' <i>Conversion of existing former commercial building (E1) to dwelling house (C3) and construction of part first, part 1.5 storey side extension with soft and hard landscaping</i> '.
Site History	Examination of Ordnance Survey historic maps revealed that the site was undeveloped land until c. 1920-22, when 1no. unspecified building was developed. By c.1970-71, the site was redeveloped as 2no. buildings labelled 'Engineering Works'. Maps from c.1992-95 show the site relabelled as 'Works', and 1no. building constructed in the west of the site. The surrounding area has been Industrial and commercial uses.
Geology	According to the BGS Geindex, the site is located on bedrock of Holywell Nodular Chalk Formation and New Pit Chalk Formation (Undifferentiated) comprising Chalk. The superficial deposits are Alluvium comprising Clay, Silt Sand and Gravel.
Topography	The site is at an elevation of approximately 129 mAOD (above Ordnance Datum).
Hydrogeology	The site is underlain by a Secondary A Superficial and Principal Bedrock Aquifer.
Hydrology	The nearest surface water body is the River Ver located 35m E of the site.
Ecology	There are no designated ecological receptors located on or within 250m of the site.
Contamination Assessment	<p>On site potentially contaminative land uses (PCLUs) have included a Works (Engineering). Other potential sources of onsite contamination identified were Made Ground and fly-tipping. Off site PCLUs identified included a Works/Factory (adjacent W) and Cemetery (170m SW)..</p> <p>A conceptual site risk model was developed and a qualitative risk assessment carried out. Potentially significant potential pollutant linkages were identified in respect of:</p> <ul style="list-style-type: none">  Human Health Receptors (i.e. Future Occupiers/Users) - via ingestion, dermal absorption and inhalation (indoors and outdoors);  Human Health Receptors - Explosion/ Fire risk due to build-up of Methane/ VOCs in confined spaces;  Groundwater receptors – Secondary A and Principal Aquifers;

	<ul style="list-style-type: none">  Property Receptors - Damage to buildings and services due to exposure to aggressive chemicals in the soil; and  Property Receptors – Explosion/ Fire risk due to build-up of Methane/ VOCs in confined spaces <p>The identified risks are considered to be Low-Moderate.</p>
<p>Recommendations</p>	<p>Given that potentially significant potential pollutant linkages were identified, it is recommended that an intrusive site investigation is undertaken with the objective of determining the presence and extent of any soil and gaseous contamination at the site.</p>
<p>This table is intended as a summary of the desk study findings and should be read in conjunction with the main report.</p>	

5 INTRODUCTION

STM Environmental Consultants Ltd (STM) were commissioned by Gleneden Plant Sales Ltd (Client) to undertake a Phase 1 Contaminated Land Risk Assessment (CLRA) at a site located at 10 Church End, Markyate, St Albans, AL3 8PY.

The study is required to support the discharge of Condition 6(i) attached to planning permission 21/04038/FUL (Refer to [Appendix 1](#) for the Decision Notice).

5.1 Development Proposal

The development proposal is for the 'Conversion of existing former commercial building (E1) to dwelling house (C3) and construction of part first, part 1.5 storey side extension with soft and hard landscaping'.

The proposed development plans are contained in [Appendix 2](#).

6 CONTEXT AND OBJECTIVES FOR THE RISK ASSESSMENT

6.1 Legislative Context

6.1.1 Part IIA

Part IIA of the Environmental Protection Act 1990, which came into force in England in April 2000 and in Wales in July 2001, introduced a new statutory regime for the identification and remediation of contaminated land in the United Kingdom.

The legislation considers risks from contaminated land to human beings, controlled waters (surface and ground water), protected ecological systems and property. Under the legislation "contaminated land" is defined as:

"Any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land that: -

- (a) Significant harm is being caused or there is significant possibility of such harm being caused: or
- (b) Pollution of controlled waters is being caused, or is likely to be, caused."

In order for land to be considered contaminated, there must be a contaminant, a receptor and a pathway (via which the contaminant can reach the receptor) present at the site. When these three components are identified at a site, a *pollutant linkage* is said to exist.

Pollutant Linkage = Contaminant → Pathway → Receptor

In order for a local authority to determine that a site is contaminated land, it must be satisfied that the pollutant linkage is a *significant pollutant linkage* and that the land in question is causing, or that there is a significant possibility that it will cause significant harm (SPOSH) to humans, habitats, buildings or livestock and crops if remedial work is not carried out.

6.1.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the government's policy on dealing with land contamination through the planning process. It states that planning policies and decisions should ensure that:

- a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);
- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and
- adequate site investigation information, prepared by a competent person, is presented.

6.1.3 Environmental Damage Regulations

The Environmental Damage (Protections and Remediation) Regulations 2015 transpose the provisions of the EU Environmental Liability Directive into law in England and Wales.

The Regulations require action in response to the most significant cases of environmental damage. They cover specific types of:

- damage to species and habitats;
- damage to water; or
- risks to human health from contamination of land.

The Regulations apply to both imminent threats and actual cases of damage. Where these arise, those responsible must take immediate action to prevent damage occurring or remediate damage where it does occur.

The Regulations are based on the polluter pays principle 'requiring those responsible to meet the cost of preventive and remedial measures.

6.2 Objectives

This Desk Study has been written so as to provide an initial overview of the nature and extent of contamination hazards that may exist at the site. It has been undertaken in accordance with the specifications outlined in the British Standard BS 10175:2011+A2:2017 Code of Practice for the Investigation of potentially contaminated sites and the Environment Agency Document, LCRM: Stage 1 Risk Assessment.



The main objectives of the study were to:

- Enable a conceptual site risk model to be constructed;
- Provide sufficient information for a preliminary qualitative risk assessment to be undertaken;
- Inform the need for and scope of any intrusive investigations that may be required.

6.3 Summary of Research Undertaken

Details of information sources researched in order to compile this desk study are given below.

- Environment Agency Open Data (GIS)
- English Nature Open Data (GIS)
- English Heritage Open Data (GIS)
- British Geological Survey GeoIndex Web Map Service
- Coal Authority Open Data and Web Map Service.
- Historical Ordnance Survey Maps
- Local Authority Planning Application Portal

-  Groundsure Enviro Insight Report & Historical Maps
-  Bomb Sight Web Map Service for UXO

7 SITE DESCRIPTION

7.1 Site Location and Size

The site is located at 10 Church End, Markyate, St Albans, AL3 8PY and is centred at national grid reference 505968, 216797. The site has an area of approximately 0.01ha.

The site lies within the jurisdiction of Dacorum Borough Council in terms of the planning process. See Figure 1 below for the Site Location and Aerial Map.

7.2 Current Site Use

The site currently comprises a disused two-storey commercial building with a single storey side structure which was previously a Storeroom/Workshop. There is evidence of Fly Tipping to the rear of the property.

7.3 Surrounding Land Uses

A description of current land uses surrounding the boundaries of the site is given below in Table 1.

Table 1: Summary of surrounding land uses

Boundary	Land Use Description
Northern	Adjacent Road/Church
Eastern	Commercial
Southern	Commercial
Western	Industrial/ Residential

Figure 1: Site Location and Aerial Map



8 SITE HISTORY

8.1 Analysis of Historical Ordnance Survey Mapping

Historical maps published by the Ordnance Survey dating back to the late 1800's were reviewed in order to ascertain any previous industrial use at the site. The Groundsure Historical Maps are presented in [Appendix 3](#). A summary of the historic map analysis is provided in Table 2.

Table 2: Summary of historical land use identified from historical maps

Map Year & Scale	POTENTIALLY CONTAMINATIVE LAND USES	
	On Site	Off Site
1879 1:10,560	Blank site.	Partial mapping; the area to the W comprises predominately undeveloped land.
1880 1:2,500	The site comprises undeveloped land.	The immediate surrounding area has been developed, with fields, Agricultural Land and wooded areas located further from the site (N, E and W).
1884-85 1:10,560	Blank site.	Partial mapping; no significant changes.
1898-1900 1:2,500 1:10,560	No significant changes.	2no. Orchards 80m S & 130m W.
1901 1:2,500	Blank site.	Partial mapping; no significant changes.
1920-22 1:10,560	1no. unspecified building developed in the north east part of the site.	3no. Orchards 180m NW, 200m NE and 210m S. Cemetery 170m SW.
1924 1:2,500	No significant changes.	Orchard 80m S no longer present.
1938 1:10,560	Blank site.	Partial mapping; no significant changes.
1946-47 1:10,560	No significant changes.	Orchards 210m S no longer present.
1958 1:2,500	Blank site.	Partial mapping; A5 now developed 15m S. Orchard 200m NE no longer present.

Table 2: Summary of historical land use identified from historical maps

Map Year & Scale	POTENTIALLY CONTAMINATIVE LAND USES	
	On Site	Off Site
1960 1:10,560	No significant changes.	No significant changes.
1970-71 1:2,500	Site redeveloped and now comprises 2no. buildings, labelled Engineering Works.	Orchards 130m W no longer present. Engineering Works adjacent W Electricity Substation 200m S.
1975 1:10,000	No significant changes.	No significant changes.
1979 1:2,500	Blank site.	Partial mapping; no significant changes.
1981-86 1:2,500	No significant changes.	No significant changes.
1992-95 1:2,500	Site relabelled as Works, and 1no. building has been constructed in the west of the site.	No significant changes.
2001 1:10,000	No significant changes.	No significant changes.
2003 1:1,250	No significant changes.	No significant changes.
2010 1:10,000	No significant changes.	No significant changes.
2023 1:10,000	No significant changes.	No significant changes.
Current Use	The site currently comprises a disused two-storey commercial building with a single storey side structure which was previously a Storeroom/Workshop.	The main current uses in the immediate surrounding area include Industrial, commercial and potentially Agricultural.

9 ENVIRONMENTAL CHARACTERISTICS

A variety of Environmental datasets provided by the Environment Agency, British Geological Society, English Heritage and English Nature and others were screened in order to assess the environmental sensitivity of the site. The Groundsure Environmental Screen Report is presented in [Appendix 4](#). The results are summarised below.

9.1 Geology

9.1.1 Published Geology

According to the BGS Geoindex, the site is located on bedrock of Holywell Nodular Chalk Formation and New Pit Chalk Formation (Undifferentiated) comprising Chalk. The superficial deposits are Alluvium comprising Clay, Silt Sand and Gravel.

9.1.2 Unpublished Geology

BGS borehole records for the immediate surrounding area were reviewed in order to obtain further information on the ground conditions beneath the site.

The nearest log is located approximately 51m NE of the site (BGS ref. TL01NE71) and was undertaken in 16/01/1991 to a depth of approximately 21.0mbgl. The strata encountered comprised Soil to 0.9mbgl, underlain by CLAY and GRAVEL to 5.90mbgl, in turn underlain by CHALK to 21.0mbgl, the base of the borehole. The Borehole Log is presented in [Appendix 5](#).

9.2 Hydrogeology

The Environment Agency classifies the superficial deposits as a Secondary A Aquifer. The bedrock is classified as a Principal Aquifer. The site is located within Source Protection Zone 2.

9.3 Water Abstractions

No Groundwater, Surface Water or Potable Water Abstraction Licenses were identified on or within 2000m of the site.

9.4 Groundwater Level

According to BGS, the groundwater is likely to be less than 3.0 metres below the ground surface for at least part of the year.

9.5 Hydrology

The nearest surface water feature is the River Ver which is located approximately 35m E of the site.

9.6 Flood Risk

9.6.1 River and Tidal (Fluvial and Tidal) Flooding

The risk of fluvial and tidal flooding is considered to be low. The site is located within Flood Zone 1, which is defined as land having less than 1 in 1,000 annual probability of river or sea flooding (<0.1%).

9.6.2 Surface Water (Pluvial) Flooding

The Environment Agency (EA) long term flooding maps indicate that the site is at High risk of surface water flooding. High risk means that this area has a chance of flooding of greater than 3.3% each year.

9.6.3 Groundwater Flooding

The BGS groundwater flood maps indicate that the risk of groundwater flooding at the site is High.

9.7 Environmentally Sensitive Sites and Ecological Protection Zones

No Ecological Protection Zones (e.g. Special Scientific Interest (SSSI), Ramsar Sites, Special Areas of Conservation (SAC)) were identified on or within 250m of the proposed development.

However, an Environmentally Sensitive Sites (Green Belt Land) was identified on site.

9.8 Conservation Areas, Designated Protected Buildings and Monuments

No Scheduled Ancient Monuments were identified on or within 50m of the proposed development.

However, the following Conservation Area and Listed Buildings were identified within 50m of the site:

Table 3: Conservation Area and Listed Buildings identified within 50m of the site:

Name of Site	Type	Grade	Distance & Direction
Cell Lodge and Adjoining Gates and Gatepiers	Listed Buildings	II	13m N
The Homestead	Listed Buildings	II	15m SE
Markyate	Conservation Area	-	43m SW

9.9 Topography

According to [Google Earth](#), the general site level is at 129mAOD.

9.10 Waste Disposal Activities & Landfill Sites

No evidence of Waste Disposal Activities or Landfill Sites were identified on or within 250m of the site.

9.11 Petrol and Fuel Sites

No Petrol or Fuel Sites were identified on or within 500m of the site.

9.12 Historical Tanks

The Groundsure report includes a summary of Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. No Historical Tanks were indicated to have been on or within 250m of the site.

9.13 Sites Determined as Contaminated Land under Part 2A EPA 1990

No Sites Determined as Contaminated Land were identified on or within 500m of the site.

9.14 Dangerous or Hazardous Sites

No Control of Major Accident Hazards (COMAH) or Notification of Installations Handling Hazardous Substances (NIHHS) Sites were identified on or within 500m of the site.

9.15 Hazardous Substance Storage/Usage

No 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 were identified on or within 500m of the site.

9.16 IPC Authorisations

No Integrated Pollution Control (IPC) Authorisations were identified on or within 500m of the site.

9.17 Part A(1) and IPPC Authorised Activities

No Part A(1) or Integrated Pollution Prevention Control (IPPC) Authorised Activities were identified on or within 500m of the site.

9.18 Part A(2) and Part B Activities and Enforcements

No Part A(2) and Part B Activities and Enforcements were identified on or within 500m of the site.

9.19 Category 3 or 4 Radioactive Substance Authorisations

No Category 3 or 4 Radioactive Substance Authorisations were identified on or within 500m of the site.

9.20 Discharge Consents

No Red List or Licensed Discharge Consents were identified on or within 500m of the site.

9.21 List 1 and List 2 Dangerous Substance Inventory Sites

No List 1 and List 2 Dangerous Substances Inventory Sites were identified on or within 500m of the site.

9.22 Pollution Incidents

No Pollution Incidents occurred on or within 50m of the site.

9.23 Coal Mining

The site is not located in an area potentially affected by Coal Mining.

9.24 Non-Coal Mining

The following Non-Coal Mining Areas were identified within 50m of the site:

Table 4: Non-Coal Mining Areas identified within 50m of the site:

Commodity	Assessment of Likelihood	Distance/ Direction
Chalk	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.	21m NE

9.25 Radon

A search of the BGS Radon dataset indicates that the property lies in an area with between 1% and 3% chance of being affected by naturally occurring Radon gas. Therefore, it is possible that it is in area affected by Radon. However, no Radon protective measures are considered necessary for the site in accordance with publication BR211 by the Building Research Establishment.

9.26 Asbestos within Buildings

The information available indicates that the buildings on the site were developed prior to 2010. It is therefore considered possible that Asbestos may exist within them and that an Asbestos survey may be required in line with The Control of Asbestos Regulations 2012. This is outside the scope of this assessment. An Asbestos survey is recommended.

10 RELEVANT PLANNING HISTORY

Dacorum Borough Council's online planning portal was searched in an effort to identify any relevant planning applications.

10.1 Planning Applications for the Site

Table 5 below provides a summary of the previously submitted planning applications identified for the site.

Table 5: Summary of planning applications at the site

Application Reference	Date	Description of Proposal	Status
4/00506/93/ ROC	07 May 1993	Single storey rear extension to form workshop & store and provision of canopy over side entrance. Non compliance with condition no 2 p/p 4/0011/90 materials	Granted – Conditions Unknown *
4/00011/90/ FUL	22 Feb 1990	Single storey rear extension to form workshop and store and provision of canopy over side entrance	Granted – Conditions Unknown *

**Decision Notice was not available on the online planning portal at the time of writing and no relevant reports were identified in the search.*

10.2 Planning Applications for Adjacent Sites

Table 6 below provides a summary of the previously submitted planning applications identified for adjacent sites. Although other planning applications were identified on adjacent sites; they were not deemed relevant to this report.

Table 6: Summary of planning applications for adjacent sites

Application Reference	Date	Description of Proposal	Status
19/02765/LI PA	19 Mar 2020	Change of Use of Current Building to Provide 4x Two Bedroom Terraced Dwellings The Promotional Centre Church End Markyate St Albans Hertfordshire AL3 8PY (adjacent W)	Granted – Without Contaminated Land Condition*
/01040/19/D RC	19 Jul 2019	Deatils as required by condition 1(phase 1 contamination report parts 1, 2 & 3) attached to planning application 4/00064/19/lpa (change of use from factory to 4 residential dwellings) The Factory Church End Markyate St Albans Hertfordshire AL3 8PY (adjacent W)	Granted – Conditions Unknown **
4/00064/19/ LPA	06 Mar 2019	Change of use from factory to 4 residential Dwellings. The Factory Church End Markyate St Albans AL3 8PY (adjacent W)	Granted – With Contaminated Land Condition

*Contamination conditions were previously discharged under 4/01040/19/DRC on the understanding that the small garden/courtyard area will be permanently laid to hardstanding. No reports were uploaded to the online planning portal. Contamination conditions have not been included on this application.

**Decision Notice was not available on the online planning portal at the time of writing and no relevant reports were identified in the search.

11 SITE WALKOVER

A site walkover was undertaken by STM on 31st August 2023. Photographs of the site, taken during the site walkover, can be found in [Appendix 6](#).

11.1 Site Description

The site comprises a disused two-storey commercial building with a single storey side structure which was previously a Storeroom/Workshop. The site is primarily covered with the main Workshop building which tapers towards the back of the site and is situated very close to the neighbouring property. A small patch of soft landscaping can be found at the rear of the site. At the time of the site walkover, this small open space at the rear of the site was utilised for storing building materials and a small number of chemical containers.

11.2 Surrounding Land Use

The surrounding land is dominated by both Agricultural Land to the north and the east, and by residential land to the west and south. The site is bound on its southern side by a main road.

11.3 Site Access

The site was fenced and gated.

11.4 Site Topography

The site appeared to be generally flat with no discernible changes in topography.

11.5 Ground Cover

The ground cover at the site comprises concrete (covering approximately 20% of the site), buildings (covering approx. 70% of the site) and exposed soil (covering approx. 10% of the site).

11.6 Visual or olfactory signs of contamination

No visual or olfactory signs of contamination were observed at the site during the visit.

11.7 Underground and Aboveground Storage Tanks

No signs of above or underground storage tanks were observed at the site during the visit.

11.8 Raw Material and Chemical Use and Storage

Numerous empty plastic containers having housed unknown substances were observed as having been discarded on site. In addition, a number of plastic containers of 'universal bubble fluid' were observed on site during the visit. A single small container of chainsaw oil was also observed, whilst a single unopened bag of cold pack tarmac along with an opened tub of GRP waterproofing liquid was noted at the front of the site.

11.9 Solid Wastes

A large quantity of solid waste was observed during the site visit. Primarily focused within the Workshop area and the soft landscaped area at the rear of the site, scrap wood, plastic containers, old furniture, tools, a number of small scrap appliances were all noted.

11.10 Hazardous and Industrial Waste

No potentially hazardous industrial wastes were observed at the site during the visit.

11.11 Air Emissions

No evidence of air emission sources was observed at the site during the visit.

11.12 Drainage Features

A total of 2no. metal manhole covers were observed on site.

11.13 Asbestos Containing Materials (ACMs)

No obvious signs of Asbestos were observed at the site during the visit. It should be noted that an Asbestos Survey was not undertaken as part of this assessment.

11.14 Polychlorinated Biphenyls (PCBs)

No obvious signs of features that could contain PCBs were observed at the site during the visit.

11.15 Spills and Releases

No evidence of any staining, in either external or internal areas, was observed at the site during the visit.

11.16 Ionising Radiation

No evidence of Ionising Radiation sources was observed at the site during the visit.

11.17 Electrical Substations

No Electrical Substations were observed at the site during the visit.

12 PRELIMINARY CONCEPTUAL SITE RISK MODEL (CSM)

A conceptual site risk model (CSM) aims to summarise all the potential pollutant linkages or risk that may be associated with a site. It considers the potential pollution sources, receptors and pathways by which receptors can be impacted.

12.1 Potential Sources

Potentially contaminative land uses (PCLUs) of concern were identified based on their proximity to the site and whether they had the potential to generate significant quantities of ground gases, vapours and/or mobile volatile contamination (i.e. high pollution migration potential).

Any PCLUs within a 50m radius of the site as well as any PCLUs with high pollution migration potential within 250m of the site were considered to be of concern and were included within the assessment.









A summary is provided in Table 7 below.

Table 7: Summary of potential contamination sources, period of operation and distance from site.

Site Name/Description	Industrial Profile	Approx. Year Use Established	Approx. Year Use Ended	Direction	Approx. Distance from Site (m)
Potential Made Ground	-	Unknown	Current (2023)	Onsite	0
Engineering Works	Engineering Works	c.1970-71	Unknown	Onsite	0
Storeroom/Workshop	-	Unknown	Current (2023)	Onsite	0
Fly-Tipping	-	Unknown	Current (2023)	Onsite	0
Works/Factory*	Factory or Works – Use Not Specified	c.1970-71	Unknown	Adjacent	W
Cemetery	Cemetery or Graveyard	c.1920-22	Current (2023)	SW	170

*PCLU identified using the online planning portal

Typical contaminants that may be associated with the above PCLUs are:

-  Acids & Alkalis
-  Asbestos
-  Chlorinated & Non-Chlorinated Solvents
-  Fuels & Fuel Oils
-  Heavy Metals
-  Gases: Methane & Carbon Dioxide
-  Organic & Inorganic Compounds
-  Polycyclic Aromatic Hydrocarbons (PAHs)

- Total Petroleum Hydrocarbons (TPHs)
- Volatile Organic Compounds (VOCs)

Please note, this list is not exhaustive of all contaminants that may be present on or off site.

12.2 Potential Receptors

The potential receptors include human, water, ecological and infrastructure receptors.

12.2.1 Potential Human Health receptors

Potential human health receptors include construction workers, future occupants or users of the site and the proposed development and neighbours of the site.

12.2.2 Potential Groundwater Receptors

Potential groundwater receptors include the Secondary A Superficial Aquifer and the Principal Bedrock Aquifer.

12.2.3 Potential Surface Water Receptors

Potential surface water receptors include the River Ver which is located approximately 35m E.

12.2.4 Potential Ecological Receptors

There are no potential ecological receptors in the vicinity of the site.

12.2.5 Potential Property Receptors

Potential property receptors include the proposed development as well as neighbouring properties and associated services.

12.3 Potential Pathways

12.3.1 Potential Pathways for Human Receptors

The main pathways via which on and off-site human receptors are likely to come into contact with, or be affected by any contamination present on the site can be summarised as follows:

- Dermal contact with contaminated soil (i.e. absorption through the skin) – through garden activities such as children playing, gardening etc.
- Ingestion of contaminated soil (either directly or via soil adhering to vegetables grown on the site)
- Inhalation of contaminated soil, fugitive dust and vapours.
- Explosion of landfill gases leading to death/injury

12.3.2 Potential Pathways for Groundwater Receptors

The principal means by which contaminants can reach the groundwater is by leaching (i.e. downward movement through the soil pores with percolating and infiltrating water).

12.3.3 Potential Pathways for Surface Water Receptors

Routes by which contaminants from the site could reach surface water include via overland run-off, drainage and groundwater entering nearby rivers as base flow.

12.3.4 Potential Pathways for Ecological Receptors

The exposure pathways for terrestrial ecological receptors will be similar to those for humans. Pathways for aquatic receptors are via uptake of contaminated sediments and water.

12.3.5 Potential Pathways for Property Receptors

Pathways by which property receptors are exposed to potential contaminants include ground gas and vapour migration through the unsaturated zone and absorption of water containing dissolved contaminants (i.e. as in the case of sulphate attack).

12.4 Potential Pollutant Linkages

The Potential Pollutant Linkages (PPLs) were identified as part of the CSM. These were concerned with the following:

- Risk of direct contact (ingestion and absorption) with and inhalation of contaminants to on-site human health receptors including future occupiers and site visitors (PPL1a)
- Risk of injury/death to future occupiers and visitors as a result of explosion due to accumulation of ground gas from on and off-site sources in confined spaces within on-site dwellings. (PPL1b)
- Risk of direct contact (ingestion and absorption) with and inhalation of contaminants to on-site human health receptors such as Construction Workers (PPL1c)
- Risk of injury/death to construction workers as a result of explosion due to accumulation of ground gas from on and off-site sources in confined spaces within on-site dwellings. (PPL1d)
- Risk of direct contact with (ingestion and absorption) and inhalation of contaminants to off-site human health receptors as a result of on-site contaminants migrating off-site (PPL2a)
- Risk of injury/death to off-site human health receptors as a result of explosion due to migration of on-site ground gas and subsequent accumulation in confined spaces in off-site buildings. (PPL2b)
- Risk of deterioration of groundwater quality resulting from the migration of on-site contaminants into the underlying aquifer (PPL3)
- Risk of deterioration of surface water quality resulting from the migration and entry of on-site contaminants into the surface water receptor (PPL4)
- Risk of deterioration of ecological quality resulting from the migration and entry of on-site contaminants to the ecological receptor during development and after completion (PPL5);
- Risk of damage to buildings and services from on and off-site contaminants (PPL6a)
- Risk of damage to property as a result of explosion due to accumulation of ground gas from on and off-site sources in confined spaces within buildings (PPL6b).

13 QUALITATIVE RISK ASSESSMENT

For land to be considered ‘contaminated land’ under Part IIA, the potential contamination source must be causing or have the significant possibility of causing harm to designated receptors. It is therefore necessary to focus on pollutant linkages that have the potential to be significant (i.e. those that are most likely to lead to a determination).

The identified PPLs were therefore individually qualitatively assessed using a basic risk assessment methodology which considers “Likelihood” and “Severity” to assess the magnitude of the potential risk. The methodology is summarised in [Appendix 6](#).

Table 8 below summarises the conceptual site risk model (CSM) including the identified PPLs and the results of the qualitative risk assessment.

Table 8: Conceptual Site Risk Model - Potential Sources, Pathways and Receptors identified on the site.

Source/ Potential Contaminants	Potential Contaminants Associated with Site Use as Potential Made Ground, (Engineering) Works, Fly-Tipping and Offsite Land Uses as a Works/Factory and Cemetery: i.e. Acids & Alkalis, Asbestos, Chlorinated & Non-Chlorinated Solvents, Fuels & Fuel Oils, Heavy Metals, Gases: Methane & Carbon Dioxide, Organic & Inorganic Compounds, Pesticides, PAHs, TPHs and VOCs										
	On and Off-Site Contaminants				On Site Contaminants		On Site Contaminants			On and Off-Site Contaminants	
Potential Pathways	Ingestion of soils, garden vegetables and dust Ingestion of contaminated drinking water Dermal absorption Inhalation of dusts and vapours indoors and outdoors Migration of ground gases and vapours into properties						Leaching in the unsaturated zone & diffusion in the saturated zone	Overland run-off Drainage channels Base flow	Direct contact via absorption and ingestion; Inhalation	Migration of ground gases and vapours through the unsaturated zone Attack on water supply service pipes	
Potential Receptors	ON SITE HUMANS (AFTER COMPLETION) Future Occupiers & Visitors		ON SITE HUMANS (DURING DEVELOPMENT) Construction Workers		OFF SITE HUMANS Neighbours		GROUND WATER Secondary A Principal	SURFACE WATER River Ver 35m E	ECOLOGICAL None	ON SITE PROPERTY Buildings and Services	
Potential Hazards	Adverse health effects Injury/ Death	Explosion/ Fire - Build-up of Methane/ VOCs in confined spaces	Adverse health effects Injury/ Death	Explosion/ Fire - Build-up of Methane/ VOCs in confined spaces	Adverse health effects Injury/ Death	Explosion/ Methane build-up in confined spaces	Deterioration of groundwater quality	Deterioration of surface water quality Ecological impacts	Deterioration of ecological receptor quality	Damage to property and services	Explosion/ Fire - Build-up of Methane/ VOCs in confined spaces
Plausible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
PPL ID	PPL1a	PPL1b	PPL1c	PPL1d	PPL2a	PPL2b	PPL3	PPL4	PPL5	PPL6a	PPL6b
SEVERITY	Major (4)	Major (4)	Major (4)	Major (4)	Major (4)	Major (4)	Moderate (3)	Moderate (3)	Moderate (3)	Moderate (3)	Moderate (3)
LIKELIHOOD	Remote (2)	Remote (2)	Improbable (1)	Improbable (1)	Improbable (1)	Improbable (1)	Remote (2)	Improbable (1)	Improbable (1)	Remote (2)	Remote (2)
UPDATED RISK	Low to Moderate (8)	Low to Moderate (8)	Low (4)	Low (4)	Low (4)	Low (4)	Low to Moderate (6)	Very Low (3)	Very Low (3)	Low to Moderate (6)	Low to Moderate (6)
POTENTIALLY SIGNIFICANT?	YES	YES	NO	NO	NO	NO	YES	NO	NO	YES	YES

13.1 Assessment of Potential Significance of Potential Pollutant Linkages

13.1.1 Potential Risks to On-Site Human Health Receptors

PPL1a is concerned with the risk of direct contact (ingestion and dermal absorption) with and inhalation of on and off-site contaminants by on-site human health receptors. PPL1a is considered to have the potential to be significant as potentially contaminative land uses (listed in Table 7), were identified on and in the vicinity of the site.

As the proposal is to introduce residential dwellings with soft landscaping, it is possible that human health receptors (i.e. future occupiers of the dwellings) could be exposed to any potential contamination via direct contact while undertaking recreational activities in the gardens.

PPL1c is concerned with the risk of direct contact (ingestion and dermal absorption) with and inhalation of on and off-site contaminants by construction workers. PPL1c is considered unlikely to have the potential to be significant. Although potentially contaminative land uses were identified, it is considered that any potential risks can be satisfactorily reduced so long as Construction Workers implement standard health and safety measures as described in [Sections 15.3.](#)

PPL1b is concerned with the risk of injury/death of future occupiers and site visitors as a result of explosion due to the potential accumulation of ground gases and vapours from on and off-site sources. PPL1b is considered to have the potential to be significant as potential sources of explosive ground gases and/or vapours (i.e. Engineering Works) were identified on and adjacent the site.

PPL1d is concerned with the risk of injury/death of construction workers as a result of explosion due to the potential accumulation of ground gases and vapours from on and off-site sources. PPL1d is considered unlikely to have the potential to be significant due to the likely short exposure durations for construction workers.

13.1.2 Potential Risks to Off-Site Human Health Receptors

PPL2a is concerned with the risk of direct contact and inhalation of contaminants emanating from the site by off-site human health receptors. PPL2a is considered unlikely to have the potential to be significant. Although PCLUs were identified it is considered unlikely that any potential contaminants present at the site would be of sufficient magnitude and/or mobility to significantly impact off-site human receptors.

PPL2b is concerned with the risk of injury/death of off-site human health receptors as a result of explosion due to accumulation of ground gases from on-site sources. PPL2b is considered unlikely to have the potential to be significant due to the distance to the nearest off-site residential dwellings

13.1.3 Potential Risks to Groundwater Receptors

PPL3 is concerned with the risk of deterioration of groundwater quality resulting from the migration of on-site contaminants into the underlying aquifer. PPL3 is considered to have the potential to be significant as the underlying aquifer is classified as Principal and Secondary A and Source Protection Zones 2 were identified on site.

13.1.4 Potential Risks to Surface Water Receptors

PPL4 is concerned with the risk of deterioration of surface water quality resulting from the migration and entry of on-site contaminants into surface water receptors. PPL4 is considered

unlikely to have the potential to be significant. Although the nearest surface water body is the River Ver located 35m E from the site, given the small scale of the activities that have taken place at the site, it is considered unlikely that any potential contaminants present are of sufficient magnitude and mobility to significantly impact the water course.

13.1.5 Potential Risks to Ecological Receptors

PPL5 is concerned with the risk of deterioration of ecological receptors resulting from potential on-site contaminants. PPL5 is considered unlikely to have the potential to be significant as no designated ecological receptors were identified on or within 250m of the site.

13.1.6 Potential Risks to Property Receptors

PPL6a is concerned with the risk of damage to on site buildings and services from on and off-site contaminants. If contaminated, the soil may contain aggressive chemicals (i.e. Sulphates, VOCs) that can attack building materials and services. PPL6a is considered to have the potential to be significant as potentially contaminative land uses were identified on the site.

PPL6b is concerned with the risk of damage to property as a result of explosion due to migration of on and off-site ground gases and vapours and their subsequent accumulation in confined spaces in on-site buildings. PPL6b is considered to have the potential to be significant for the same reasons as PPL1b.

14 CONCLUSIONS

This Phase 1 Desk Study was carried out to support the discharge of Condition 6(i) attached to planning permission 21/04038/FUL.

A review of historical maps and planning records suggests that the site and surrounding land have been subject to previous potentially contaminative land uses (PCLUs). On site PCLUs have included (Engineering) Works and Fly-Tipping while off site PCLUs include a Works/Factory (adjacent W) and Cemetery (170m SW). A potential source of onsite contamination was identified as Made Ground.

A conceptual site risk model was developed and a qualitative risk assessment undertaken. The conclusions of the risk assessment are presented in Table 9 below.

Table 9: Summary of qualitative risk assessment

Potential Receptor	Potential Pathway	Potential Hazard	PSPPL?	Risk
On-Site Human Health (Future Occupiers)	Ingestion/Absorption Inhalation	Adverse health Injury/Death	Yes	Low to Moderate
	Buildup of Methane/ VOCs in confined spaces	Explosion/ Fire Injury/Death	Yes	Low to Moderate
On-Site Human Health (Construction Workers)	Ingestion/Absorption Inhalation	Adverse health Injury/Death	No	Low
	Buildup of Methane/ VOCs in confined spaces	Explosion/ Fire Injury/Death	No	Low
Off-Site Human Health	Ingestion/Absorption Inhalation	Adverse health Injury/Death	No	Low
	Buildup of Methane/ VOCs in confined spaces	Explosion/ Fire Injury/Death	No	Low

Potential Receptor	Potential Pathway	Potential Hazard	PSPPL?	Risk
Groundwater	Percolation/Leaching	Adverse groundwater quality	Yes	Low to Moderate
Surface Water	Lateral Migration Groundwater baseflow	Adverse Surface water quality	No	Very Low
Ecology	Ingestion/Absorption	Adverse health Injury/Death	No	Very Low
Property	Physical Contact/Absorption	Damage to building and services	Yes	Low to Moderate
	Buildup of Methane/ VOCs in confined spaces	Explosion/ Fire Damage to building	Yes	Low to Moderate

15 RECOMMENDATIONS

15.1 Intrusive Site Investigation

Given that potentially significant potential pollutant linkages (PSPPLs) were identified, it is recommended that an intrusive site investigation is undertaken with the objective of determining the presence and extent of any soil and gaseous contamination at the site.

15.2 Watching Brief and Discovery Strategy

Therefore, it is recommended that a “watching brief” is kept at all times during the development. Should any unexpected contamination be encountered then the discovery strategy outlined below should be followed.

- Works should be halted if any suspicious ground conditions are identified by groundworkers;
- The Contractor should assess the need for any immediate health and safety or environmental management control measures. If control measures are considered to be required, they should be implemented;
- The Contractor should notify the Client’s Environmental Consultant and the Local Planning Authority;
- The Environmental Consultant should attend the site to record the extent of ‘contamination’ and if necessary, to collect samples;
- If remedial action is considered necessary then the proposed works should be agreed with the Local Planning Authority prior to implementation;
- Once remediation is complete, the Environmental Consultant should collate evidence of work carried out for inclusion in a Remediation Verification Report which should be submitted to the Local Planning Authority.

15.3 Health and Safety

All site works should be carried out in accordance with Health and Safety Executive regulations and guidelines, the Contractor’s Construction Health and Safety Plan and the Construction (Design and Management) Regulations 2015.

Precautions should be taken to minimise exposure of site workers during ground works through the implementation of site safety. Such precautions should include, but not be limited to:

- Provision of appropriate Personal Protective Equipment (PPE);
- Availability of site welfare;
- Good personal hygiene, washing and changing procedures;
- Daily safety briefings.

15.4 Services

The local Statutory Water Undertaker should be contacted in the event that new services are proposed as part of the redevelopment in order to determine their specification for the type of pipework which should be used on this site.

Further information can be found within the published guidance for the '*Selection of Water Supply Pipes to be used in Brownfield Sites*', issued in January 2011 by the UK Water Industry Research.

16 INFORMATION GAPS AND UNCERTAINTIES

Assumptions have been made regarding the nature and scale of the activities that took place on the site and the types of potential contaminants that may have resulted. These assumptions will need to be reviewed along with the Conceptual Site Model should further information come to light.

17 APPENDIX 1 – DECISION NOTICE

Dacorum Borough Council
Planning and Regeneration
The Forum
Marlowes
Hemel Hempstead
Herts
HP1 1DN



Mr David Or Martin Lomas Or Crook
MSC Planning Associates Ltd
The Old Registry
20 Amersham Hill
High Wycombe
HP13 6NZ

Switchboard
01442 228 000
Website
www.dacorum.gov.uk
D/deaf callers, Text Relay:
18001 + 01442 228 000

DECISION NOTICE

Application (full) for planning permission.

Town and Country Planning Act 1990

Reference:	21/04038/FUL
Proposal:	Conversion of existing former commercial building (E1) to dwelling house (C3) and construction of part first, part 1.5 storey side extension with soft and hard landscaping.
Address:	10 Church End Markyate St Albans Hertfordshire AL3 8PY

Your application received 22nd October 2021 and registered on 28th October 2021 has been **GRANTED** subject to the conditions overleaf.



Head of Development Management
Dacorum Borough Council

Condition(s) and Reason(s):

1. The development hereby permitted shall begin before the expiration of three years from the date of this permission.

Reason: To comply with the requirements of Section 91 (1) of the Town and Country Planning Act 1990, as amended by Section 51 (1) of the Planning and Compulsory Purchase Act 2004.

2. The development hereby permitted shall be carried out in accordance with the following approved plans/documents:

21.058 2A, 21 058 1A, K0422-E-S1

Reason: For the avoidance of doubt and in the interests of proper planning.

3. The parking space shown on the approved plan shall be kept available at all times for the parking of motor vehicles by the occupants of the dwelling[s] and their visitors and for no other purpose.

Reason: In accordance with Policy CS12 of the Dacorum Borough Core Strategy (2013) and Section 9 of the National Planning Policy Framework (2021).

4. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 2015 (as amended) (or any Order amending or re-enacting that Order with or without modification) no development falling within the following classes of the Order shall be carried out without the prior written approval of the Local Planning Authority:

Schedule 2 Part 1 Classes A, B, C, E.

Reason: To enable the Local Planning Authority to retain control over the development in the interests of safeguarding the residential and visual amenity of the locality in accordance with Policy CS12 of the Dacorum Borough Core Strategy (2013) and Paragraph 130 of the National Planning Policy Framework (2021).

5. No development (excluding demolition/ground investigations) shall take place until details of the materials to be used in the construction of the external surfaces of the development hereby permitted have been submitted and approved in writing by the Local Planning Authority. Development shall be carried out in accordance with the approved details. Please do not send materials to the Council offices. Materials should be kept on site and arrangements made with the Planning Officer for inspection.

Reason: To ensure satisfactory appearance to the development and to safeguard the visual character of the area in accordance with Policies CS11 and CS12 of the Dacorum Borough Core Strategy (2013).

6. No development, shall take place until a Phase I Report to assess the actual or potential contamination at the site has been submitted to and approved in writing by the Local Planning Authority. If actual or potential contamination and/or ground gas risks are identified, further investigation shall be carried out and a Phase II report shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of the development. If the Phase II report establishes that remediation or protection measures are necessary, a Remediation Statement shall be submitted to and approved in writing by the Local Planning Authority.

For the purposes of this condition:

(i) A Phase I Report consists of a desk study, site walkover, conceptual model and a preliminary risk assessment. The desk study comprises a search of available information and historical maps which can be used to identify the likelihood of contamination. A simple walkover survey of the site is conducted to identify pollution linkages not obvious from desk studies. Using the information gathered, a 'conceptual model' of the site is constructed and a preliminary risk assessment is carried out.

(ii) A Phase II Report consists of an intrusive site investigation and risk assessment. The report should make recommendations for further investigation and assessment where required.

(iii) A Remediation Statement details actions to be carried out and timescales so that contamination no longer presents a risk to site users, property, the environment or ecological systems.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other off-site receptors in accordance with Policy CS32 of the Dacorum Borough Core Strategy (2013) and Paragraphs 183 and 185 of the National Planning Policy Framework (2021).

7. All remediation or protection measures identified in the Remediation Statement referred to in Condition above shall be fully implemented within the timescales and by the deadlines as set out in the Remediation Statement and a Site Completion Report shall be submitted to and approved in writing by the Local Planning Authority prior to the first occupation of any part of the development hereby permitted.

For the purposes of this condition: a Site Completion Report shall record all the investigation and remedial or protection actions carried out. It shall detail all conclusions and actions taken at each stage of the works including validation work. It shall contain quality assurance and validation results providing evidence that the site has been remediated to a standard suitable for the approved use.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to

controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other off-site receptors in accordance with Policy CS32 of the Dacorum Borough Core Strategy (2013) and Paragraphs 183 and 185 of the National Planning Policy Framework (2021).

8. No development shall take place until a detailed BS4142: 2014 Noise Impact Assessment has been undertaken and submitted to the Local Planning Authority for approval. The report shall detail noise emissions and appropriate mitigation to protect residents against such industrial noise sources, including but not limited to, mechanical plant (fans, generators a/c, air handling unit, local exhaust ventilation, reversing beepers, crates, deliveries, metal cage/pallet deliveries, forklift trucks, rubbish collections, glass breakage, radio's etc.). The rating level of the noise emitted from the commercial site shall not exceed the existing typical background (LA90,1hr daytime) and (LA90,15 min) night-time. The noise levels shall be determined at the nearest noise sensitive receptor or known proposed residential dwellings. Development shall be carried out in accordance with the approved measures.

Reason: To protect the residential amenities of the locality, having regard to Policies CS12 and CS32 of the Dacorum Borough Core Strategy (2013) and Paragraph 130 (f) of the National Planning Policy Framework (2021).

Informatives:

1. Planning permission has been granted for this proposal. The Council acted pro-actively through positive engagement with the applicant during the determination process which led to improvements to the scheme. The Council has therefore acted pro-actively in line with the requirements of the Framework (paragraph 38) and in accordance with the Town and Country Planning (Development Management Procedure) (England) (Amendment No. 2) Order 2015.
2. Highway Informatives
HCC as Highway Authority recommends inclusion of the following Advisory Note (AN) / highway informative to ensure that any works within the highway are carried out in accordance with the provisions of the Highway Act 1980:

AN 1) Storage of materials: The applicant is advised that the storage of materials associated with the construction of this development should be provided within the site on land which is not public highway, and the use of such areas must not interfere with the public highway. If this is not possible, authorisation should be sought from the Highway Authority before construction works commence. Further information is available via the County Council website at:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

AN 2) Obstruction of highway: It is an offence under section 137 of the Highways Act 1980 for any person, without lawful authority or excuse, in any way to wilfully obstruct the free passage along a highway or public right of way. If this development is likely to result in the public highway or public right of way network becoming routinely blocked (fully or partly) the applicant must contact the Highway Authority to obtain their permission and requirements before construction works commence. Further information is available via the County Council website at:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

AN 3) Debris and deposits on the highway: It is an offence under section 148 of the Highways Act 1980 to deposit compost, dung or other material for dressing land, or any rubbish on a made up carriageway, or any or other debris on a highway to the interruption of any highway user. Section 149 of the same Act gives the Highway Authority powers to remove such material at the expense of the party responsible. Therefore, best practical means shall be taken at all times to ensure that all vehicles leaving the site during construction of the development and use thereafter are in a condition such as not to emit dust or deposit mud, slurry or other debris on the highway. Further information is available by telephoning 0300 1234047.

3. Working Hours Informative

Contractors and sub-contractors must have regard to BS 5228-2:2009 "Code of Practice for Noise Control on Construction and Open Sites" and the Control of Pollution Act 1974.

As a guideline, the following hours for noisy works and/or deliveries should be observed: Monday to Friday, 7.30am to 5:30pm, Saturday, 8am to 1pm, Sunday and bank holidays - no noisy work allowed.

Where permission is sought for works to be carried out outside the hours stated, applications in writing must be made with at least seven days' notice to Environmental and Community Protection Team ecp@dacorum.gov.uk or The Forum, Marlowes, Hemel Hempstead, HP1 1DN. Local residents that may be affected by the work shall also be notified in writing, after approval is received from the LPA or Environmental Health.

Works audible at the site boundary outside these hours may result in the service of a Notice restricting the hours as above. Breach of the notice may result in prosecution and an unlimited fine and/or six months imprisonment.

Waste Management Informative

Under no circumstances should waste produced from the development be incinerated on site. This includes but is not limited to pallet stretch wrap, used bulk bags, building materials, product of demolition and so on. Suitable waste management should be in place to reduce, reuse, recover or recycle waste product on site, or dispose of appropriately.

Air Quality Informative.

As an authority we are looking for all development to support sustainable travel and air quality improvements as required by the NPPF. We are looking to minimise the cumulative impact on local air quality that ongoing development has, rather than looking at significance. This is also being encouraged by DEFRA.

As a result as part of the planning application I would recommend that the applicant be asked to propose what measures they can take as part of this new development, to support sustainable travel and air quality improvements. These measures may be conditioned through the planning consent if the proposals are acceptable.

A key theme of the NPPF is that developments should enable future occupiers to make "green" vehicle choices and (paragraph 35) "incorporates facilities for charging plug-in and other ultra-low emission vehicles". Therefore an electric vehicle recharging provision rate of 1 vehicle charging point per 10 spaces (unallocated parking) is expected. To prepare for increased demand in future years, appropriate cable provision should be included in the scheme design and development, in agreement with the local authority.

Please note that with regard to EV charging for residential units with dedicated parking, we are not talking about physical charging points in all units but the capacity to install one. The cost of installing appropriate trunking/ducting and a dedicated fuse at the point of build is miniscule, compared to the cost of retrofitting an EV charging unit after the fact, without the relevant base work in place.

In addition, mitigation in regards to NOx emissions should be addressed in that all gas fired boilers to meet a minimum standard of 40 mg NOx/Kwh or consideration of alternative heat sources.

Invasive and Injurious Weeds - Informative

Weeds such as Japanese Knotweed, Giant Hogweed and Ragwort are having a detrimental impact on our environment and may injure livestock. Land owners must not plant or otherwise cause to grow in the wild any plant listed on schedule 9 of the Wildlife and Countryside Act 1981. Developers and land owners should therefore undertake an invasive weeds survey before development commences and take the steps necessary to avoid weed spread. Further advice can be obtained from the Environment Agency website at <https://www.gov.uk/japanese-knotweed-giant-hogweed-and-other-invasive-plants> .

This application was supported by the following documents:

- 21-058-3 (Existing Floor Plans)
 - (Site Location Plan)
 - (Flood Risk Assessment)
 - (Heritage Statement)
- 21-058-2 (Proposed Floor plans)
- 21-058-1 (Proposed Elevations)
- F0121-F (Site plans)

(Planning Statement)

Notes:

Appeal to the Planning Inspectorate

If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.

Before making any appeal you should first consider re-engaging with the local planning authority to discuss whether any changes to the proposal would make it more acceptable and likely to gain planning permission. A revised planning application could then be submitted.

Applicants should give consideration to the merits of the case, and whether there are strong grounds to contest the conditions or reasons for refusal of planning permission before submitting an appeal. Parties who pursue an appeal unreasonably without sound grounds for appeal may have an award of costs made against them.

Most planning appeals must be received within six months of the date on the decision notice. Where the appeal relates to an application for householder planning consent, and is to be determined via the fast track Householder Appeals Service, there are only 12 weeks to make the appeal. Appeals related to shop fronts must also be submitted within 12 weeks. Advertisement consent appeals must be submitted within 8 weeks. If an appeal on an application for planning permission is linked to enforcement action, there are only 28 days to make the appeal.

Appeals can be made online at: <https://www.gov.uk/planning-inspectorate>. If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on telephone: 0303 444 5000.

Compensation

In certain circumstances, compensation may be claimed for the Borough Council if permission is refused, or granted subject to conditions, by the Secretary of State on appeal or on reference of an application to him. These circumstances are set out in Parts VI and VIII and related provisions of the Town and Country Planning Act 1990 and Part 1 Chapter III of the Planning (Listed Buildings and Conservation Areas) Act 1990.

Purchase Notices

If either the Local Planning Authority or the Secretary of State refuses permission/consent to develop land, or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state, nor render the land capable of a reasonably beneficial use, by the carrying out of any development or works that have been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Borough Council. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI, Chapter I of the Town and Country Planning Act 1990 and Part I, Chapter III of the Planning (Listed Buildings and Conservation Areas) Act 1990.

Community Infrastructure Levy (CIL)

Dacorum Borough Council is a Charging Authority for Community Infrastructure Levy (CIL). It is your responsibility to clarify the CIL liability on your development. The Council will make every effort to ensure that notices for liable developments are dispatched as soon as possible following planning permission or consent being granted. If you do not receive a liability notice please contact the Council. It is important that all CIL matters be in place before any works begin on site – including any demolition. Further information regarding CIL, including FAQs, access to all CIL forms and information on appeals can be found on our website at www.dacorum.gov.uk/cil or you can contact us at CIL@dacorum.gov.uk.

Building Regulations

The proposed works may require building regulations approval. Please contact Hertfordshire Building Control who can help you through the process. They can be contacted via telephone (01438 879990) or email (buildingcontrol@hertfordshirebc.co.uk).

Creating New Addresses

If you are creating a new commercial or residential postal address, you must notify the Council's Address Management Team when works are commenced. This can be done [online](#) or by emailing address.management@dacorum.gov.uk.

Pollution Act

When arranging building works both the employer and the builder are responsible for works being undertaken within the hours of construction of the Control of Pollution Act 1974. Further information can be found on our [website](#).

Southern Gas Network Overbuild Advisory Note

There are a number of risks created by built over gas mains and services; these are:

- Pipework loading – pipes are at risk from loads applied by the new structure and are more susceptible to interference damage.
- Gas entry into buildings – pipework proximity increases risk of gas entry in buildings. Leaks arising from previous external pipework able to track directly into main building from unsealed entry.
- Occupier safety – lack or no fire resistance of pipework, fittings, or meter installation. Means of escape could be impeded by an enclosed meter.

Please note therefore, if you plan to dig, or carry out building work to a property, site, or public highway within Southern Gas Network's gas network, you must:

1. Check your proposals against the information held at <https://www.linesearchbeforeudig.co.uk/> to assess any risk associated with your development and
2. Contact their Plant Protection team to let them know. Plant location enquiries must be made via email, but you can phone us with general plant protection queries. See contact details below:

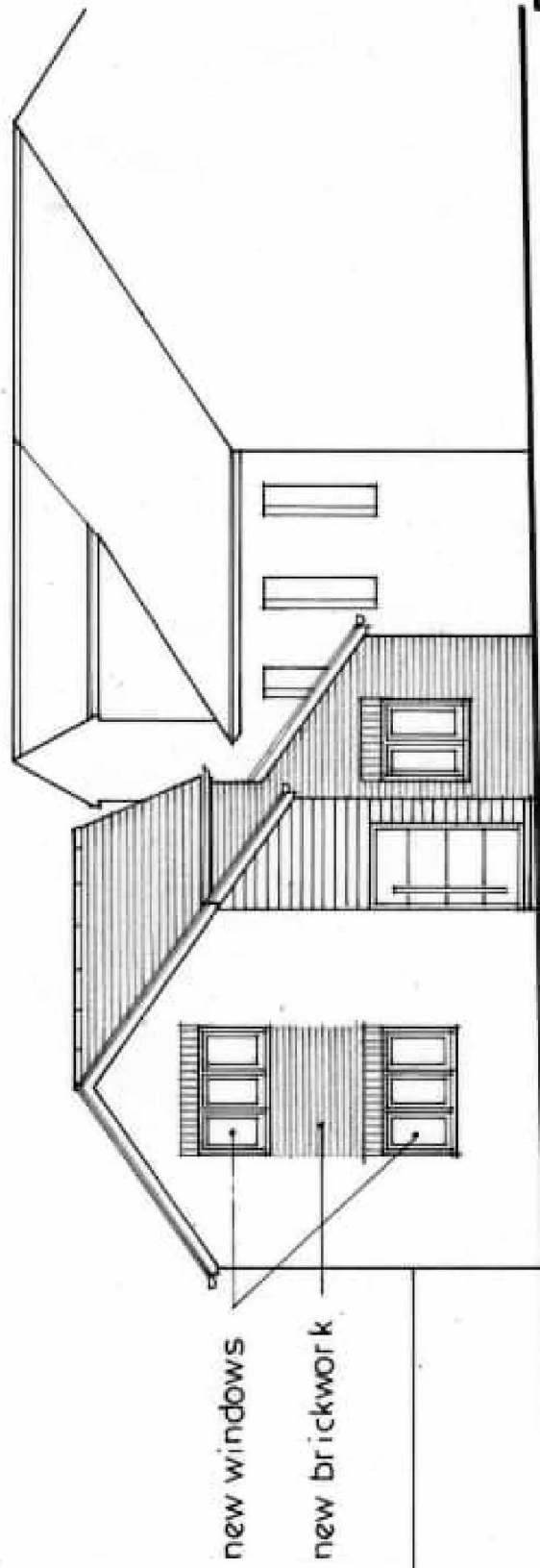
Phone 0800 912 1722 / Email plantlocation@sgn.co.uk

In the event of an overbuild on our gas network, the pipework must be altered, you may be temporarily disconnected, and your insurance may be invalidated.

Further information on safe digging practices can be found here:

- Our free Damage Prevention e-Learning only takes 10-15 minutes to complete and highlights the importance of working safely near gas pipelines, giving clear guidance on what to do and who to contact before starting any work <https://www.sgn.co.uk/damage-prevention>
- Further information can also be found here <https://www.sgn.co.uk/help-and-advice/digging-safely>

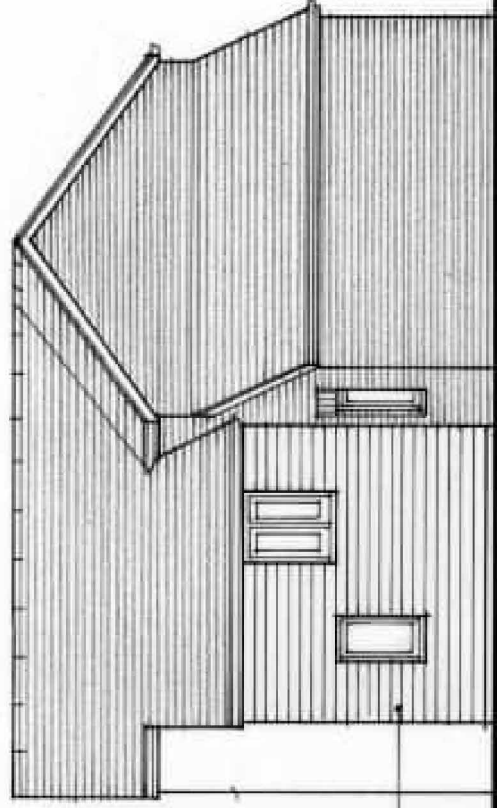
18 APPENDIX 2 – PROPOSED DEVELOPMENT PLANS



new windows

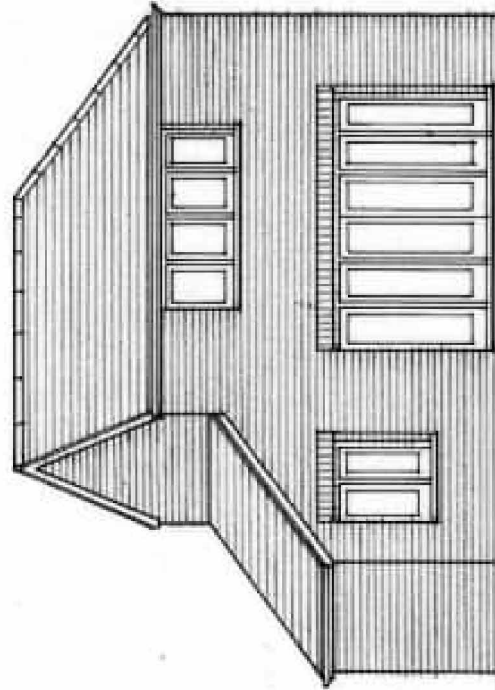
new brickwork

NORTH WEST ELEVATION

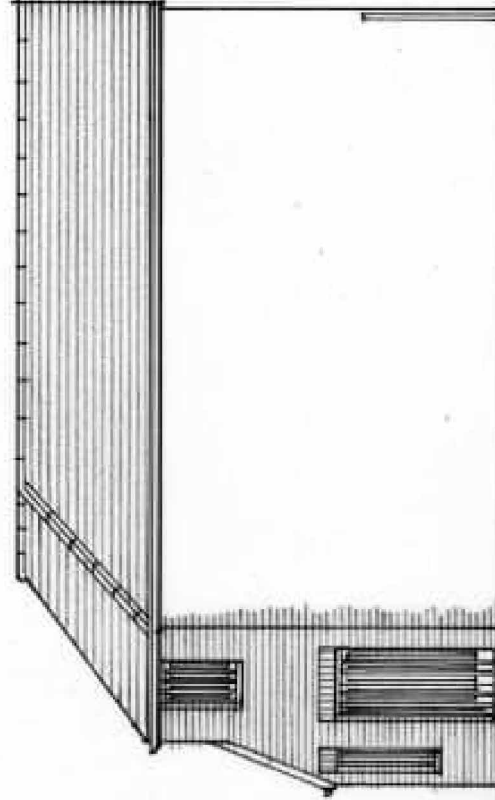


black
boarding

SOUTH WEST ELEVATION



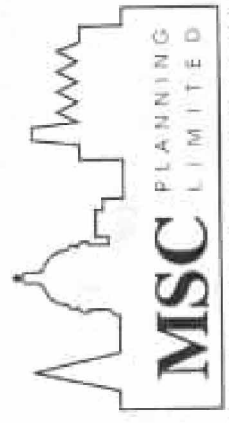
SOUTH EAST ELEVATION



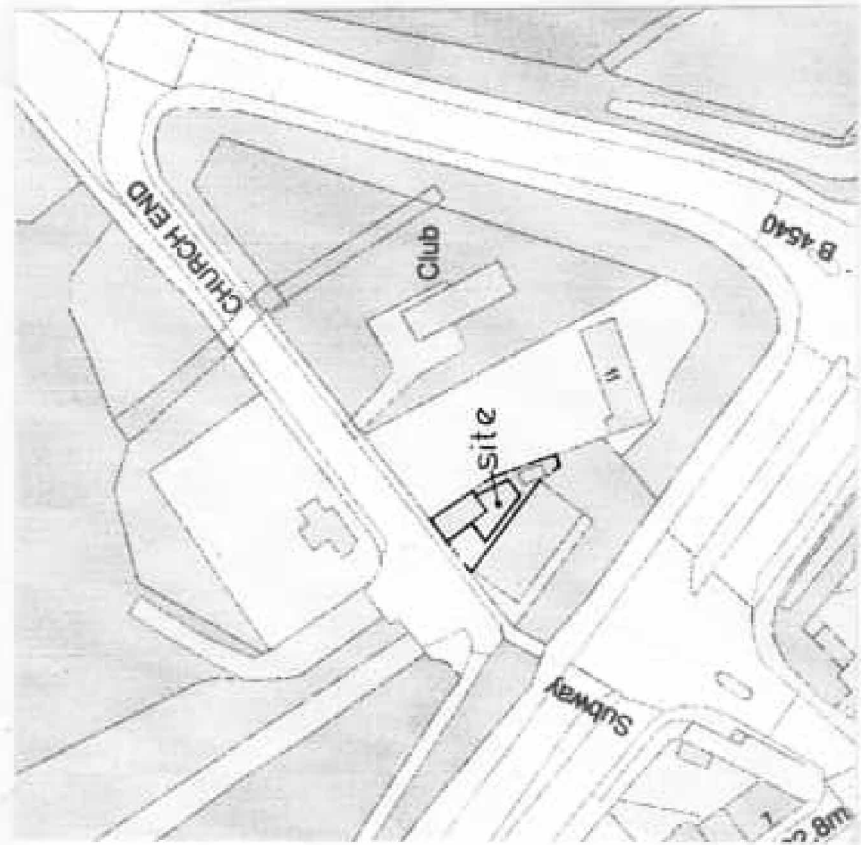
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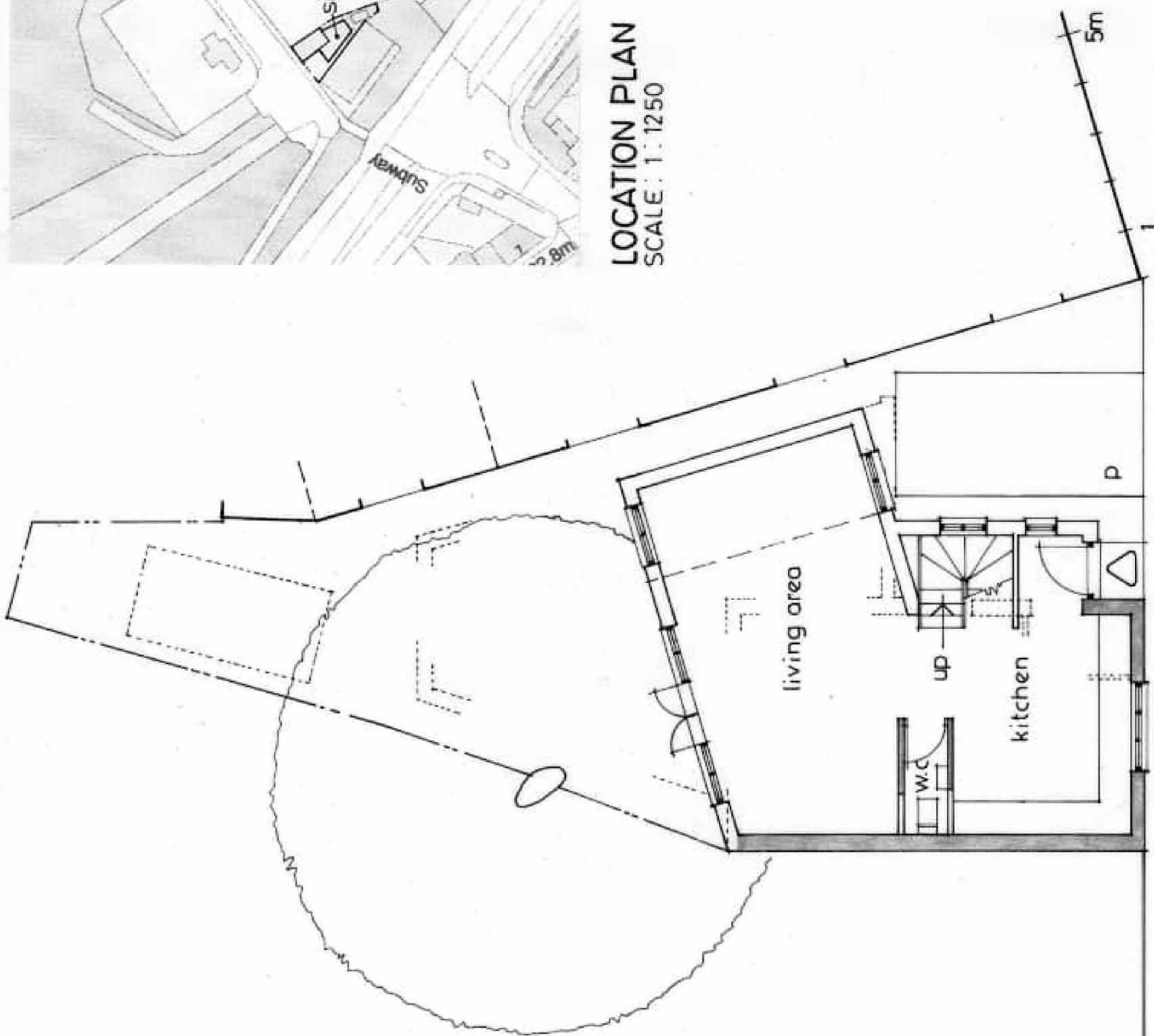
PROPOSED DEVELOPMENT AT 10 CHURCH END · MARKYATE · HERTS ·
REF: 21-058-1A



Chartered Town Planning & Development Consultants
Beech House, 259 Amersham Road,
Hazlemere, Buckinghamshire HP15 7QW.
Tel: 01494 511108 Fax: 01494 534351

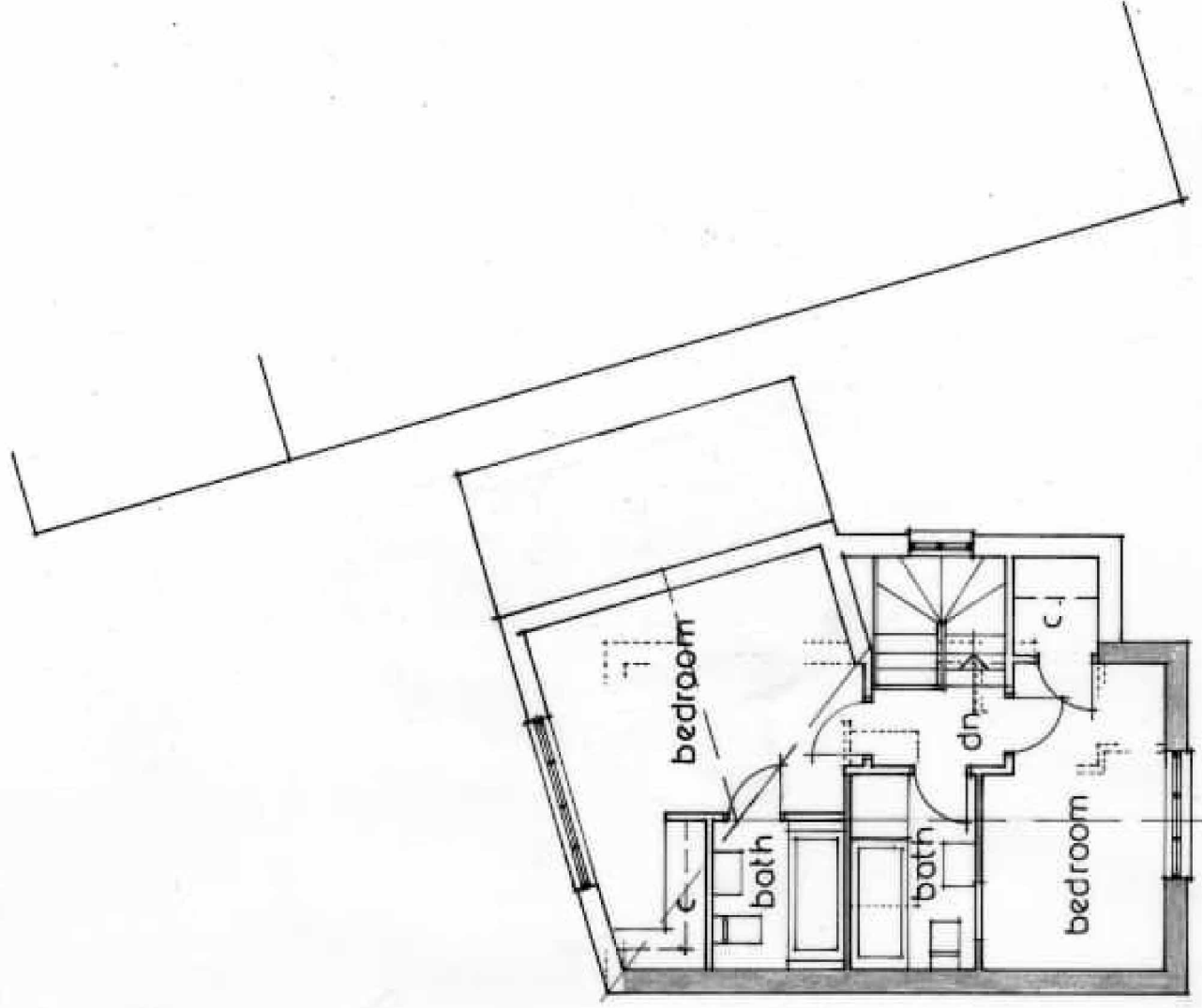
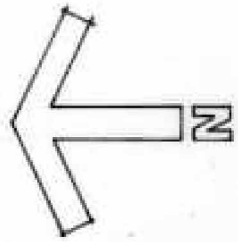


LOCATION PLAN
SCALE: 1:1250



GROUND FLOOR PLAN
SCALE: 1:100

PROPOSED DEVELOPMENT AT 10 CHURCH END · MARKYATE · HERTS ·
REF: 21-058-2A



FIRST FLOOR PLAN



Chartered Town Planning & Development Consultants
Beech House, 259 Amersham Road,
Hazlemere, Buckinghamshire HP15 7GW.
Tel: 01494 511108 Fax: 01494 534351

19 APPENDIX 3 – HISTORICAL MAPS

Site Details

10, CHURCH END, MARKYATE,
ST ALBANS, AL3 8PY

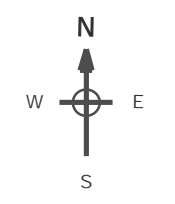
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Map Name: County Series

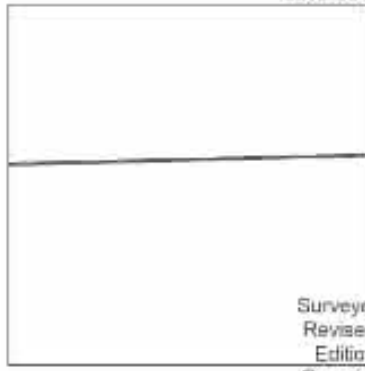
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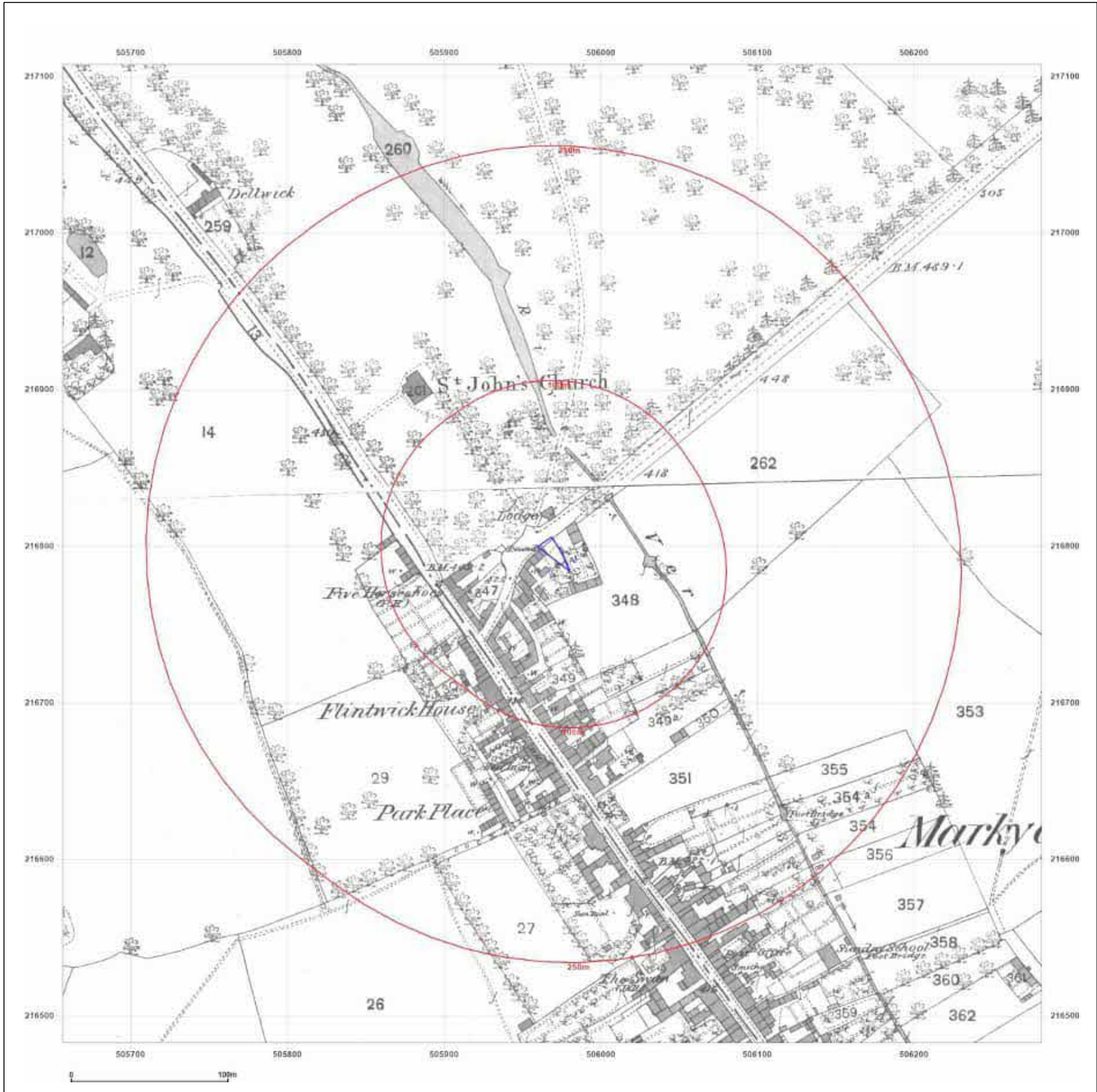
Printed at: 1:2,500



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Edition N/A
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Levelled N/A



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Revised 1880
Edition N/A
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Site Details

10, CHURCH END, MARKYATE,
ST ALBANS, AL3 8PY

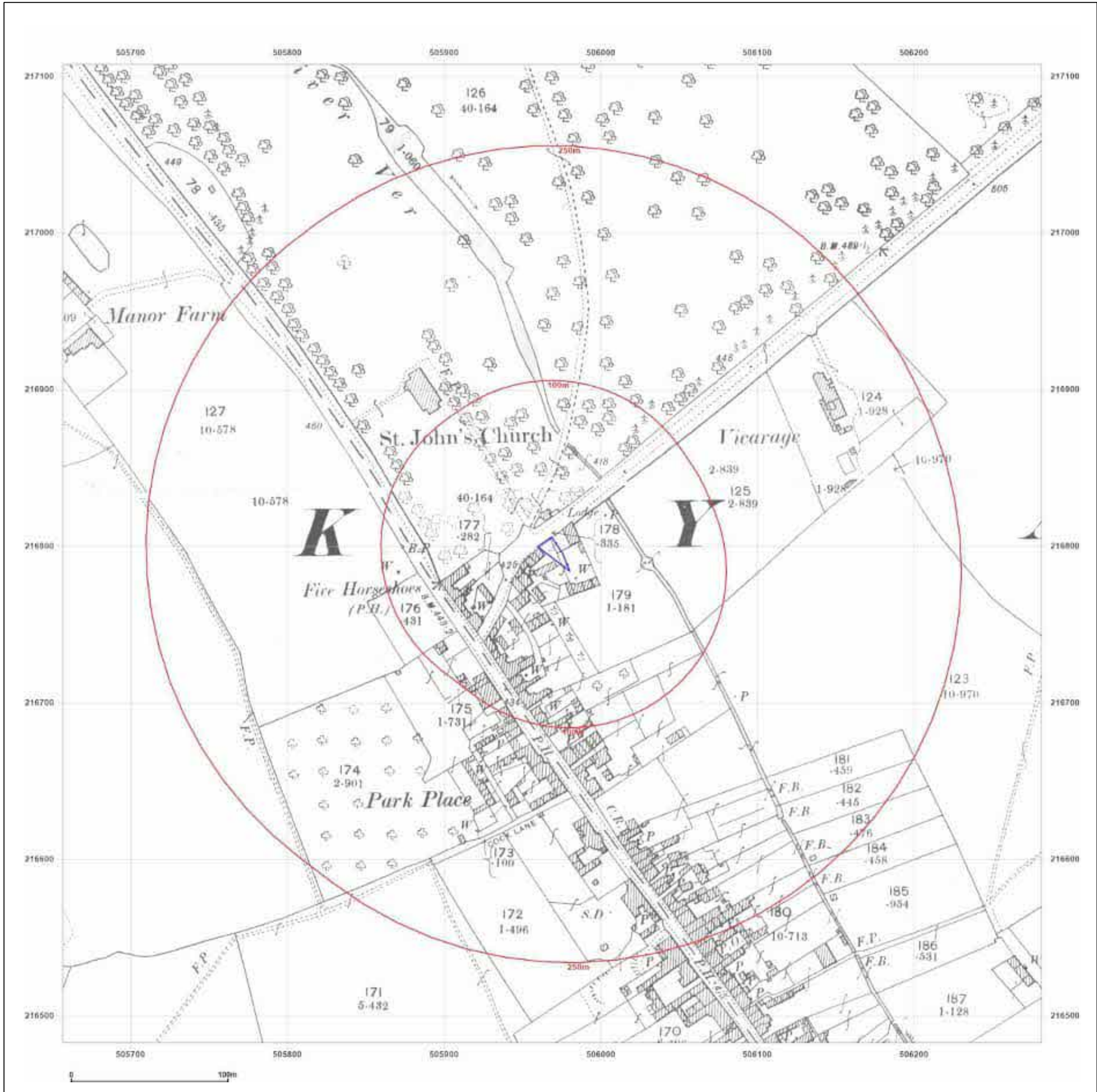
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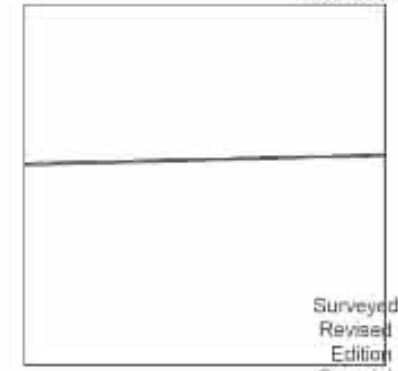
Map date: 1898

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Surveyed 1896
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Site Details

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Report Ref: GS-QTR-MBW-K6X-TW8
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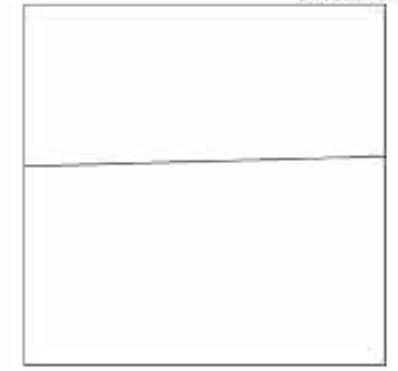
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Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1901
Revised 1901
Edition N/A
Copyright N/A
Levelled N/A

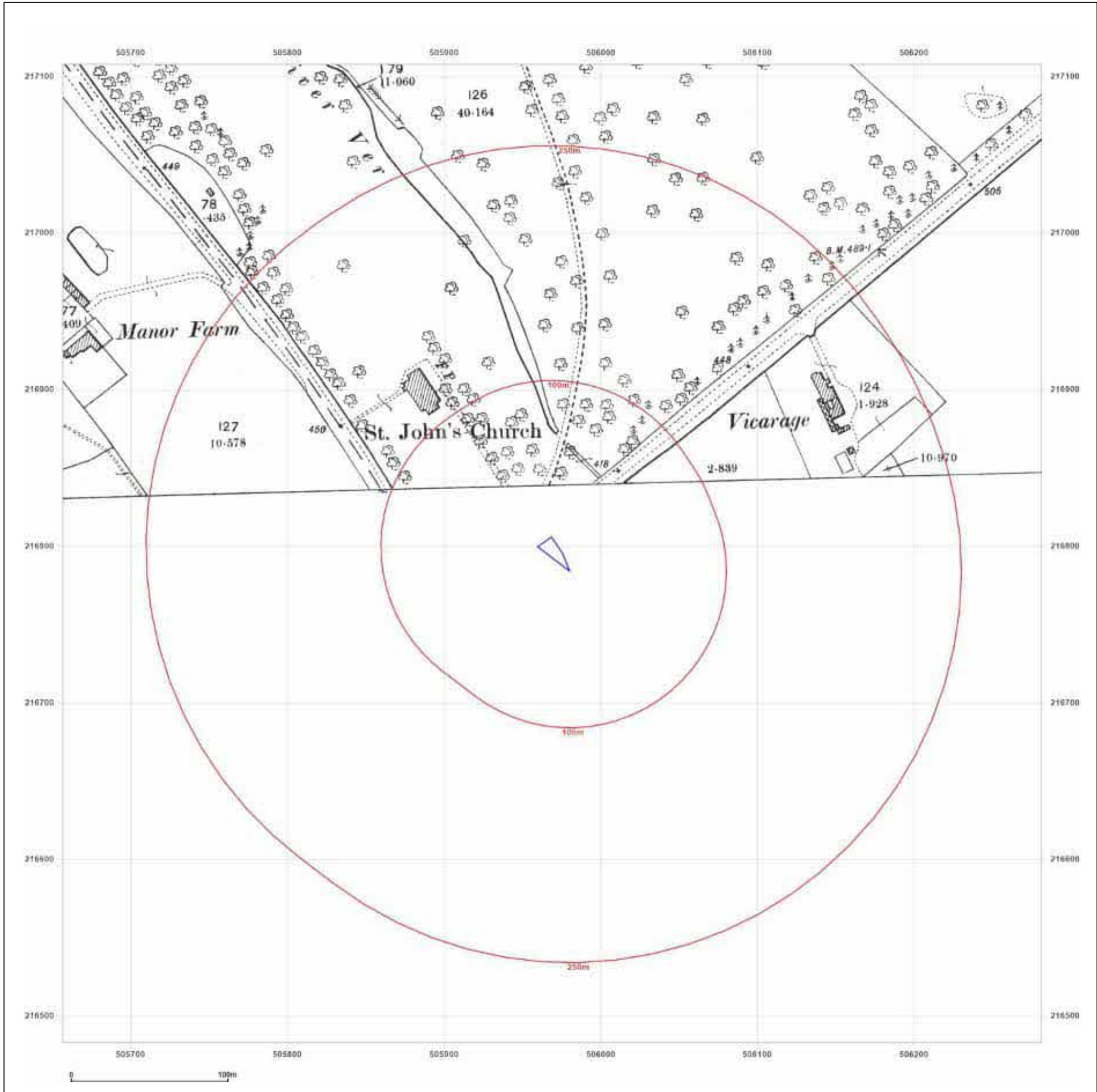


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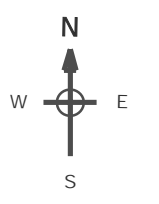


Site Details

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ST ALBANS, AL3 8PY

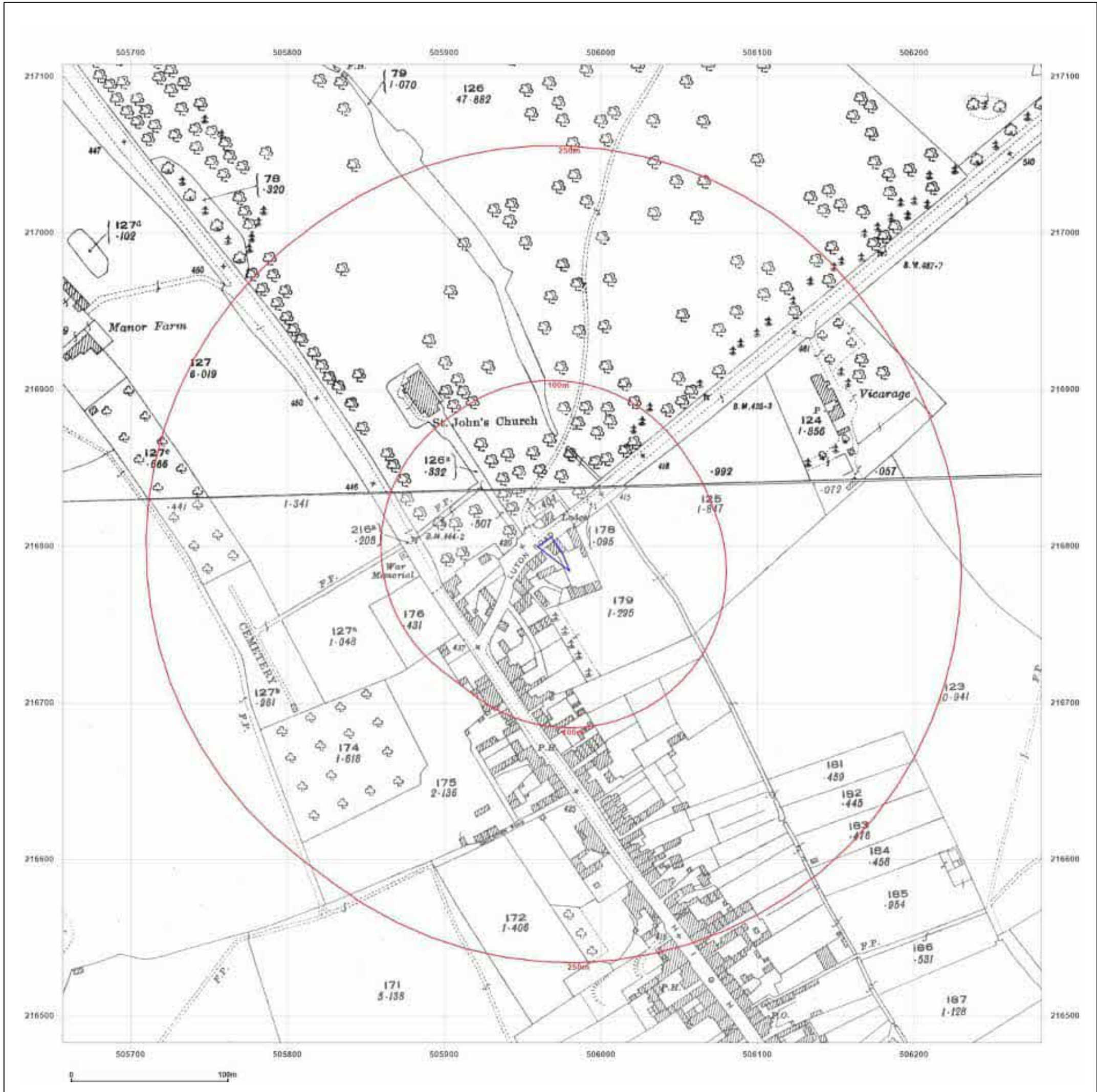
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Map Name: County Series
Map date: 1924
Scale: 1:2,500
Printed at: 1:2,500



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Surveyed 1924
Revised 1924
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ST ALBANS, AL3 8PY

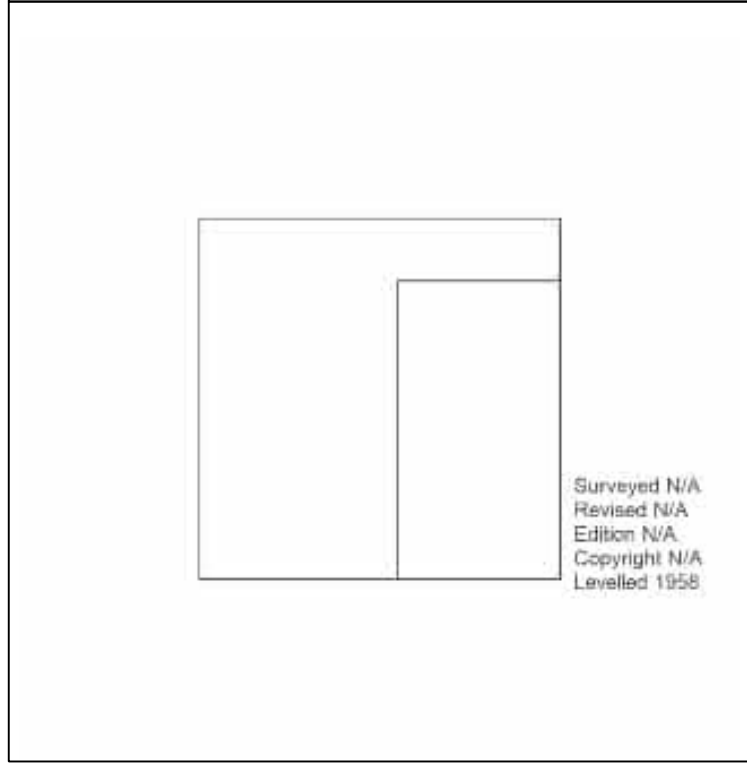
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Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1958

Scale: 1:2,500

Printed at: 1:2,500



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

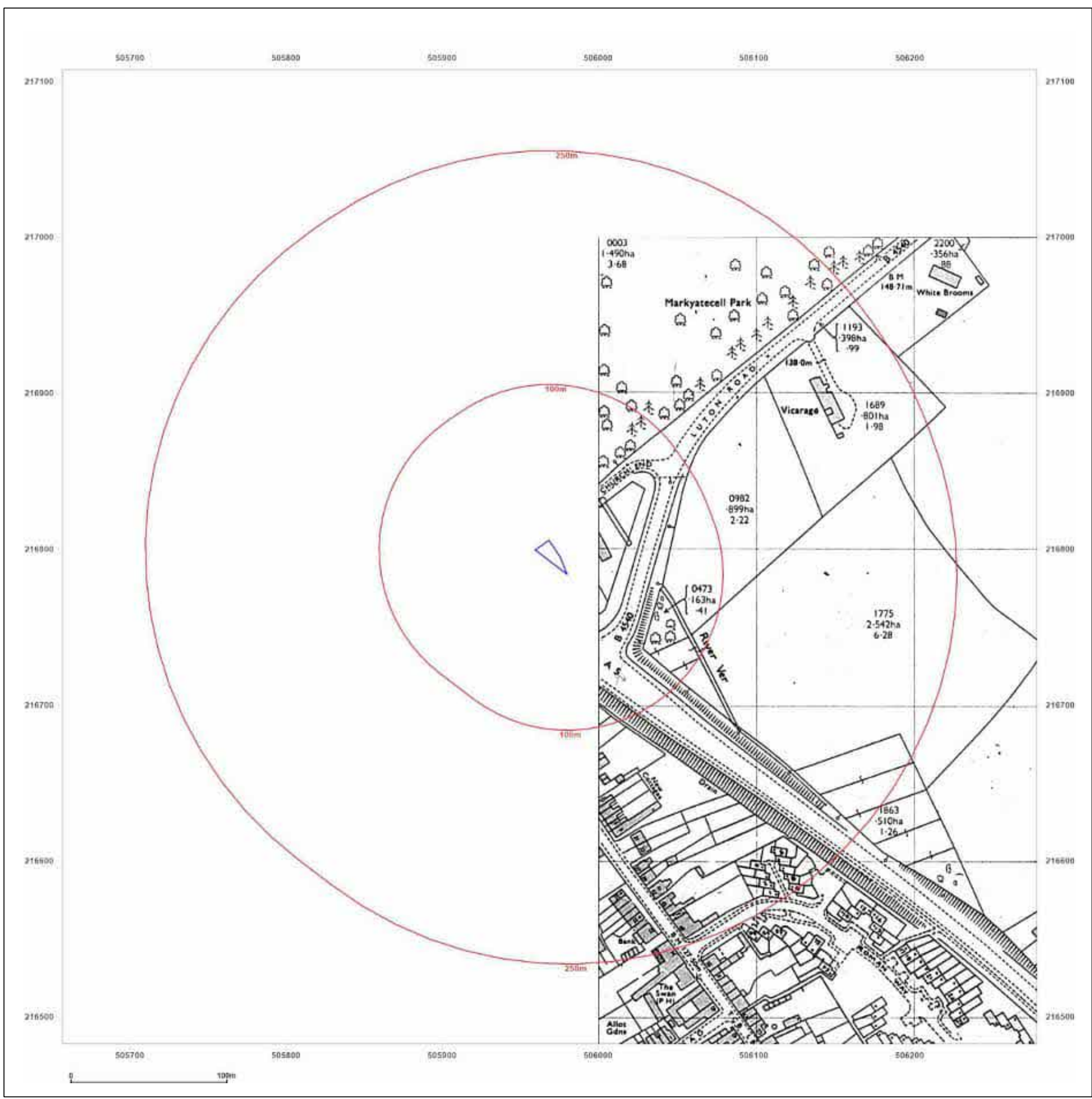


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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1970-1971

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1970 Revised 1970 Edition N/A Copyright 1971 Levelled 1958	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A
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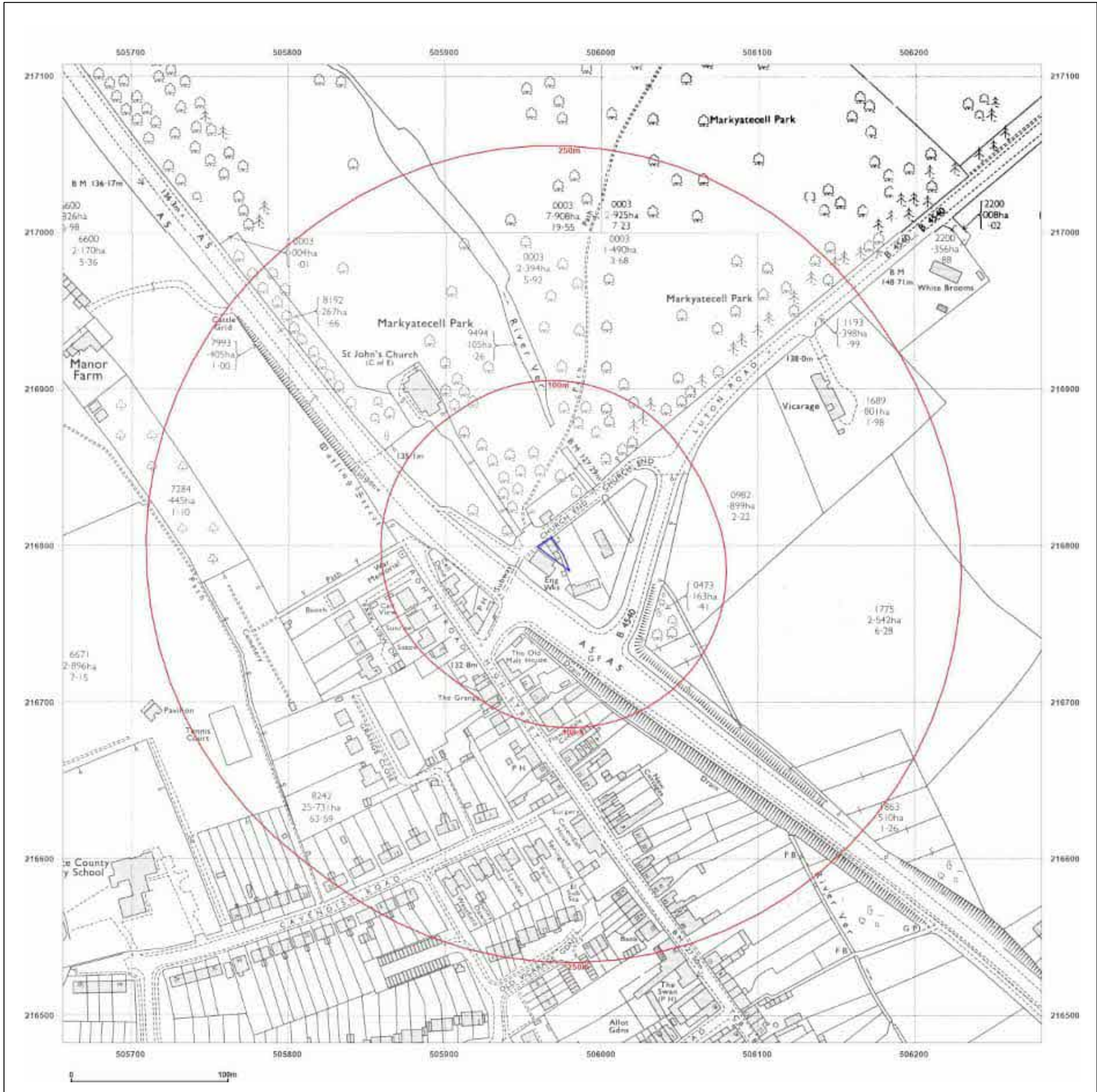


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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1971

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed 1971 Revised 1971 Edition N/A Copyright 1971 Levelled 1958
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

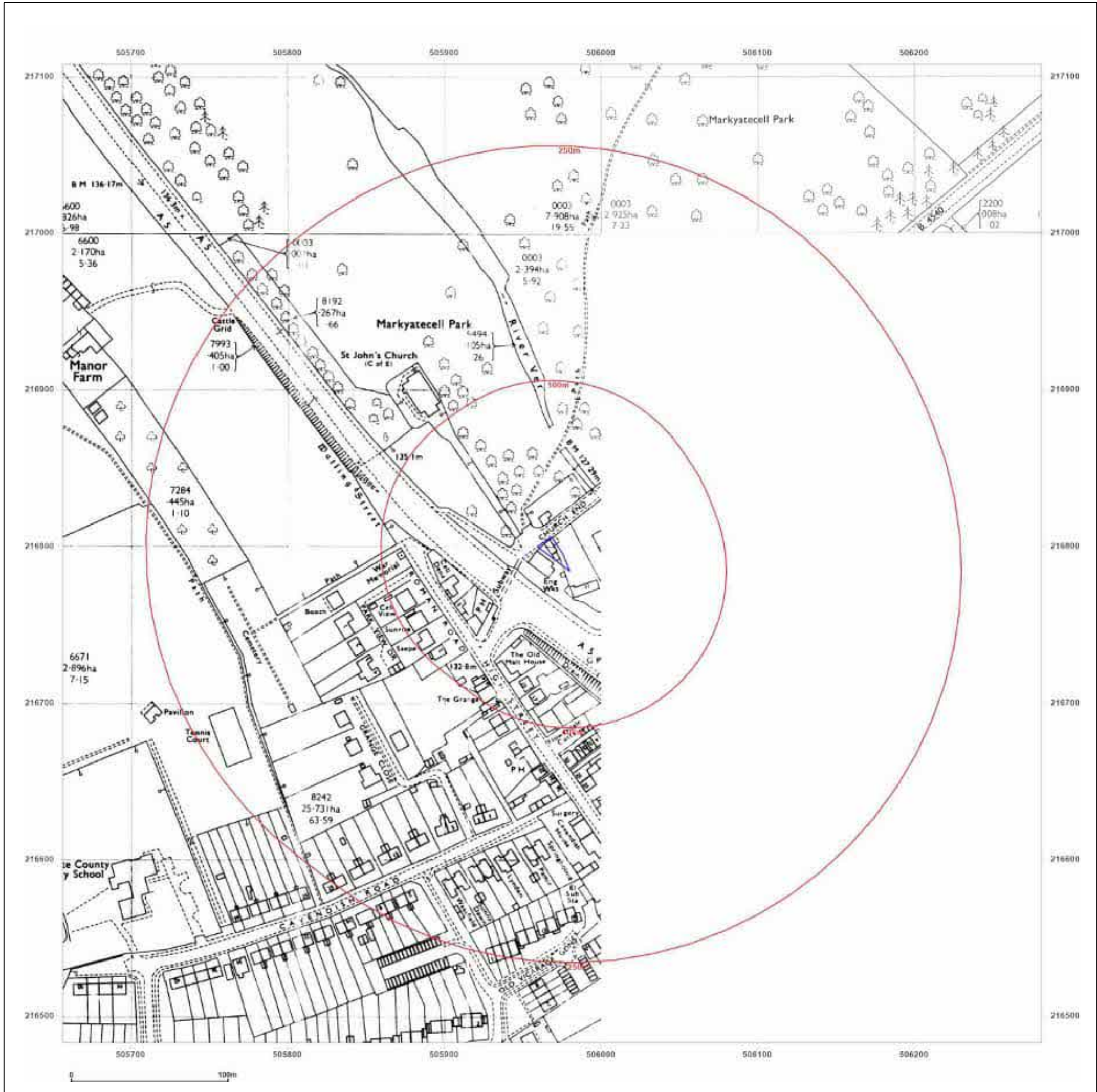


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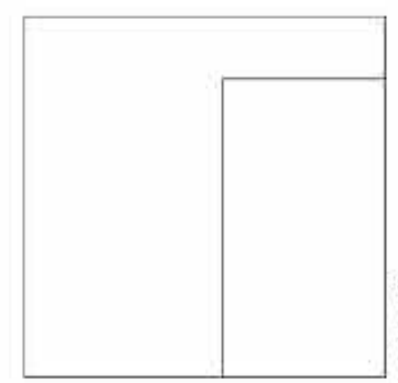
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Map Name: National Grid

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Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
Copyright N/A
Levelled N/A

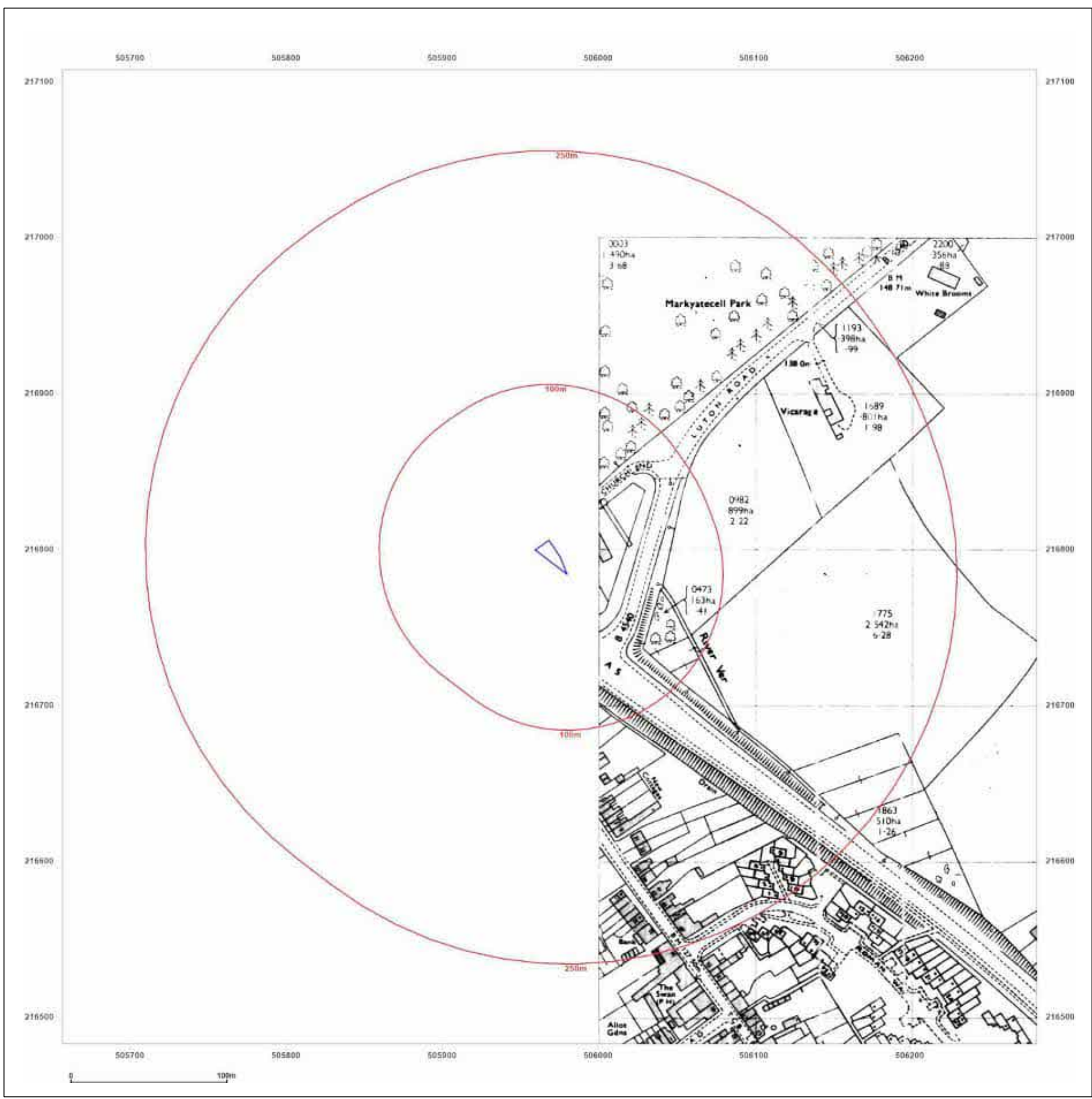


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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1981-1986

Scale: 1:2,500

Printed at: 1:2,500



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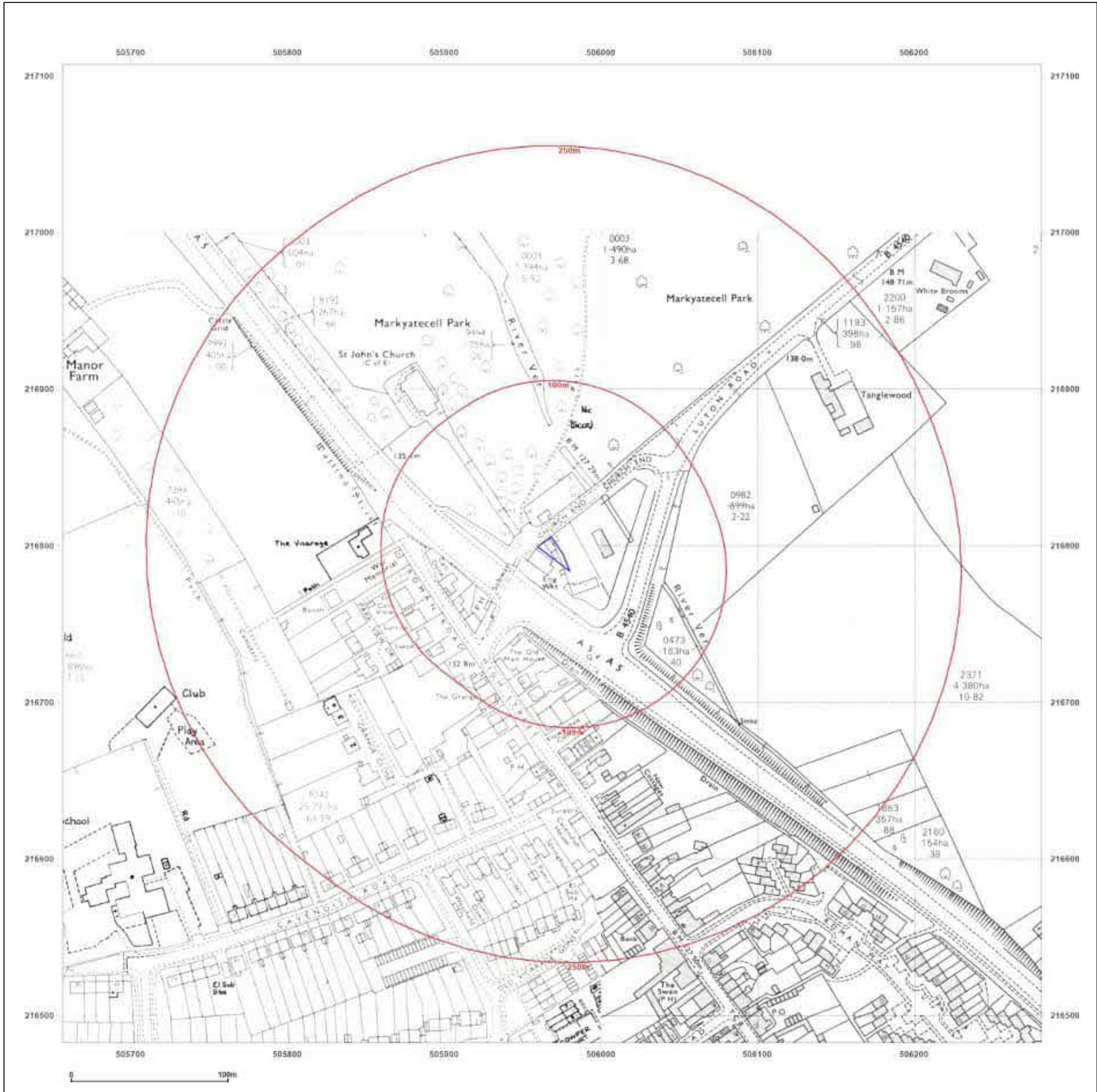


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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1992-1993

Scale: 1:2,500

Printed at: 1:2,500



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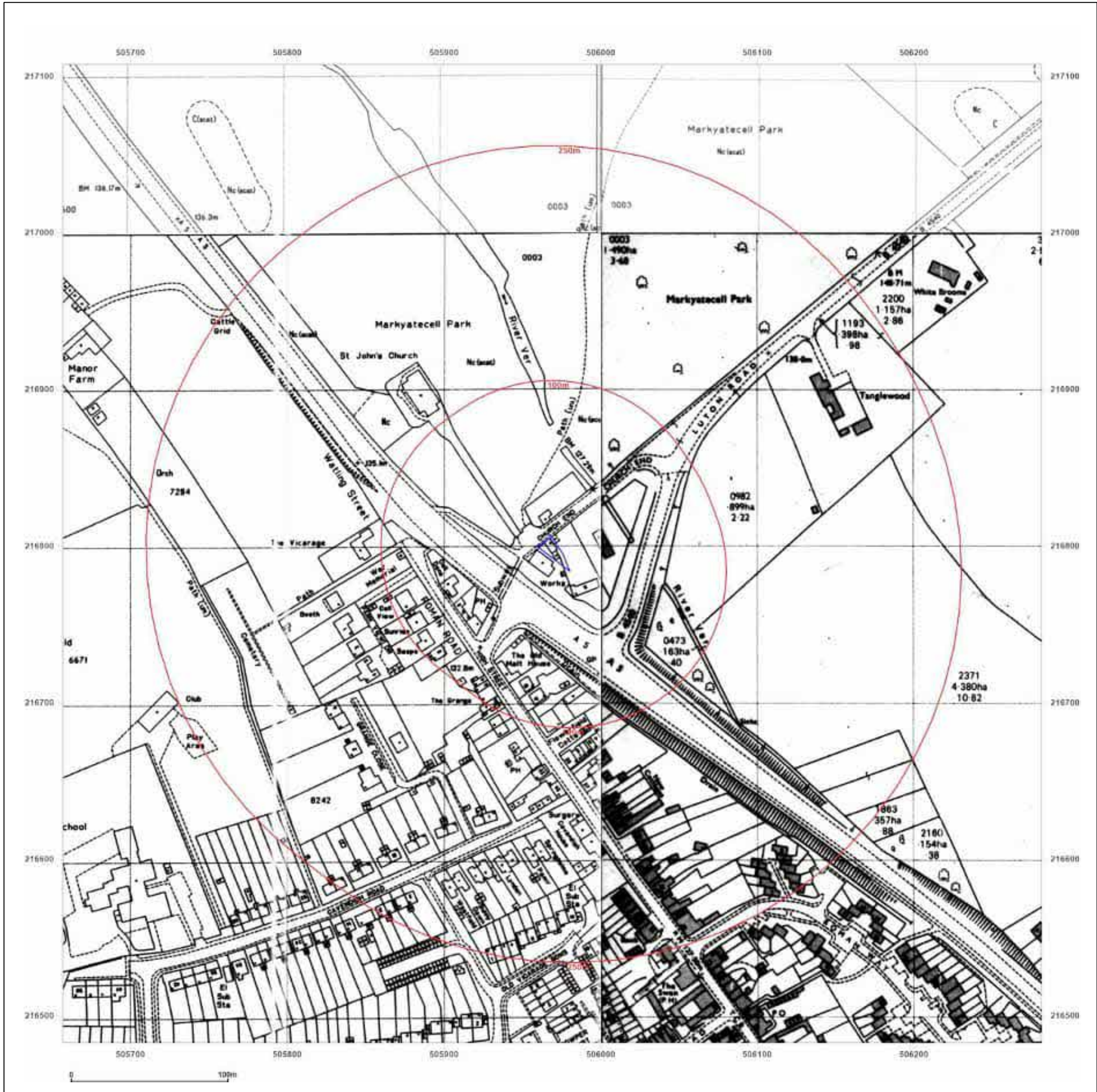


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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1993-1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A Revised N/A Edition N/A Copyright 1995 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A
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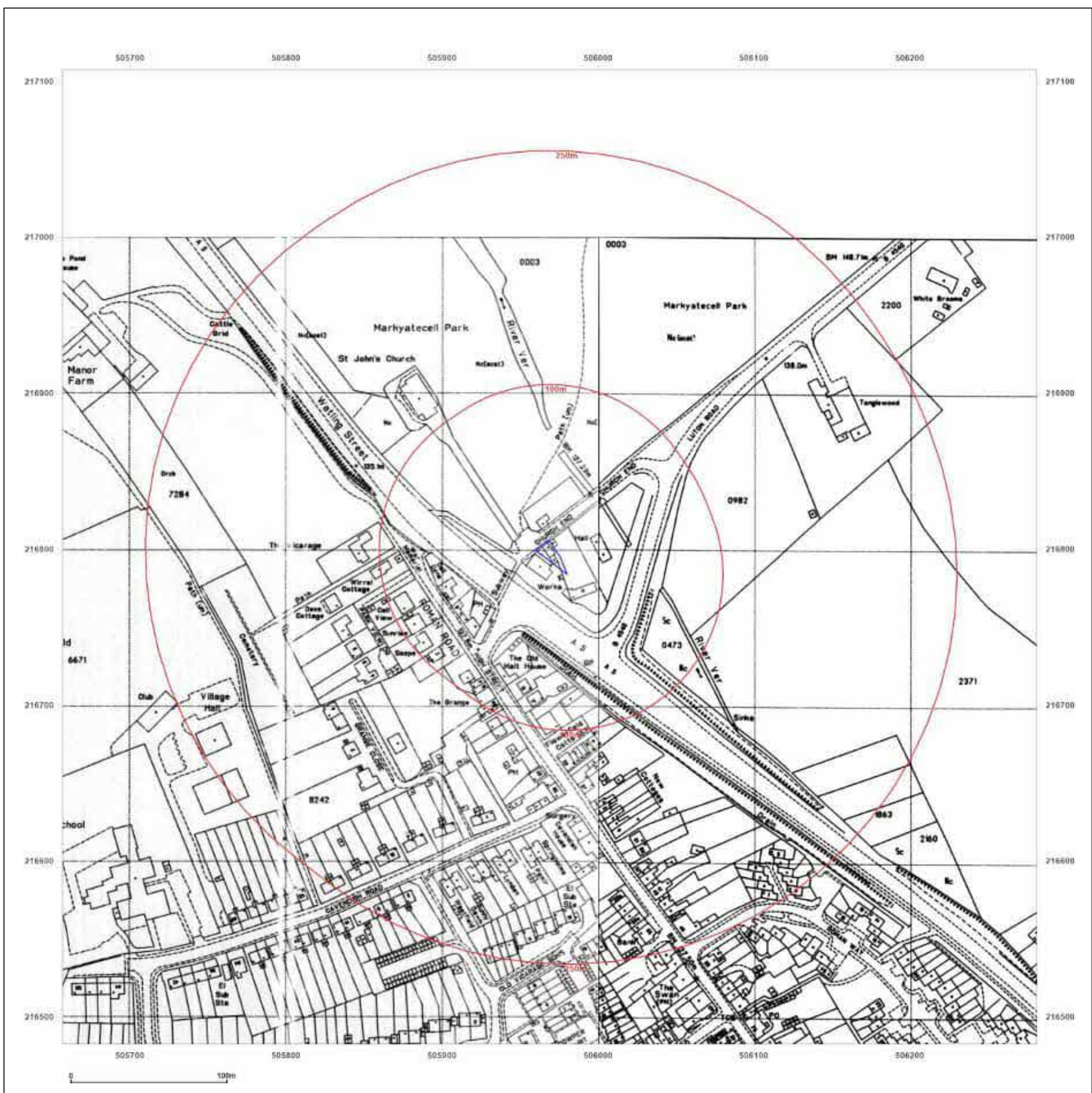


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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

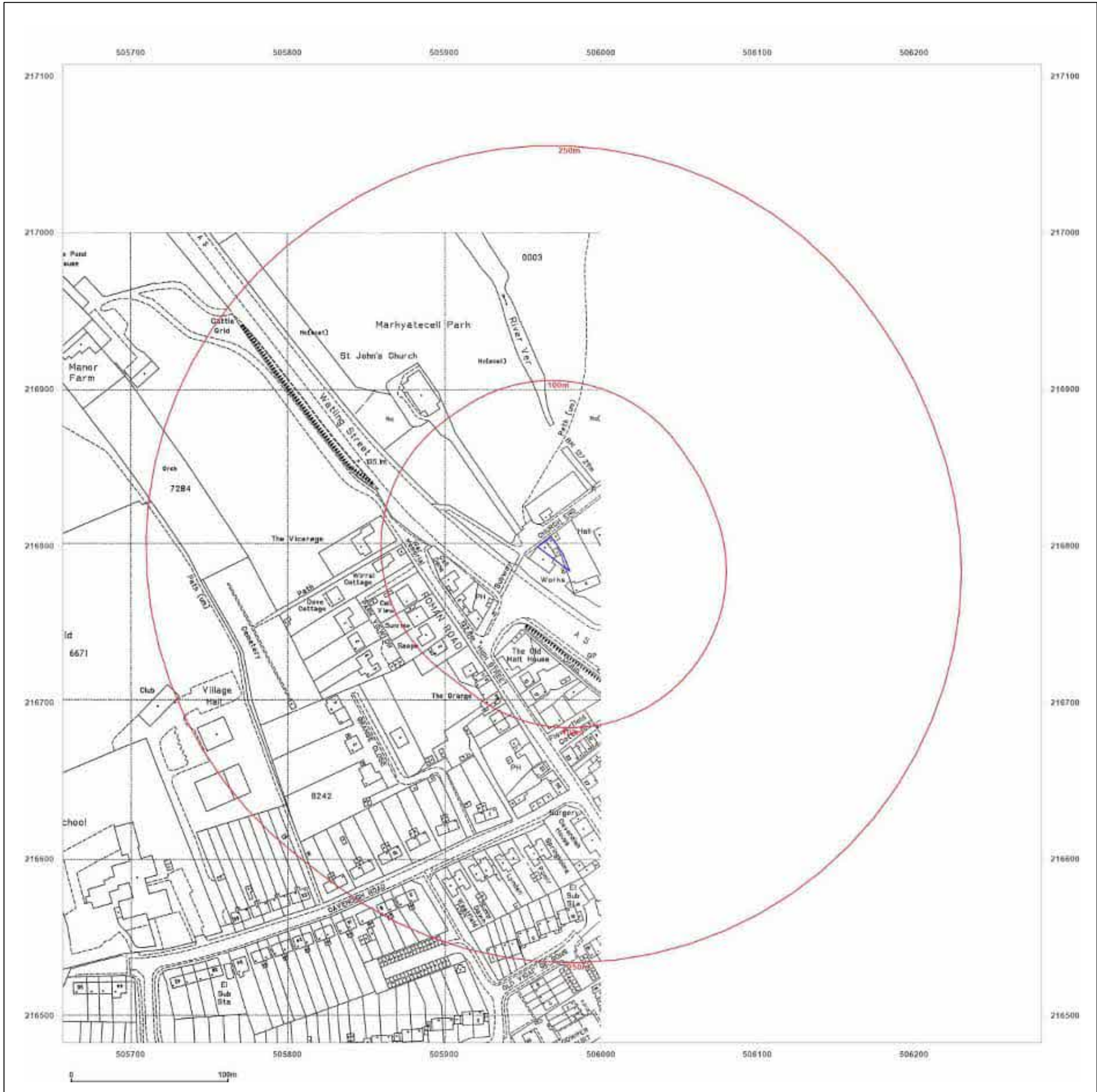


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Map legend available at:
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Site Details

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ST ALBANS, AL3 8PY

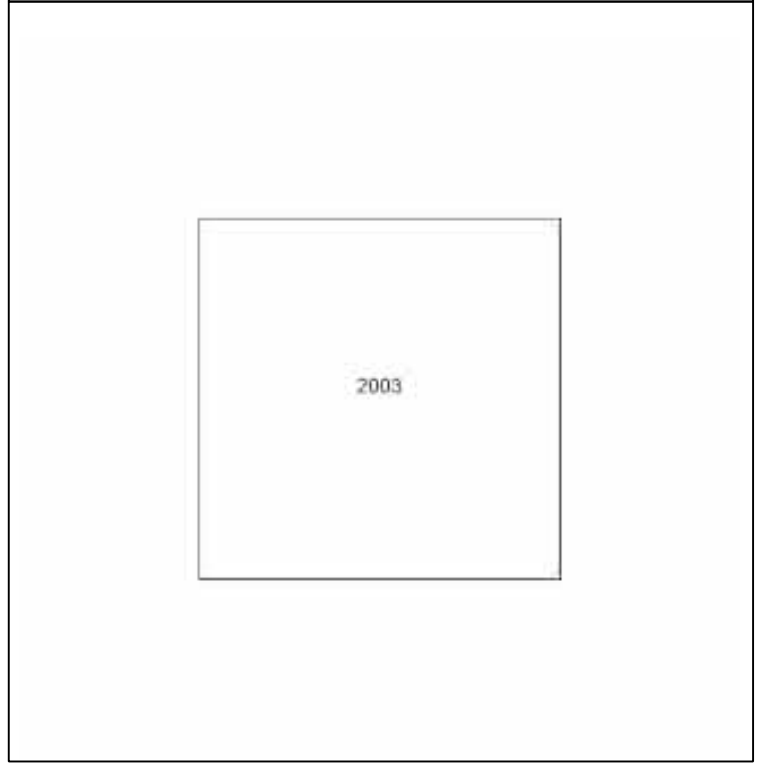
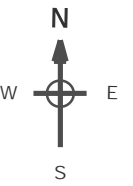
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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Production date: 25 August 2023

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



Site Details

10, CHURCH END, MARKYATE,
ST ALBANS, AL3 8PY

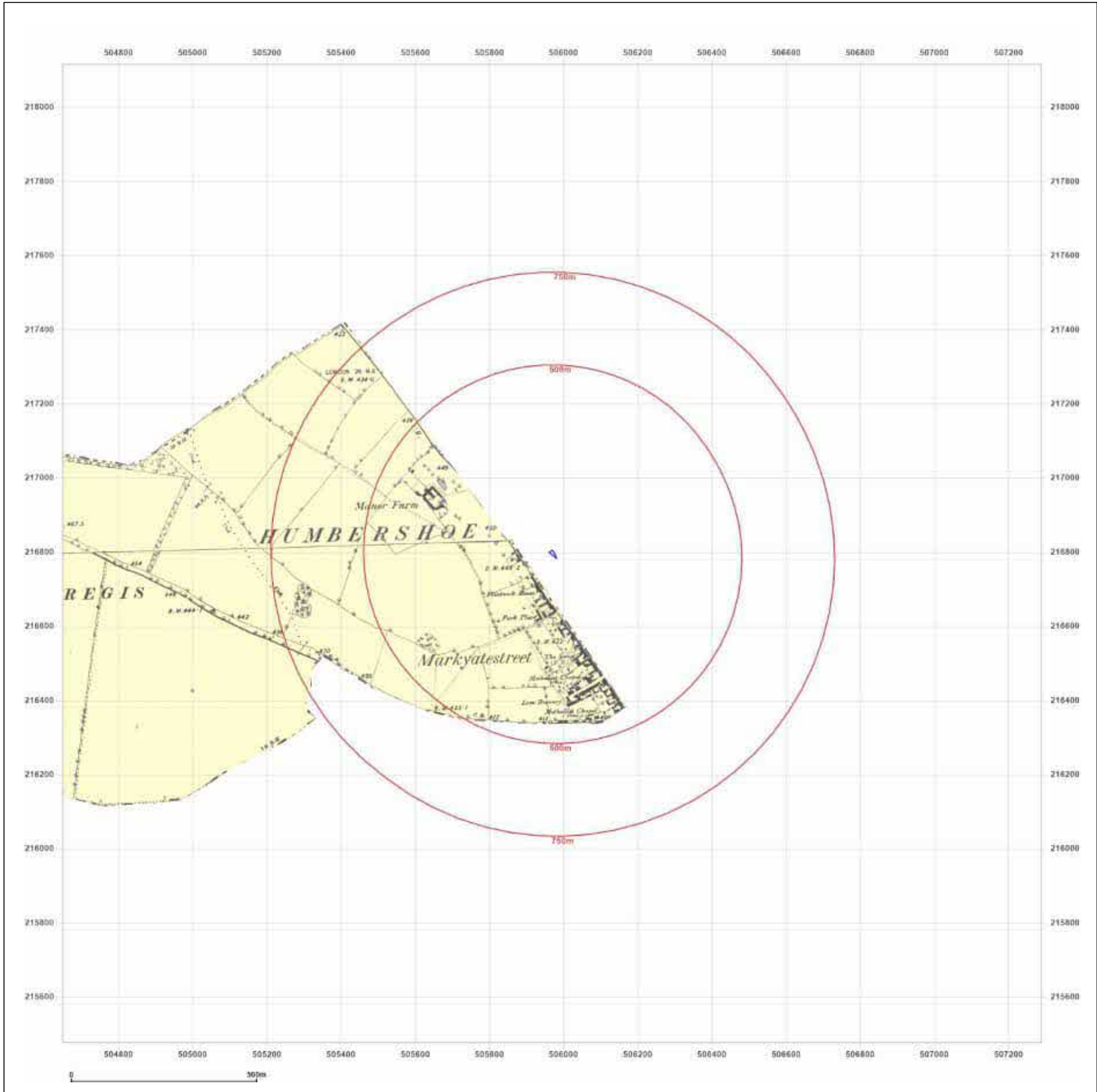
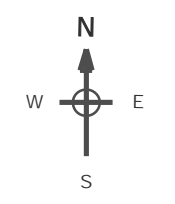
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Report Ref: GS-QTR-MBW-K6X-TW8
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Map Name: County Series

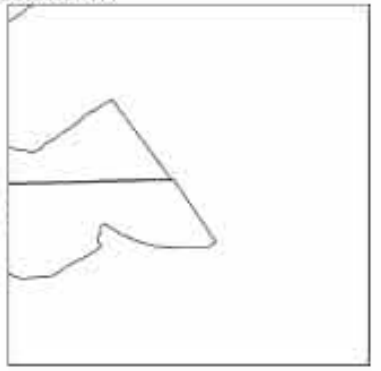
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Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Levelled N/A



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Revised 1879
Edition N/A
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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

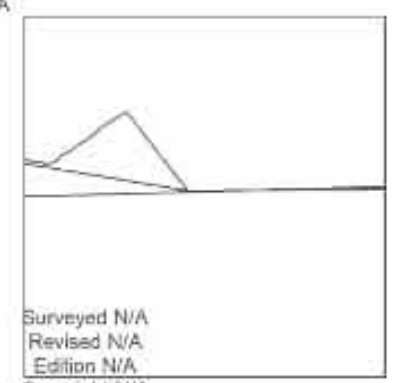
Map date: 1884-1885

Scale: 1:10,560

Printed at: 1:10,560



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Revised N/A
Edition 1884
Copyright N/A
Levelled N/A



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

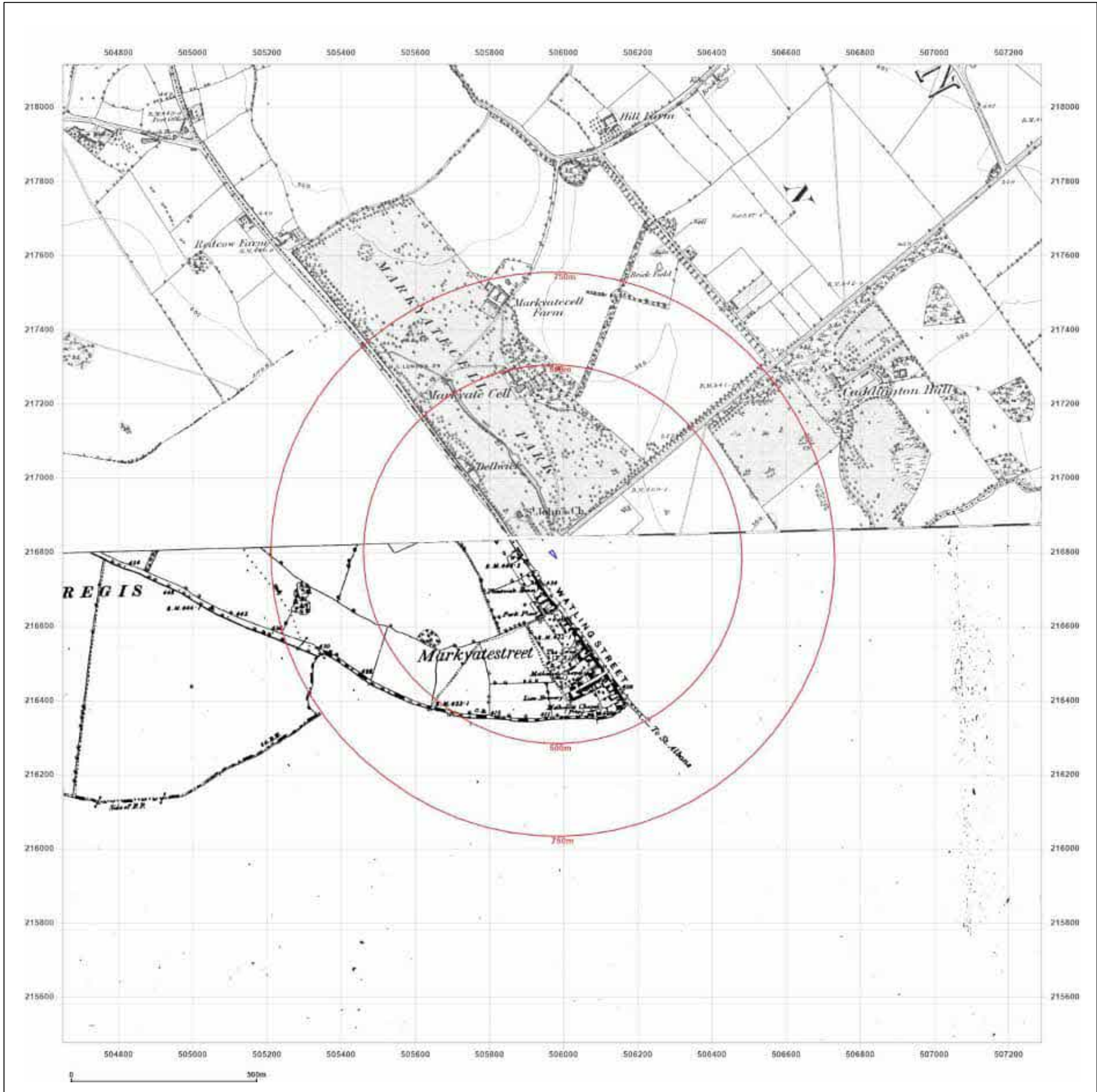


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Site Details

10, CHURCH END, MARKYATE,
ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

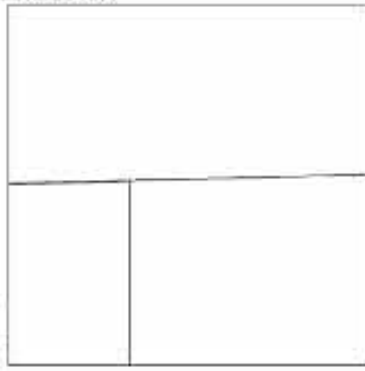
Map Name: County Series

Map date: 1898-1899

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1879 Revised 1899 Edition N/A Copyright N/A Levelled N/A	
Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	

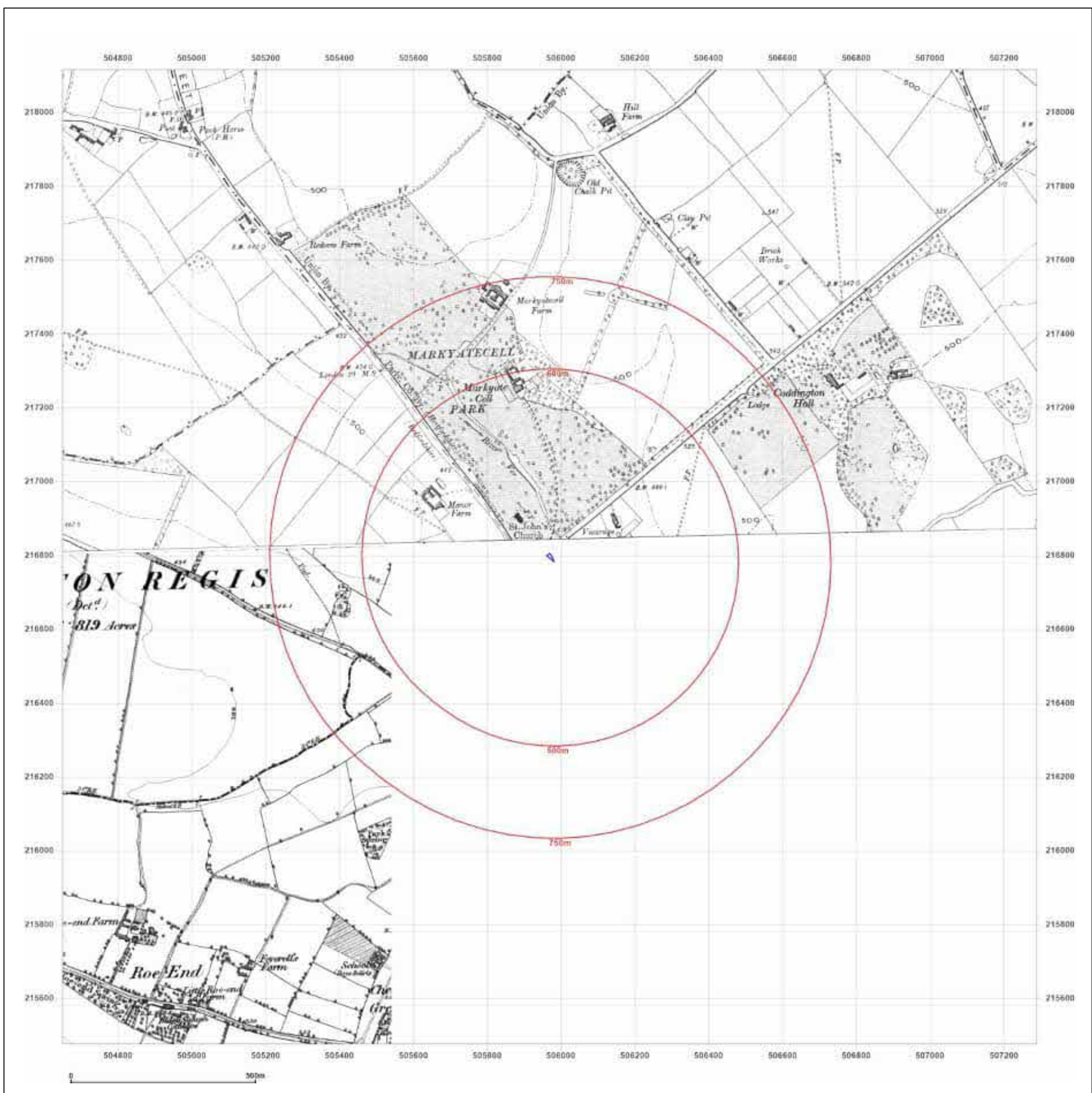


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Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

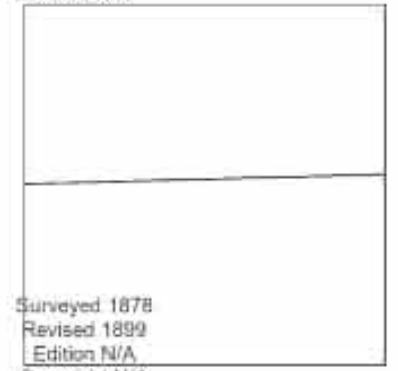
Map date: 1899-1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1878
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1878
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

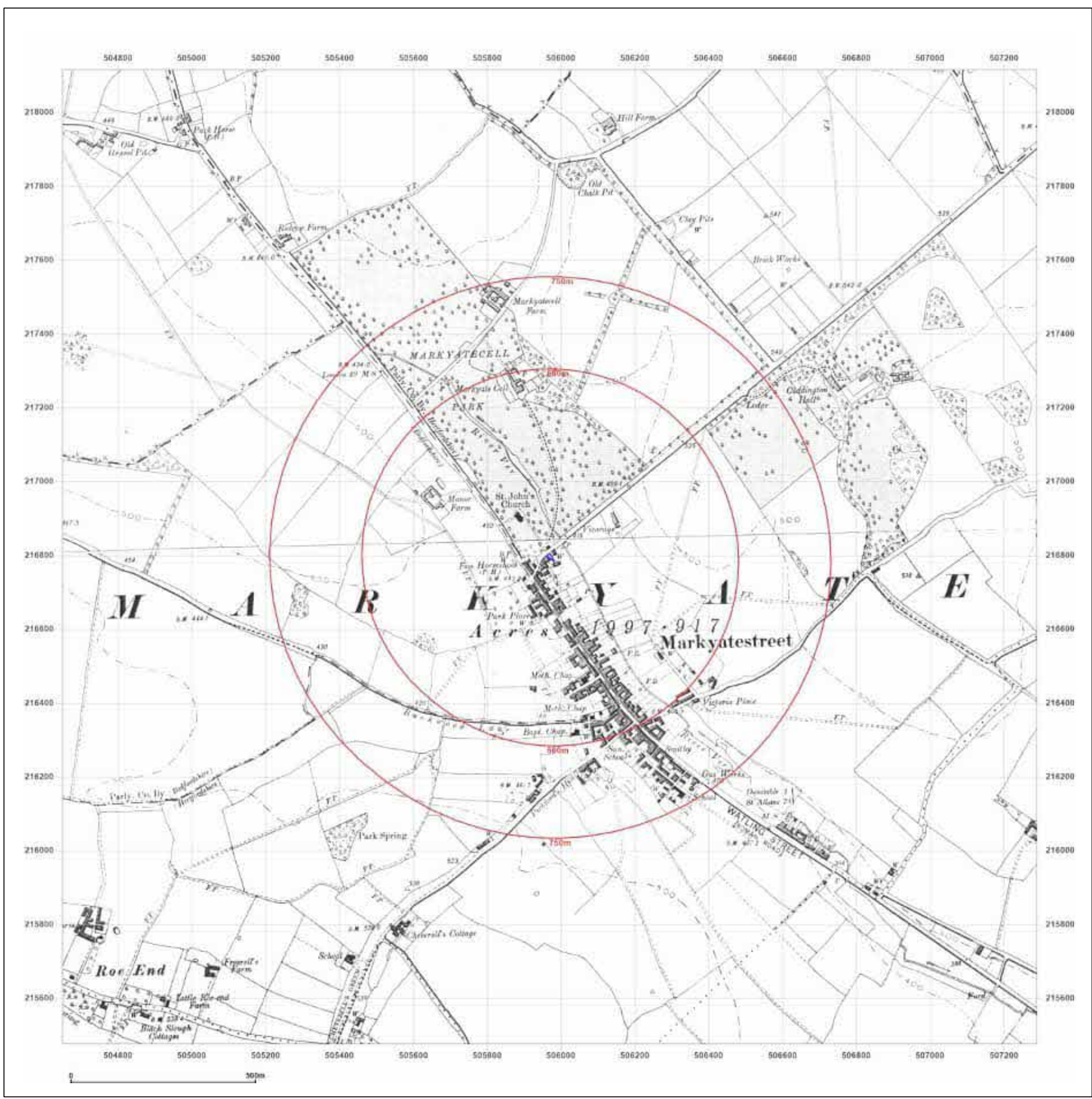


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Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

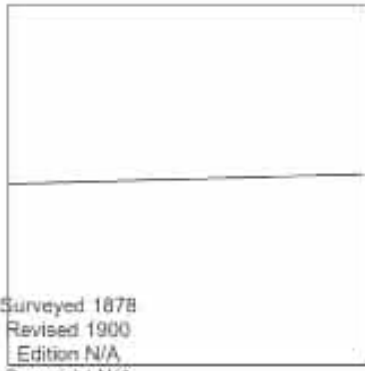
Map Name: County Series

Map date: 1900

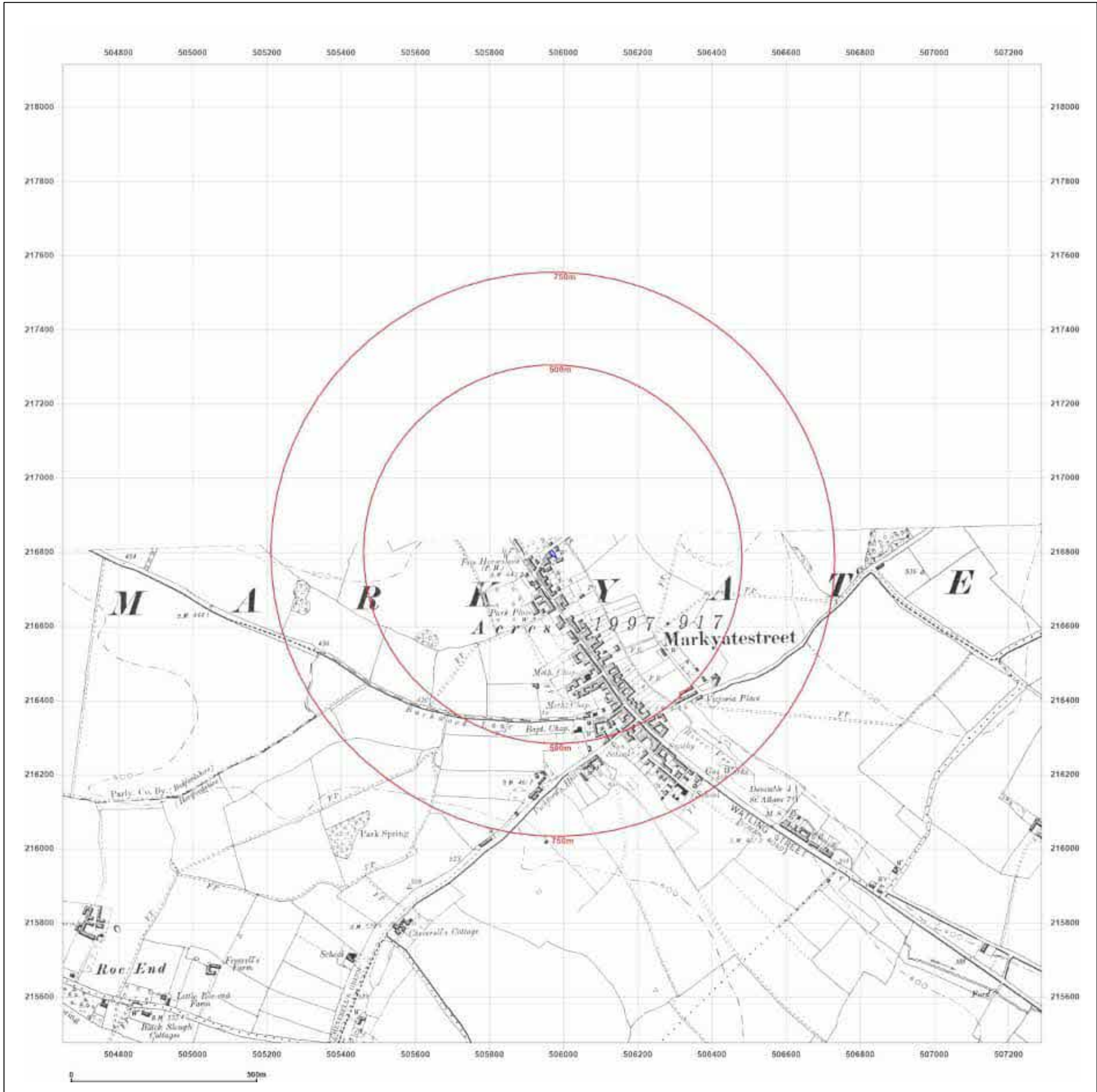
Scale: 1:10,560

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Revised 1900
Edition N/A
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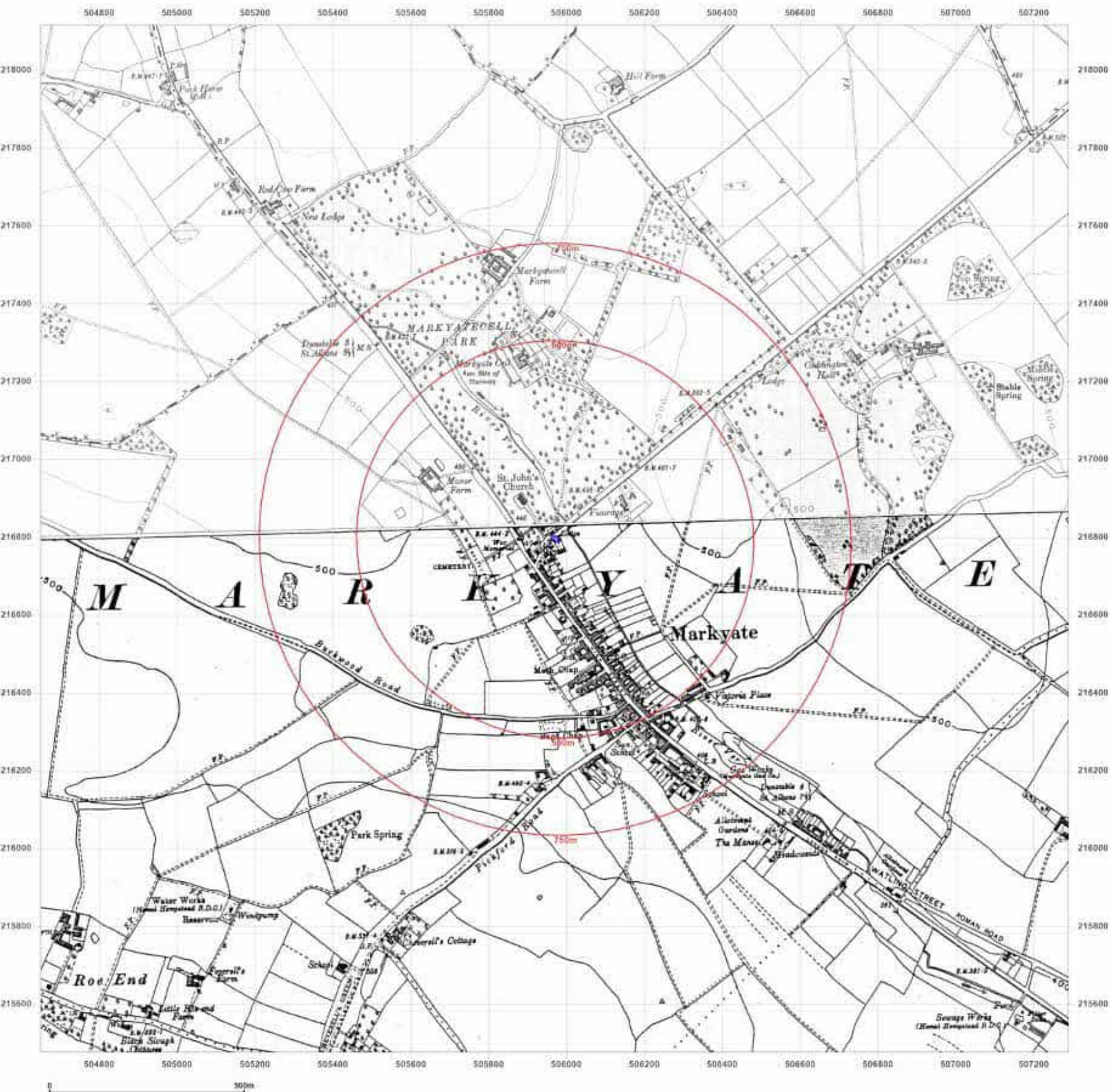
Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

Map date: 1920-1922

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1878
Revised 1922
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Revised N/A
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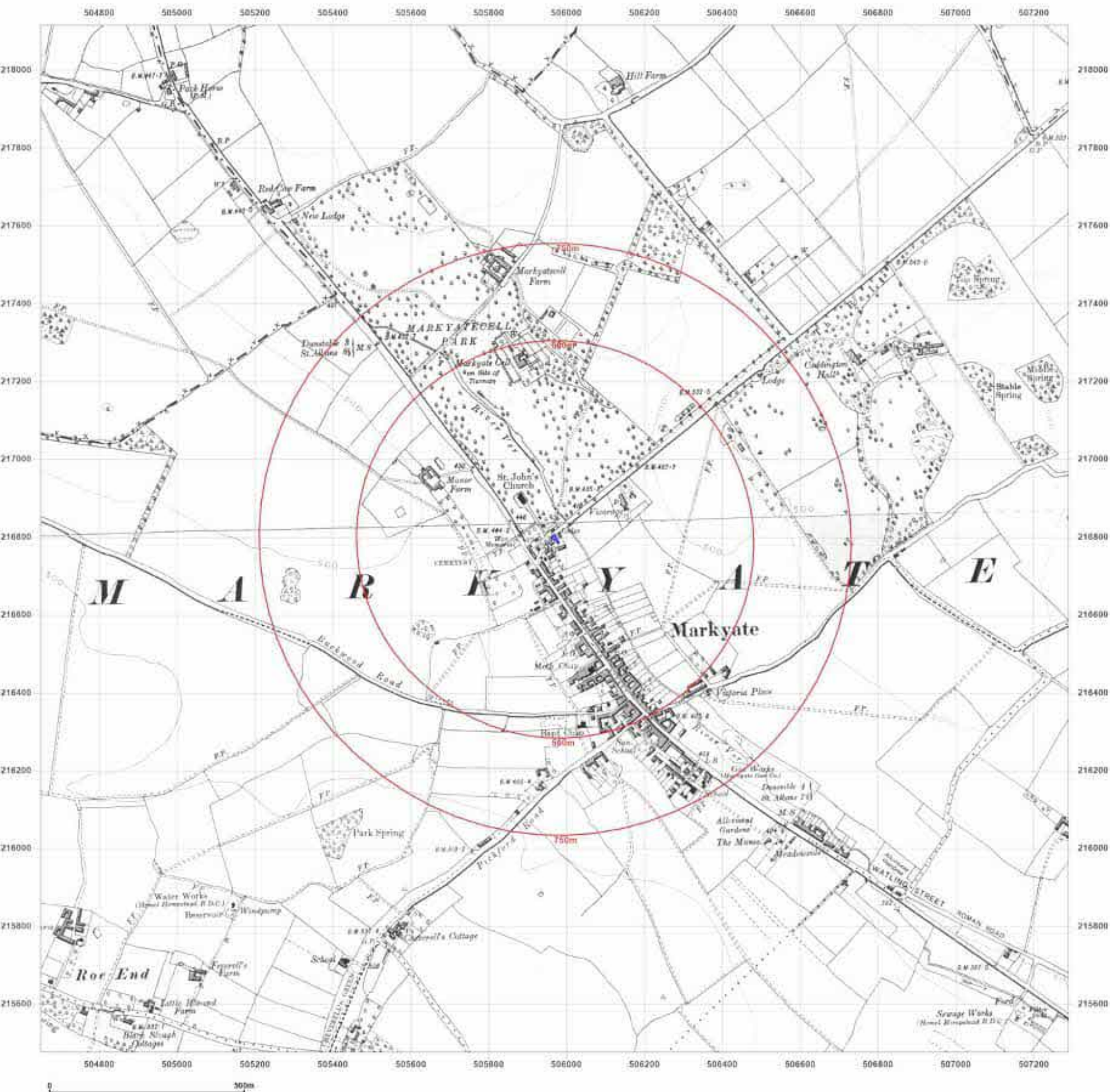
Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

Map date: 1922

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1878
Revised 1922
Edition N/A
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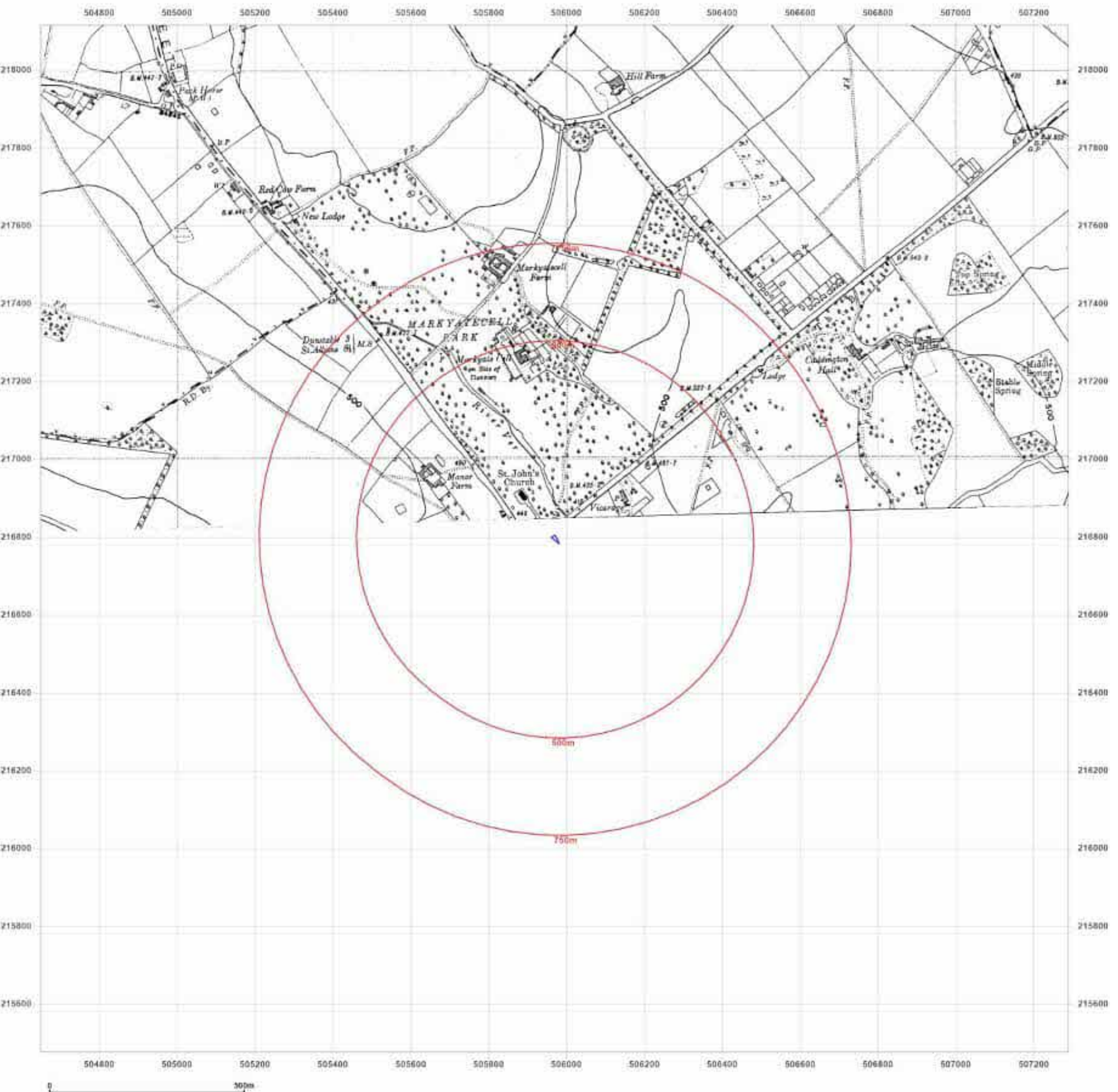
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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

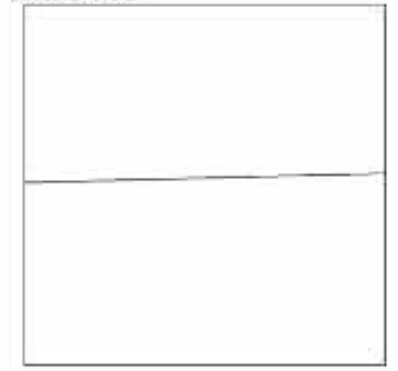
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1974
Edition N/A
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ST ALBANS, AL3 8PY

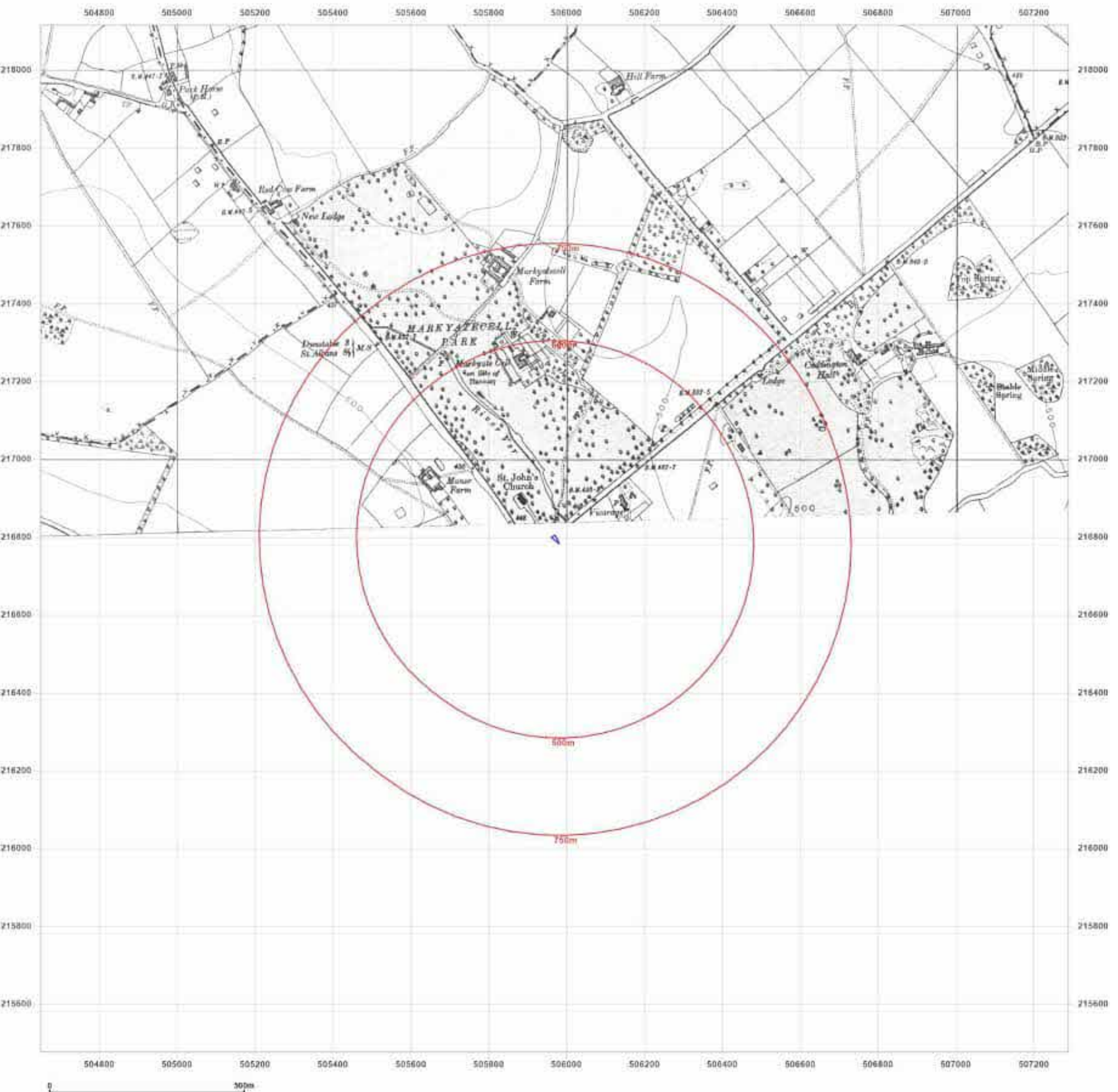
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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

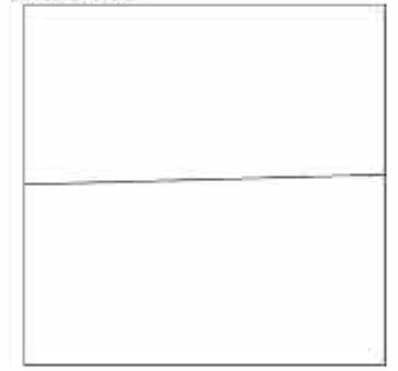
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

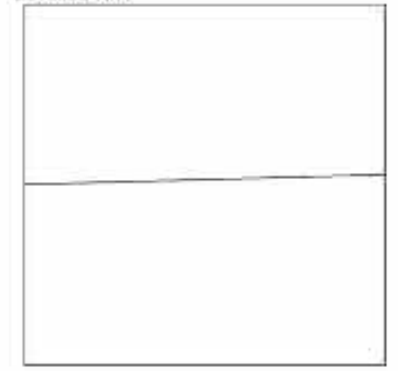
Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1878
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

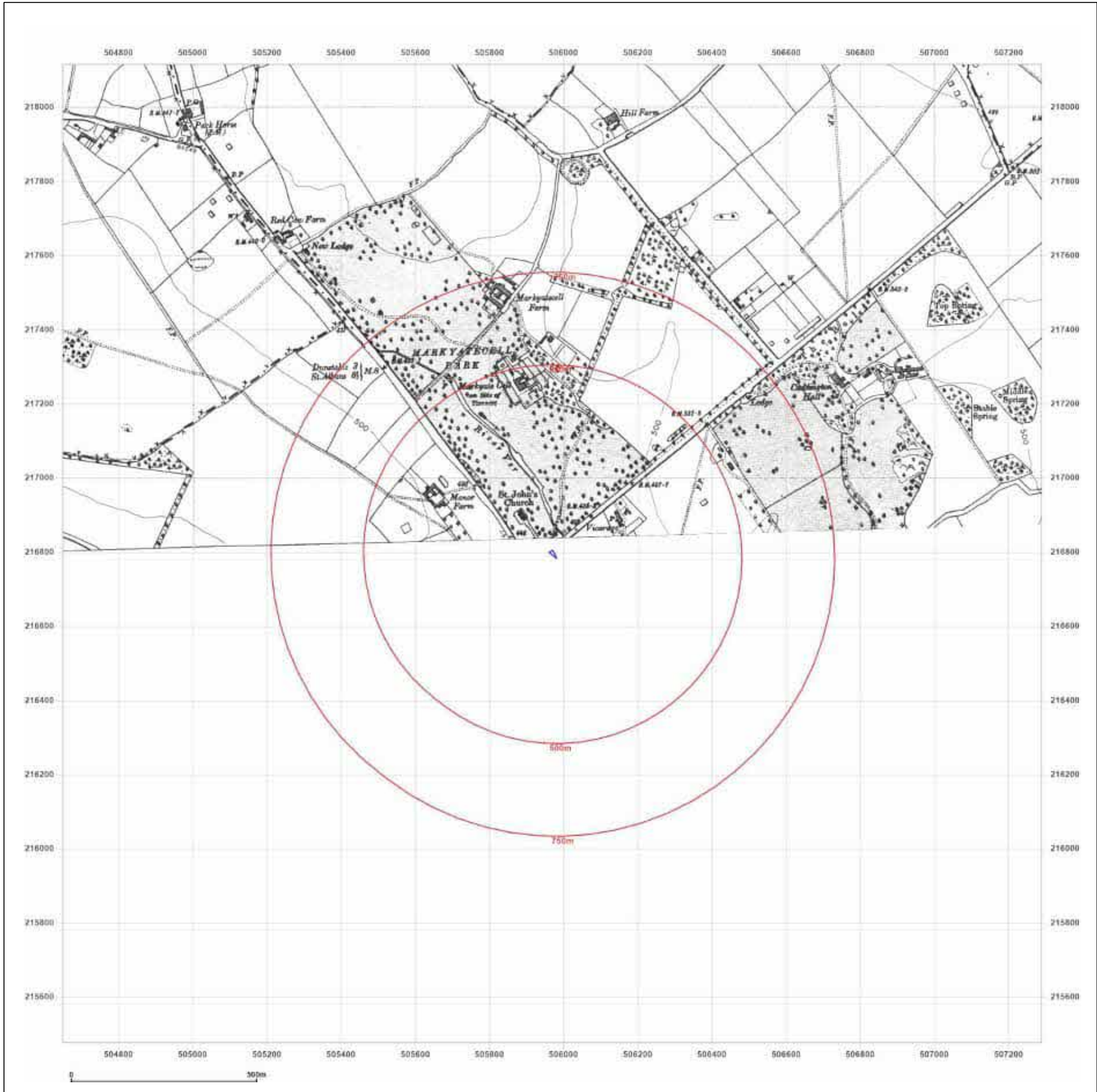


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ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: County Series

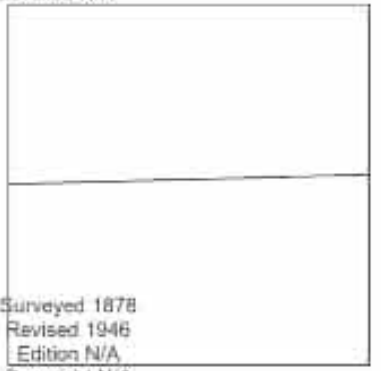
Map date: 1946-1947

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1878
Revised 1947
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1878
Revised 1946
Edition N/A
Copyright N/A
Levelled N/A

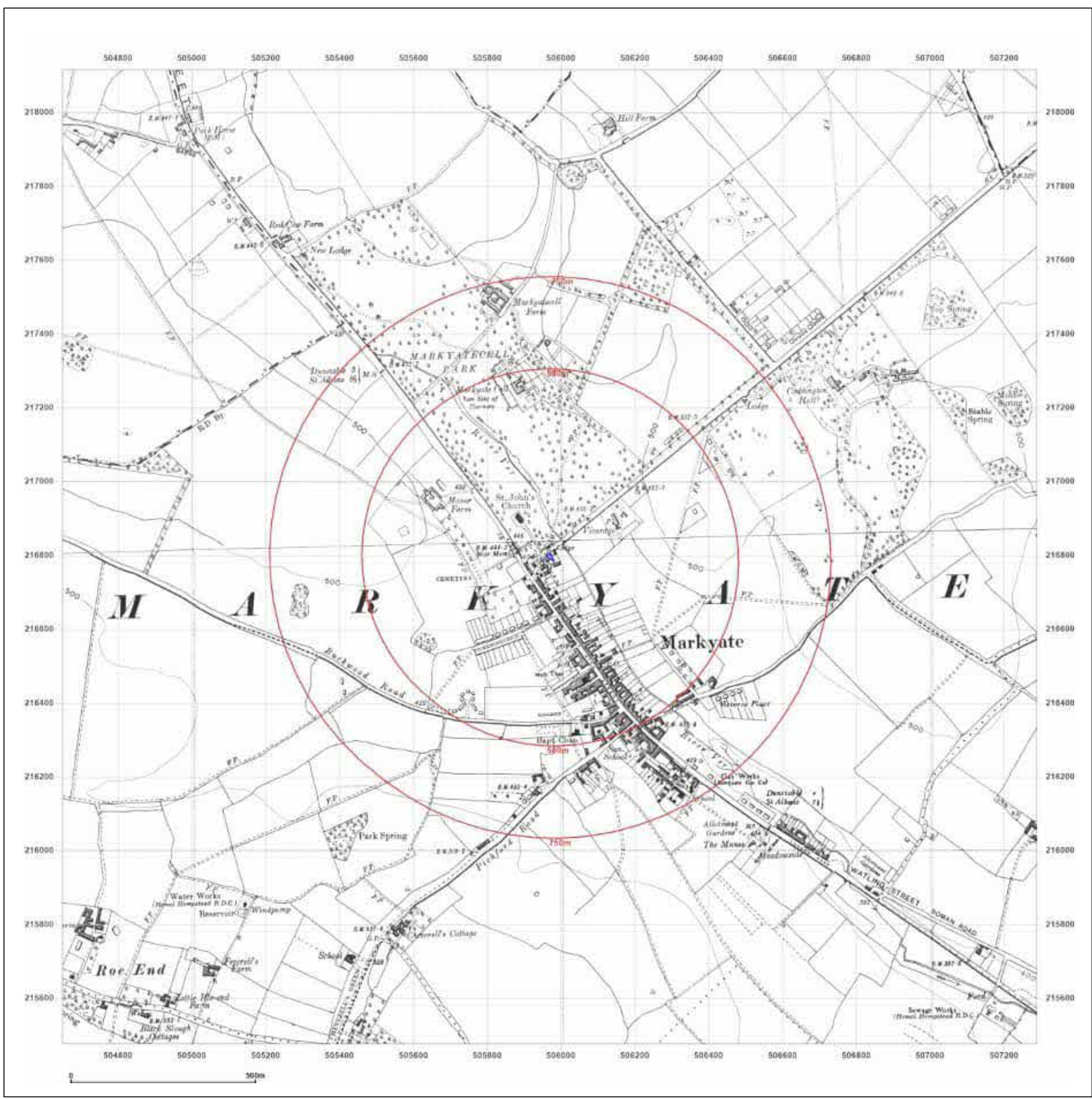


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Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: Provisional

Map date: 1960

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1959
Edition 1960
Copyright 1960
Levelled N/A

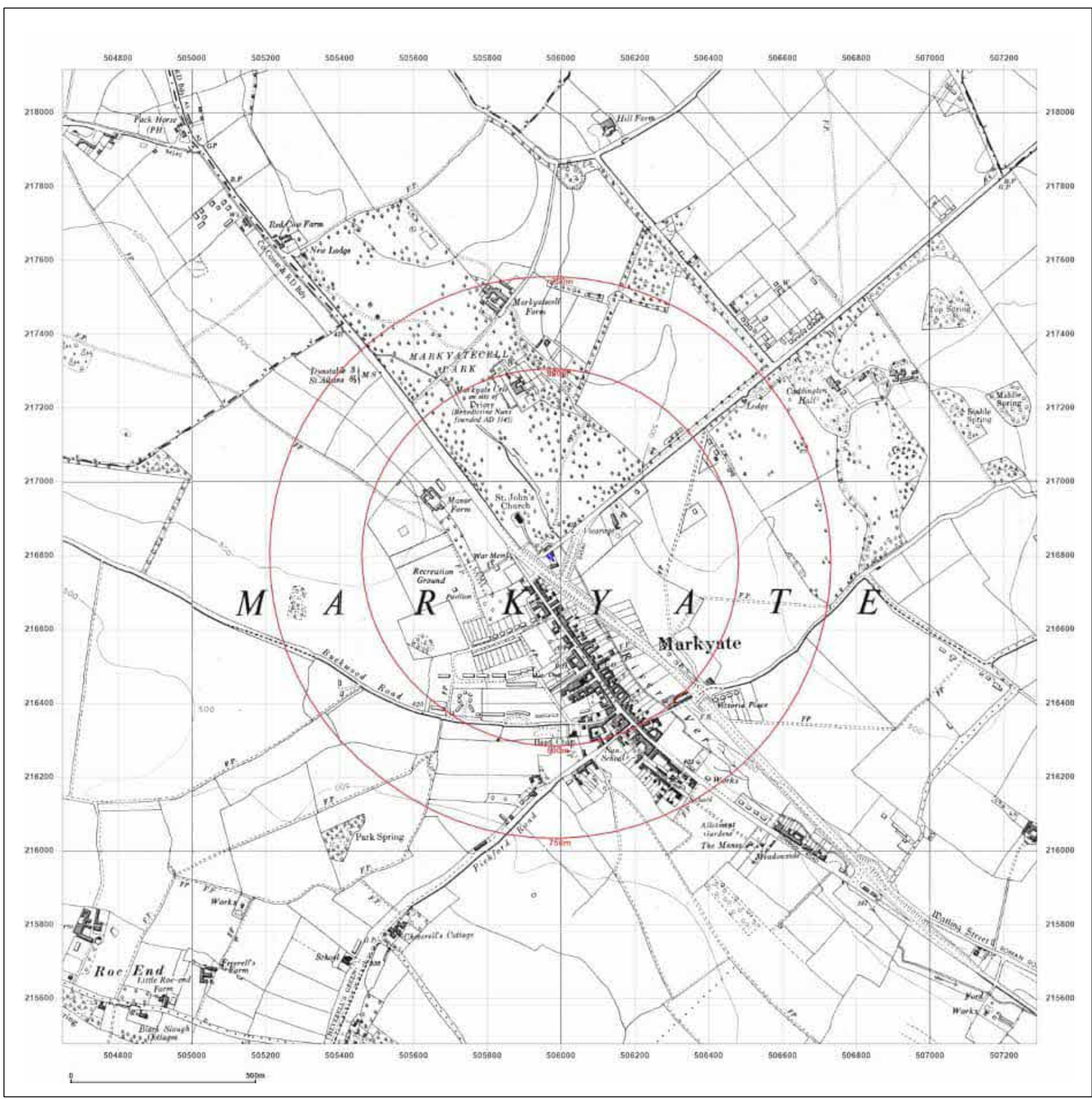


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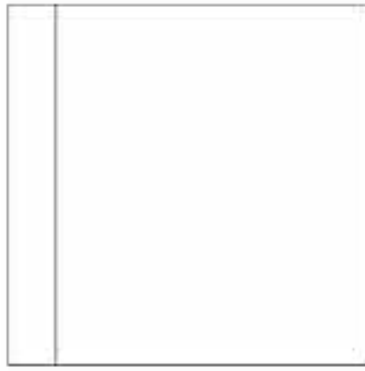
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Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: Provisional

Map date: 1960

Scale: 1:10,560

Printed at: 1:10,560

Surveyed N/A
Revised 1959
Edition N/A
Copyright 1960
Levelled N/A

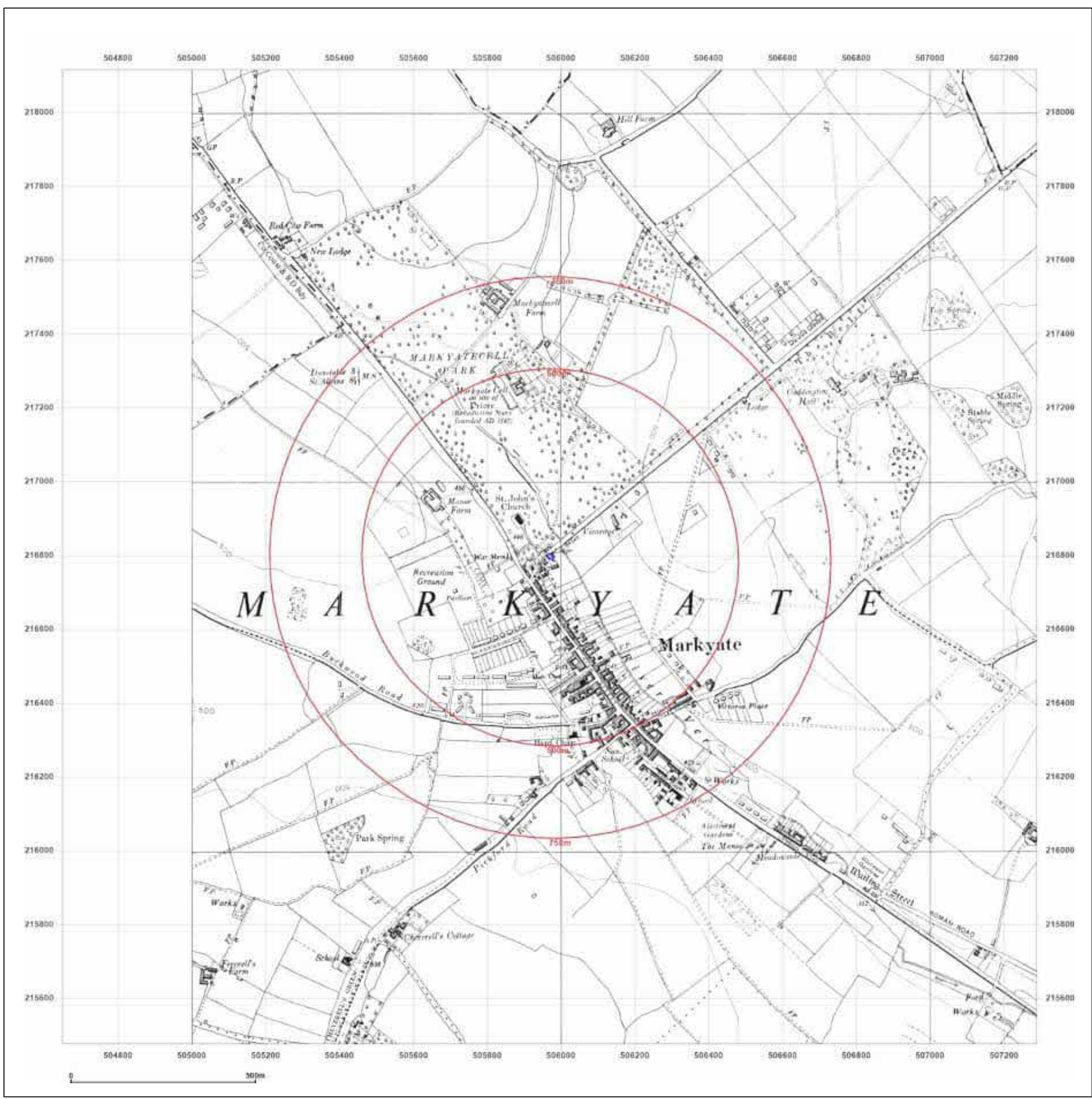


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Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 1975

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1972
Revised 1975
Edition N/A
Copyright 1975
Levelled 1971

Surveyed 1973
Revised 1974
Edition N/A
Copyright 1975
Levelled 1971

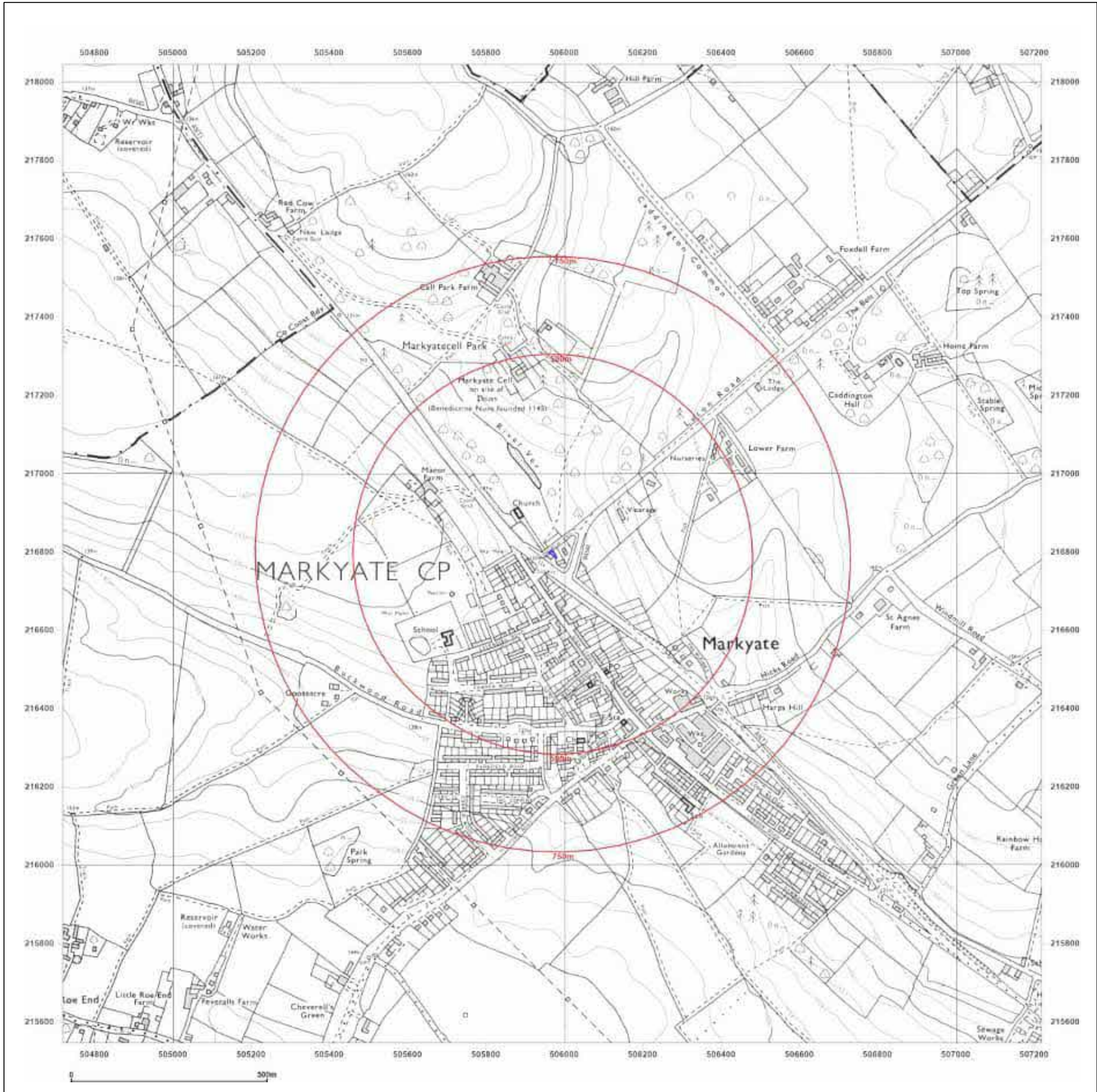


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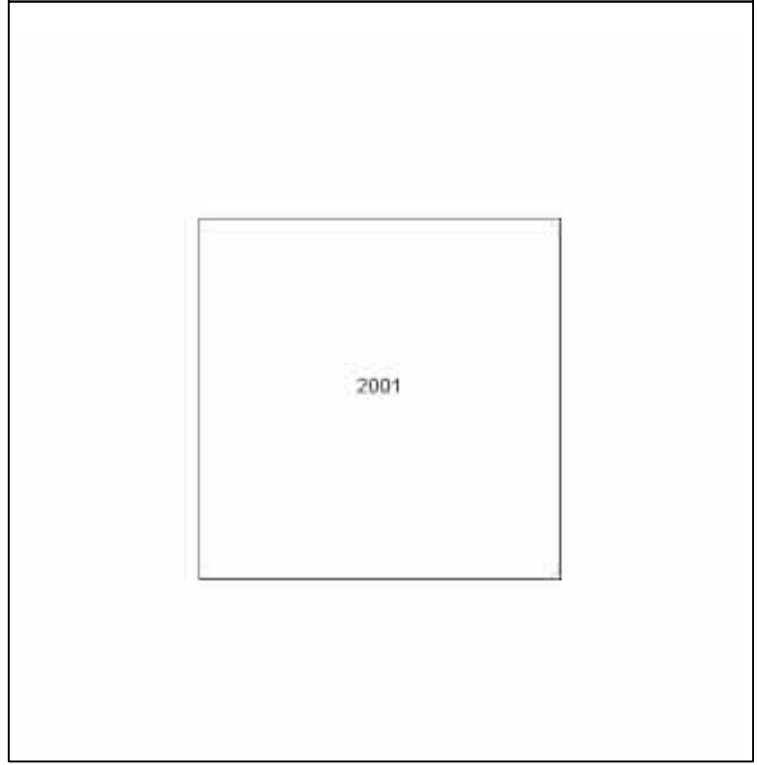
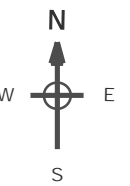
Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

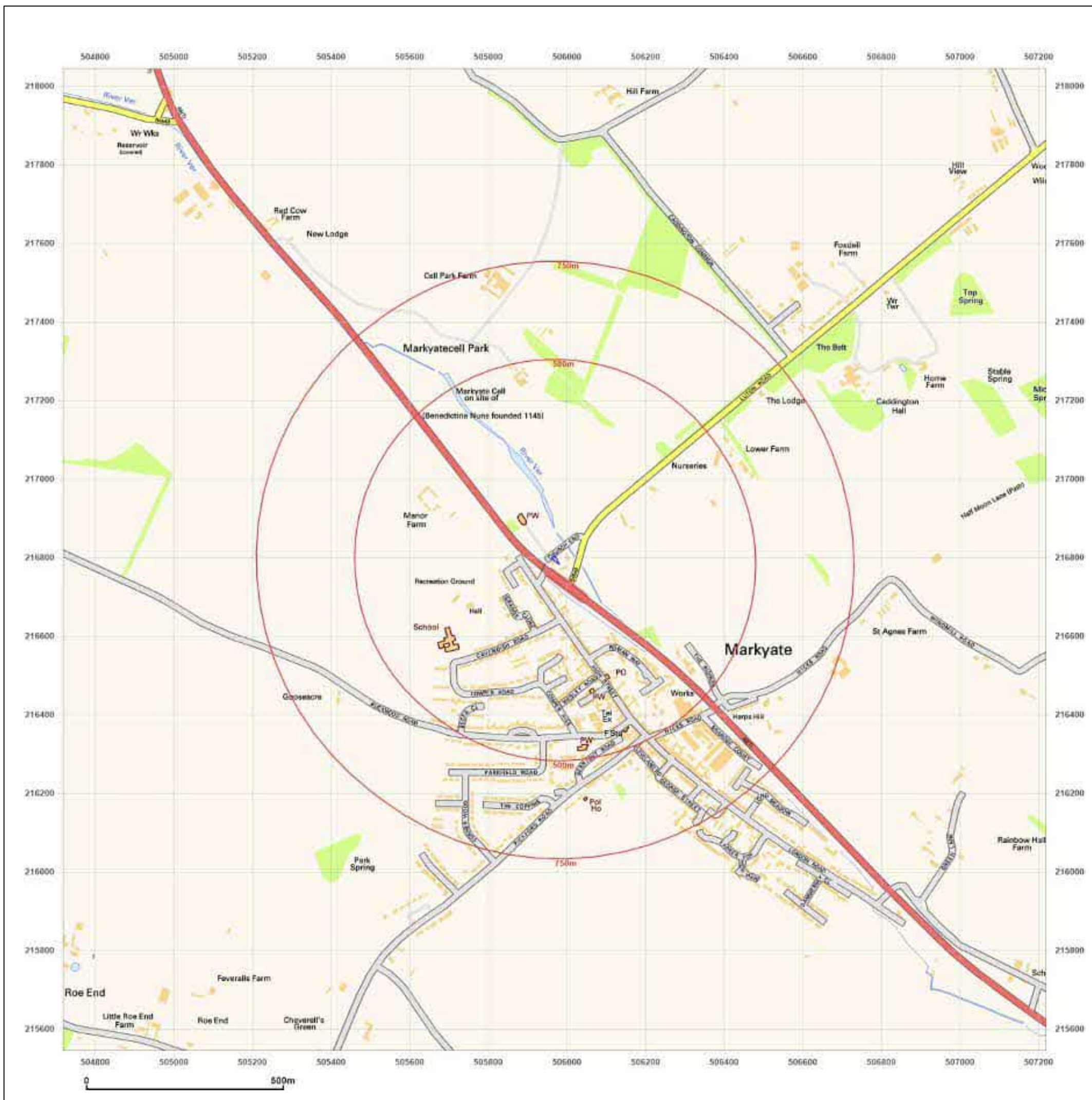


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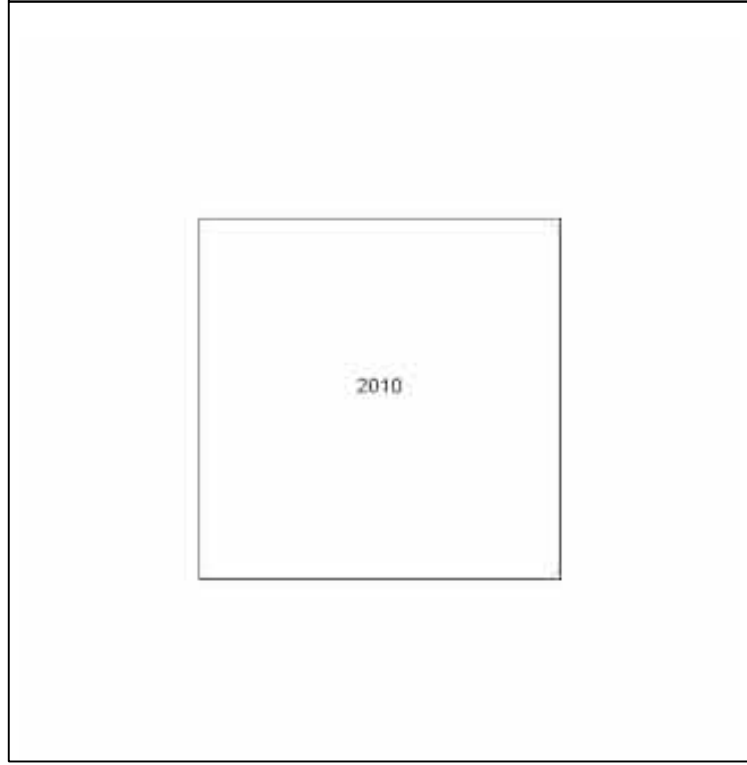
Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

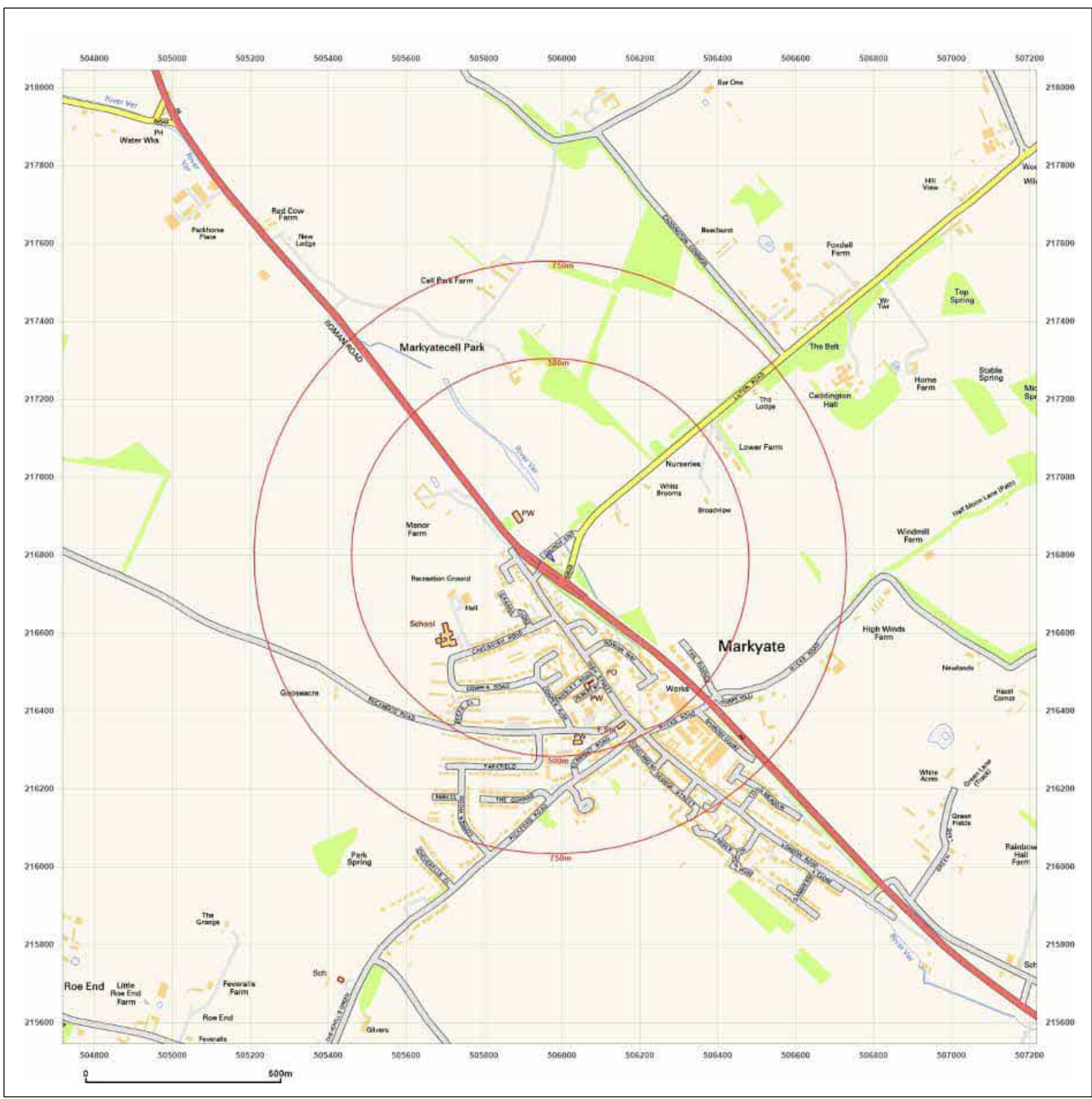


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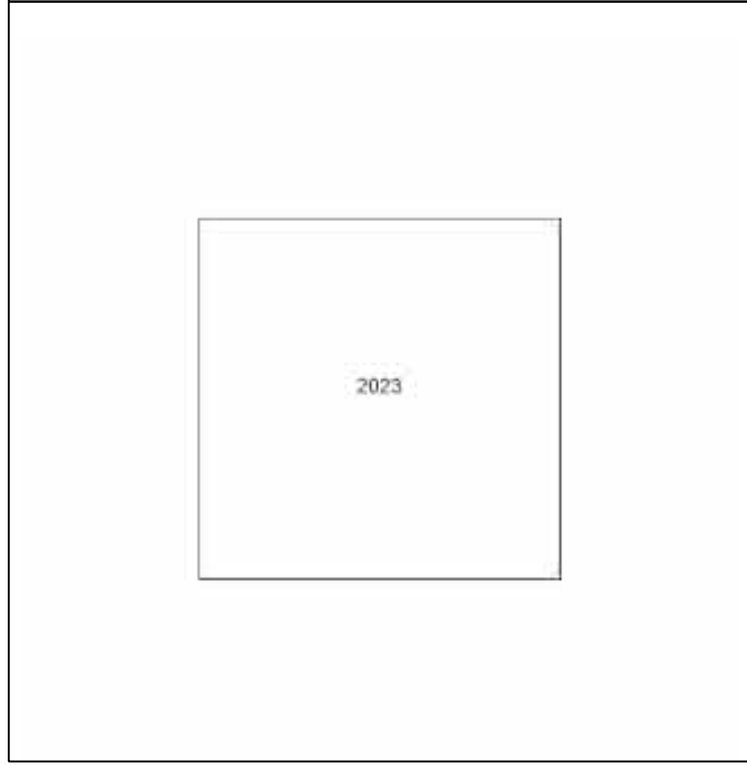
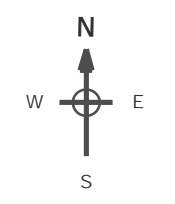


Site Details

10, CHURCH END, MARKYATE,
ST ALBANS, AL3 8PY

Client Ref: PH1-2023-000075
Report Ref: GS-QTR-MBW-K6X-TW8
Grid Ref: 505969, 216795

Map Name: National Grid
Map date: 2023
Scale: 1:10,000
Printed at: 1:10,000

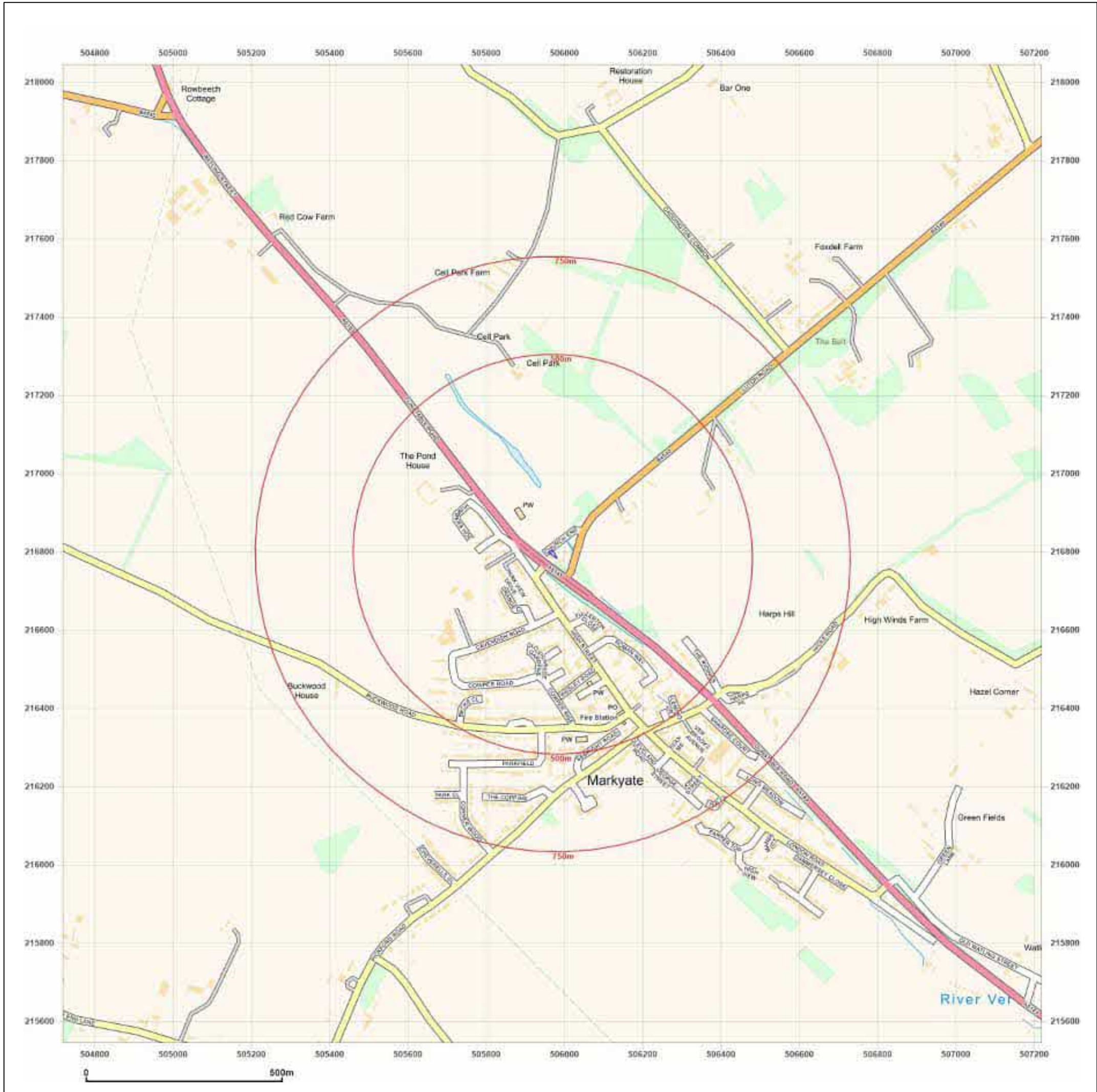


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20 APPENDIX 4 – ENVIRONMENTAL SCREENING REPORT

10, CHURCH END, MARKYATE, ST ALBANS, AL3 8PY

Order Details

Date: 25/08/2023
Your ref: PH1-2023-000075
Our Ref: GS-4TV-42Y-L3X-OHN

Site Details

Location: 505968 216797
Area: 0.01 ha
Authority: [Dacorum Council](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.13 >](#)

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Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	0	0	2	9	-
15 >	1.2 >	Historical tanks >	0	0	0	1	-
15 >	1.3 >	Historical energy features >	0	0	2	2	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	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
17 >	2.1 >	Historical industrial land uses >	0	0	3	12	-
18 >	2.2 >	Historical tanks >	0	0	0	1	-
18 >	2.3 >	Historical energy features >	0	0	3	6	-
19	2.4	Historical petrol stations	0	0	0	0	-
19	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
20	3.1	Active or recent landfill	0	0	0	0	-
20	3.2	Historical landfill (BGS records)	0	0	0	0	-
21	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
21	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
21	3.5	Historical waste sites	0	0	0	0	-
21	3.6	Licensed waste sites	0	0	0	0	-
21 >	3.7 >	Waste exemptions >	0	0	1	6	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
23 >	4.1 >	Recent industrial land uses >	0	1	6	-	-
24	4.2	Current or recent petrol stations	0	0	0	0	-
24	4.3	Electricity cables	0	0	0	0	-
24	4.4	Gas pipelines	0	0	0	0	-
25	4.5	Sites determined as Contaminated Land	0	0	0	0	-



25	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
25	4.7	Regulated explosive sites	0	0	0	0	-
25	4.8	Hazardous substance storage/usage	0	0	0	0	-
25	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
26	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
26	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
26	4.12	Radioactive Substance Authorisations	0	0	0	0	-
26	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
26	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
27	4.15	Pollutant release to public sewer	0	0	0	0	-
27	4.16	List 1 Dangerous Substances	0	0	0	0	-
27	4.17	List 2 Dangerous Substances	0	0	0	0	-
27	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
27	4.19	Pollution inventory substances	0	0	0	0	-
28	4.20	Pollution inventory waste transfers	0	0	0	0	-
28	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
29 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
31 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
32 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
33 >	5.4 >	<u>Groundwater vulnerability- soluble rock risk ></u>	Identified (within 0m)				
34	5.5	Groundwater vulnerability- local information	None (within 0m)				
35 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	6
37	5.7	Surface water abstractions	0	0	0	0	0
37 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	4
38 >	5.9 >	<u>Source Protection Zones ></u>	1	0	1	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	3	9	-	-



42 >	6.2 >	Surface water features >	0	2	2	-	-
42 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
42 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
43 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
44 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
45 >	7.2 >	Historical Flood Events >	0	1	2	-	-
45 >	7.3 >	Flood Defences >	0	0	3	-	-
46 >	7.4 >	Areas Benefiting from Flood Defences >	0	2	1	-	-
46 >	7.5 >	Flood Storage Areas >	0	0	1	-	-
47 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
48 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				

Page	Section	Surface water flooding >					
49 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				

Page	Section	Groundwater flooding >					
51 >	9.1 >	Groundwater flooding >	High (within 50m)				

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
52	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
53	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
53	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
53	10.4	Special Protection Areas (SPA)	0	0	0	0	0
53	10.5	National Nature Reserves (NNR)	0	0	0	0	0
54	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
54 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	7
54	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
55	10.10	Marine Conservation Zones	0	0	0	0	0
55 >	10.11 >	Green Belt >	1	0	0	0	1
55	10.12	Proposed Ramsar sites	0	0	0	0	0

56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
56	10.15	Nitrate Sensitive Areas	0	0	0	0	0
56	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
57 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
58	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
59	11.1	World Heritage Sites	0	0	0	-	-
60 >	11.2 >	Area of Outstanding Natural Beauty >	0	1	0	-	-
60	11.3	National Parks	0	0	0	-	-
60 >	11.4 >	Listed Buildings >	0	2	11	-	-
61 >	11.5 >	Conservation Areas >	0	1	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62 >	11.7 >	Registered Parks and Gardens >	0	1	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64 >	12.3 >	Tree Felling Licences >	0	4	1	-	-
64	12.4	Environmental Stewardship Schemes	0	0	0	-	-
65	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	13.1 >	Priority Habitat Inventory >	0	0	3	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
67	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
68 >	14.1 >	10k Availability >	Identified (within 500m)				
69	14.2	Artificial and made ground (10k)	0	0	0	0	-
70	14.3	Superficial geology (10k)	0	0	0	0	-



70	14.4	Landslip (10k)	0	0	0	0	-
71	14.5	Bedrock geology (10k)	0	0	0	0	-
71	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
72 >	15.1 >	50k Availability >	Identified (within 500m)				
73	15.2	Artificial and made ground (50k)	0	0	0	0	-
73	15.3	Artificial ground permeability (50k)	0	0	-	-	-
74 >	15.4 >	Superficial geology (50k) >	1	0	2	1	-
75 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
75	15.6	Landslip (50k)	0	0	0	0	-
75	15.7	Landslip permeability (50k)	None (within 50m)				
76 >	15.8 >	Bedrock geology (50k) >	1	0	2	0	-
77 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
77	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
78 >	16.1 >	BGS Boreholes >	0	0	1	-	-
Page	Section	Natural ground subsidence >					
79 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
81 >	17.2 >	Running sands >	Low (within 50m)				
83 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
85 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
86 >	17.5 >	Landslides >	Very low (within 50m)				
88 >	17.6 >	Ground dissolution of soluble rocks >	Very low (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
90	18.1	BritPits	0	0	0	0	-
91 >	18.2 >	Surface ground workings >	0	0	4	-	-
91	18.3	Underground workings	0	0	0	0	0
91	18.4	Underground mining extents	0	0	0	0	-
91	18.5	Historical Mineral Planning Areas	0	0	0	0	-

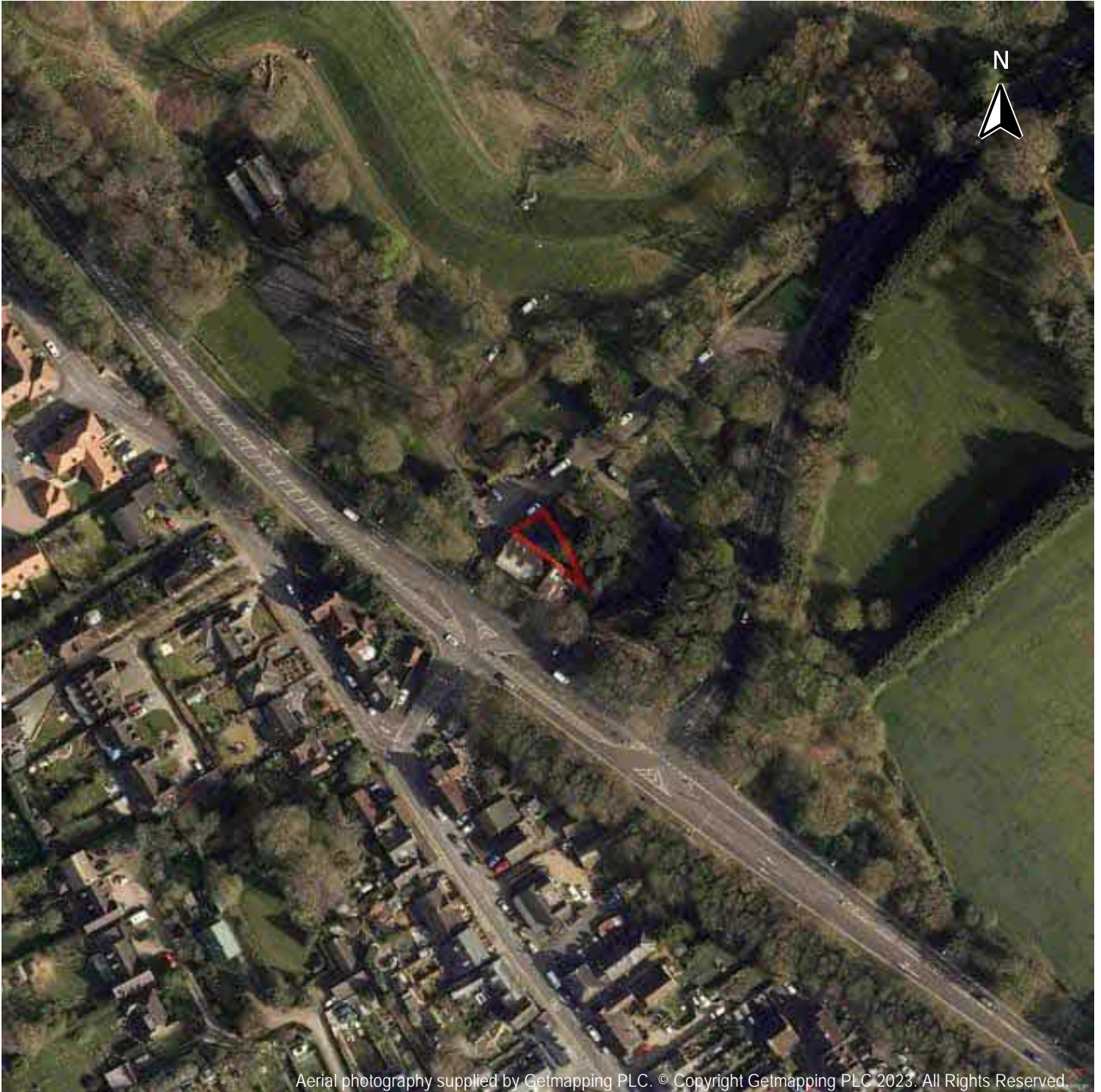


92 >	18.6 >	Non-coal mining >	0	1	0	0	3
92	18.7	JPB mining areas	None (within 0m)				
93	18.8	The Coal Authority non-coal mining	0	0	0	0	-
93	18.9	Researched mining	0	0	0	0	-
93	18.10	Mining record office plans	0	0	0	0	-
93	18.11	BGS mine plans	0	0	0	0	-
94	18.12	Coal mining	None (within 0m)				
94	18.13	Brine areas	None (within 0m)				
94	18.14	Gypsum areas	None (within 0m)				
94	18.15	Tin mining	None (within 0m)				
94	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
95	19.1	Natural cavities	0	0	0	0	-
96 >	19.2 >	Mining cavities >	0	0	0	0	1
96	19.3	Reported recent incidents	0	0	0	0	-
96	19.4	Historical incidents	0	0	0	0	-
97	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
98 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
100 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	6	-	-	-
100	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
102	22.3	Railway tunnels	0	0	0	-	-
102	22.4	Historical railway and tunnel features	0	0	0	-	-
102	22.5	Royal Mail tunnels	0	0	0	-	-



103	22.6	Historical railways	0	0	0	-	-
103	22.7	Railways	0	0	0	-	-
103	22.8	Crossrail 1	0	0	0	0	-
103	22.9	Crossrail 2	0	0	0	0	-
103	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 09/04/2020

Site Area: 0.01ha



Recent site history - 2015 aerial photograph



Capture Date: 07/09/2015

Site Area: 0.01ha



Recent site history - 2006 aerial photograph



Capture Date: 21/09/2006

Site Area: 0.01ha



Recent site history - 2000 aerial photograph

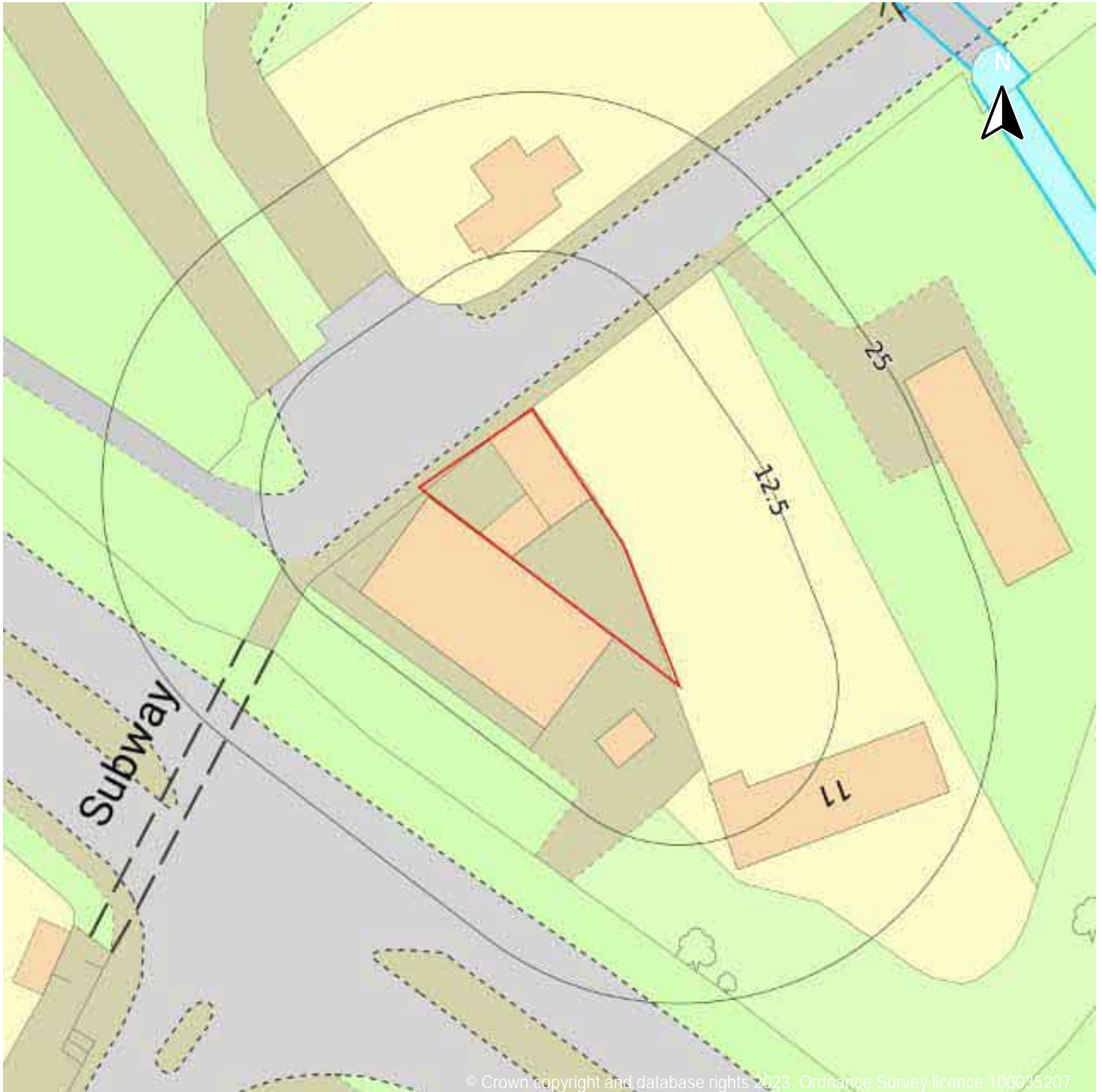


Capture Date: 10/06/2000

Site Area: 0.01ha



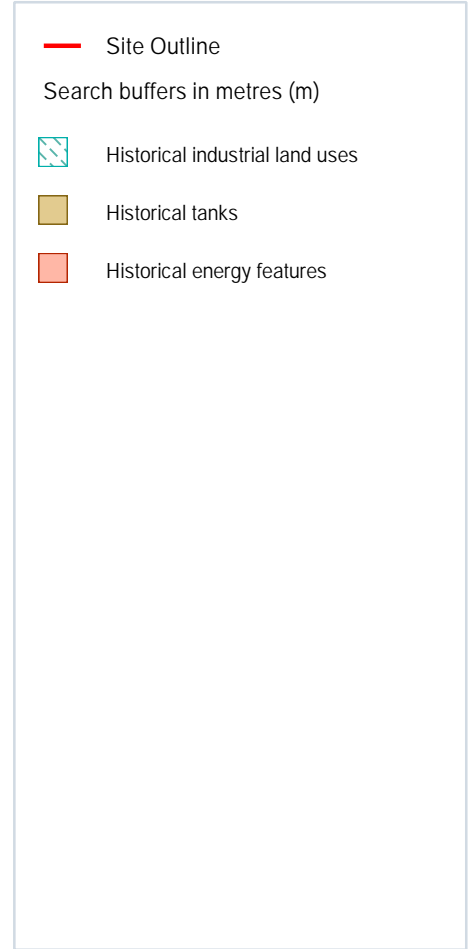
OS MasterMap site plan



Site Area: 0.01ha



1 Past land use



1.1 Historical industrial land uses

Records within 500m

11

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 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
A	168m SW	Cemetery	1922 - 1946	2117765

ID	Location	Land use	Dates present	Group ID
A	177m SW	Cemetery	1920	2094207
1	258m S	Unspecified Pit	1922	2040833
C	338m S	Brewery	1885 - 1888	2079158
C	359m S	Brewery	1879	2083585
4	425m SE	Unspecified Works	1973	2046233
D	440m S	Refuse Heap	1922 - 1946	2090360
5	444m SE	Fire Station	1973	2057918
6	450m NE	Nurseries	1973	2058595
D	454m S	Shale Tip	1920	2062952
8	489m SW	Refuse Heap	1922 - 1946	2083738

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

1

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 ungrouped 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
3	359m NW	Unspecified Tank	1880	343225

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

4

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 ungrouped 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
B	199m S	Electricity Substation	1986 - 1995	229385
B	200m S	Electricity Substation	1970	236325
2	331m SW	Electricity Substation	1986 - 1995	232585
7	478m S	Electricity Substation	1958 - 1996	236738

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 ungrouped 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 ungrouped 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

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2.1 Historical industrial land uses

Records within 500m **15**

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 17](#) >

ID	Location	Land Use	Date	Group ID
A	168m SW	Cemetery	1946	2117765
A	168m SW	Cemetery	1922	2117765
A	177m SW	Cemetery	1920	2094207

ID	Location	Land Use	Date	Group ID
1	258m S	Unspecified Pit	1922	2040833
D	338m S	Brewery	1885	2079158
D	342m S	Brewery	1888	2079158
D	359m S	Brewery	1879	2083585
3	425m SE	Unspecified Works	1973	2046233
E	440m S	Refuse Heap	1946	2090360
E	440m S	Refuse Heap	1922	2090360
4	444m SE	Fire Station	1973	2057918
5	450m NE	Nurseries	1973	2058595
E	454m S	Shale Tip	1920	2062952
G	489m SW	Refuse Heap	1946	2083738
G	489m SW	Refuse Heap	1922	2083738

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

1

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 17](#) >

ID	Location	Land Use	Date	Group ID
2	359m NW	Unspecified Tank	1880	343225

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

9

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 17](#) >

ID	Location	Land Use	Date	Group ID
B	199m S	Electricity Substation	1986	229385
B	200m S	Electricity Substation	1970	236325
B	200m S	Electricity Substation	1995	229385
C	331m SW	Electricity Substation	1995	232585
C	331m SW	Electricity Substation	1986	232585
F	478m S	Electricity Substation	1996	236738
F	479m S	Electricity Substation	1981	236738
F	479m S	Electricity Substation	1958	236738
F	479m S	Electricity Substation	1992	236738

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



- 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 7

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 20](#) >

ID	Location	Site	Reference	Category	Sub-Category	Description
1	232m S	40 HIGH STREET ST ALBANS HERTFORDSHIRE AL3 8PB	EPR/K F0803X Z /A001	Treating waste exemption	Non- Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal



ID	Location	Site	Reference	Category	Sub-Category	Description
A	293m S	40, HIGH STREET, MARKYATE, ST. ALBANS, AL3 8PB	WEX118222	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	293m S	40, HIGH STREET, MARKYATE, ST. ALBANS, AL3 8PB	WEX255162	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	455m SE	1, HICKS ROAD, MARKYATE, ST. ALBANS, AL3 8LJ	WEX020378	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	455m SE	1, HICKS ROAD, MARKYATE, ST. ALBANS, AL3 8LJ	WEX342753	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	455m SE	-	WEX265334	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	455m SE	1 Hicks Road ST. ALBANS Hertfordshire AL3 8LJ	EPR/DE 5041C D/A001	Treating waste exemption	Non- Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal

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



4 Current industrial land use



— Site Outline

Search buffers in metres (m)

● Recent industrial land uses

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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 23](#) >

ID	Location	Company	Address	Activity	Category
1	4m SW	L & T Precision Engineering	-, Church End, Markyate, Hertfordshire, AL3 8PY	Precision Engineers	Engineering Services
2	91m W	Circadisc	Sunset, High Street, Markyate, Hertfordshire, AL3 8PD	Electronic Media	Industrial Products

ID	Location	Company	Address	Activity	Category
3	165m SW	Am-pm Pest Control	4, Grange Close, Markyate, Hertfordshire, AL3 8PU	Pest and Vermin Control	Contract Services
A	204m S	Electricity Sub Station	Hertfordshire, AL3	Electrical Features	Infrastructure and Facilities
A	222m S	C T R Media Ltd	32e, High Street, Markyate, Hertfordshire, AL3 8PB	Published Goods	Industrial Products
4	225m SW	Safe Access Scaffolding Ltd	17, Cavendish Road, Markyate, Hertfordshire, AL3 8PT	Construction and Tool Hire	Hire Services
A	233m S	Toppers Celebration Cakes & Cupcakes	32g, High Street, Markyate, Hertfordshire, AL3 8PB	Baking and Confectionery	Foodstuffs

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	0
---------------------	---

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

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

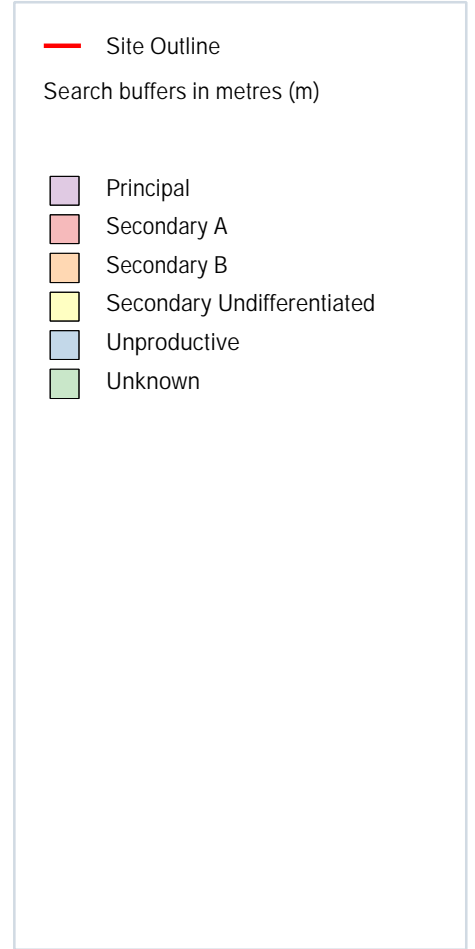
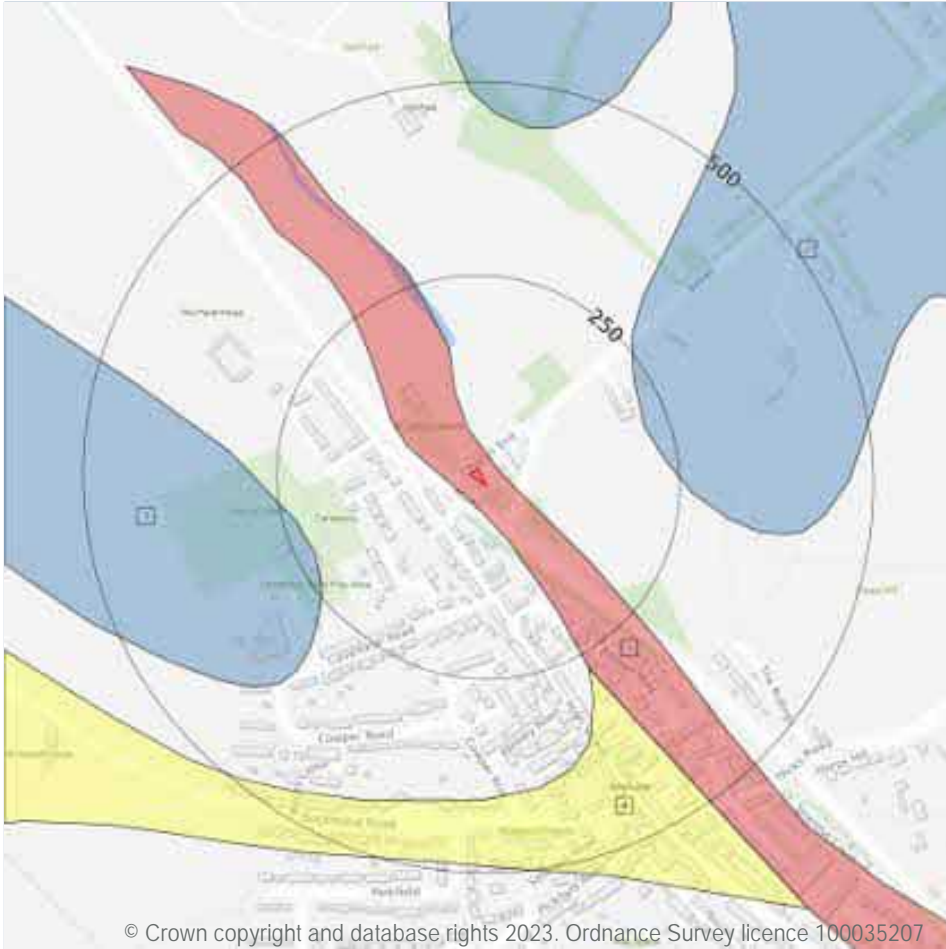
0

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



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5.1 Superficial aquifer

Records within 500m

4

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 29 >](#)

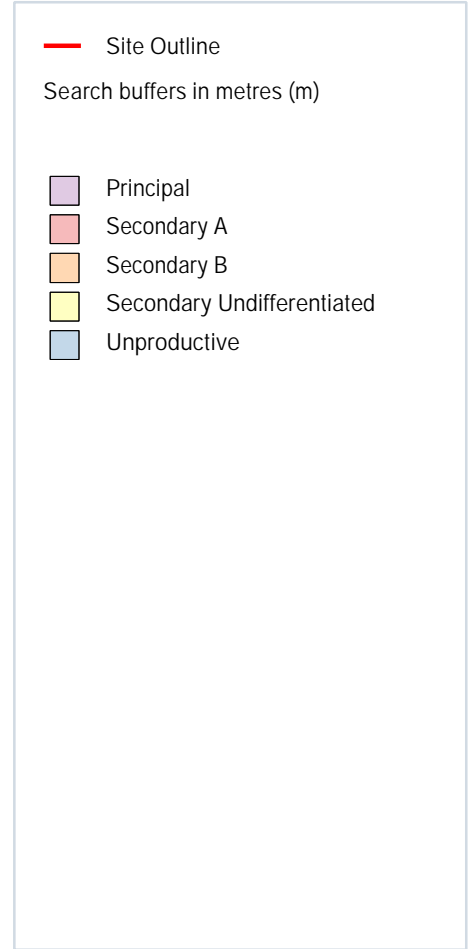
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	218m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

ID	Location	Designation	Description
3	226m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	271m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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



Bedrock aquifer



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5.2 Bedrock aquifer

Records within 500m

1

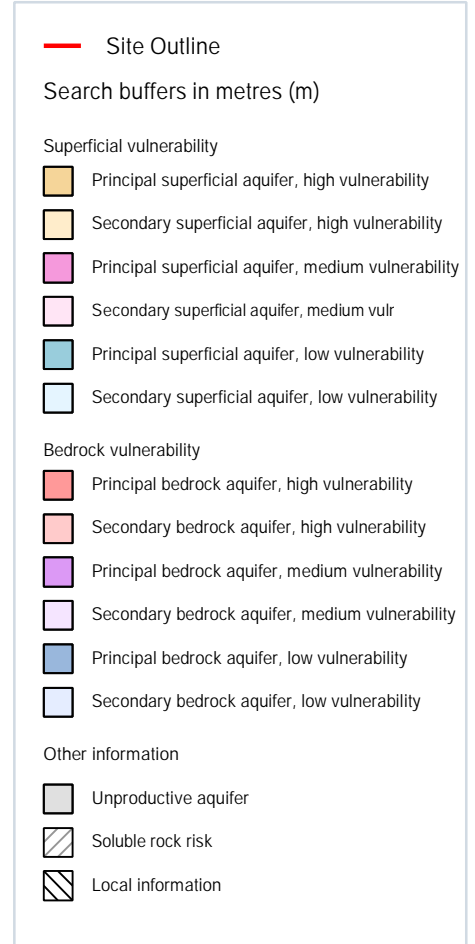
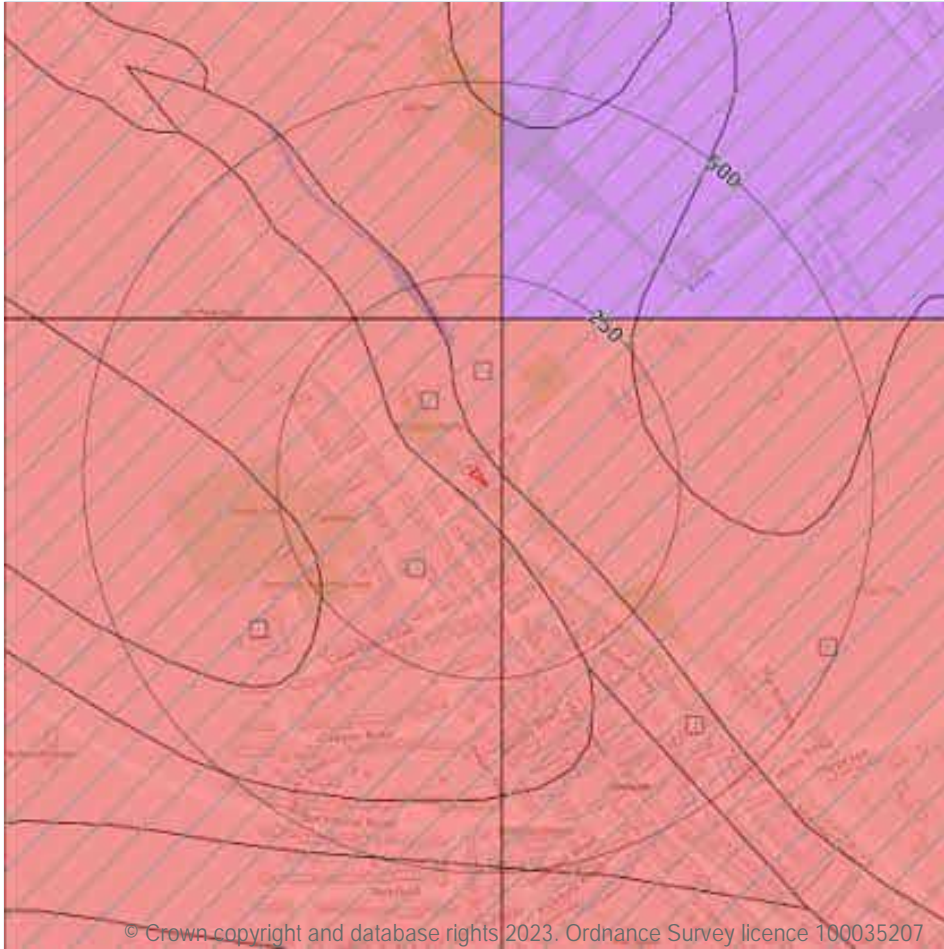
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 31](#) >

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major 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

5

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 32](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
3	20m E	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
5	21m NE	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
6	24m E	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
7	26m SW	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal 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
2	Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.	36.0%

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

6

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 35 >](#)

ID	Location	Details	
-	1369m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A2 Data Type: Point Name: Affinity Water Limited Easting: 504840 Northing: 217588	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -
-	1531m NW	Status: Historical Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION Data Type: Point Name: Affinity Water Limited Easting: 504800 Northing: 217800	Annual Volume (m ³): 6150403 Max Daily Volume (m ³): 36368.6 Original Application No: - Original Start Date: 08/05/1967 Expiry Date: - Issue No: 102 Version Start Date: 14/11/2012 Version End Date: -
-	1548m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A Data Type: Point Name: Affinity Water Limited Easting: 504854 Northing: 217884	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -
-	1579m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A1 Data Type: Point Name: Affinity Water Limited Easting: 504805 Northing: 217877	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -
-	1854m N	Status: Active Licence No: 28/39/28/0003 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: MILLFIELD FARM, CADDINGTON-BOREHOLE Data Type: Point Name: BREWER Easting: 505500 Northing: 218600	Annual Volume (m ³): 4092 Max Daily Volume (m ³): 22.73 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 101 Version Start Date: 11/08/2008 Version End Date: -



ID	Location	Details	
-	1854m N	Status: Historical Licence No: 28/39/28/0003 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT MILLFIELD FARM Data Type: Point Name: BREWER Easting: 505500 Northing: 218600	Annual Volume (m ³): 4092 Max Daily Volume (m ³): 22.73 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 11/10/1965 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	4
----------------------	---

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.

Features are displayed on the Abstractions and Source Protection Zones map on [page 35 >](#)

ID	Location	Details	
-	1369m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A2 Data Type: Point Name: Affinity Water Limited Easting: 504840 Northing: 217588	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -



ID	Location	Details	
-	1531m NW	Status: Historical Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION Data Type: Point Name: Affinity Water Limited Easting: 504800 Northing: 217800	Annual Volume (m ³): 6150403 Max Daily Volume (m ³): 36368.6 Original Application No: - Original Start Date: 08/05/1967 Expiry Date: - Issue No: 102 Version Start Date: 14/11/2012 Version End Date: -
-	1548m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A Data Type: Point Name: Affinity Water Limited Easting: 504854 Northing: 217884	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -
-	1579m NW	Status: Active Licence No: 28/39/28/0130 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: KENSWORTH LYNCH PUMPING STATION - POINT A1 Data Type: Point Name: Affinity Water Limited Easting: 504805 Northing: 217877	Annual Volume (m ³): 3877819 Max Daily Volume (m ³): 25003 Original Application No: NPS/WR/029577 Original Start Date: 08/05/1967 Expiry Date: - Issue No: 104 Version Start Date: 12/09/2018 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m

2

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on [page 35 >](#)

ID	Location	Type	Description
1	On site	2	Outer catchment
2	137m SW	3	Total catchment

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



5.10 Source Protection Zones (confined aquifer)

Records within 500m

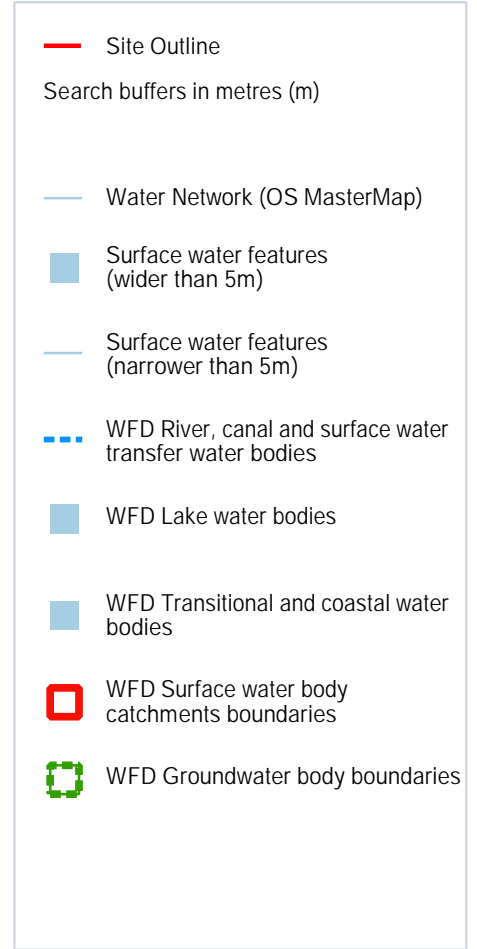
0

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



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6.1 Water Network (OS MasterMap)

Records within 250m

12

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
A	44m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver

ID	Location	Type of water feature	Ground level	Permanence	Name
2	46m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	46m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Ver
3	53m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
4	62m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
B	148m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
B	157m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
B	157m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	161m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
B	212m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver
7	219m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	219m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Ver

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

4

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
A	On site	River	Ver	GB106039029920	Colne	Colne

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
1	44m NE	River	Ver	GB106039029920 ↗	Moderate	Fail	Moderate	2019

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



6.5 WFD Groundwater bodies

Records on site

1

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.

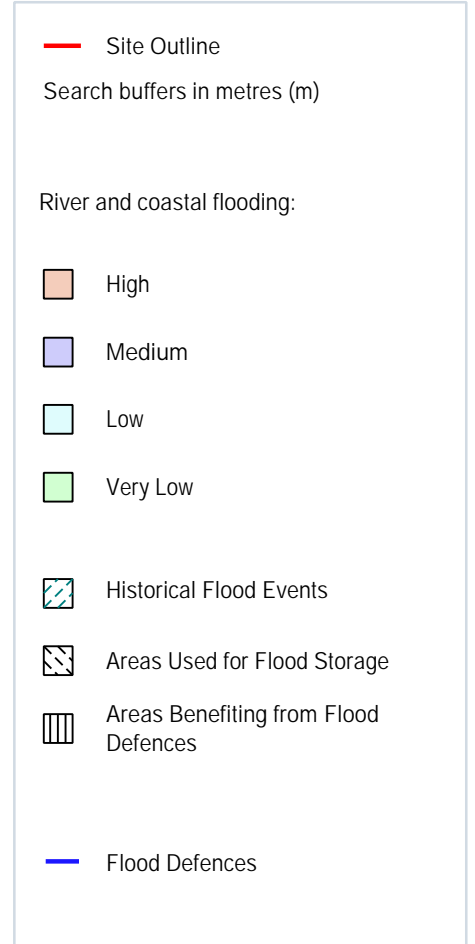
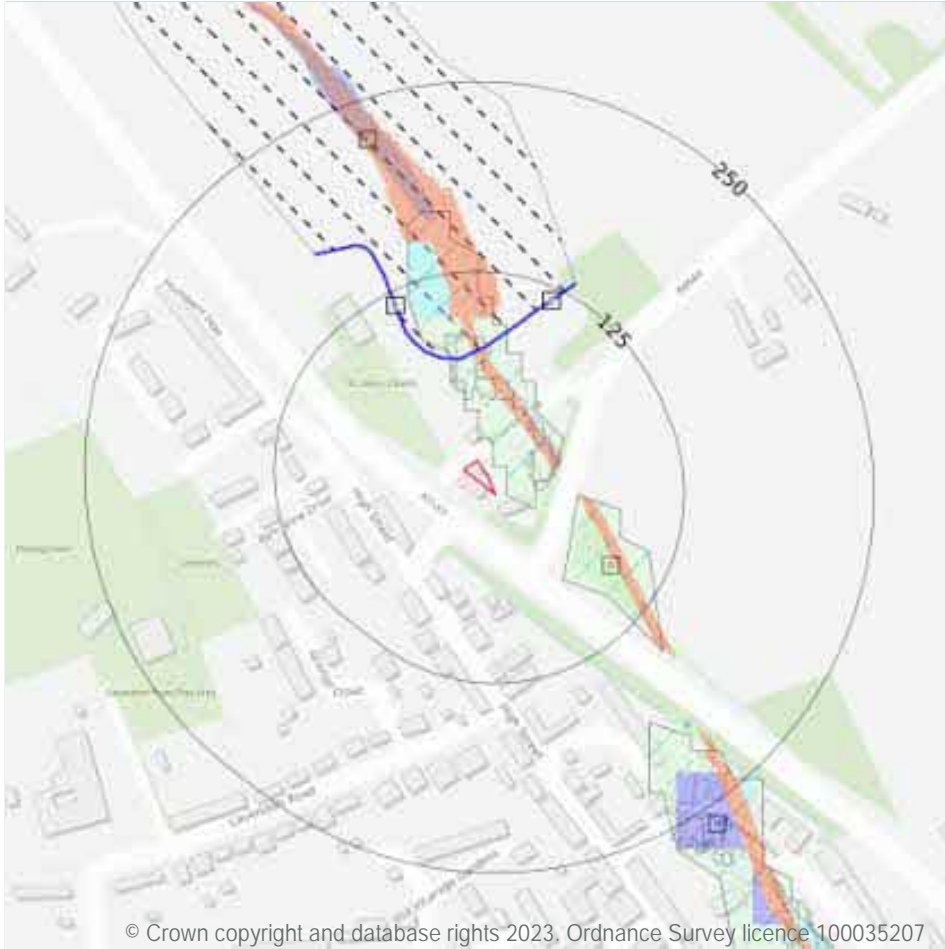
Features are displayed on the Hydrology map on [page 40](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Mid-Chilterns Chalk	GB40601G601200 ↗	Poor	Poor	Poor	2019

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 the sea

Records within 50m

5

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; 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). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 44](#) >

Distance	Flood risk category
On site	N/A
0 - 50m	High

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

7.2 Historical Flood Events

Records within 250m	3
---------------------	---

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.

Features are displayed on the River and coastal flooding map on [page 44 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
A	6m NE	06junesummer1993	1993-01-01 1993-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
D	54m E	06junesummer1993	1993-01-01 1993-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
H	182m SE	06junesummer1993	1993-01-01 1993-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial

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

7.3 Flood Defences

Records within 250m	3
---------------------	---

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.

Features are displayed on the River and coastal flooding map on [page 44 >](#)

ID	Location	Update
E	68m N	08/11/2022
A	74m N	08/11/2022



ID	Location	Update
2	100m N	08/11/2022

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	3
----------------------------	----------

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.

Features are displayed on the River and coastal flooding map on [page 44](#) >

ID	Location	
B	25m E	Area benefiting from flood defences
A	40m N	Area benefiting from flood defences
H	240m SE	Area benefiting from flood defences

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

7.5 Flood Storage Areas

Records within 250m	1
----------------------------	----------

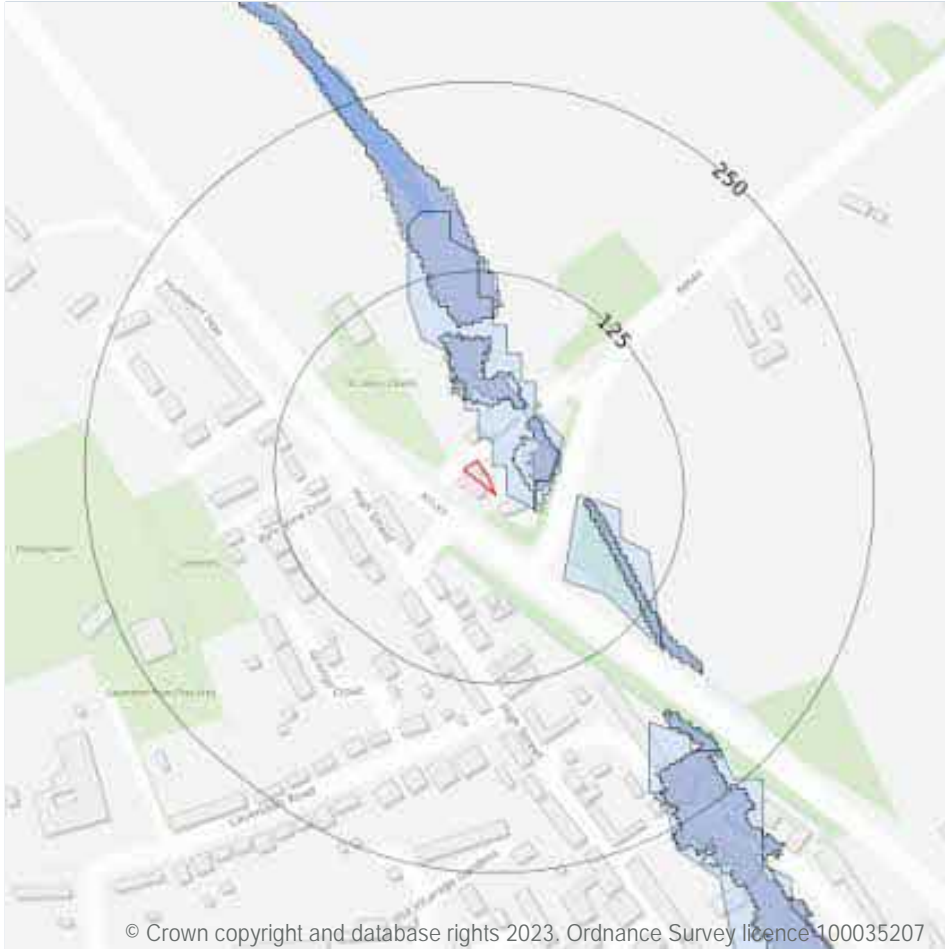
Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

Features are displayed on the River and coastal flooding map on [page 44](#) >

ID	Location	Update
F	68m N	Flood Storage Area

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

River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

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7.6 Flood Zone 2

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on [page 44](#) >

Location	Type
6m NE	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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.

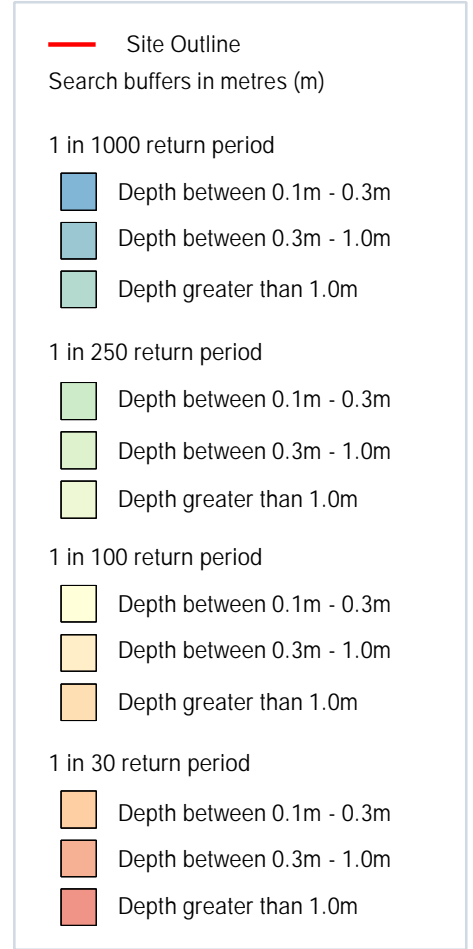
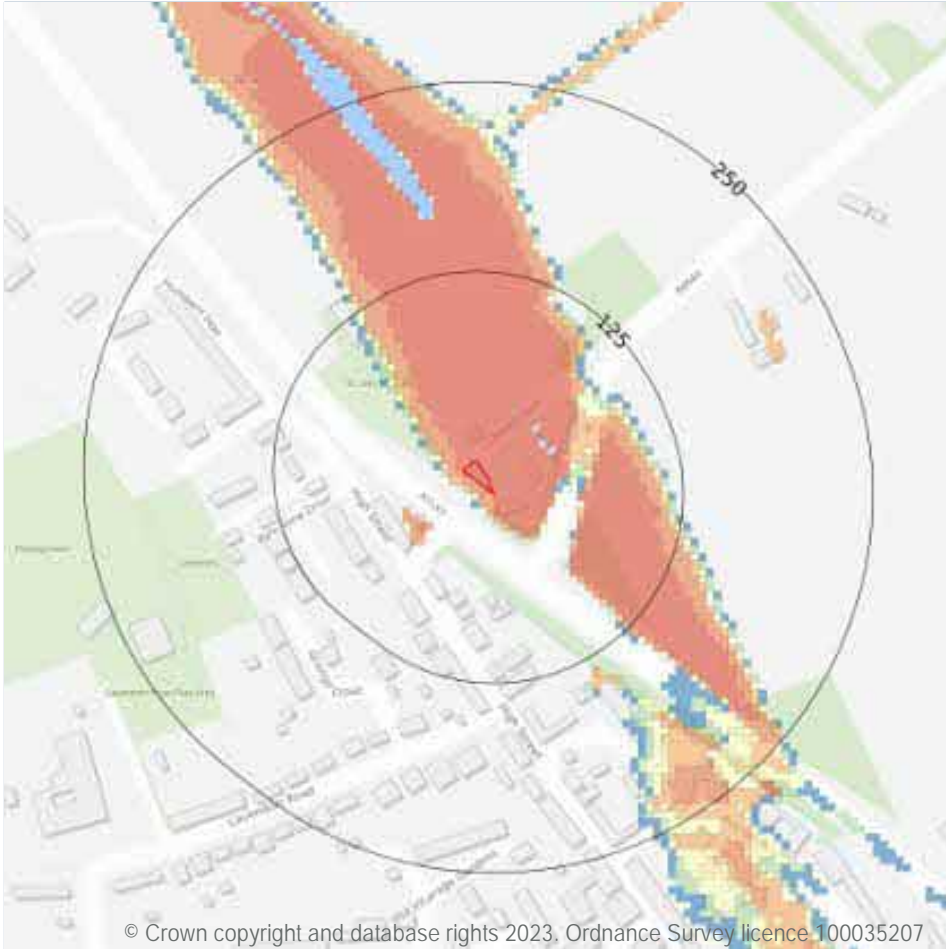
Features are displayed on the River and coastal flooding map on [page 44](#) >

Location	Type
25m E	Zone 3 - (Fluvial /Tidal Models)

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



8 Surface water flooding



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8.1 Surface water flooding

Highest risk on site

1 in 30 year, Greater than 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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.

Features are displayed on the Surface water flooding map on [page 49](#) >

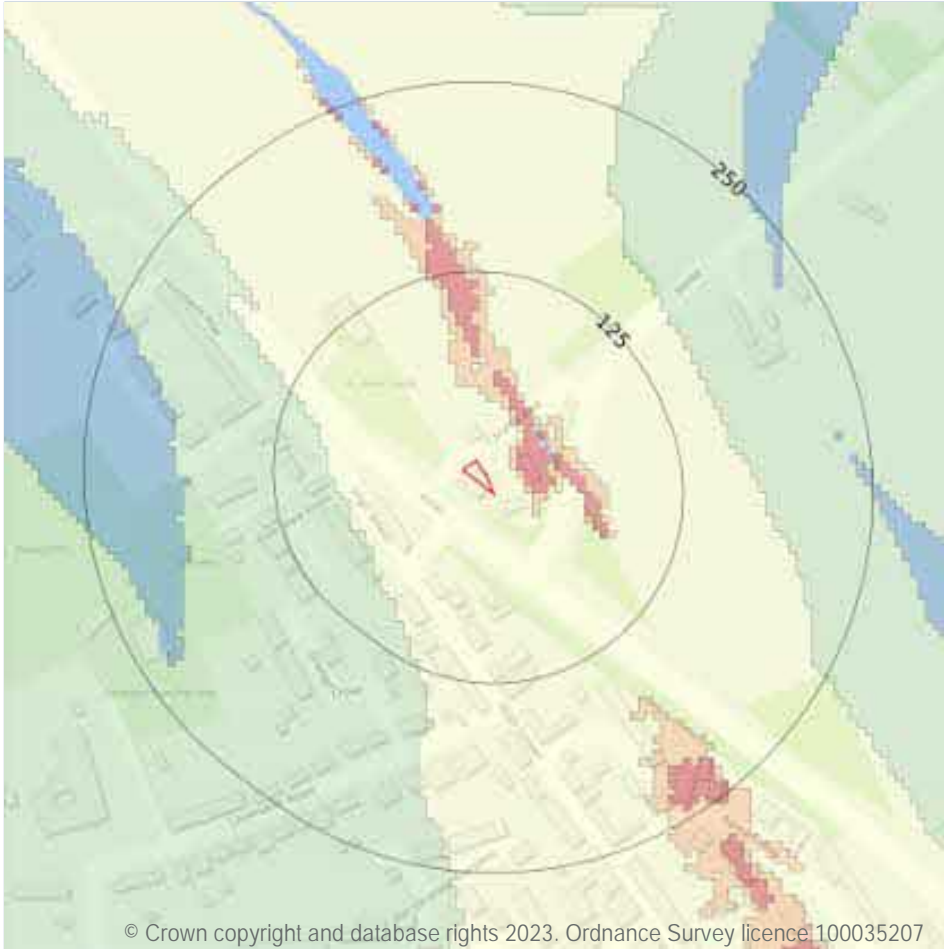
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

High

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 51](#) >

This data is sourced from Ambient Risk Analytics.

10 Environmental designations



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- Site Outline
- Search buffers in metres (m)
- Designated Ancient Woodland
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

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

0

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.

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

10.7 Designated Ancient Woodland

Records within 2000m

7

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 52 >](#)

ID	Location	Name	Woodland Type
3	849m SW	Unknown	Ancient & Semi-Natural Woodland
-	1316m E	Brownleys	Ancient & Semi-Natural Woodland
-	1560m S	Unknown	Ancient Replanted Woodland
-	1560m S	Unknown	Ancient Replanted Woodland
-	1706m SW	Unknown	Ancient & Semi-Natural Woodland
-	1865m S	Friendless Wood	Ancient & Semi-Natural Woodland
-	1933m W	Dedmansey/byslip Woods	Ancient Replanted 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 2

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

Features are displayed on the Environmental designations map on [page 52 >](#)

ID	Location	Name	Local Authority name
1	On site	London	Dacorum
2	832m NW	London	Central Bedfordshire

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

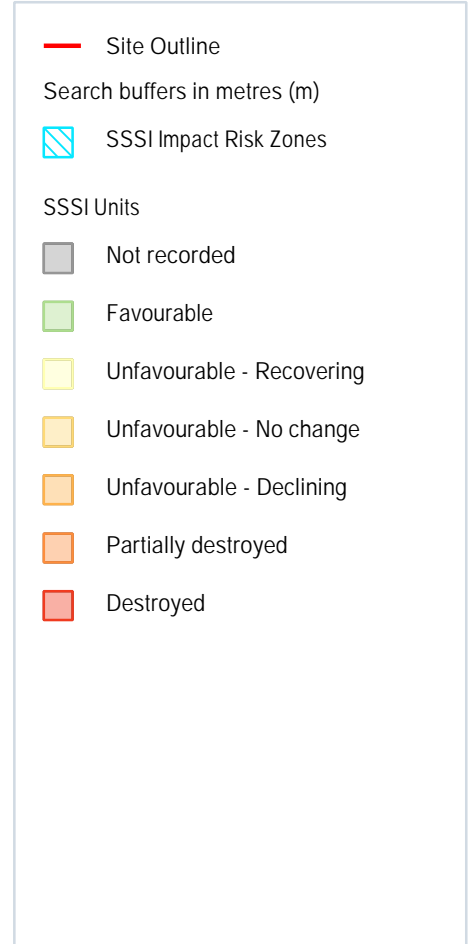
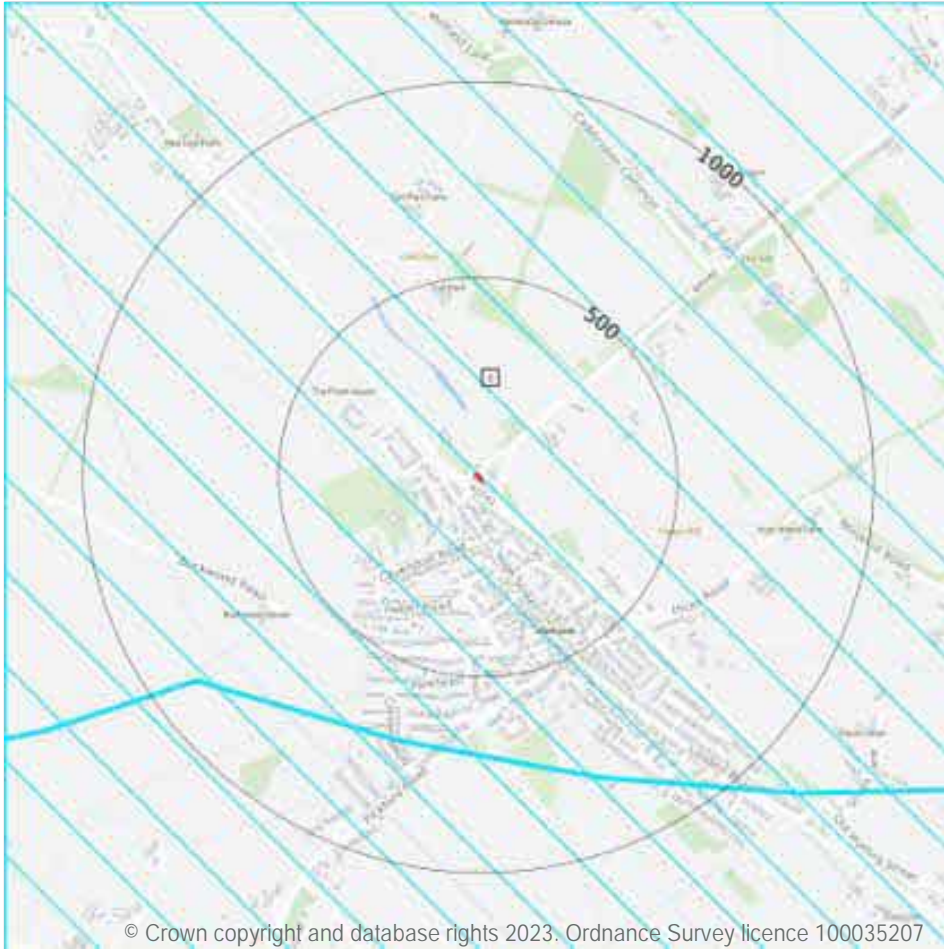
0

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 57](#) >

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Residential - Any residential developments with a total net gain in residential units.</p> <p>Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.</p> <p>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.</p> <p>Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p>

This data is sourced from Natural England.

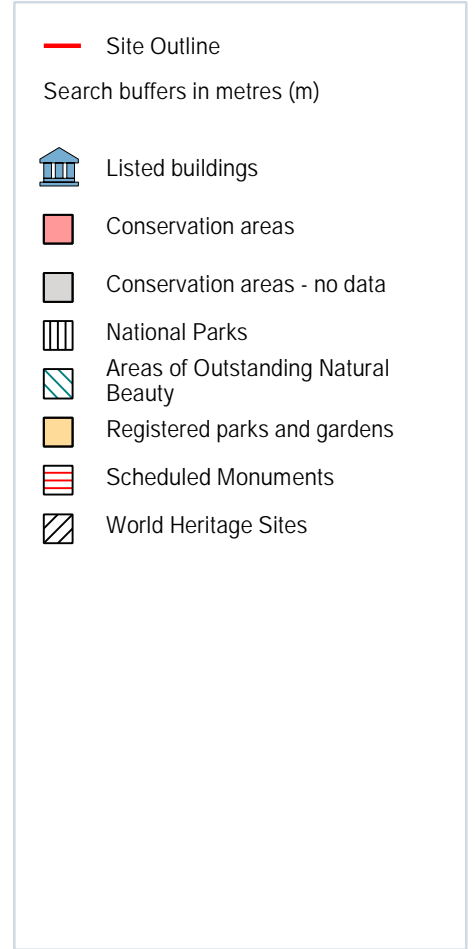
10.18 SSSI Units

Records within 2000m	0
----------------------	---

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.

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

1

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.

Features are displayed on the Visual and cultural designations map on [page 59 >](#)

ID	Location	NAME	Data Source
1	9m N	Chilterns	Natural England

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

13

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.

Features are displayed on the Visual and cultural designations map on [page 59 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
3	13m N	Cell Lodge And Adjoining Gates And Gatepiers	II	1173916	19/03/1987
4	15m SE	The Homestead	II	1348026	26/01/1967



ID	Location	Name	Grade	Reference Number	Listed date
5	63m SW	The White Hart	II	1173969	19/03/1987
B	74m S	The Old Maltings	II	1101243	26/01/1967
6	86m W	Markyate War Memorial	II	1420358	05/08/2014
B	89m SW	Numbers 4, 8 (The Grange), And 8a (Cleagrove)	II	1101209	19/03/1987
7	122m NW	Church Of St. John The Baptist	II*	1101241	26/01/1967
8	136m S	Shaw's Cottage	II	1101244	19/03/1987
A	165m S	Cavendish House	II	1295946	26/01/1967
9	192m S	Stable And Coachhouse Adjoining In Rear Yard At No 30	II	1101210	19/03/1987
C	225m S	Old Forge Cottage	II	1348046	19/03/1987
C	239m S	49, High Street	II	1348047	19/03/1987
C	239m SE	47, High Street	II	1101203	19/03/1987

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

11.5 Conservation Areas

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 59 >](#)

ID	Location	Name	District	Date of designation
A	43m SW	Markyate	Dacorum	06/10/1969

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

11.7 Registered Parks and Gardens

Records within 250m

1

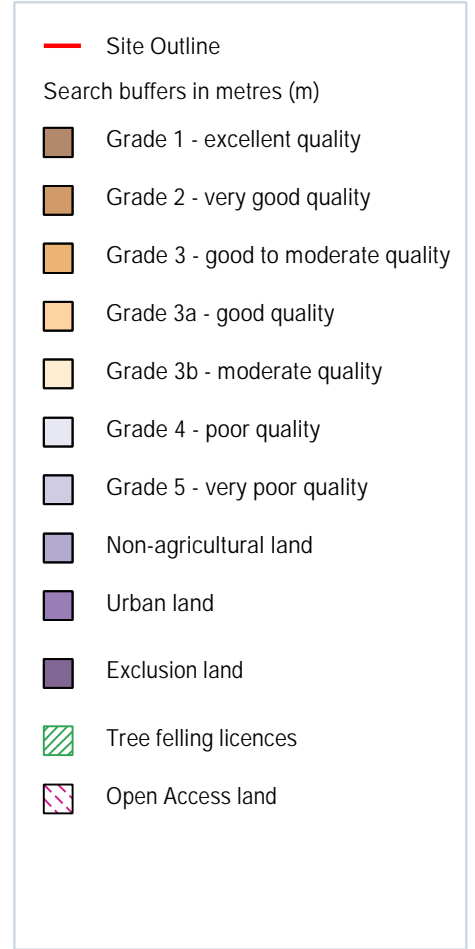
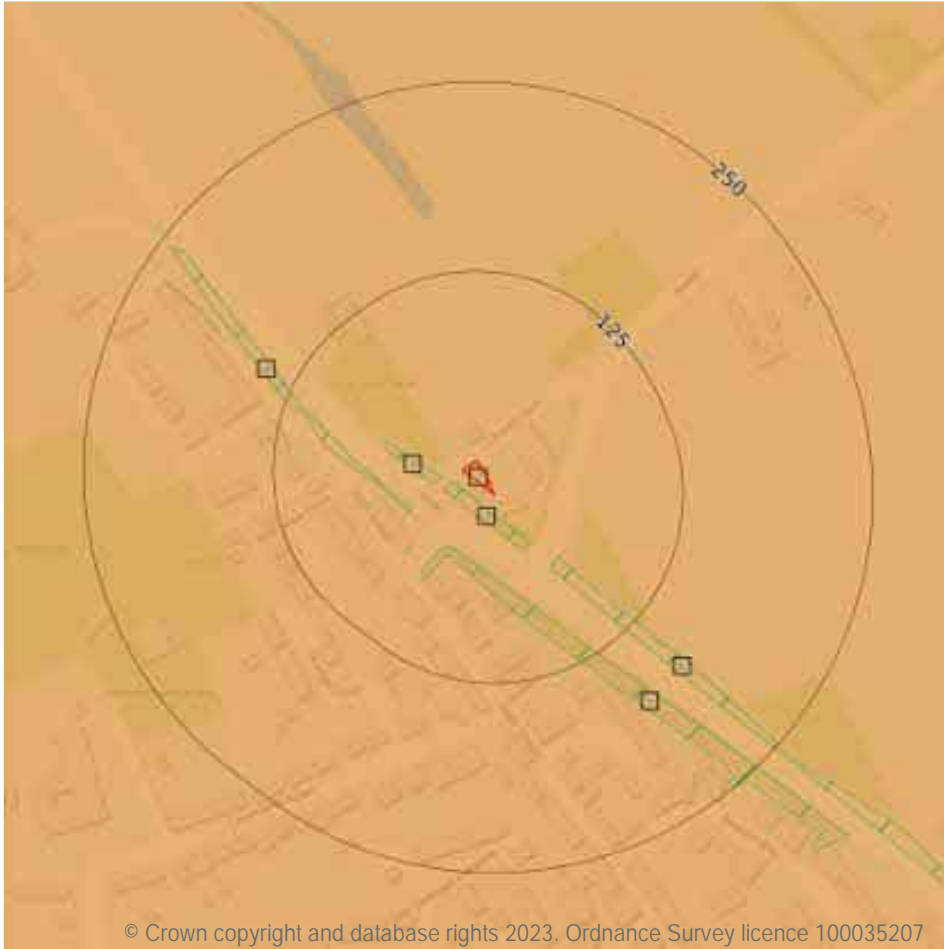
Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the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

Features are displayed on the Visual and cultural designations map on [page 59](#) >

ID	Location	Name	Grade
2	12m NW	Markyatecell Park	II

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

12 Agricultural designations



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 63](#) >

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

5

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.

Features are displayed on the Agricultural designations map on [page 63 >](#)

ID	Location	Description	Reference	Application date
2	10m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
3	15m W	Selective Fell/Thin (Unconditional)	018/366/15-16	-
4	44m SW	Selective Fell/Thin (Unconditional)	018/366/15-16	-
5	45m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
6	60m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-

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. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.



12.5 Countryside Stewardship Schemes

Records within 250m

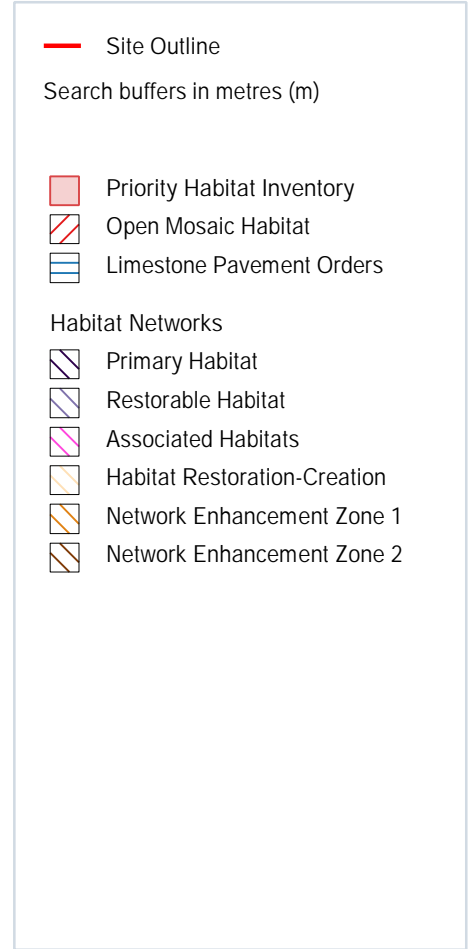
0

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



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13.1 Priority Habitat Inventory

Records within 250m

3

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

Features are displayed on the Habitat designations map on [page 66](#) >

ID	Location	Main Habitat	Other habitats
1	184m W	Traditional orchard	Overruled by Traditional Orchards HAP Inventory dataset
2	214m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	221m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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 68](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Partial	Partial	No coverage	TL01NE

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

0

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.

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

14.5 Bedrock geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

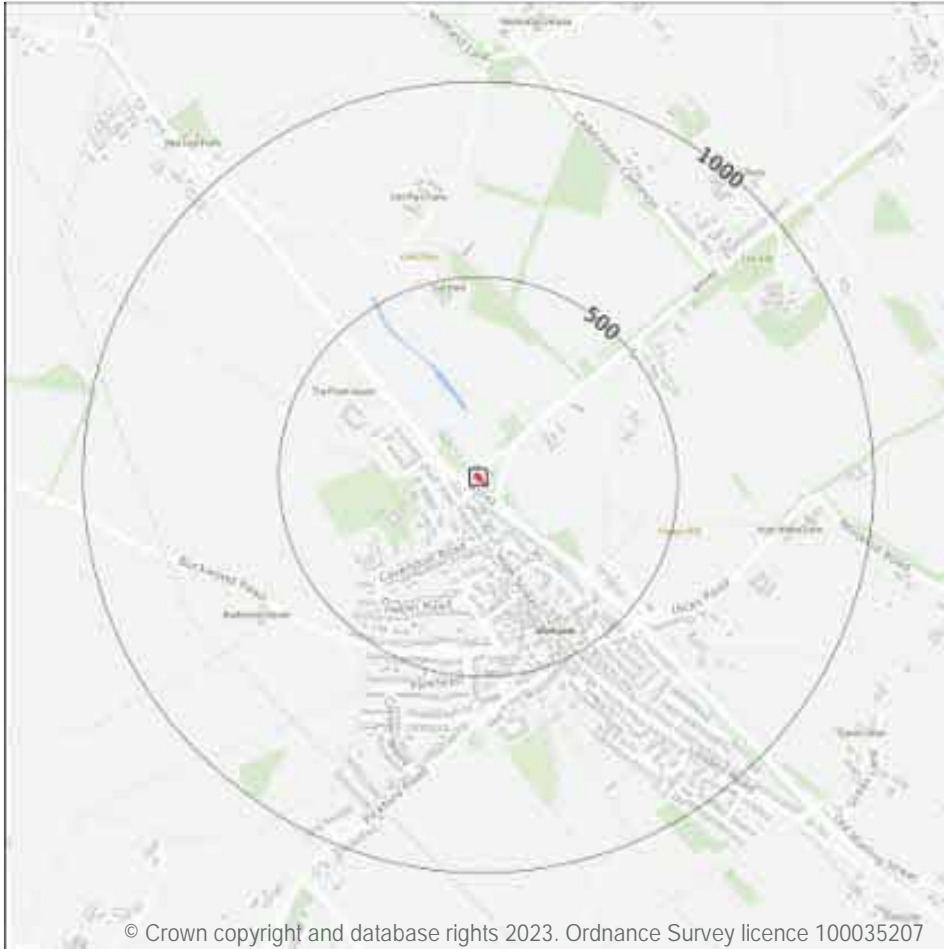
0

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 72 >](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW238_aylesbury_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

0

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.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

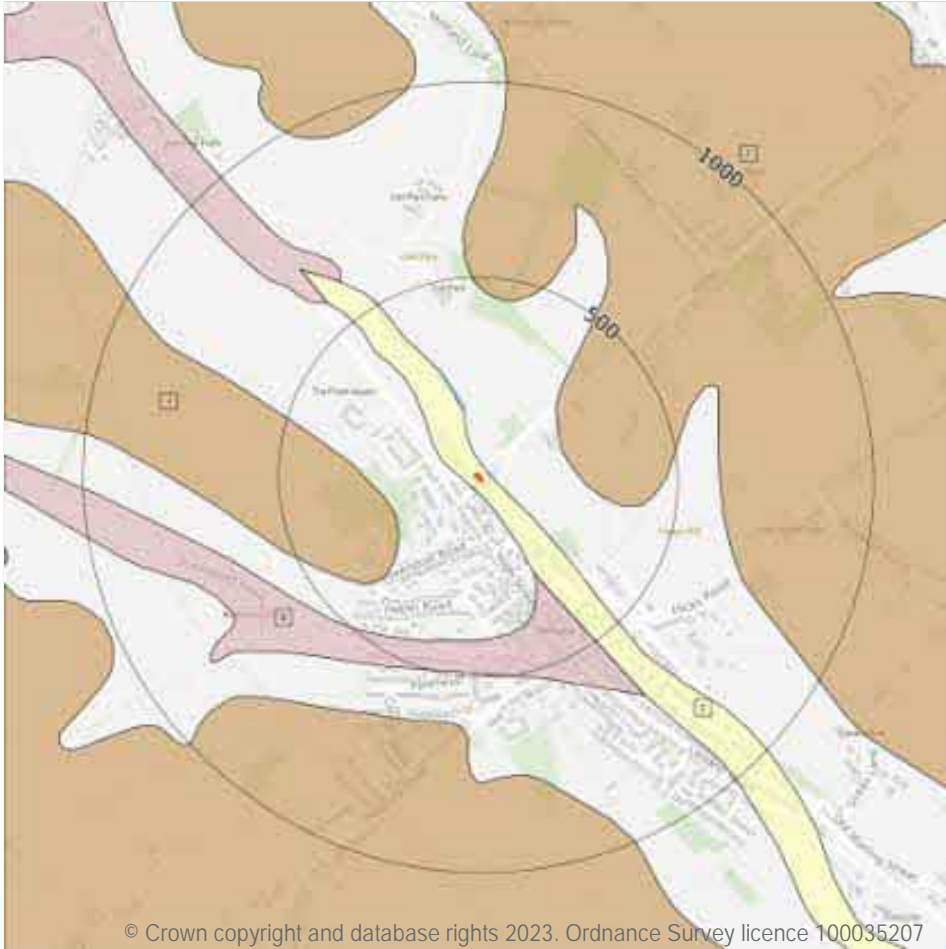
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

☒ Landslip (50k)

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

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15.4 Superficial geology (50k)

Records within 500m

4

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 74 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	218m E	QWF-X CZSV	CLAY-WITH-FLINTS FORMATION	CLAY, SILT, SAND AND GRAVEL
3	226m SW	QWF-X CZSV	CLAY-WITH-FLINTS FORMATION	CLAY, SILT, SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
4	271m SE	HEAD- XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1
--------------------	---

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low

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.

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15.8 Bedrock geology (50k)

Records within 500m

3

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 76 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	HNCK-CHLK	HOLYWELL NODULAR CHALK FORMATION AND NEW PIT CHALK FORMATION (UNDIFFERENTIATED) - CHALK	CENOMANIAN
2	158m NE	CKR-CHLK	CHALK ROCK MEMBER - CHALK	TURONIAN
3	188m NE	LESE-CHLK	LEWES NODULAR CHALK FORMATION AND SEAFORD CHALK FORMATION (UNDIFFERENTIATED) - CHALK	TURONIAN

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	Very High	Very High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m 0

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

This data is sourced from the British Geological Survey.

16 Boreholes



— Site Outline

Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

1

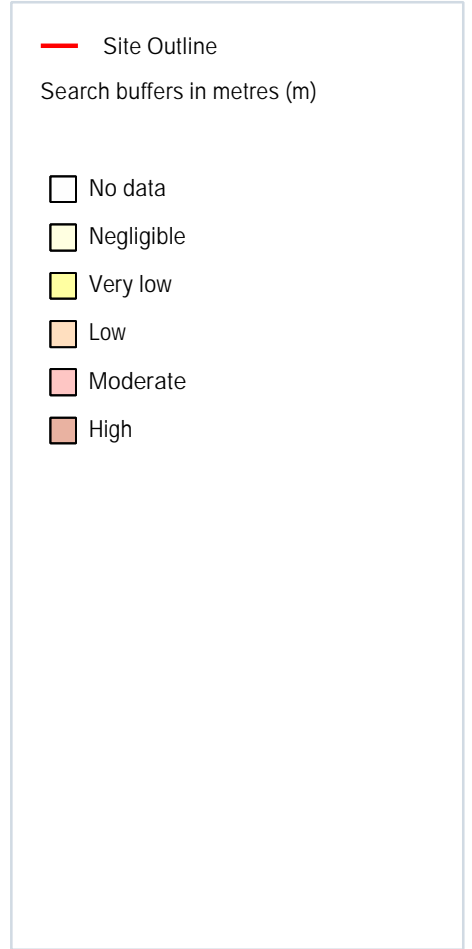
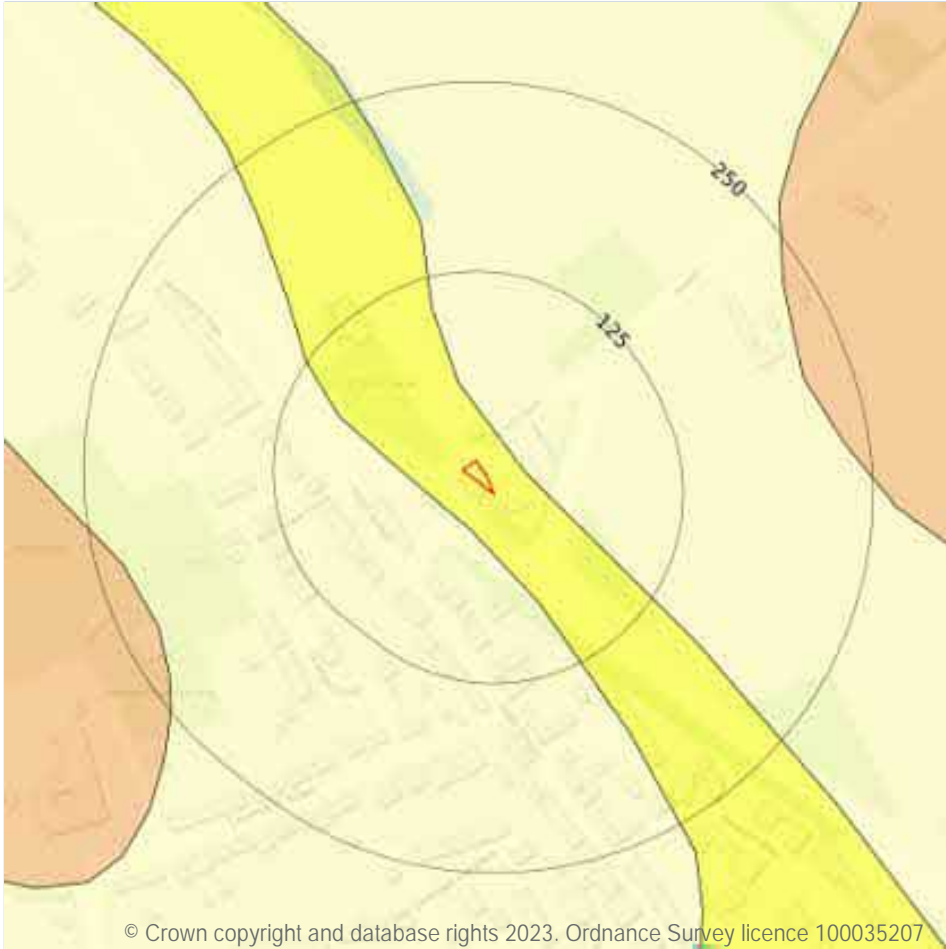
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on [page 78 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	51m NE	506020 216820	CHURCH ROAD, MARKYATE OBH	21.0	N	521463 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

3

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).

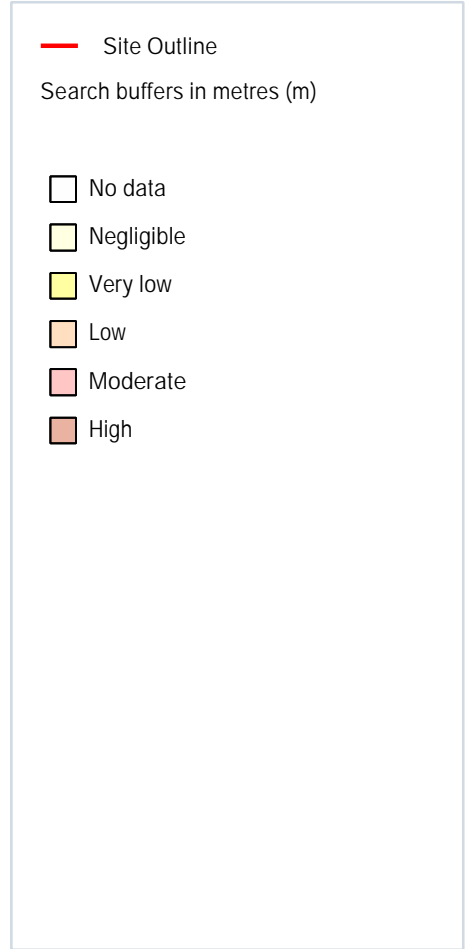
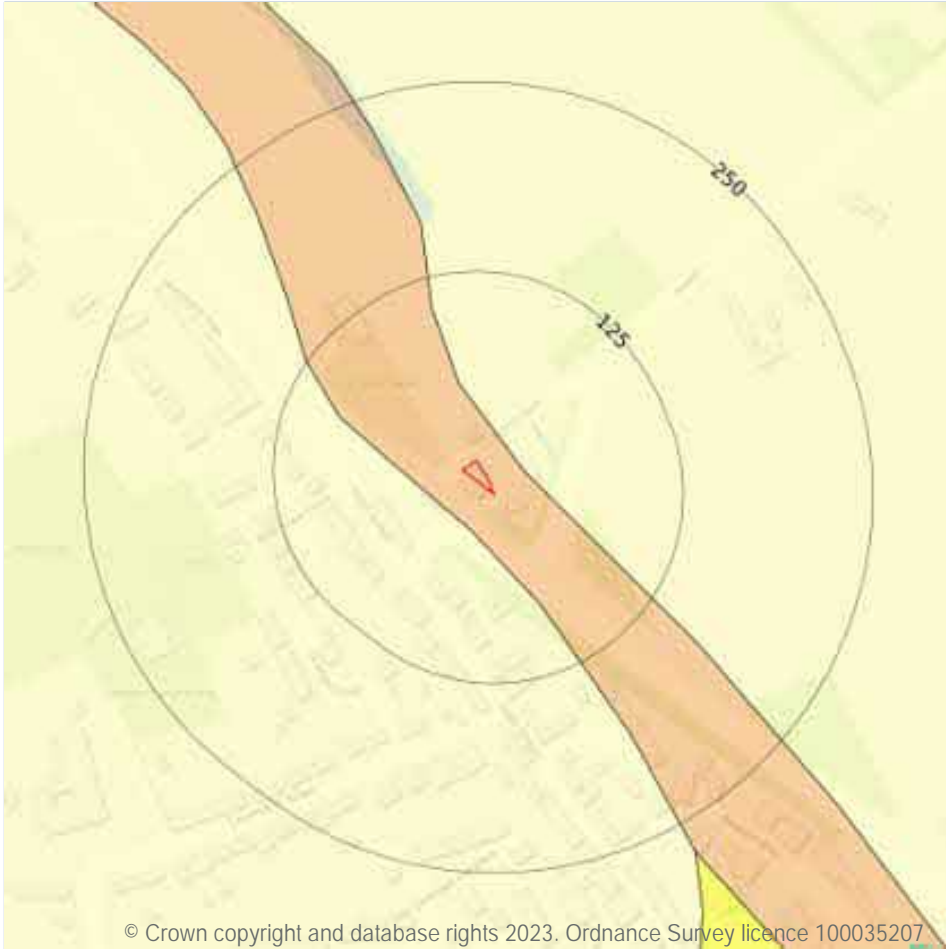
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 79 >](#)

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.
21m NE	Negligible	Ground conditions predominantly non-plastic.
27m SW	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

3

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 81](#) >

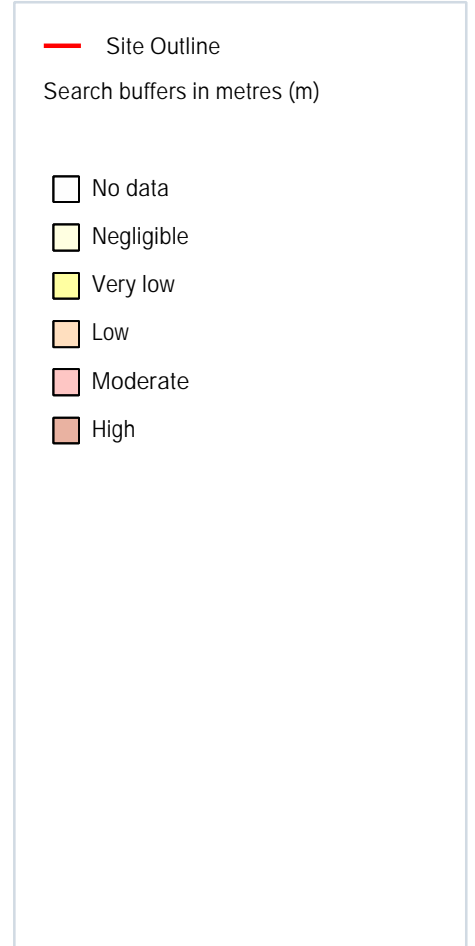
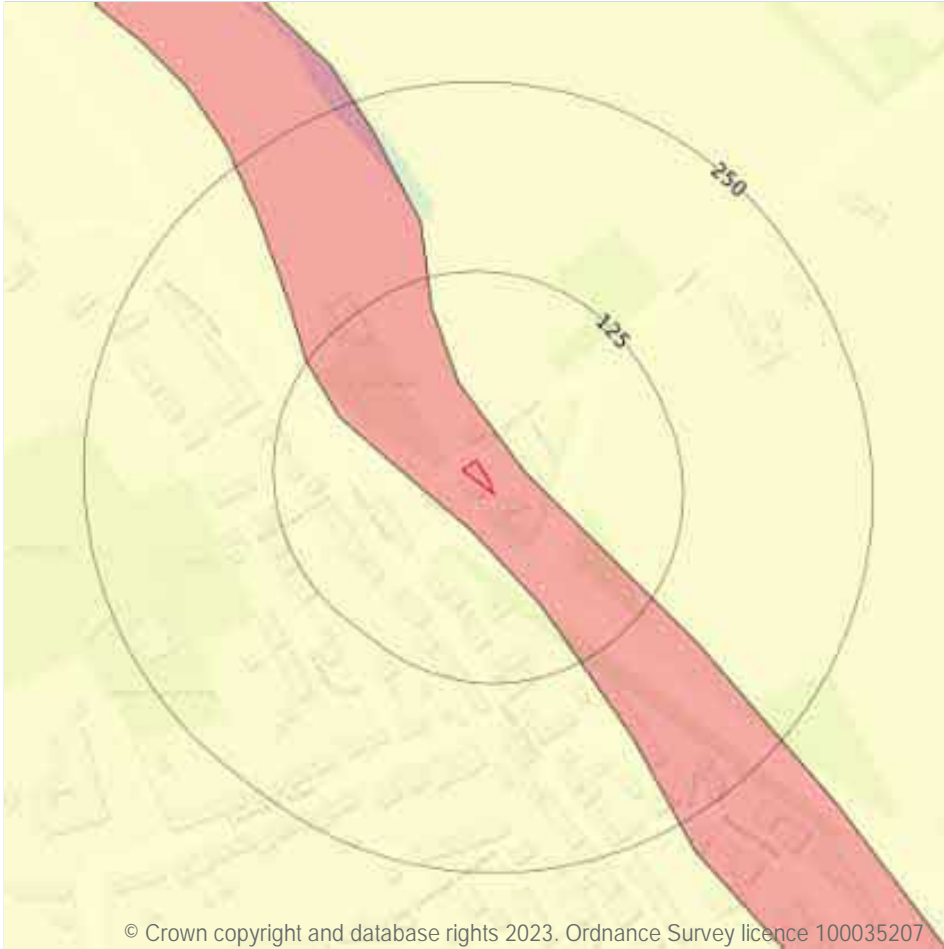
Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

Location	Hazard rating	Details
21m NE	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.
27m SW	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



17.3 Compressible deposits

Records within 50m

2

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.

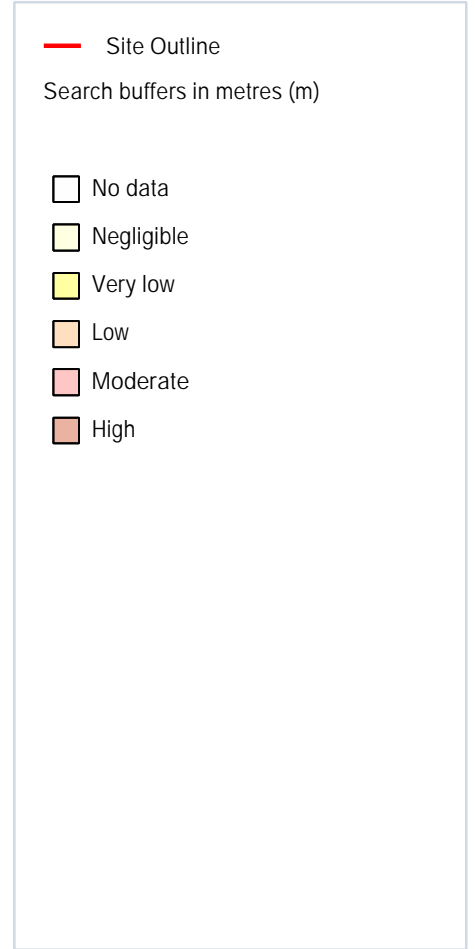
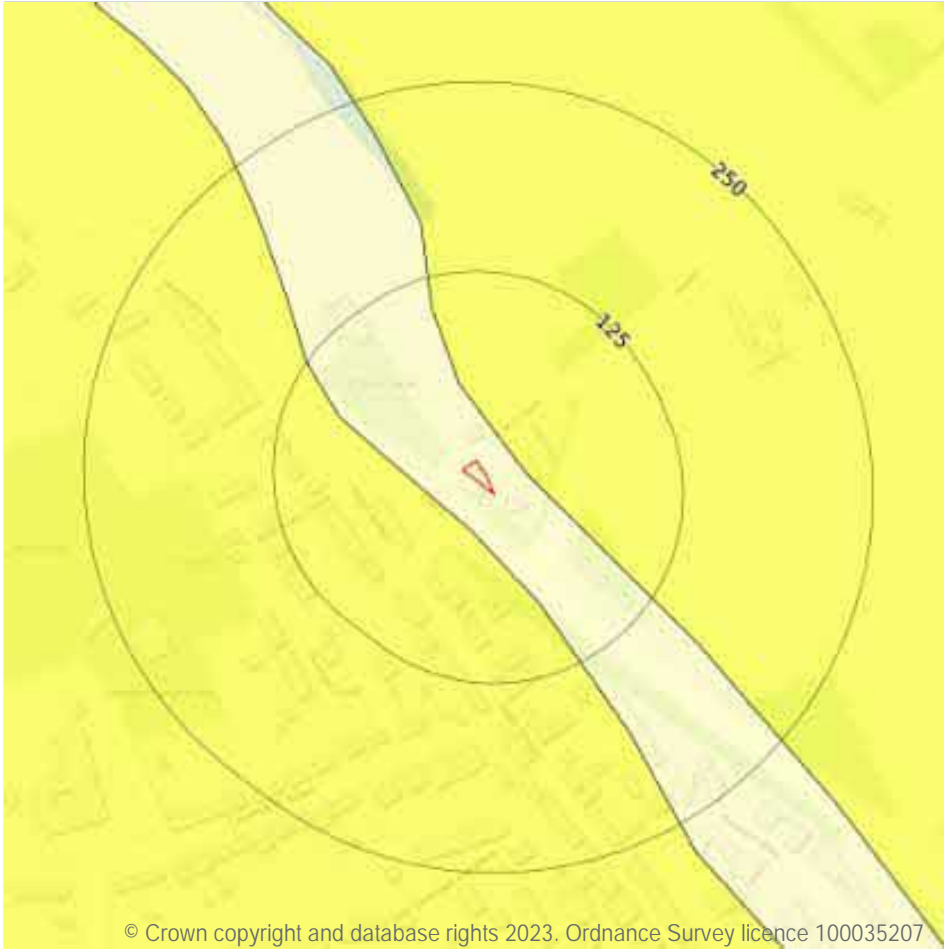
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 83](#) >

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
21m NE	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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17.4 Collapsible deposits

Records within 50m

2

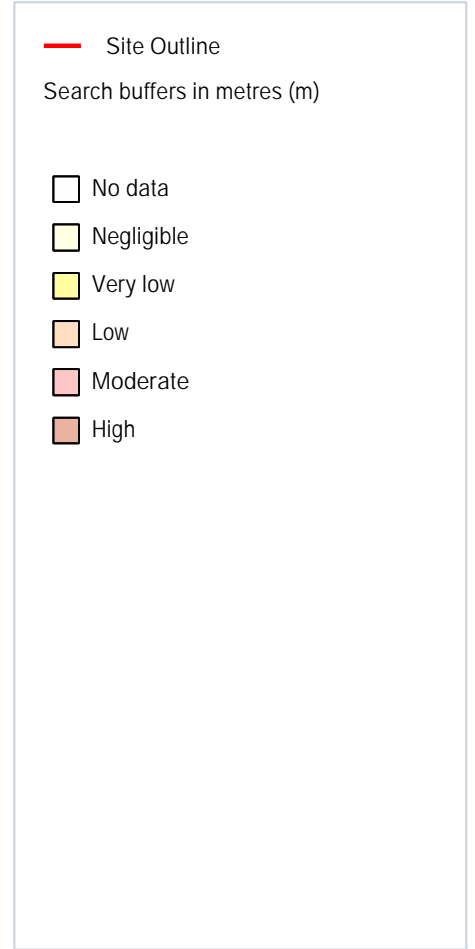
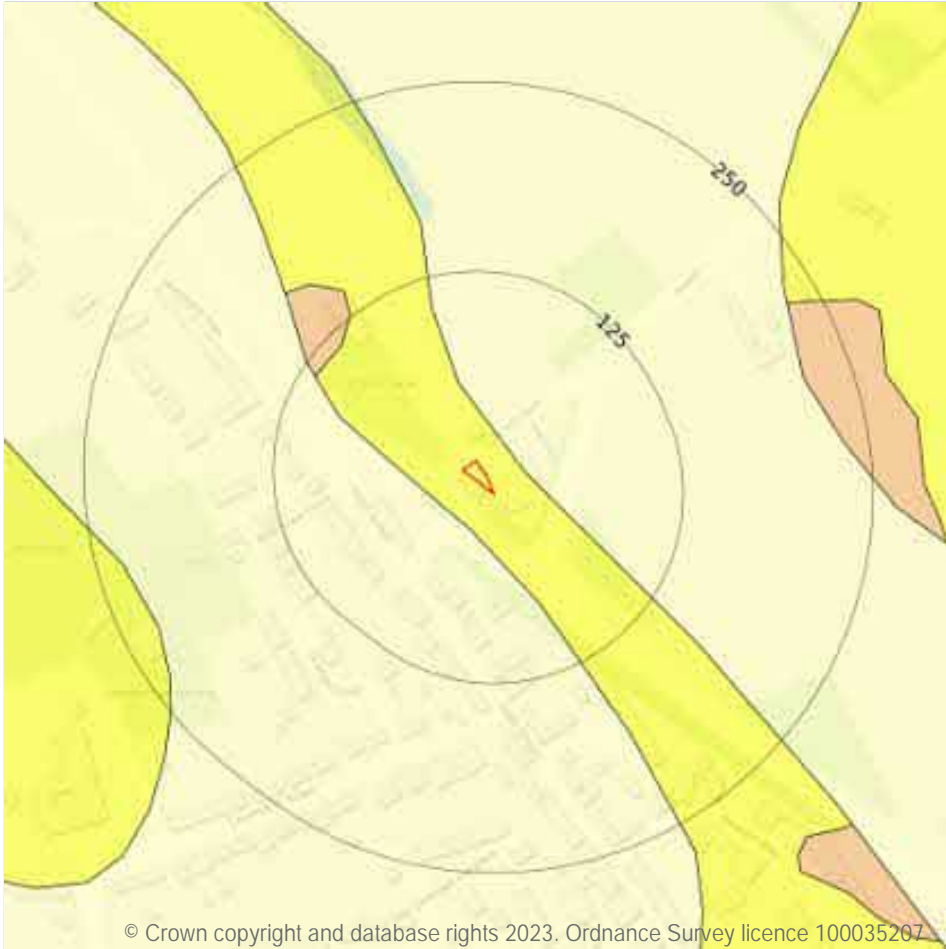
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 85 >](#)

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
21m NE	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



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17.5 Landslides

Records within 50m

3

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 86](#) >

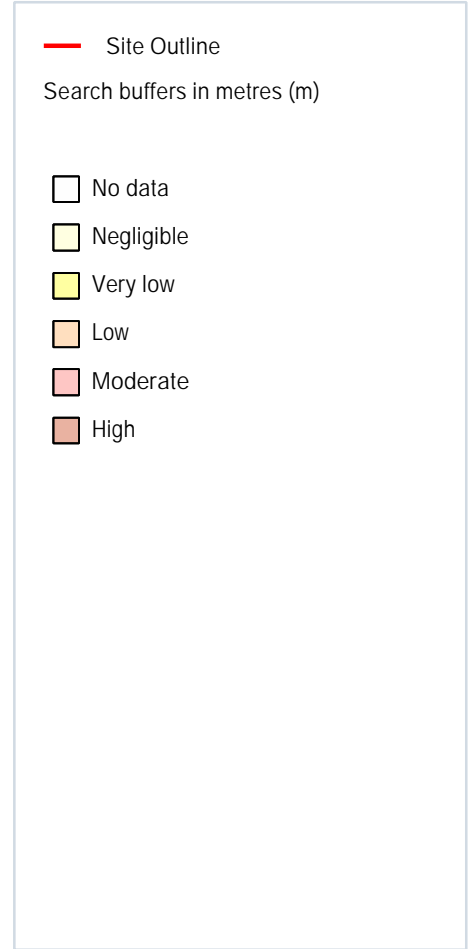
Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
21m NE	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
27m SW	Negligible	Slope instability problems are not thought 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



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 88](#) >

Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 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.

18.2 Surface ground workings

Records within 250m

4

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

Features are displayed on the Mining and ground workings map on [page 90](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
2	159m N	Pond	1973	1:10000
A	168m SW	Cemetery	1946	1:10560
A	168m SW	Cemetery	1922	1:10560
A	177m SW	Cemetery	1920	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

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

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from 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

4

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).

Features are displayed on the Mining and ground workings map on [page 90](#) >

ID	Location	Name	Commodity	Class	Likelihood
1	21m NE	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	804m N	Markyatecell Farm	Chalk	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	854m N	Markyatecell Farm	Chalk	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	960m W	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.



18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.



18.12 Coal mining

Records on site	0
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Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 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.

18.14 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

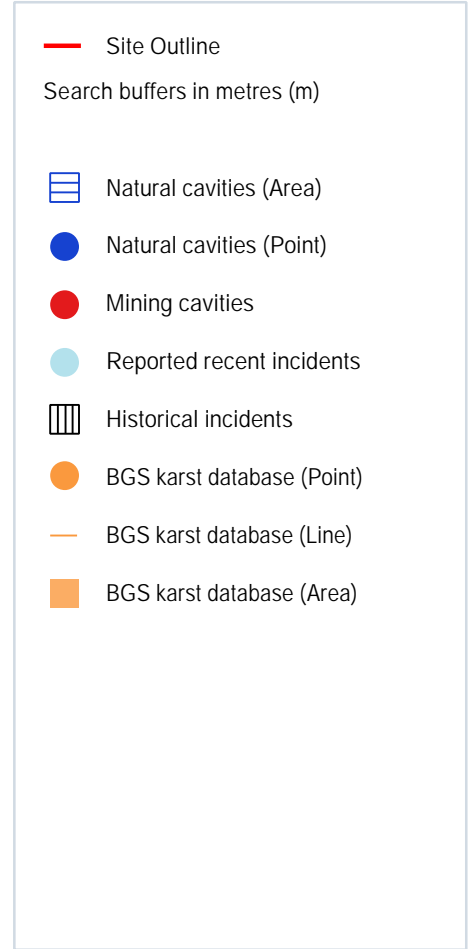
18.16 Clay mining

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 Ground cavities and sinkholes



19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

1

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.

Features are displayed on the Ground cavities and sinkholes map on [page 95 >](#)

ID	Location	Mine Address	Mineral	Data source	Publisher
-	904m N	Markyate, Hertfordshire	Chalk	THE ENGINEERING GEOMORPHOLOGY OF KARST DEVELOPMENT AND THE PREDICTION OF SUBS..	PHD THESIS,LONDON UNIVERSITY

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.



19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

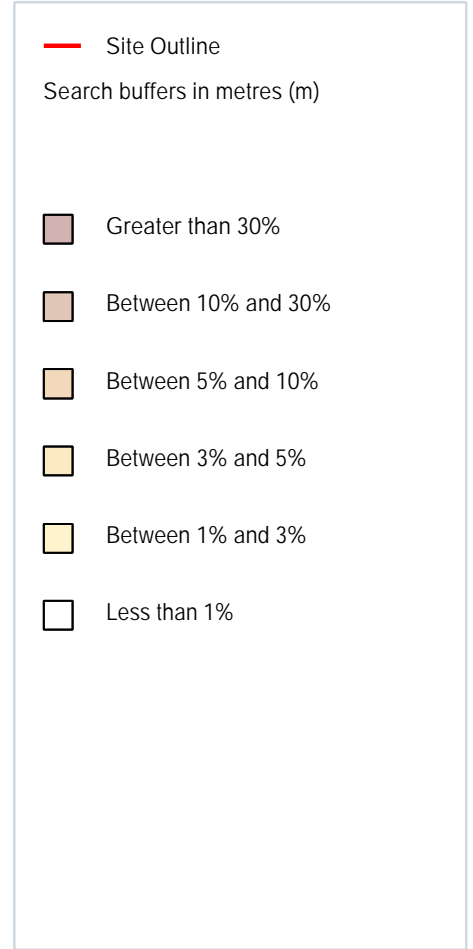
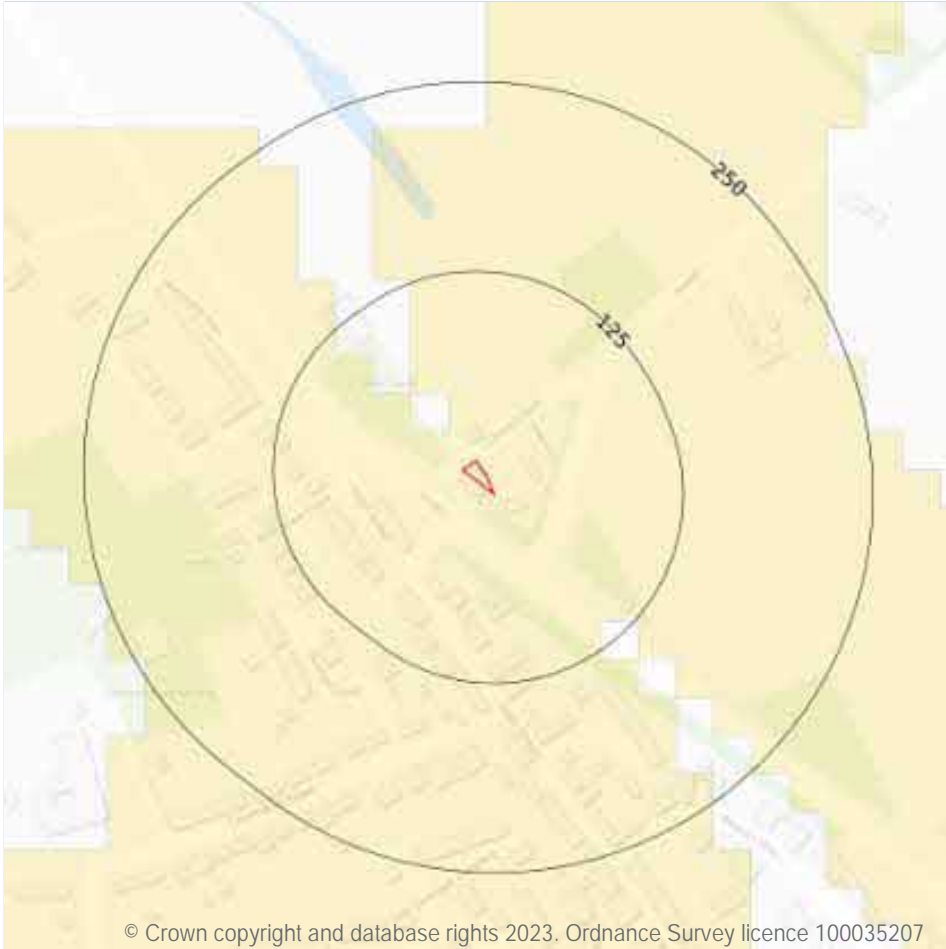
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 98 >](#)

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 UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

7

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	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
20m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
20m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	45 - 60 mg/kg
24m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	45 - 60 mg/kg
24m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	45 - 60 mg/kg
27m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	45 - 60 mg/kg

This data is sourced from the British Geological Survey.

21.2 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.



21.3 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.



22 Railway infrastructure and projects

22.1 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.

22.2 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.

22.3 Railway tunnels

Records within 250m	0
---------------------	---

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 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.

22.5 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.

22.6 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.

22.7 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.

22.8 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.

22.9 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.

22.10 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> ↗ .

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-april-2023/> ↗ .



22 APPENDIX 6 – SITE PHOTOGRAPHY













23 APPENDIX 7 - RISK ASSESSMENT METHODOLOGY

- Severity considers the potential impact of the linkage on the receptors, if the linkage was active. Categories range from slight/superficial to fatal.
- Likelihood considers the chances of the linkage occurring and is classified into categories from improbable to frequent.

By assigning scores with each of the above categories, the risk assessment can be undertaken using the formula:

$$\text{RISK} = \text{LIKELIHOOD} \times \text{SEVERITY}$$

The matrix given in Table 10 provides a means of calculating the overall risk; while Table 11 provides the qualitative assessment based on the risk score.

Table 10: Contamination Risk Matrix

		Potential Severity				
		Fatal 5	Major 4	Moderate 3	Minor 2	Slight 1
Probable Likelihood	Frequent 5	Very High	High	Moderate	Low - Moderate	Low
	Probable 4	High	High	Moderate	Low - Moderate	Low
	Possible 3	Moderate	Moderate	Low - Moderate	Low - Moderate	Very Low
	Remote 2	Low - Moderate	Low - Moderate	Low - Moderate	Low	Very Low
	Improbable 1	Low	Low	Very Low	Very Low	Very Low

Table 11: Assessment description for risk scores

Risk Score	Risk Assessment
1-3	Very Low
4-5	Low
6-10	Low to Moderate
11-15	Moderate
16-20	High
21-25	Very High

Table 12: Risk Classification System

Risk Term	Description
Very Low	The presence of an identified hazard does not give rise to the potential to cause significant harm to groundwater, surface water, ecological and/or property receptors. In the event of such harm being realized, it is not likely to be Severe.
Low	The presence of an identified hazard does not give rise to the potential to cause significant harm to human health receptors. In the event of such harm being realized, it is not likely to be Severe.
Low to Moderate	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realized, would at worst normally be mild.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remedial action. Investigation is required and remedial works may be necessary in the short term and are likely over the longer term.
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, or, there is an evidence that severe harm to a designated receptor is currently happening. Urgent investigation and remediation are likely to be required.

24 ABBREVIATIONS

Abbreviation	Description
AOD	Above Ordnance Datum
AONB	Areas of Outstanding Natural Beauty
BGS	British Geological Survey
c.	circa
CLRA	Contaminated Land Risk Assessment
COMAH	Control of Major Accident Hazards
CSM	Conceptual Site Risk Model
EA	Environment Agency
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention Control
LAPC	Local Authority Pollution Control
LNR	Local Nature Reserves
NIHHS	Notification of Installations Handling Hazardous Substances
NNR	National Nature Reserves
NP	National Parks
NPPF	National Planning Policy Framework
OS	Ordnance Survey
PAHs	Polycyclic Aromatic Hydrocarbons
Part IIA	Part IIA of the Environmental Protection. Act 1990
PCBs	Polychlorinated Biphenyls
PCLU	Potentially Contaminative Land Use
PPL	Potential Pollutant Linkage
PSPPL	Potentially Significant Potential Pollutant Linkage
SAC	Special Areas of Conservation
SI	Site Investigation
SPA	Special Protection Area
SPOSH	Significant Possibility of Significant Harm
SSSIs	Sites of Special Scientific Interest
TPHs	Total Petroleum Hydrocarbons
UXO	Unexploded Ordnance
VOC	Volatile Organic Compounds