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PHASE I DESK STUDY REPORT

For the site at:
Blewgarth, The Warren, Caversham,
Reading, RG4 7TH

On behalf of:
Mr. Tom Luke

Job Reference:
ICE0180-DSR-JUL23

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Report:	PHASE I DESK STUDY REPORT
Site:	BLEWGARTH, THE WARREN, CAVERSHAM, READING, RG4 7TH
Client:	MR. TOM LUKE
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FIGURES

FIGURE 1 Site Location Plan

APPENDICES

APPENDIX A Desk Study Information

EXECUTIVE SUMMARY		
Site Details	Site Address	Blewgarth, The Warren, Caversham, Reading, RG4 7TH
	National Grid Reference	470770, 174863
	Site Area (Approx.)	0.11Ha
	Current Site Use(s)	Residential property with private garden and external garage.
	Form of Development	It is understood that the redevelopment proposals comprise the demolition works of the existing house and associated retaining walls to create space for the construction of a new 5-bedroom residential property with services and associated infrastructure.
Desk Study	Site History	The historic mapping indicated that the site remained undeveloped until circa 1956 when it was shown to have been develop for a residential use. The site remained unaltered on the later map editions. In addition, although it has not been shown within the historic mapping, whilst the access road and driveway were surfaced with gravel at the time of the site walkover survey, an external garage was also noted in the southwest corner of the site during the site walkover. The surrounding land uses have been shown to comprise residential development and community facilities including, a boat house (Reading Canoe Club), Caversham Court Gardens and allotments. Over the mapping period the land was located c.100m to the northwest was shown to comprise a chalk pit, which possibly infilled. This area had since developed by a residential property with associated private garden. River Thames was located c.49m to the south of the site.
	Ground Conditions	With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise chalk of the Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated). Given that the site had been developed previously, there is the potential for a thickness of Made Ground to be present over the natural deposits.
	Hydrogeology	Based on the findings of the GroundSure report, the underlying bedrock geology (White Chalk Subgroup) was recorded as a Principal Aquifer.
	Hydrology	The nearest surface water feature is River Thames and located 49m to the southwest off the site. The desk study did not identify any discharge consents, pollution incidents and licenced surface water abstractions to controlled waters within a radius of 250m of the site boundary. In addition, the site is not indicated to be at risk of flooding. In addition, the site was indicated to be outside of any current indicative tidal and fluvial flood plain, or any associated flood warning areas.
	Ground Gases & Vapours	No ground gas protection measures are required in the absence of viable sources of contamination and ground gases (carbon dioxide and methane).
	Summary	It is concluded that there is no potential for contamination to exist at the site due to its recent and historic uses. Although, the individual risk ratings for the potential pollutant linkages identified ranged from moderate to very low, no specific industrial or potentially contaminative land uses have been identified on or near the site in relation to the desk study. Subsequently, no viable sources of contamination and ground gases (carbon dioxide and methane) have been identified within the desk study. Therefore, no further assessment is considered necessary on the site in relation to the soils' contamination and ground gasses to protect the end users.
Further Action: During the construction, any abnormal conditions (geotechnical or potential contamination) are identified shall be reported to a competent engineer (Geotechnical and/or Geo-Environmental Consultant).		
<i>This Executive Summary is intended to provide a brief summary of the main findings and conclusions of this desk study. For detailed information, the reader is referred to the main report ref. ICE0180-DSR-JUL23.</i>		

1. INTRODUCTION

1.1 General

IBEX Consulting Engineers Limited ('IBEX') was instructed by Mr. Tom Luke ('the Client') to produce a Phase I Desk Study Report for the site at Blewgarth, The Warren, Caversham, Reading, RG4 7TH (herein referred to as 'the site'). The site's location is presented in Figure 1.

1.2 Proposed Development

It is understood that the redevelopment proposals comprise the demolition works of the existing house and associated retaining walls to create space for the construction of a new 5-bedroom residential property with services and associated infrastructure.

1.3 Objectives

The objectives of this report are as follows:

- To undertake a desk-based assessment of geotechnical and geo-environmental factors pertaining to the site and surrounding area, including reviewing the previous site walkover survey was undertaken by others and an examination of various sources of geo-environmental, hydrogeological, hydrological and geotechnical information;
- To review readily available historical information (i.e., Ordnance Survey maps and database search information) for the site and surrounding areas; and
- To assess the potential impacts that the proposal may have on ground stability, the hydrogeology and hydrology on the site and its environs.

In terms of the environmental investigation, a Preliminary Risk Assessment (PRA) was also undertaken as part of the desk study in accordance with LCRM by others, in order to provide a basis for the scope and rationale of the subsequent Phase II ground investigation. The data from Phase I and Phase II were then to form the basis of a subsequent preliminary Generic Quantitative Risk Assessment (GQRA). The objective of the risk assessments was to evaluate the risks posed to the proposed residential redevelopment, adjacent land uses, and the wider environment, in the context of the development options, immediate liabilities under the Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

1.4 Standards

Where practicable, the geo-environmental assessment presented in this report was undertaken in accordance with the following documents and guidance:

- British Standards Institute - Code of Practice for Earth Retaining Structures (BS8002:2015).
- British Standards Institute - Code of Practice for Site Investigations (BS5930:2015).
- British Standards Institute - Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gasses for New Buildings (BS 8485:2015+A:2019).
- British Standards Institute - Eurocode 7 - Geotechnical Design - Parts 1 & 2 (BS EN1997-1:2004 & BS EN1997-2:2007).
- British Standards Institute - Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs) (BS8576:2013).
- British Standards Institute - Investigation of Potentially Contaminated Sites - Code of Practice (BS10175:2011).
- British Standards Institute - Soils for Civil Engineering Purposes (BS1377:1990).
- British Standards Institute - Specification for Topsoil and Requirements for Use (BS3882:2015).
- Building Research Establishment - The Performance of Building Materials in Contaminated Land (BRE255) (1994).

- Construction Industry Research and Information Association - Assessing risks posed by hazardous ground gases to buildings (C665) (2007).
- Department for Communities and Local Government - National Planning Policy Framework (2012).
- Department for Environment Food and Rural Affairs and CL:AIRE - Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination (SP1010) (2014).
- Department of Environment - Industry Profiles (1995 - 1996).
- Environment Agency - Guidance for waste destined for disposal in landfills (2006).
- Environment Agency - Guidance on Requirements for Land Contamination Reports (2005).
- Environment Agency – Land Contamination Risk Management (2020).
- National House Building Council, Environment Agency & Chartered Institute of Environmental Health - Guidance for the Safe Development of Housing on Land Affected by Contamination (R&D Publication 66) (2008).
- National House Building Council - Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (10627-R01[04]) (2007).
- National House Building Council - Standards, Chapter 4.1 Land Quality - Managing Ground Conditions (2018).

1.5 Conditions

The data collected from the investigations have been used to provide an interpretation of the geotechnical conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. IBEX takes no responsibility for conditions that either have not been revealed in the available records, or that occurs between or under points of physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

It should be noted that in particular the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore only be representative of the conditions at the time of sampling. This report should not be taken as any guarantee that a site is free of hazardous or potentially contaminative materials.

Information contained in this report is intended for the use of the Client, and IBEX can take no responsibility for the use of this information by any party for uses other than that described in this report. IBEX makes no warranty or representation whatsoever express or implied with respect to the use of this information by any third party. IBEX does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

Assessment criteria or other parameters developed for the evaluation of contamination on this site are based on a number of assumptions regarding exposure and toxicology, and exposure to contaminants and levels of adverse effects may therefore vary. Whilst every care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future, and no liability is accepted in this respect.

2. DESK STUDY

The findings of the Phase I desk study are presented in the following section. A copy of the historic maps and other information obtained as part of the desk study are presented in Appendix A. Comments made in the following sections regarding possible ground conditions on the site are based purely on the desk study assessment undertaken.

2.1 Site Description

The site location plan is presented in Figure 1.

Name of Site		Blewgarth
Address of Site		Blewgarth The Warren Caversham Reading RG4 7TH
National Grid Reference		470770, 174863
Site Area (Approx.)		0.11Ha
Current Site Use(s)		Residential property with private garden and external garage
Evidence of Historic Use(s)		None
Local Authority		Reading Borough Council
Surfaces		Varied from grassed surface to gravel surfaced driveway
Vegetation		Grassed private garden and hedgegrows, semi-mature and mature trees along the site boundaries
Topography/Slope Stability		Slopes towards the south and southwest
Drainage		Yes
Services		Yes
Controlled waters		River Thames is located c.25m to the south of the site.
Tanks		None
Surrounding Land Uses	North	Residential properties with private gardens and St Peter's Avenue
	East	The Warren, allotments gardens and Reading Canoe Club
	South	The Warren, River Thames and Rivermead Park beyond
	West	Residential properties with private gardens

2.2 Historic Mapping

Historic maps dating back to 1877 were obtained as part of the desk study. A summary of the apparent key features observed on the map extracts both on the site and within the local area is presented within Table 2.1.

Date	On-site	Off-site
1877 to 1878	The site was shown to be occupied by an undeveloped open land.	The vast majority of the surrounding area was shown to be open fields, residential properties, roads, a river, allotment gardens, mainly semi-rural setting. Three rectangular shaped

Date	On-site	Off-site
		greenhouses were mapped c.30m to the southeast. The southern and southeast boundaries of the site were lined with The Warren (single carriageway). The boundaries of the open fields and roads were lined with deciduous trees. St Peter's Church with a graveyard were shown c.100m to the northeast. Rectory and Vicarage were labelled c.100m to the east. A chalk pit, some earthworks (cutting) and Warren House were mapped c.100m to the northwest. St Peter's Hill and another chalk pit with some earthworks (cutting) were mapped approximately 200m to the northeast. River Thames and a boat house were shown c.49m to the south. Open fields on the southern side of River Thames were labelled as 'Liable to Floods'. St Peter's Avenue (single carriageway) was mapped c.50m to the north.
1881	No significant changes noted.	No significant changes noted.
1897 to 1900	No significant changes noted.	Some residential development was shown within the surrounding area.
1910 to 1914	No significant changes noted.	Some residential and commercial development was shown within the surrounding area, including to the north, east, south and southeast of the site.
1932	No significant changes noted.	Some residential and commercial development was shown within the surrounding area, including to the north. Caversham Court was mapped c.100m to the east. A rectangular shaped excavated area was mapped approximately 80m to the northwest. Tennis courts were shown c.200m to the north. Chalk pits within the surrounding areas were no longer shown and is assumed to have been infilled.
1936 to 1938	No significant changes noted.	Recreation ground was shown c.100m to the southeast.
1956 to 1959	An 'L' shaped residential building with a small rectangular outbuilding were shown within the boundaries of the site which was commensurate with the present structure.	Some residential development was shown within the surrounding area, including to the immediate north, northwest and northeast of the site. Lathom was mapped c.10m to the northwest. New residential properties with associated private gardens were labelled along the northern site boundary. Allotment gardens were mapped c.70m to the southeast. White Lodge was mapped c.90. to the southwest. Two small ponds were mapped c.112m to the south. To the southeast, Recreation Ground was renamed as 'Caversham Court Recreation Ground'.
1960 to 1962	No significant changes noted.	Further residential development was shown within the surrounding area.
1971 to 1976	No significant changes noted.	Further residential development was shown within the surrounding area. A ground mounted electrical substation was mapped c.155m to the north. A second ground mounted electrical substation was mapped c.221m to the east.
1986 to 1988	No significant changes noted.	Further residential development was shown within the surrounding area. Two residential buildings were mapped c.30m to the northwest. Three square shaped building with car parking areas (Warren Court) were labelled c.100m to the

Date	On-site	Off-site
		southwest. A small rectangular shaped structure was shown c.10m to the south. To the southeast, Caversham Court Recreation Ground was renamed as 'Caversham Court Gardens'.
1989 to 1991	No significant changes noted.	Further residential and commercial development was shown within the surrounding area. Rivermead Leisure Centre with a play area were mapped c.450m to the south where 'Liable to Floods' areas were shown within the previous editions.
1984	No significant changes noted.	No significant changes noted.
1993 to 1994	No significant changes noted.	No significant changes noted.
2001 to 2003	No significant changes noted.	No significant changes noted.
2010	No significant changes noted.	No significant changes noted.
2023	No significant changes noted.	No significant changes noted.

Table 2.1 Summary of historic map extracts

The historic mapping indicated that the site remained undeveloped until circa 1956 when it was shown to have been developed for a residential use. The site remained unaltered on the later map editions. In addition, although it has not been shown within the historic mapping, whilst the access road and driveway were surfaced with gravel at the time of the site walkover survey, an external garage was also noted in the southwest corner of the site during the site walkover.

The surrounding land uses have been shown to comprise residential development and community facilities including, a boat house (Reading Canoe Club), Caversham Court Gardens and allotments. Over the mapping period the land was located c.100m to the northwest was shown to comprise a chalk pit, which possibly infilled. This area had since developed by a residential property with associated private garden. River Thames was located c.49m to the south of the site.

2.3 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site is reported to comprise chalk of the Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated). Given that the surrounding areas and boundaries of the site had been developed previously, there is the potential for a thickness of Made Ground to be present over the natural deposits.

BS5930:2015 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material.

The **White Chalk Subgroup** is a soft white friable microporous limestone composed of coccolith biomicrites with a varying proportion of larger shell fragments. Flint characterises the White Chalk Subgroup, occurring as nodular courses, tabular beds and linings to fractures.

At various levels clay sized material occurs as marl seams and partings. Close to the surface the upper few metres are invariably discoloured brown, due to leaching from the overlying strata. The interface with any overlying stratum is invariably extremely irregular as a result of localised weathering and general solution. Weathering by frost action may extend to a depth of several metres.

Occasional erosional features, such as pipes, swallow holes and solution cavities, usually infilled with drift deposits, are found in the chalk, sometimes manifesting themselves at the surface as shallow circular depressions. Solution features may be reactivated by the concentrated ingress of water from leaking drains or soakaways. Reactivation may lead to surface collapse.

2.4 Hydrogeology

With reference to GroundSure data, the underlying bedrock geology (White Chalk Subgroup) on the site is designated as a Principal Aquifer.

Principal Aquifers are defined as layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

The soil cover across the site was classified as being of intermediate leaching potential, for soils which provide between high and low vulnerability. They are likely to be characterised by medium leaching soils and/or the upper layers of the chalk characterised by a medium permeability.

Source Protection Zones (SPZ)

The site was indicated to be outside of any Source Protection Zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality.

A total of one pollution incident to controlled waters was recorded within a radius of 250m of the site boundary, this is summarised below:

- Reference no. 45823; 173m south; Other sewage; category 4 no impact; 30th November 2001.

No licenced surface water abstractions and discharges of treated or untreated sewage effluent to controlled waters were recorded within a radius of 250m of the site boundary.

2.5 Hydrology

River Thames was located c.49m to the south which flows to the east.

The desk study did not identify any pollution incidents to groundwater and licensed groundwater abstractions within a radius of 250m of the site boundary.

The site is not indicated to be at risk of flooding. In addition, the site was indicated to be outside of any current indicative tidal and fluvial flood plain, or any associated flood warning areas. However, some localised areas located c.10m to the south off the site are at risk from surface water flooding (Flood Zone 2) due to close proximity of River Thames. In addition, the BGS Groundwater Flood Susceptibility (GFS) Data map also indicated that the vast majority of site has a moderate potential for groundwater flooding to occur.

Feature		On Site	Off Site	Potential Receptor?
Aquifer	Bedrock (White Chalk Subgroup)	Principal Aquifer	Principal Aquifer	Yes
SPZ		None	None	No
Abstractions	Groundwater	19 reported within 2km; nearest identified 693m W for farming.	None	No
	Surface Water	6 reported within 2km; nearest identified 764m SE	None	No
	Potable Water	None	None	No
Surface Water Features		None	River Thames	No
Flood Risk	Environment Agency (EA) Flood Zone 2	None	Flood Zone 2 (10m SW)	No
	EA Flood Zone 3	None	Flood Zone 3 (13m S)	No
	Risk of Flooding from Rivers and Sea (RoFRaS)	N/A	High	No
	Historical Flood Events	None	51 reported within 250km; nearest identified 10m SW	No
	Flood Defences	There are no areas benefiting from Flood Defences within 250m of the study site.		No
	Surface Water Flooding	Negligible	The highest risk off site (within 50m) is 1 in 100 year, between 0.1m and 0.3m*	No
	Groundwater Flooding	Moderate	Moderate	Yes

* Based on the Ambient 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.

Table 2.2 Summary of Hydrogeology and Hydrology

2.6 Geochemistry

Data obtained as part of the desk study provides details on the estimated soil chemistry for the natural soils in the vicinity of the site. The estimated soil quality on the subject site is presented in Table 2.3.

Determinand	Concentration (mg/kg)	In Excess of S4UL*?
Arsenic	15 – 25	No
Cadmium	1.8	No
Chromium	60 – 90	No
Lead	60 – 100	No
Nickel	15 – 30	No

*Comparative threshold concentrations are for a residential end use and a soil organic matter content of 1%

Table 2.3 Summary of Site Geochemistry

The natural background concentrations (where available) were below respective published Soil Guideline Values, Generic Assessment Criteria and Category 4 Screening Levels for the protection of human health for residential land use with vegetable uptake, i.e. the most conservative proposed end use.

However, these values are not necessarily representative of the site's soil chemistry and do not take account of current or historical activities on the site. Furthermore, some screening criteria are dependent on pH and soil organic matter content. Therefore, concentrations of specific determinands and the utilised S4UL cannot be determined without site specific investigation and analysis.

2.7 Sensitive Land Uses

A search was made of environmentally sensitive areas, including areas of green belt, scenic or natural beauty, parks, reserves, nitrate zones, protected conservation and scientific areas.

No environmentally sensitive areas were noted within a 250m boundary of the site with the exception of several listed buildings (49m E), conservation areas (3m E) and a Registered Parks and Gardens (Caversham Court – 12m SE).

2.8 Environmental Data

Searches of other various environmental databases were made as part of the desk study, including air pollution control sites, Part IIA contaminated land, Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC) sites, registered radioactive substances, Control of Major Accident Hazards (COMAH) sites, explosives sites, Notification of Installations Handling Hazardous Substances (NIHHS) sites, planning permissions for sites involving hazardous substances and fuel station registers. Additional details are referenced in Appendix A.

The industrial land uses within 250m of the site were identified as part of the desk study and these are summarised in Table 2.4.

Name	Category	Distance (m)	Direction	Status
Industrial				
Boat House	-	42	W	Inactive
Boat House	-	65	SE	Inactive
Boat House	-	70	W	Inactive
Boat Houses	-	82	W	Inactive
Boat Houses	-	188	W	Inactive
Boat Houses	-	236	W	Inactive
Boat Houses	-	240	W	Inactive
Tanks				
Unspecified Tank	-	69	SE	Inactive
Energy Features				
Electricity Substation	Infrastructure and facilities	146	N	Inactive
Electricity Substation	Infrastructure and facilities	218	E	Inactive
Electricity Substation	Infrastructure and facilities	155	N	Active
Electricity Substation	Infrastructure and facilities	221	E	Active

Table 2.4 Summary of Industrial Land Uses (Historical and Current) within 250m of the Site

No other such designations or land uses were identified as part of the desk study within a 250m radius of the site boundary.

2.9 Geological Hazards Data

Based on the findings of the GroundSure GeolInsight Report, a summary of the potential geotechnical hazard data pertaining to the site is presented in Table 2.5. The worst-case designations identified within 50m of the site have been utilised in this assessment.

Potential Hazard	Site Check Hazard Rating	Details	Further Action Required?
Shrink swell	Negligible	Ground conditions predominantly non-plastic.	No
Landslides	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.	No
Ground dissolution soluble rocks	Very Low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localized subsidence are at a level where they need not be considered.	No
Compressible deposits	Negligible	Compressible strata are not considered likely to occur.	No
Collapsible Deposits	Very Low	Deposits with potential to collapse when loaded and saturated are possibly present in places.	No
Running sands	Negligible	Running sand conditions are not thought to occur whatever the positions of the water table. No identified constraints on lands use due to running conditions.	
Coal mining	No	The study site is not located within the specified search distance of an identified coal mining area	No
Non-coal mining	Likely	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 need not be considered.	No

Table 2.5 Summary of Geological Hazards

2.10 Landfill and Ground Workings

A search of BGS recorded landfill sites, IPC registered waste sites, licensed waste management facilities, local authority recorded landfill sites, other registered landfill sites, waste transfer stations and other waste treatment or disposal sites was undertaken as part of the desk study. Such sites may form an artificial source of ground gases, such as carbon dioxide and methane, where wastes are buried or disposed of to landfill.

The desk study identified the presence of seventeen areas of potentially infilled lands, licenced landfill and artificial and made ground sites on the historical mapping and within 250m of the site, details of which are provided below:

Name	Category	Distance (m)	Direction	Status
Surface Ground Workings				
Grave Yard	-	73	E	Inactive
Unspecified Ground Workings	-	75	W	Inactive
Worked Ground	Void	75	W	Inactive
Worked Ground	Void	77	NW	Inactive
Unspecified Pits	-	78	W	Inactive
Pond	-	112	S	Inactive
Made Ground	Artificial Deposit	122	SW	Inactive
Chalk Pit	-	136	NE	Inactive
Unspecified Pit	-	136	NE	Inactive
Cuttings	-	137	NE	Inactive

Name	Category	Distance (m)	Direction	Status
Surface Ground Workings				
Chalk Pit	-	137	NE	Inactive
Worked Ground	Void	138	NE	Inactive
Worked Ground	Void	144	NE	Inactive
Unspecified Pit	-	142	NE	Inactive
Unspecified Quarry	-	181	NE	Inactive
Made Ground	Artificial Deposit	225	S	Inactive
Licensed Landfill				
Landfill	Commercial, household, liquid sludge	80	SW	Inactive

Table 2.6 Summary of Ground Workings, Infilled Areas and Licensed Landfill Sites within 250m of the Site

2.11 Radon

The Groundsure report states that the site lies in an area where between 1% and 3% of homes are above the Action Level as defined by Public Health England and the BGS. However, the BGS assessment states that no radon protective measures are necessary in the construction of new houses or extensions on the site.

2.12 Previous Ground Investigations

IBEX was not aware of any previous ground investigation works that had been undertaken on the site at the time of writing this report.

2.13 Generic Contamination

2.13.1 Soil Contamination

The historic mapping indicated that the site remained undeveloped until circa 1956 when it was shown to have been developed for a residential use. The site remained unaltered on the later map editions. In addition, although it has not been shown within the historic mapping, whilst the access road and driveway were surfaced with gravel at the time of the site walkover survey, an external garage was also noted in the southwest corner of the site during the site walkover.

The surrounding land uses have been shown to comprise residential development and community facilities including, a boat house (Reading Canoe Club), Caversham Court Gardens and allotments. Over the mapping period the land was located c.100m to the northwest was shown to comprise a chalk pit, which possibly infilled. This area had since developed by a residential property with associated private garden. River Thames was located c.49m to the south of the site.

With reference to DoE Industry Profiles and the National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication '*Guidance for the Safe Development of Housing on Land Affected by Contamination*' (2008), potential contaminants associated with the site's former uses have been identified. The guidance has identified the potential for the following contaminants of concern to be present on the site associated with the historic (on site and off-site) land uses: heavy metals, inorganic substances (including sulphates, asbestos, elevated pH) oil/fuel hydrocarbons, asbestos and Polycyclic Aromatic Hydrocarbons (PAHs).

In addition, it is possible that the surrounding land uses may have resulted in the deposition of airborne contaminants on the surface and shallow soils on site including heavy metals, organic pollutants such as PAH, petroleum hydrocarbons/oils, inorganic compounds within the shallow soils across the site.

2.13.2 Ground Gases & Vapours

No specific industrial or potentially contaminative land uses have been identified on or near the site in relation to the desk study.

No viable sources of ground gases (carbon dioxide and methane) have been identified within the desk study.

3. PRELIMINARY RISK ASSESSMENT

Based on the findings of the desk study, the following sections summarise the anticipated environmental factors likely to impact the site.

3.1 Preliminary Conceptual Model

3.1.1 Methodology

A Preliminary Risk Assessment (PRA) has been prepared to evaluate the level of possible risks associated with potential sources of contamination and sensitive receptors identified have been assessed following a source-pathway-receptor (SPR) approach in accordance with current UK protocols. Based on the findings of the desk study, as outlined in the previous sections, to evaluate further the potential pollutant linkages for the end users and the environment. A combination of qualitative and quantitative techniques is used, as described below.

A risk may only exist where a plausible SPR linkage is present, and where the quantity or concentration of a contaminant is sufficient so as to pose harm. Under the statutory definition, "Contamination" may only strictly exist where contaminants pose a risk of harm to a receptor. Risk may be defined as a function of the likelihood and severity of any adverse effects arising from contamination.

The purpose of generic quantitative risk assessment is to compare concentrations of contaminants found on site against generic assessment criteria (GAC) to establish whether there are actual or potential unacceptable risks. It also determines whether further detailed assessment is required. The approaches detailed all broadly fit within a tiered assessment structure in line with the framework set out in the Department of Environment, Food and Rural Affairs (DEFRA), EA and Institute for Environment and Health Publication, Guidelines for Environmental Risk Assessment and Management.

3.1.2 Summary of Plausible Sources of Contamination

It is likely that a thickness of Made Ground may be present associated with the existing residential building and associated private garden, a garage and estate road on the site. In addition, whilst no specific potential sources of on-site contamination have been identified within the boundaries of the site there also remains the possibility that aerial deposition of contaminants may have occurred on the site. In addition, there also remains the possibility that aerial deposition of contaminants may have occurred on the site.

Possible sources of contamination identified or discounted as part of the desk study are summarised in Table 3.1.

Source	Description	Comments
Made Ground and shallow soils (due to existing residential building and associated private garden, a garage and estate road)	The general quality of Made Ground and shallow soils could be impacted by the presence of contamination associated with the existing land use.	Possible elevated concentrations of metals, metalloids, organic contaminants to include TPH and PAH compounds, and inorganic compounds such as sulphate and asbestos.
Asbestos Containing Materials (ACMs) within the fabric of buildings and possibly in shallow soils	There is a likelihood the current buildings on site could have been constructed using asbestos containing materials. Consequently, the potential presence of asbestos in the near surface soils cannot be discounted.	ACMs and Asbestos.
Off-site sources- electric sub-station	An electric sub-station was identified off site c.155m to the north from a review of the historical mapping.	Possible PCBs, and hydrocarbons.
Naturally occurring aggressive ground conditions	Naturally occurring compounds in the ground which could damage buried concrete.	Possible elevated sulphate concentrations.

Table 3.1 Possible Sources of Contamination

3.1.3 Summary of Plausible Pathways

The plausible pathways are summarised in Table 3.2. These pathways are based on the proposed residential end use, including gardens and soft landscaping.

Pathway	Description
Direct Contact	Ingestion of soil particles, inhalation of soil derived dust (including tracked back dust), dermal contact. Bioaccumulation within home grown vegetables and fruit.
Inhalation	Inhalation of soil dust both inside and outside of buildings. Inhalation of ground gas/vapours within buildings.
Vertical & Lateral Migration	Contaminant movement both vertically through leaching/gravity and horizontally along preferential pathways, e.g. services trenches, more permeable strata or with groundwater.
Groundwater	Shallow groundwater or perched water may be present within the Made Ground if present or at depth within the underlying natural deposits which could result in the vertical and lateral migration of contaminants.
Chemical Attack	Attack of buried plastics and concrete by aggressive ground conditions.
Flooding	The GroundSure GeoInsight Report indicated that some localised areas located c.10m to the south off the site are at risk from surface water flooding (Flood Zone 2) due to close proximity of River Thames. In addition, the BGS Groundwater Flood Susceptibility (GFS) Data map also indicated that the vast majority of site has a moderate potential for groundwater flooding to occur.

Table 3.2 Possible Contamination Pathways

3.1.4 Summary of Plausible Receptors

Potential receptors associated with the site and its development are summarised in Table 3.3.

Receptor	Description	Comments
End Users	Residents/occupants of the proposed redevelopment.	The proposed redevelopment comprises residential housing with services and associated development infrastructure.
Soft Landscaping	Possible areas of planting including lawns, shrubs, trees.	Soft landscaped areas are already present therefore this element has not been assessed further.
Built Environment	Buried concrete for foundations and plastics for potable water supply pipes may be laid in contact with contaminated soils.	Aggressive ground conditions may be present beneath the site.
Adjacent Land Users	Sensitive land uses identified within the immediate vicinity.	Adjacent land use is primarily residential with associated private gardens areas and roads
Groundwater	Controlled waters contained within the aquifer(s) beneath the site.	The underlying bedrock (White Chalk Subgroup) is classified as a Principal Aquifer and the site is outside of any SPZ.
Surface Water	Controlled Waters within lakes, rivers, and ponds, etc., or coastal waters.	River Thames is located 49m to the southwest off the site and which was noted to flow to the east.

Table 3.3 Possible receptors of contamination

Site workers involved in the preparation and construction of the development have not been considered further in this assessment as the Principal Contractor is duty bound under the current CDM Regulations to undertake their own risk assessments with respect to their employees.

Whilst the above sources and receptors have been identified, Table 3.4 summarises the identified plausible pollution linkages and a qualitative assessment of the risks based on the desk study research.

Sources	Potential Pathways	Potential Receptors	Likelihood	Severity	Risk Estimation*	Mitigation Measure
• Potential for Made Ground associated due to structures (house, estate road, garage, retaining walls) on site	• Direct contact and inhalation of soil derived dust	• Future End users (construction workers, residents of new residential development and maintenance workers)	Likely	Medium	Moderate	Intrusive Investigation & Monitoring
	• Direct or indirect contact	• Adjacent land users	Likely	Mild	Moderate to Low	
	• Direct contact	• Water supply pipes (water mains and sewer)	Likely	Mild	Moderate to Low	
	• Direct contact	• Buildings and infrastructure (gas & electric assets and broadband)	Unlikely	Minor	Low	
	• Vertical migration	• Groundwater	Likely	Mild	Moderate to Low	
	• Lateral migration	• Surface Water	Likely	Mild	Moderate to Low	
• Contaminants of Concern (ACMs)	• Direct contact and inhalation of soil derived dust	• Future End users (construction workers, staff of new residential development and maintenance workers)	Likely	Mild	Moderate to Low	
	• Direct or indirect contact	• Adjacent land users	Unlikely	Medium	Low	
• Off-site sources- electric sub-station (PCBs) located c.155m N	• Direct contact and inhalation of soil derived dust	• Future End users (construction workers, staff of new residential development and maintenance workers)	Likely	Mild	Moderate to Low	
	• Direct or indirect contact	• Adjacent land users	Unlikely	Medium	Low	
• Aggressive Natural Deposits	• Direct contact and inhalation of soil derived dust	• Future End users (construction workers, residents of new residential development and maintenance workers)	Unlikely	Minor	Very Low	
	• Direct contact	• Adjacent land users	Unlikely	Minor	Very Low	
	• Direct contact	• Water supply pipes (water mains and sewer)	Unlikely	Minor	Very Low	
	• Direct contact	• Buildings and infrastructure (gas & electric assets and broadband)	Likely	Minor	Low	
	• Vertical migration	• Groundwater	Unlikely	Minor	Very Low	
	• Lateral migration	• Surface Water	Likely	Mild	Moderate to Low	

Table 3.4 Preliminary Qualitative Risk Assessment

3.2 Preliminary Risk Assessment Summary

The PRA and Conceptual Model (CM) developed from the information gathered as part of the desk study process have identified plausible potential pollutant linkages that exist in relation to the proposed redevelopment of the site.

The potential pollutant linkages established within this desk study are not considered to prevent development on the subject site but could require investigation and assessment to support further characterisation, calibration of the CM and where/if necessary, determine a remedial strategy to reduce, remove or otherwise control any risk within the site to key receptors.

3.3 Preliminary Geotechnical Risk Assessment Summary

The site is anticipated to be underlain by the Chalk. Given that the site had been developed previously, there is the potential for a thickness of Made Ground to be present over the natural deposits.

It is possible that conventional strip or pad foundations could be suitable for the proposed redevelopment, although this is subject to confirmation following intrusive investigation and subject to the thickness of Made Ground that may be present on site.

3.4 Conclusions and Recommendations

It is concluded that there is no potential for contamination to exist at the site due to its recent and historic uses. Although, the individual risk ratings for the potential pollutant linkages identified ranged from moderate to very low, no specific industrial or potentially contaminative land uses have been identified on or near the site in relation to the desk study. Subsequently, no viable sources of contamination and ground gases (carbon dioxide and methane) have been identified within the desk study. Therefore, no further assessment is considered necessary on the site in relation to the soils' contamination and ground gasses to protect the end users.

It is possible that conventional foundations would be suitable for the proposed redevelopment, although this is subject to confirmation following intrusive investigation and subject to the thickness of Made Ground that may be present on site and consideration should be given to the potential risk of solution features beneath the site.

Should previously undiscovered contamination or unforeseen ground conditions be encountered during construction by the ground worker's, this must be reported to the site manager immediately in order that the consultant is notified. Where deemed necessary, the consultant shall attend the site to inspect the discovery and provide recommendations on the further actions required, if any. Where necessary the regulatory authority shall be informed. Following any additional investigation or laboratory testing the results and any proposed remedial measures shall be reported to the regulatory authority or other appropriate organisation for consent, before proceeding or implementing the remedial measures.

The provisions shall be made to ensure that all workers are made aware of their responsibility to observe, report, and act on any potentially suspicious, abnormal, unforeseen or contaminated ground and/or groundwater conditions they may encounter.

Depending on the type, nature and extent of any such 'discovery', it may be necessary to halt works in that location until such time as the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with consultation with the regulator, client, other technical personnel and/or regulatory/approval organisations.



PHASE I DESK STUDY REPORT

For the site at:
Blewgarth, The Warren, Caversham,
Reading, RG4 7TH

On behalf of:
Mr. Tom Luke

Document ID:
ICE0180-DSR-JUL23

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road
Redhill, Surrey, RH1 1QZ
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Figures





Project:		Blewgarth, The Warren, Caversham, Reading, RG4 7TH		Title	Site Location Plan	
Client:		Mr. Tom Luke		IBEX Consulting Engineers Limited Abbey House, 25 Clarendon Road Redhill, Surrey. RH1 1QZ +44(0)1737 452622 www.ibexconsultant.com		
Ref No:	ICE0180	Revision:	0			
Drawn:	LD	Date:	05/07/2023			
Figure:	1	Scale:	Not To Scale			

Appendix A

Desk Study Information



THE WARREN, THE WARREN, CAVERSHAM, READING, RG4 7TH**Order Details**

Date: 04/07/2023
Your ref: ICE0180
Our Ref: GS-NWG-EBE-Q59-4U1

Site Details

Location: 470765 174861
Area: 0.11 ha
Authority: [Reading Borough Council](#) ↗

[Summary of findings](#)[p. 2 >](#)[Aerial image](#)[p. 9 >](#)[OS MasterMap site plan](#)[p.14 >](#)groundsure.com/insightuserguide ↗

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
15 >	1.1 >	Historical industrial land uses >	0	1	25	26	-
18 >	1.2 >	Historical tanks >	0	0	1	3	-
18 >	1.3 >	Historical energy features >	0	0	4	10	-
19	1.4	Historical petrol stations	0	0	0	0	-
19 >	1.5 >	Historical garages >	0	0	0	7	-
20	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
21 >	2.1 >	Historical industrial land uses >	0	1	30	29	-
24 >	2.2 >	Historical tanks >	0	0	2	6	-
24 >	2.3 >	Historical energy features >	0	0	6	15	-
25	2.4	Historical petrol stations	0	0	0	0	-
26 >	2.5 >	Historical garages >	0	0	0	11	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
27	3.1	Active or recent landfill	0	0	0	0	-
27	3.2	Historical landfill (BGS records)	0	0	0	0	-
28	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
28 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	1	0	-
28	3.5	Historical waste sites	0	0	0	0	-
28	3.6	Licensed waste sites	0	0	0	0	-
29 >	3.7 >	Waste exemptions >	0	0	0	9	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
31 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
32 >	4.2 >	Current or recent petrol stations >	0	0	0	2	-
32	4.3	Electricity cables	0	0	0	0	-
32	4.4	Gas pipelines	0	0	0	0	-
32	4.5	Sites determined as Contaminated Land	0	0	0	0	-



32	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
33	4.7	Regulated explosive sites	0	0	0	0	-
33	4.8	Hazardous substance storage/usage	0	0	0	0	-
33	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
33	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
33 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	0	3	-
34	4.12	Radioactive Substance Authorisations	0	0	0	0	-
34 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	2	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
35	4.15	Pollutant release to public sewer	0	0	0	0	-
35 >	4.16 >	List 1 Dangerous Substances >	0	0	0	4	-
36	4.17	List 2 Dangerous Substances	0	0	0	0	-
36 >	4.18 >	Pollution Incidents (EA/NRW) >	0	0	1	4	-
37	4.19	Pollution inventory substances	0	0	0	0	-
37	4.20	Pollution inventory waste transfers	0	0	0	0	-
37	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
38 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
40 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
42 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
43 >	5.4 >	Groundwater vulnerability- soluble rock risk >	Identified (within 0m)				
43	5.5	Groundwater vulnerability- local information	None (within 0m)				
44 >	5.6 >	Groundwater abstractions >	0	0	0	0	19
49 >	5.7 >	Surface water abstractions >	0	0	0	0	6
50 >	5.8 >	Potable abstractions >	0	0	0	0	5
52	5.9	Source Protection Zones	0	0	0	0	-
52	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
53 >	6.1 >	Water Network (OS MasterMap) >	0	1	0	-	-



54 >	6.2 >	Surface water features >	0	1	0	-	-
54 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
54 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
55 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
56 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
57 >	7.2 >	Historical Flood Events >	0	11	40	-	-
60	7.3	Flood Defences	0	0	0	-	-
60	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
60	7.5	Flood Storage Areas	0	0	0	-	-
61 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
62 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
63 >	8.1 >	Surface water flooding >	1 in 100 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
65 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
66	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
67	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
67	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
67	10.4	Special Protection Areas (SPA)	0	0	0	0	0
67	10.5	National Nature Reserves (NNR)	0	0	0	0	0
68	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
68 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	1
68	10.8	Biosphere Reserves	0	0	0	0	0
68	10.9	Forest Parks	0	0	0	0	0
69	10.10	Marine Conservation Zones	0	0	0	0	0
69	10.11	Green Belt	0	0	0	0	0
69	10.12	Proposed Ramsar sites	0	0	0	0	0



69	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
69	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
70	10.15	Nitrate Sensitive Areas	0	0	0	0	0
70 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	1
71 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
72	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
73	11.1	World Heritage Sites	0	0	0	-	-
74	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
74	11.3	National Parks	0	0	0	-	-
74 >	11.4 >	Listed Buildings >	0	1	10	-	-
75 >	11.5 >	Conservation Areas >	0	1	0	-	-
75	11.6	Scheduled Ancient Monuments	0	0	0	-	-
76 >	11.7 >	Registered Parks and Gardens >	0	1	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
78	12.2	Open Access Land	0	0	0	-	-
78	12.3	Tree Felling Licences	0	0	0	-	-
78	12.4	Environmental Stewardship Schemes	0	0	0	-	-
78	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
79 >	13.1 >	Priority Habitat Inventory >	0	0	6	-	-
80	13.2	Habitat Networks	0	0	0	-	-
80	13.3	Open Mosaic Habitat	0	0	0	-	-
80	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
81 >	14.1 >	10k Availability >	Identified (within 500m)				
82 >	14.2 >	Artificial and made ground (10k) >	0	0	5	4	-
84 >	14.3 >	Superficial geology (10k) >	0	1	4	0	-

85	14.4	Landslip (10k)	0	0	0	0	-
86 >	14.5 >	Bedrock geology (10k) >	1	0	1	0	-
87	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
88 >	15.1 >	50k Availability >	Identified (within 500m)				
89 >	15.2 >	Artificial and made ground (50k) >	0	0	3	0	-
90	15.3	Artificial ground permeability (50k)	0	0	-	-	-
91 >	15.4 >	Superficial geology (50k) >	0	1	3	0	-
92 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
92	15.6	Landslip (50k)	0	0	0	0	-
92	15.7	Landslip permeability (50k)	None (within 50m)				
93 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
94 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
94	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
95 >	16.1 >	BGS Boreholes >	0	0	2	-	-
Page	Section	Natural ground subsidence >					
96 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
97 >	17.2 >	Running sands >	Low (within 50m)				
99 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
101 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
102 >	17.5 >	Landslides >	Moderate (within 50m)				
104 >	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
106 >	18.1 >	BritPits >	0	0	1	0	-
107 >	18.2 >	Surface ground workings >	0	0	19	-	-
108	18.3	Underground workings	0	0	0	0	0
108	18.4	Underground mining extents	0	0	0	0	-
108	18.5	Historical Mineral Planning Areas	0	0	0	0	-



108 >	18.6 >	Non-coal mining >	1	0	1	0	1
109 >	18.7 >	JPB mining areas >	Identified (within 0m)				
109	18.8	The Coal Authority non-coal mining	0	0	0	0	-
110 >	18.9 >	Researched mining >	0	0	1	0	-
110	18.10	Mining record office plans	0	0	0	0	-
110	18.11	BGS mine plans	0	0	0	0	-
110	18.12	Coal mining	None (within 0m)				
111	18.13	Brine areas	None (within 0m)				
111	18.14	Gypsum areas	None (within 0m)				
111	18.15	Tin mining	None (within 0m)				
111	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
112 >	19.1 >	Natural cavities >	0	0	0	1	-
113	19.2	Mining cavities	0	0	0	0	0
113	19.3	Reported recent incidents	0	0	0	0	-
113	19.4	Historical incidents	0	0	0	0	-
113	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
115 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
117 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
117	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
117	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
118	22.1	Underground railways (London)	0	0	0	-	-
118	22.2	Underground railways (Non-London)	0	0	0	-	-
118	22.3	Railway tunnels	0	0	0	-	-
118	22.4	Historical railway and tunnel features	0	0	0	-	-
118	22.5	Royal Mail tunnels	0	0	0	-	-



119	22.6	Historical railways	0	0	0	-	-
119	22.7	Railways	0	0	0	-	-
119	22.8	Crossrail 1	0	0	0	0	-
119	22.9	Crossrail 2	0	0	0	0	-
119	22.10	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 29/06/2019

Site Area: 0.11ha



Recent site history - 2015 aerial photograph



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Capture Date: 20/04/2015

Site Area: 0.11ha



Recent site history - 2013 aerial photograph



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Capture Date: 08/07/2013

Site Area: 0.11ha



Recent site history - 2010 aerial photograph



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Capture Date: 22/09/2010

Site Area: 0.11ha



Recent site history - 1999 aerial photograph



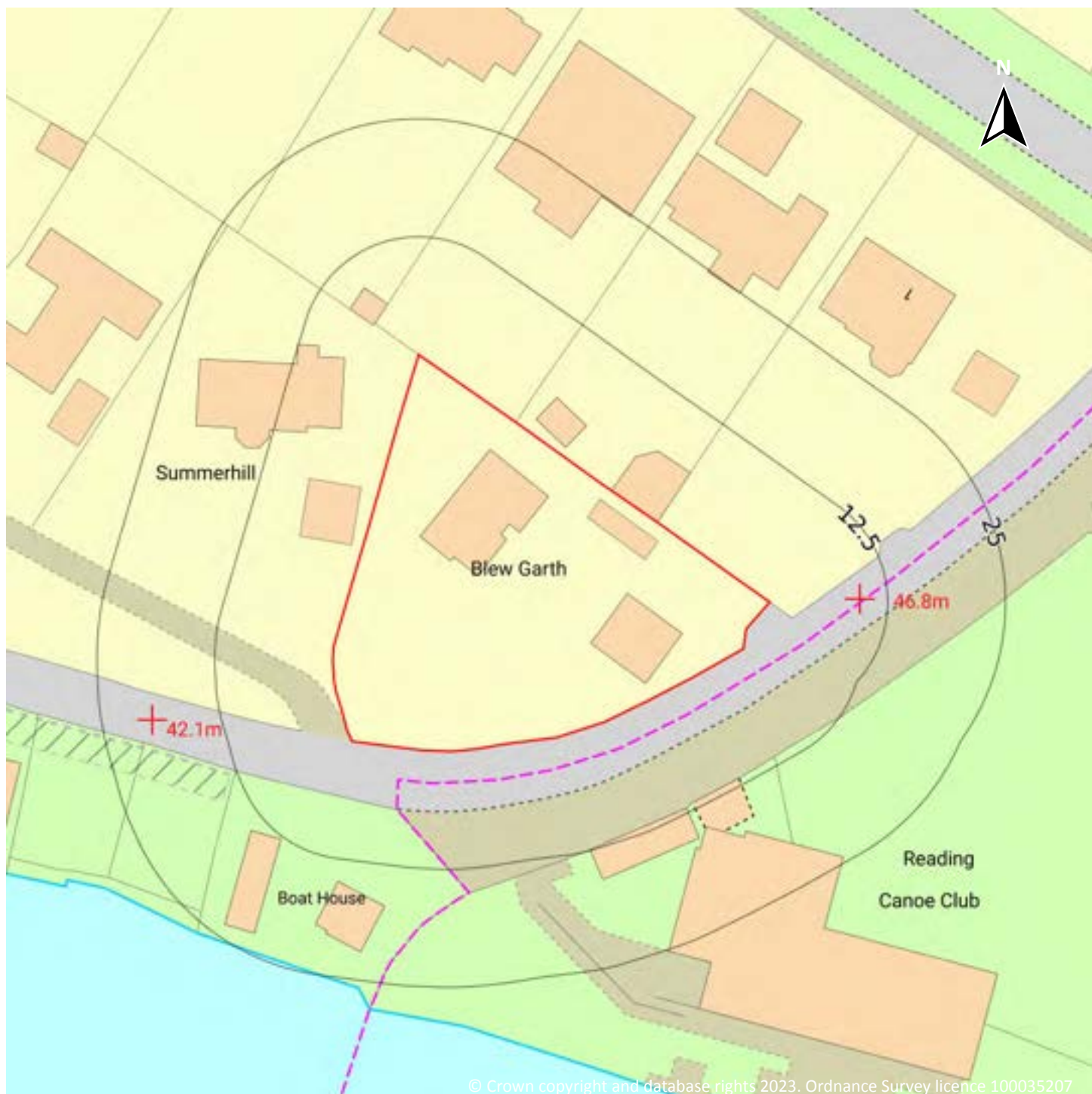
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2023. All Rights Reserved.

Capture Date: 04/09/1999

Site Area: 0.11ha



OS MasterMap site plan



Site Area: 0.11ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

52

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 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	42m W	Boat Houses	1901	1864327



ID	Location	Land use	Dates present	Group ID
B	65m SE	Boat House	1897 - 1900	1888429
A	70m W	Boat House	1938	1902082
A	70m W	Boat House	1910	1902277
1	73m E	Grave Yard	1878	1865905
C	75m W	Unspecified Ground Workings	1938	1901766
C	75m W	Unspecified Ground Workings	1910	1937174
C	78m W	Unspecified Pits	1989 - 1994	1885676
C	78m W	Unspecified Pits	1962 - 1971	1887042
C	78m W	Unspecified Pits	1977	1956429
A	82m W	Boat Houses	1901	1864322
D	136m NE	Chalk Pit	1897	1964760
D	136m NE	Chalk Pit	1900 - 1910	1910809
D	136m NE	Unspecified Pit	1938	1926072
D	137m NE	Cuttings	1989	1918209
D	137m NE	Cuttings	1977	1956113
D	137m NE	Cuttings	1962 - 1971	1962187
D	142m NE	Unspecified Pit	1878	1954209
D	181m NE	Unspecified Quarry	1961	1868373
E	188m W	Boat Houses	1910	1892405
E	188m W	Boat Houses	1938	1931629
E	236m W	Boat Houses	1938	1940734
E	236m W	Boat Houses	1910	1962797
3	240m E	Boat Houses	1901	1864326
E	240m W	Boat Houses	1900	1938492
E	240m W	Boat Houses	1897	1928295
E	275m W	Boat Houses	1938	1899632
E	275m W	Boat Houses	1910	1949852
E	276m W	Boat House	1977	1885245



ID	Location	Land use	Dates present	Group ID
E	276m W	Boat House	1989 - 1994	1938462
6	280m SE	Boat House	1989 - 1994	1888920
E	280m W	Boat Houses	1900	1965478
E	282m W	Boat Houses	1897	1944741
7	317m E	Chalk Pit	1901	1864145
G	317m E	Police Station	1897 - 1900	1915256
G	356m E	Smithy	1878	1875900
H	356m SE	Unspecified Ground Workings	1938	1893838
H	356m SE	Unspecified Ground Workings	1910	1903036
8	393m SE	Boat House	1977	1867406
I	408m E	Unspecified Manufactory	1878	1859443
J	413m W	Boat House	1989 - 1994	1893065
J	413m W	Boat House	1977	1930831
K	419m NW	Sand Pit	1878	1873397
L	421m W	Boat Houses	1938	1864328
L	421m W	Boat House	1910	1867414
M	426m NE	Cuttings	1878	1882444
10	435m S	Unspecified Depot	1977	1862092
I	469m E	Telecomm Exchange	1994	1859621
I	469m E	Telephone Exchange	1989	1870418
P	471m W	Boat Houses	1938	1907498
P	473m W	Boat Houses	1994	1964029
11	491m SE	Boat House	1910	1867404

This data is sourced from Ordnance Survey / Groundsure.



1.2 Historical tanks

Records within 500m

4

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 15 >](#)

ID	Location	Land use	Dates present	Group ID
B	69m SE	Unspecified Tank	1932 - 1936	323723
O	463m S	Unspecified Tank	1970 - 1988	328327
O	480m S	Unspecified Tank	1970 - 1988	323178
12	497m S	Unspecified Tank	1970 - 1988	321384

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

14

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 15 >](#)

ID	Location	Land use	Dates present	Group ID
2	146m N	Electricity Substation	1972 - 1993	206394
F	218m E	Electricity Substation	1971 - 1986	196716
F	218m E	Electricity Substation	1982	200871
F	218m E	Electricity Substation	-	187634
4	261m S	Electricity Substation	1988 - 1993	197426
5	268m NE	Electricity Substation	1972 - 1993	209921
M	425m NE	Electricity Substation	1974 - 1993	196253



ID	Location	Land use	Dates present	Group ID
9	435m NE	Electricity Substation	1993	189856
O	445m S	Electricity Substation	1970 - 1988	198539
K	445m NW	Electricity Substation	1974	189855
I	455m E	Electricity Substation	1956	189854
I	460m E	Electricity Substation	-	187733
I	460m E	Electricity Substation	1956 - 1971	196894
I	460m E	Electricity Substation	1982	195382

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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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	7
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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'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
I	414m E	Garage	1986	61872
I	414m E	Garage	1982	61672
I	414m E	Garage	1956 - 1971	64886
I	415m E	Garage	1956 - 1959	64114



ID	Location	Land use	Dates present	Group ID
N	444m E	Garage	1971 - 1982	65324
N	444m E	Garage	1956	62186
N	445m E	Garage	1956 - 1959	65431

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
- Historical garages

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2.1 Historical industrial land uses

Records within 500m

60

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 21](#) >

ID	Location	Land Use	Date	Group ID
A	42m W	Boat Houses	1901	1864327
B	65m SE	Boat House	1900	1888429
B	65m SE	Boat House	1897	1888429



ID	Location	Land Use	Date	Group ID
A	70m W	Boat House	1938	1902082
A	70m W	Boat House	1910	1902277
1	73m E	Grave Yard	1878	1865905
C	75m W	Unspecified Ground Workings	1938	1901766
C	75m W	Unspecified Ground Workings	1910	1937174
C	78m W	Unspecified Pits	1994	1885676
C	78m W	Unspecified Pits	1989	1885676
C	78m W	Unspecified Pits	1977	1956429
C	78m W	Unspecified Pits	1962	1887042
C	78m W	Unspecified Pits	1971	1887042
A	82m W	Boat Houses	1901	1864322
D	136m NE	Chalk Pit	1897	1964760
D	136m NE	Unspecified Pit	1938	1926072
D	136m NE	Chalk Pit	1910	1910809
D	137m NE	Cuttings	1989	1918209
D	137m NE	Cuttings	1977	1956113
D	137m NE	Cuttings	1962	1962187
D	137m NE	Cuttings	1971	1962187
D	137m NE	Chalk Pit	1900	1910809
D	142m NE	Unspecified Pit	1878	1954209
D	181m NE	Unspecified Quarry	1961	1868373
F	188m W	Boat Houses	1938	1931629
F	188m W	Boat Houses	1910	1892405
F	236m W	Boat Houses	1938	1940734
F	236m W	Boat Houses	1910	1962797
2	240m E	Boat Houses	1901	1864326
F	240m W	Boat Houses	1900	1938492
F	240m W	Boat Houses	1897	1928295



ID	Location	Land Use	Date	Group ID
F	275m W	Boat Houses	1938	1899632
F	275m W	Boat Houses	1910	1949852
F	276m W	Boat House	1994	1938462
F	276m W	Boat House	1989	1938462
F	276m W	Boat House	1977	1885245
J	280m SE	Boat House	1994	1888920
J	280m SE	Boat House	1989	1888920
F	280m W	Boat Houses	1900	1965478
F	282m W	Boat Houses	1897	1944741
K	317m E	Police Station	1897	1915256
K	321m E	Police Station	1900	1915256
K	356m E	Smithy	1878	1875900
L	356m SE	Unspecified Ground Workings	1938	1893838
L	356m SE	Unspecified Ground Workings	1910	1903036
3	393m SE	Boat House	1977	1867406
M	408m E	Unspecified Manufactory	1878	1859443
N	413m W	Boat House	1994	1893065
N	413m W	Boat House	1989	1893065
N	413m W	Boat House	1977	1930831
O	419m NW	Sand Pit	1878	1873397
P	421m W	Boat Houses	1938	1864328
P	421m W	Boat House	1910	1867414
Q	426m NE	Cuttings	1878	1882444
5	435m S	Unspecified Depot	1977	1862092
M	469m E	Telecomm Exchange	1994	1859621
M	469m E	Telephone Exchange	1989	1870418
T	471m W	Boat Houses	1938	1907498
T	473m W	Boat Houses	1994	1964029



ID	Location	Land Use	Date	Group ID
6	491m SE	Boat House	1910	1867404

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	8
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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 21 >](#)

ID	Location	Land Use	Date	Group ID
B	69m SE	Unspecified Tank	1932	323723
B	69m SE	Unspecified Tank	1936	323723
S	463m S	Unspecified Tank	1970	328327
S	463m S	Unspecified Tank	1988	328327
S	480m S	Unspecified Tank	1988	323178
S	480m S	Unspecified Tank	1970	323178
U	497m S	Unspecified Tank	1988	321384
U	497m S	Unspecified Tank	1970	321384

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	21
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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 21 >](#)

ID	Location	Land Use	Date	Group ID
E	146m N	Electricity Substation	1993	206394
E	146m N	Electricity Substation	1972	206394



ID	Location	Land Use	Date	Group ID
G	218m E	Electricity Substation	1971	196716
G	218m E	Electricity Substation	1982	200871
G	218m E	Electricity Substation	-	187634
G	219m E	Electricity Substation	1986	196716
H	261m S	Electricity Substation	1993	197426
H	261m S	Electricity Substation	1988	197426
I	268m NE	Electricity Substation	1993	209921
I	269m NE	Electricity Substation	1972	209921
Q	425m NE	Electricity Substation	1993	196253
Q	425m NE	Electricity Substation	1974	196253
4	435m NE	Electricity Substation	1993	189856
S	445m S	Electricity Substation	1988	198539
O	445m NW	Electricity Substation	1974	189855
S	445m S	Electricity Substation	1970	198539
M	455m E	Electricity Substation	1956	189854
M	460m E	Electricity Substation	-	187733
M	460m E	Electricity Substation	1956	196894
M	460m E	Electricity Substation	1971	196894
M	460m E	Electricity Substation	1982	195382

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

11

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'.

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

ID	Location	Land Use	Date	Group ID
M	414m E	Garage	1986	61872
M	414m E	Garage	1982	61672
M	414m E	Garage	1956	64886
M	414m E	Garage	1971	64886
M	415m E	Garage	1956	64114
M	415m E	Garage	1959	64114
R	444m E	Garage	1982	65324
R	444m E	Garage	1956	62186
R	445m E	Garage	1956	65431
R	445m E	Garage	1959	65431
R	445m E	Garage	1971	65324

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- 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

1

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.

Features are displayed on the Waste and landfill map on [page 27 >](#)

ID	Location	Details		
A	80m SW	Site Address: Richfield Avenue, Reading, Berkshire Licence Holder Address: -	Waste Licence: - Site Reference: RDG11, TP0122 Waste Type: Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 31/12/1970 Last Recorded: 31/12/1979

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	9
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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 27 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX226802	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX226802	Disposing of waste exemption	Not on a farm	Disposal by incineration
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX226802	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX079806	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX079806	Disposing of waste exemption	Not on a farm	Disposal by incineration
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX079806	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX354878	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX354878	Disposing of waste exemption	Not on a farm	Disposal by incineration



ID	Location	Site	Reference	Category	Sub-Category	Description
A	327m SW	RIVERMEAD LEISURE COMPLEX, RICHFIELD AVENUE, READING, RG1 8EQ	WEX354878	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters

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
- △ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Company	Address	Activity	Category
1	155m N	Electricity Sub Station	Berkshire, RG4	Electrical Features	Infrastructure and Facilities
3	221m E	Electricity Sub Station	Berkshire, RG4	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.



4.2 Current or recent petrol stations

Records within 500m**2**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Company	Address	LPG	Status
D	449m E	ESSO	18-20, Church Street, Caversham, Reading, Reading, RG4 8AU	No	Open
E	473m SE	BP	Richfield Avenue, Reading, Reading, RG1 8EQ	No	Open

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**3**

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.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Address	Details	
D	468m E	Tesco Stores Ltd, Caversham Bridge Service Station, 18-20 Church Street, Caversham, Reading, RG4 8AU	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	488m SE	Rontec Watford Ltd, BP, Richfield Avenue, Reading, Berkshire, RG1 8EQ	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
D	498m E	Caversham Launderama, 21 Church St, Caversham, Reading, RG4 8AZ	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

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

2

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

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Address	Details	
5	367m S	CALENDARS RESTAURANT, RICHFIELD AVE, CALENDARS RESTAURANT, RICHFIELD, AVENUE, CAVERSHAM, READING, BERK, S	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.2379 Permit Version: 1 Receiving Water: PORTMAN BROOK	Status: TRANSFERRED FROM COPA 1974 Issue date: 22/04/1988 Effective Date: 22/04/1988 Revocation Date: -



ID	Location	Address	Details	
A	375m SW	RIVERSIDE LEISURE CENTRE, READING, RIVERSIDE LEISURE CENTRE, READIN, G, BERKS	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.2509 Permit Version: 1 Receiving Water: PORTMAN BROOK	Status: TRANSFERRED FROM COPA 1974 Issue date: 09/06/1988 Effective Date: 09/06/1988 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
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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
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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	4
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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.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
C	425m SW	Quick Circuits Lovelock Rd. Reading	Not Active	-	-
C	425m SW	Hilliers Engineering 215 Cardiff Road Reading	Not Active	-	-
C	425m SW	Hilliers Engineering, 215 Cardiff Road, Reading	Active	Kennet	Mercury (other), Cadmium
C	425m SW	Quick Circuits, Lovelock Road, Reading	Active	Kennet	Mercury (other)

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

5

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

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Details	
2	173m S	Incident Date: 30/11/2001 Incident Identification: 45823 Pollutant: Inert Materials and Wastes Pollutant Description: Mineral Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	284m S	Incident Date: 27/02/2002 Incident Identification: 60853 Pollutant: Oils and Fuel Pollutant Description: Mixed/Waste Oils	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
A	360m S	Incident Date: 26/02/2002 Incident Identification: 60718 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	400m SE	Incident Date: 13/08/2002 Incident Identification: 99851 Pollutant: Oils and Fuel Pollutant Description: Other Oil or Fuel	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	410m SE	Incident Date: 10/07/2001 Incident Identification: 15233 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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.

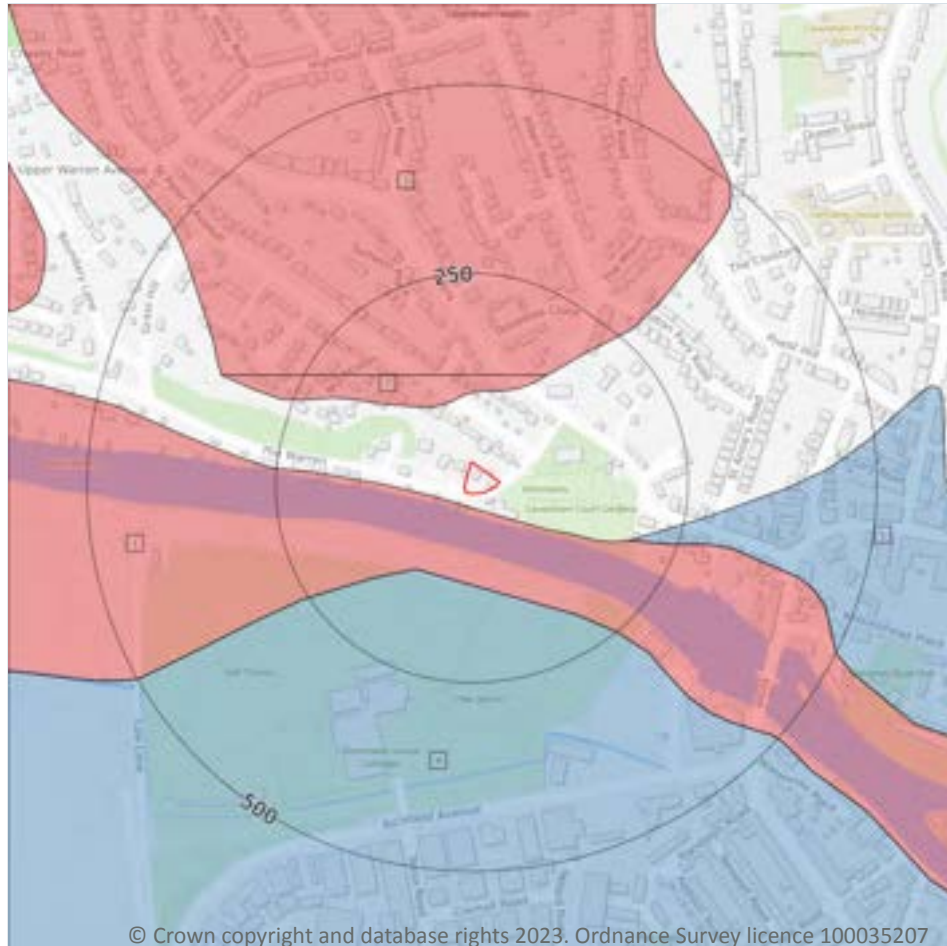
4.21 Pollution inventory radioactive waste

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



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

5

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 38](#) >

ID	Location	Designation	Description
1	17m SW	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	84m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

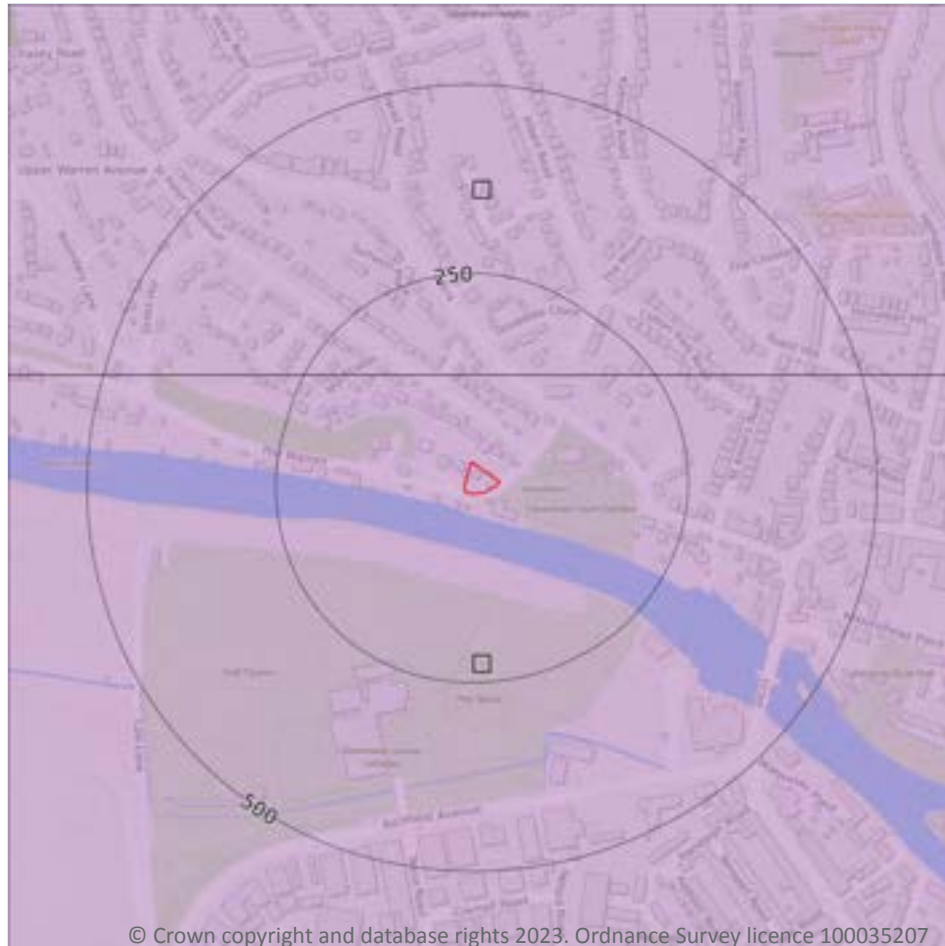


ID	Location	Designation	Description
3	115m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	115m S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	189m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

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

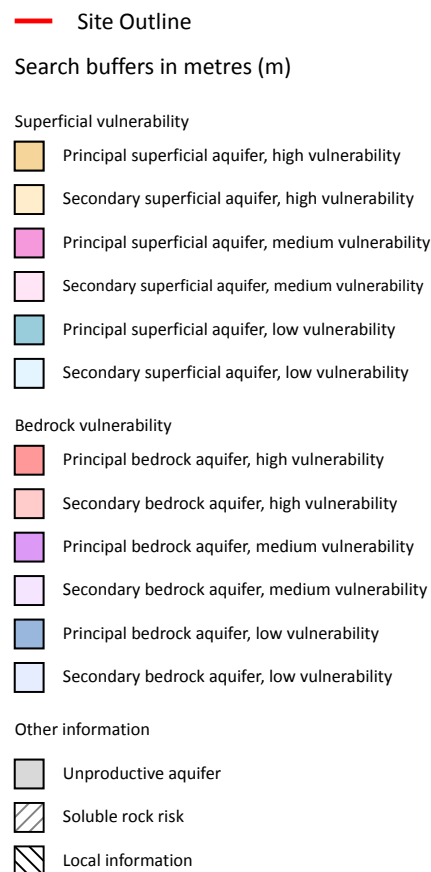
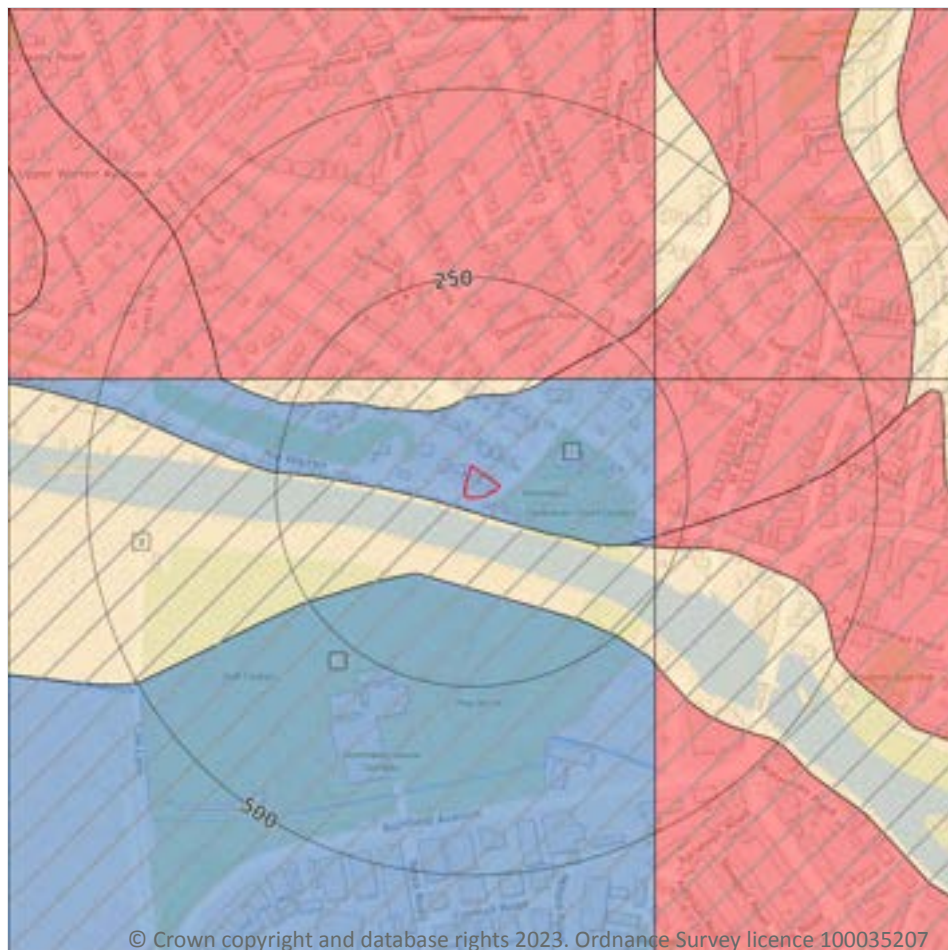
ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	115m N	Principal	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

2

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 42](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
3	16m SW	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low 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	Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow.	2.0%

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

5.5 Groundwater vulnerability- local information

Records on site	0
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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



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

19

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 44](#) >

ID	Location	Details	
-	693m W	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (D) Data Type: Point Name: DRAYTON Easting: 470100 Northing: 174600	Annual Volume (m ³): 9819 Max Daily Volume (m ³): 26.82 Original Application No: WR.A/3088 Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date: -
-	755m S	Status: Historical Licence No: 28/39/23/0041 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/07/1966 Version End Date: -
-	755m S	Status: Historical Licence No: 28/39/23/0041 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/07/1966 Version End Date: -
-	755m S	Status: Active Licence No: 28/39/23/0167 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 727.4 Original Application No: - Original Start Date: 23/01/1990 Expiry Date: - Issue No: 101 Version Start Date: 30/06/2006 Version End Date: -
-	755m S	Status: Active Licence No: 28/39/23/0167 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 727.4 Original Application No: - Original Start Date: 23/01/1990 Expiry Date: - Issue No: 101 Version Start Date: 30/06/2006 Version End Date: -



ID	Location	Details	
-	822m SW	Status: Active Licence No: 28/39/23/0128 Details: Process Water Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING POINT A Data Type: Point Name: HILLIER GROUP OF COMPANIES Easting: 470400 Northing: 174100	Annual Volume (m ³): 6682 Max Daily Volume (m ³): 27.28 Original Application No: WR.A/4547 Original Start Date: 22/01/1975 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	847m SW	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (E) Data Type: Point Name: DRAYTON Easting: 470100 Northing: 174300	Annual Volume (m ³): 9819 Max Daily Volume (m ³): 26.82 Original Application No: WR.A/3088 Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date: -
-	857m S	Status: Active Licence No: 28/39/23/0128 Details: Process Water Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING POINT B Data Type: Point Name: HILLIER GROUP OF COMPANIES Easting: 470600 Northing: 174000	Annual Volume (m ³): 6682 Max Daily Volume (m ³): 27.28 Original Application No: WR.A/4547 Original Start Date: 22/01/1975 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1139m SW	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (B) Data Type: Point Name: DRAYTON Easting: 469700 Northing: 174400	Annual Volume (m ³): 9819 Max Daily Volume (m ³): 26.82 Original Application No: WR.A/3088 Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date: -
-	1139m SW	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (C) Data Type: Point Name: DRAYTON Easting: 469700 Northing: 174400	Annual Volume (m ³): 9819 Max Daily Volume (m ³): 26.82 Original Application No: WR.A/3088 Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date: -



ID	Location	Details	
-	1197m E	Status: Active Licence No: 28/39/23/0020 Details: Laundry Use Direct Source: THAMES GROUNDWATER Point: 72 GEORGE STREET, CAVERSHAM, - BOREHOLE 'A' Data Type: Point Name: Elis UK Ltd Easting: 471900 Northing: 174400	Annual Volume (m ³): 68190 Max Daily Volume (m ³): 300.04 Original Application No: NPS/WR/035059 Original Start Date: 09/05/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/02/2021 Version End Date: -
-	1339m SW	Status: Historical Licence No: 28/39/23/0181 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTLE HOSPITAL, OXFORD ROAD, READING Data Type: Point Name: WEST BERKSHIRE HEALTH AUTHORITY Easting: 469800 Northing: 173900	Annual Volume (m ³): 136875 Max Daily Volume (m ³): 400 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: 07/01/1999 Version End Date: -
-	1405m SW	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (A) Data Type: Point Name: DRAYTON Easting: 469500 Northing: 174200	Annual Volume (m ³): 9819 Max Daily Volume (m ³): 26.82 Original Application No: WR.A/3088 Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date: -
-	1410m S	Status: Active Licence No: 28/39/23/0042 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHEAPSIDE, READING, BERKSHIRE Data Type: Point Name: PRIMARK STORES LIMITED Easting: 471200 Northing: 173500	Annual Volume (m ³): 14933 Max Daily Volume (m ³): 40.91 Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -
-	1644m W	Status: Historical Licence No: 28/39/23/0139 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: CHAZEY COURT FARM, MAPLEDURHAM Data Type: Point Name: EYSTON Easting: 469140 Northing: 175200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1977 Expiry Date: - Issue No: 101 Version Start Date: 09/09/1999 Version End Date: -



ID	Location	Details	
-	1666m W	Status: Historical Licence No: 28/39/23/0137 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING (A - R) Data Type: Point Name: READING BOROUGH COUNCIL Easting: 469100 Northing: 174600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 17/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 17/11/1976 Version End Date: -
-	1674m W	Status: Historical Licence No: 28/39/23/0139 Details: General use relating to Secondary Category (Medium Loss) Direct Source: THAMES GROUNDWATER Point: CHAZEY COURT FARM, MAPLEDURHAM, - TUBEWELL 'A' Data Type: Point Name: EYSTON Easting: 469110 Northing: 175200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1977 Expiry Date: - Issue No: 101 Version Start Date: 09/09/1999 Version End Date: -
-	1880m W	Status: Historical Licence No: 28/39/23/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB Easting: 468900 Northing: 174500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1992 Version End Date: -
-	1880m W	Status: Historical Licence No: 28/39/23/0131 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB Easting: 468900 Northing: 174500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1992 Version End Date: -

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



5.7 Surface water abstractions

Records within 2000m

6

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.

Features are displayed on the Abstractions and Source Protection Zones map on [page 44 >](#)

ID	Location	Details	
-	764m SE	Status: Historical Licence No: 28/39/23/0196 Details: Transfer between sources Direct Source: THAMES SURFACE WATER - NON TIDAL Point: THAMES AT CHRISTCHURCH MEADOW Data Type: Point Name: READING BOROUGH COUNCIL Easting: 471440 Northing: 174450	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/05/2003 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 12/05/2003 Version End Date: -
-	764m SE	Status: Historical Licence No: 28/39/23/0196 Details: Lake & Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: THAMES AT CHRISTCHURCH MEADOW Data Type: Point Name: READING BOROUGH COUNCIL Easting: 471440 Northing: 174450	Annual Volume (m ³): 31536 Max Daily Volume (m ³): 86.4 Original Application No: - Original Start Date: 12/05/2003 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 01/04/2006 Version End Date: -
-	764m SE	Status: Historical Licence No: 28/39/23/0199/TR Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER THAMES - CHRISTCHURCH MEADOWS Data Type: Point Name: READING BOROUGH COUNCIL Easting: 471440 Northing: 174450	Annual Volume (m ³): 1752000 Max Daily Volume (m ³): 4800 Original Application No: - Original Start Date: 10/09/2008 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 10/09/2008 Version End Date: -
-	1444m SE	Status: Historical Licence No: TH/039/0023/022 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER THAMES AT CAVERSHAM WEIR Data Type: Point Name: Reading Hydro CBS Limited Easting: 472072 Northing: 174185	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/WR/036037 Original Start Date: 19/02/2016 Expiry Date: 31/03/2028 Issue No: 4 Version Start Date: 16/09/2021 Version End Date: -



ID	Location	Details	
-	1880m SE	Status: Historical Licence No: 28/39/22/0594 Details: Lake & Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: THE ORACLE CENTRE, READING Data Type: Point Name: ORACLE SHOPPING CENTRE LTD Easting: 471590 Northing: 173150	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/02/2000 Expiry Date: - Issue No: 1 Version Start Date: 16/02/2000 Version End Date: -
-	1880m SE	Status: Historical Licence No: 28/39/22/0594 Details: Lake & Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: ST.GILES STREAM AT THE ORACLE CENTRE, READING Data Type: Point Name: ORACLE SHOPPING CENTRE LTD Easting: 471590 Northing: 173150	Annual Volume (m ³): 737856 Max Daily Volume (m ³): 2016 Original Application No: NPS/WR/033582 Original Start Date: 16/02/2000 Expiry Date: - Issue No: 2 Version Start Date: 09/03/2020 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	5
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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 44 >](#)

ID	Location	Details	
-	755m S	Status: Historical Licence No: 28/39/23/0041 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/07/1966 Version End Date: -



ID	Location	Details	
-	755m S	Status: Active Licence No: 28/39/23/0167 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD Easting: 470900 Northing: 174100	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 727.4 Original Application No: - Original Start Date: 23/01/1990 Expiry Date: - Issue No: 101 Version Start Date: 30/06/2006 Version End Date: -
-	1339m SW	Status: Historical Licence No: 28/39/23/0181 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTLE HOSPITAL, OXFORD ROAD, READING Data Type: Point Name: WEST BERKSHIRE HEALTH AUTHORITY Easting: 469800 Northing: 173900	Annual Volume (m ³): 136875 Max Daily Volume (m ³): 400 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: 07/01/1999 Version End Date: -
-	1410m S	Status: Active Licence No: 28/39/23/0042 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHEAPSIDE, READING, BERKSHIRE Data Type: Point Name: PRIMARK STORES LIMITED Easting: 471200 Northing: 173500	Annual Volume (m ³): 14933 Max Daily Volume (m ³): 40.91 Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -
-	1880m W	Status: Historical Licence No: 28/39/23/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB Easting: 468900 Northing: 174500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1992 Version End Date: -

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



5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

1

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 53 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
A	49m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Thames

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

1

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 53 >](#)

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 53 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Thames Wallingford to Caversham	GB106039030331	Chilterns South	Thames and Chilterns South

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 53 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	44m SW	River	Thames Wallingford to Caversham	GB106039030331 ↗	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 53](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	South-West Chilterns Chalk	GB40601G601100 ↗	Good	Good	Good	2019

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



7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- River and coastal flooding:
- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

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 56 >](#)



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	51
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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 56 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
1	10m SW	06marchspring1947	1947-01-01 1947-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	12m SW	06januarynewyear2003	2002-12-23 2003-01-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
D	13m S	Ea06winter13-14	2013-11-23 2014-02-28	Unknown	Local drainage/surface water	Fluvial
C	23m SW	Reading_Fluvial Water	2007-07-19 2007-07-29	Main river	Channel capacity exceeded (no raised defences)	Fluvial
E	23m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	23m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	23m SW	06augustsummer1977	1977-01-01 1977-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
D	23m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
2	26m SW	06decemberwinter2000	2000-01-01 2000-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
F	34m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial



ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
B	44m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	54m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	73m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	76m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	85m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	90m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	95m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	95m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
3	96m SE	06decemberwinter2000	2000-01-01 2000-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
C	102m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	103m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	103m S	06augustsummer1977	1977-01-01 1977-12-12	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	105m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	111m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
G	113m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	114m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	117m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
4	121m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial



ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
5	129m S	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
8	145m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
H	150m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	152m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
B	153m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	162m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
H	163m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	167m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
10	167m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
I	168m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	171m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
I	174m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
A	175m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
12	185m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
J	187m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
13	193m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
I	203m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
16	205m W	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial



ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
L	218m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
K	219m E	Ea06winter13-14	2013-11-23 2014-02-28	Unknown	Local drainage/surface water	Fluvial
M	220m SW	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
L	233m SE	Ea06winter13-14	2013-11-23 2014-02-28	Main river	Channel capacity exceeded (no raised defences)	Fluvial
N	245m SE	Ea06winter13-14	2013-11-23 2014-02-28	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	0
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Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

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

7.4 Areas Benefiting from Flood Defences

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

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

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

7.5 Flood Storage Areas

Records within 250m	0
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Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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

River and coastal flooding - Flood Zones



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

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 56 >](#)

Location	Type
10m SW	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.

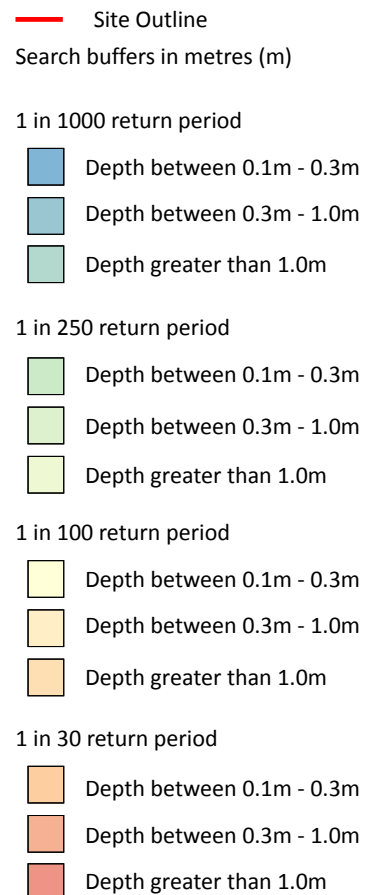
Features are displayed on the River and coastal flooding map on [page 56 >](#)

Location	Type
13m S	Zone 3 - (Fluvial /Tidal Models)

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 100 year, 0.1m - 0.3m

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 63 >](#)

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

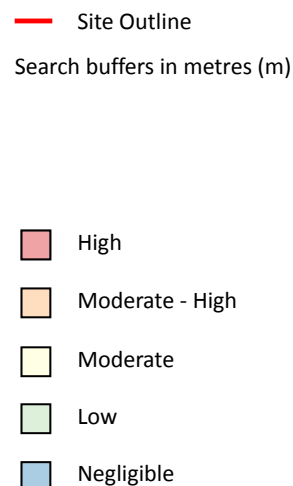
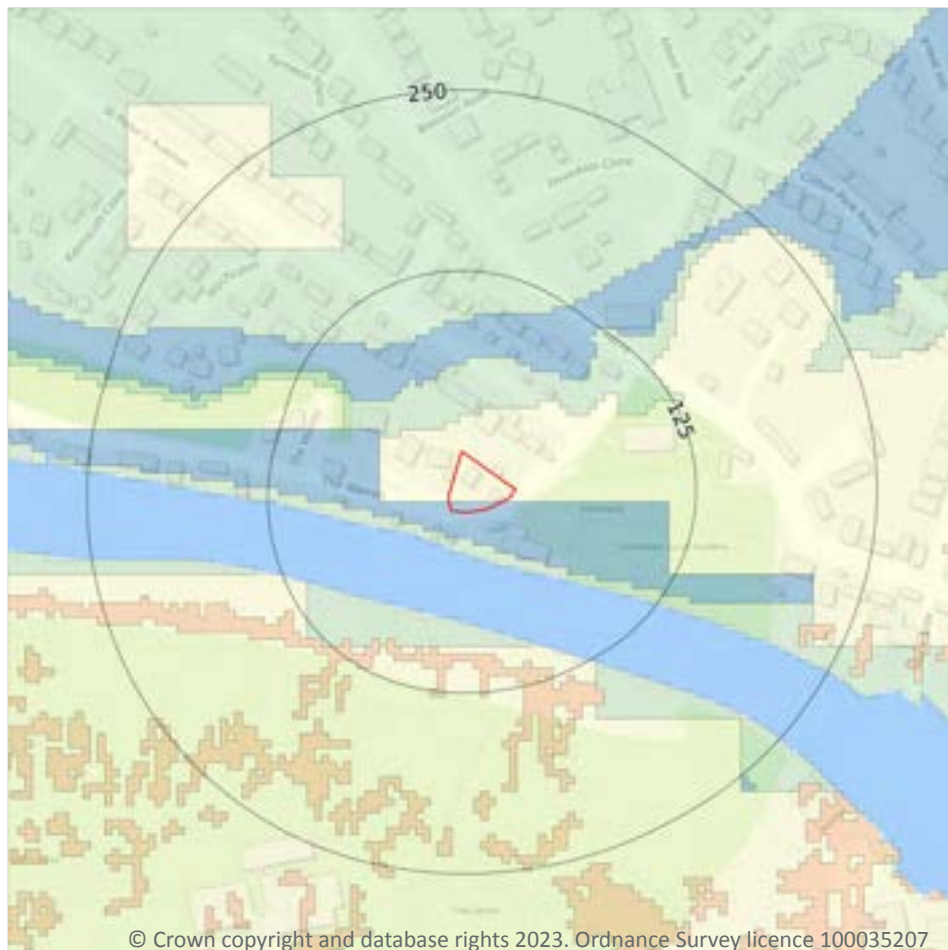
The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

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 65 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



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

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**1**

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 66 >](#)

ID	Location	Name	Woodland Type
-	1990m NW	Chazey Wood	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**0**

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

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**2**

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.

Location	Name	Type	NVZ ID	Status
On site	Thames Wallingford to Caversham NVZ	Surface Water	481	Existing
1097m N	Thames Wallingford to Caversham NVZ	Surface Water	481	Existing

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



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

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 71](#) >

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m ² , slurry lagoons & digestate stores > 4000m ² . 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.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

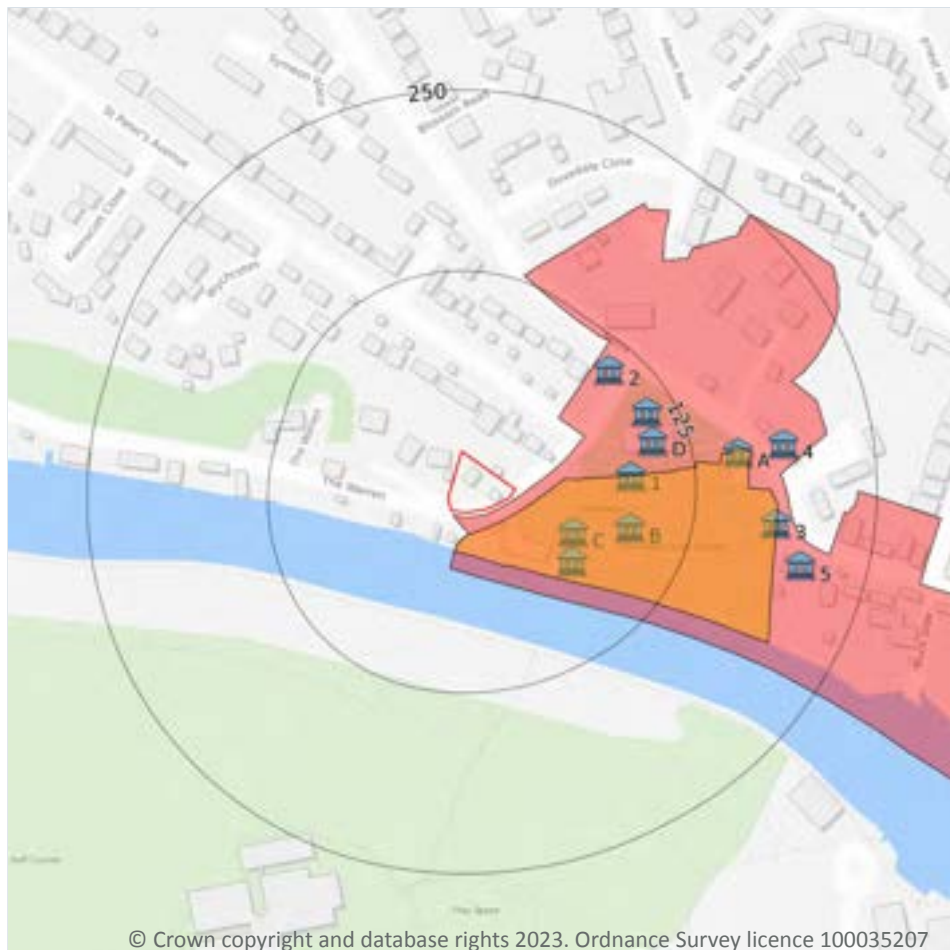
0

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



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

11

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 73 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
C	49m SE	Retaining Walls To Raised Walk To Riverside Garden Pavilion At Caversham Court	II	1154940	14/12/1978
C	61m SE	Riverside Garden Pavilion At Caversham Court	II	1113447	22/03/1957
1	81m E	Retaining Wall Of St Peter's Churchyard	II	1321934	14/12/1978
B	83m E	Retaining Walls Of Axial East West Garden Terrace Walk At Caversham Court	II	1113448	14/12/1978
D	101m E	Church Of St Peter	II*	1303560	22/03/1957



ID	Location	Name	Grade	Reference Number	Listed date
2	105m NE	Lodge To The Warren	II	1113575	14/12/1978
D	106m NE	Eleven Tombs In St Peter's Churchyard	II	1113449	14/12/1978
A	156m E	Caversham Court Stables	II	1321972	22/03/1957
3	182m E	Screen Wall At North East End Of Caversham Court Recreation Ground	II	1113446	14/12/1978
4	188m E	Banksfoot	II	1321969	22/03/1957
5	204m E	No 20 (The Rectory) Including Garden Walls	II	1321971	14/12/1978

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 73 >](#)

ID	Location	Name	District	Date of designation
A	3m E	St Peter's, Caversham	Reading	28/04/1988

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 73](#) >

ID	Location	Name	Grade
B	12m SE	Caversham Court	II

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



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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 77](#) >

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m**0**

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

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

12.3 Tree Felling Licences

Records within 250m**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m**0**

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



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

6

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 79 >](#)

ID	Location	Main Habitat	Other habitats
1	74m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	80m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	97m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	182m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



ID	Location	Main Habitat	Other habitats
5	199m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	219m W	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

2

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.

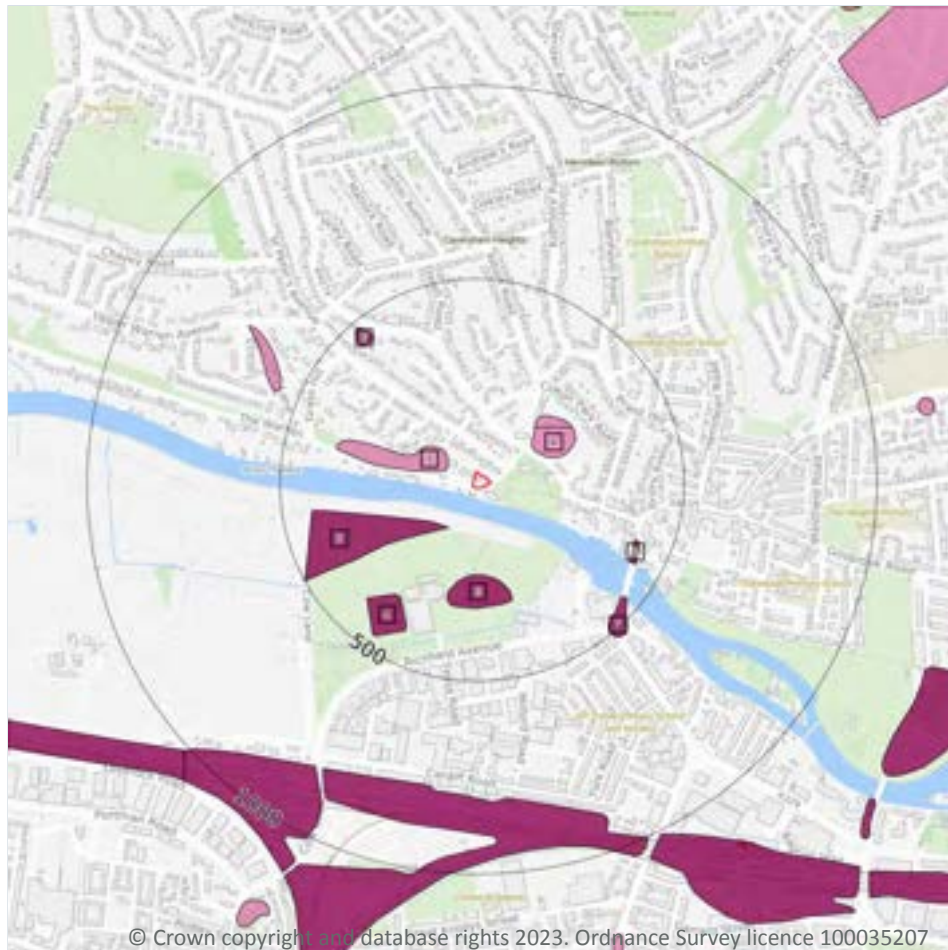
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 81](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU77SW
2	115m N	Full	Full	Full	No coverage	SU77NW

This data is sourced from the British Geological Survey.



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



Site Outline
Search buffers in metres (m)

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

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14.2 Artificial and made ground (10k)

Records within 500m

9

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 82](#) >

ID	Location	LEX Code	Description	Rock description
1	75m W	WGR-VOID	Worked Ground (Undivided)	Void
2	122m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	138m NE	WGR-VOID	Worked Ground (Undivided)	Void
A	182m NE	WGR-VOID	Worked Ground (Undivided)	Void

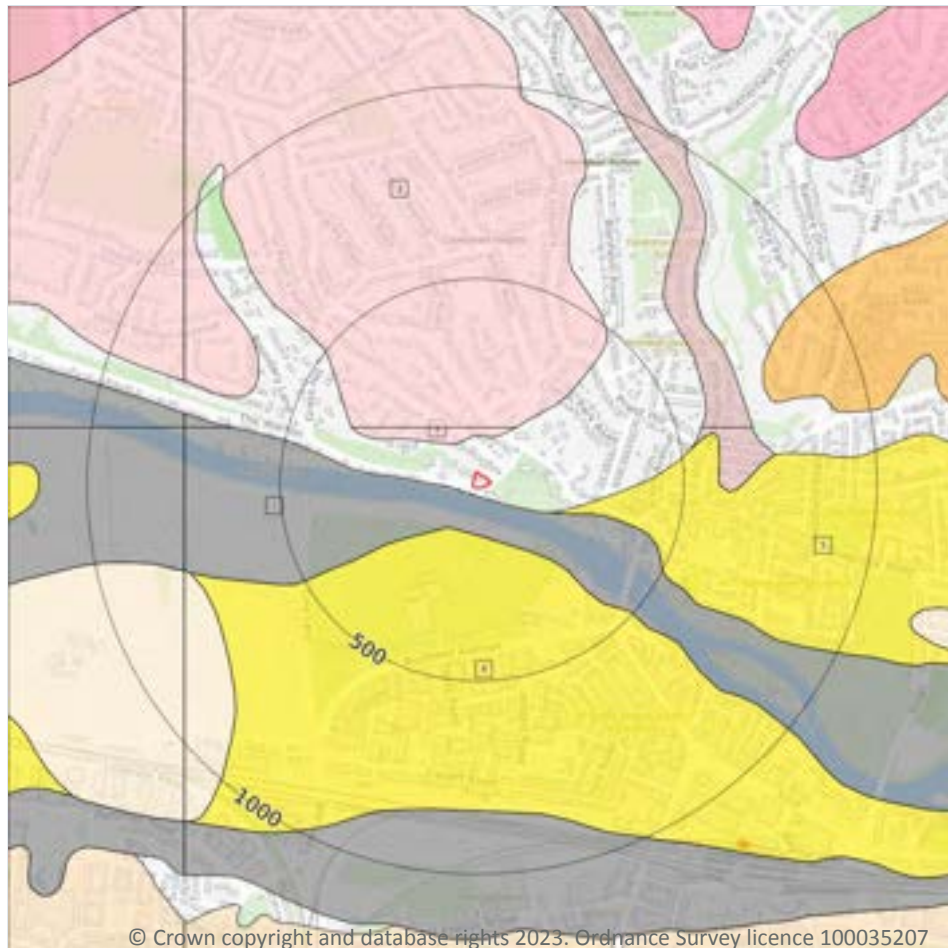


ID	Location	LEX Code	Description	Rock description
3	225m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	341m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	402m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	435m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	449m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



— Site Outline
Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 84](#) >

ID	Location	LEX Code	Description	Rock description
1	18m SW	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
2	88m NW	BHT-XSV	Boyn Hill Gravel Member - Sand And Gravel	Sand And Gravel
3	115m N	BHT-XSV	Boyn Hill Gravel Member - Sand And Gravel	Sand And Gravel
4	117m S	LASI-XCZ	Langley Silt Member - Clay And Silt	Clay And Silt



ID	Location	LEX Code	Description	Rock description
5	173m SE	LASI-XCZ	Langley Silt Member - Clay And Silt	Clay And Silt

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

2

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 86](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age
2	115m N	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- ☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

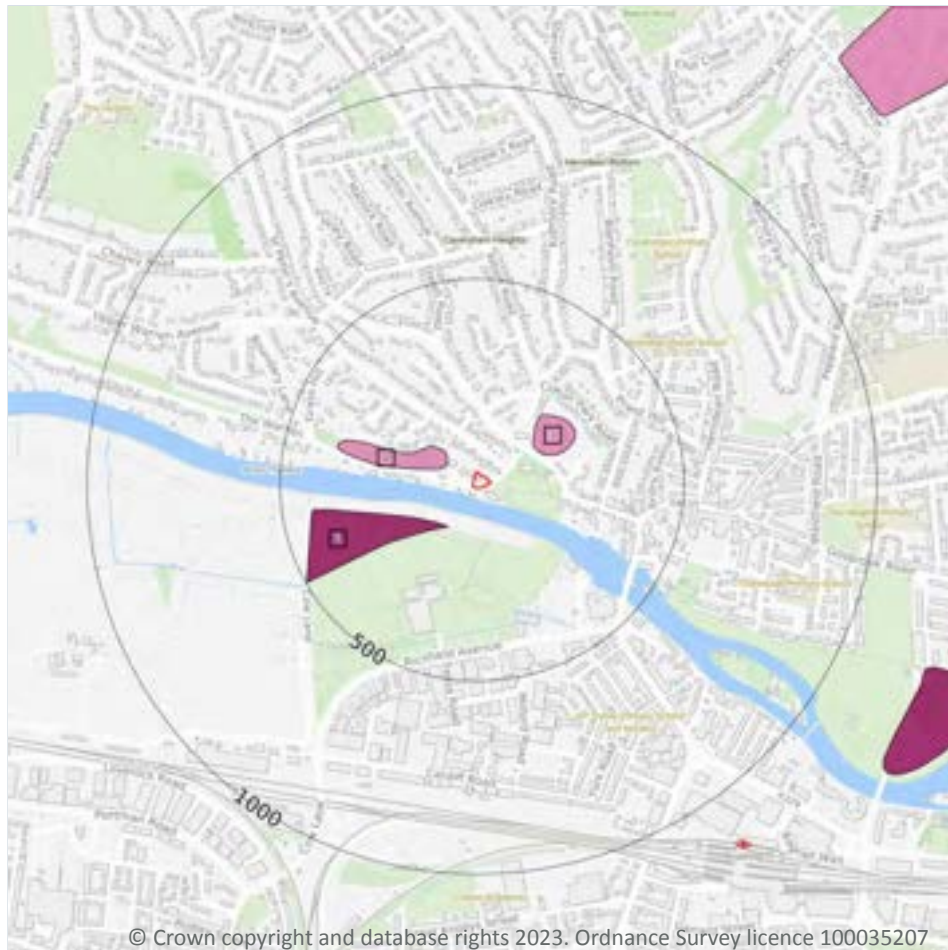
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 88](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	EW268_reading_v4

This data is sourced from the British Geological Survey.



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



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

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15.2 Artificial and made ground (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 89](#) >

ID	Location	LEX Code	Description	Rock description
1	77m NW	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
2	121m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	144m NE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

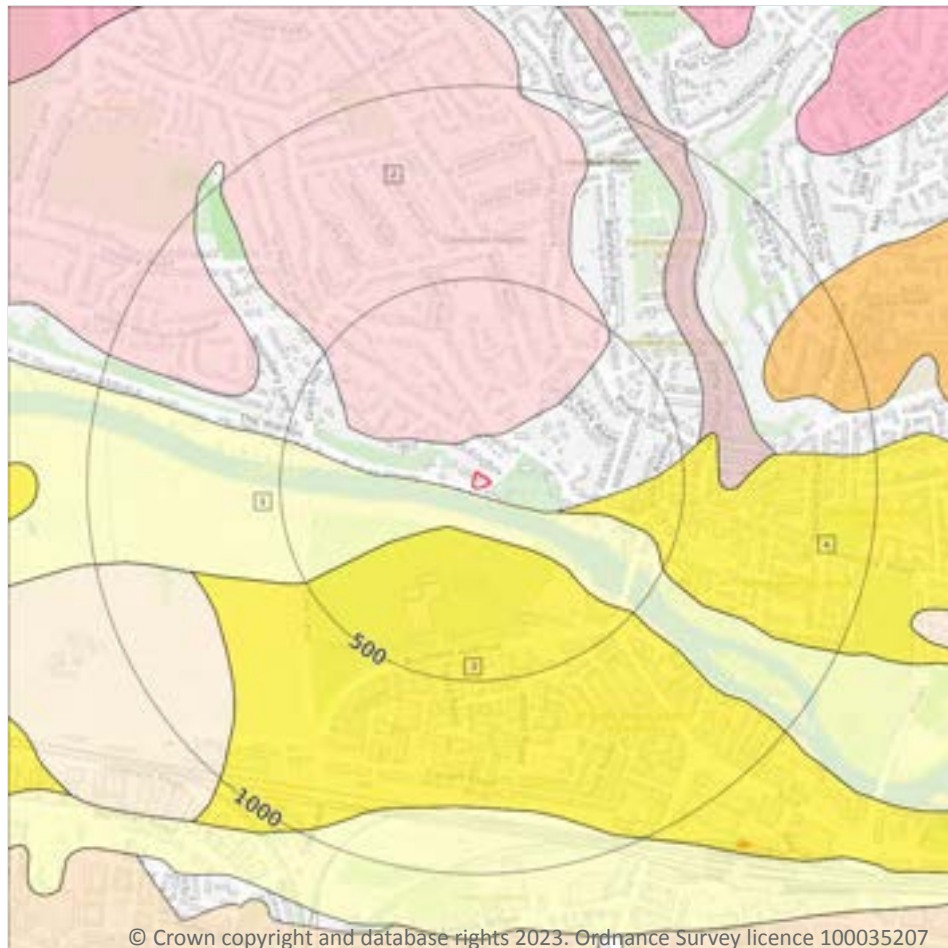
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



— Site Outline

Search buffers in metres (m)

▨ Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

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 91](#) >

ID	Location	LEX Code	Description	Rock description
1	17m SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	84m N	BHT-XSV	BOYN HILL GRAVEL MEMBER	SAND AND GRAVEL
3	115m S	LASI-XCZ	LANGLEY SILT MEMBER	CLAY AND SILT
4	189m E	LASI-XCZ	LANGLEY SILT MEMBER	CLAY AND SILT



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
17m SW	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

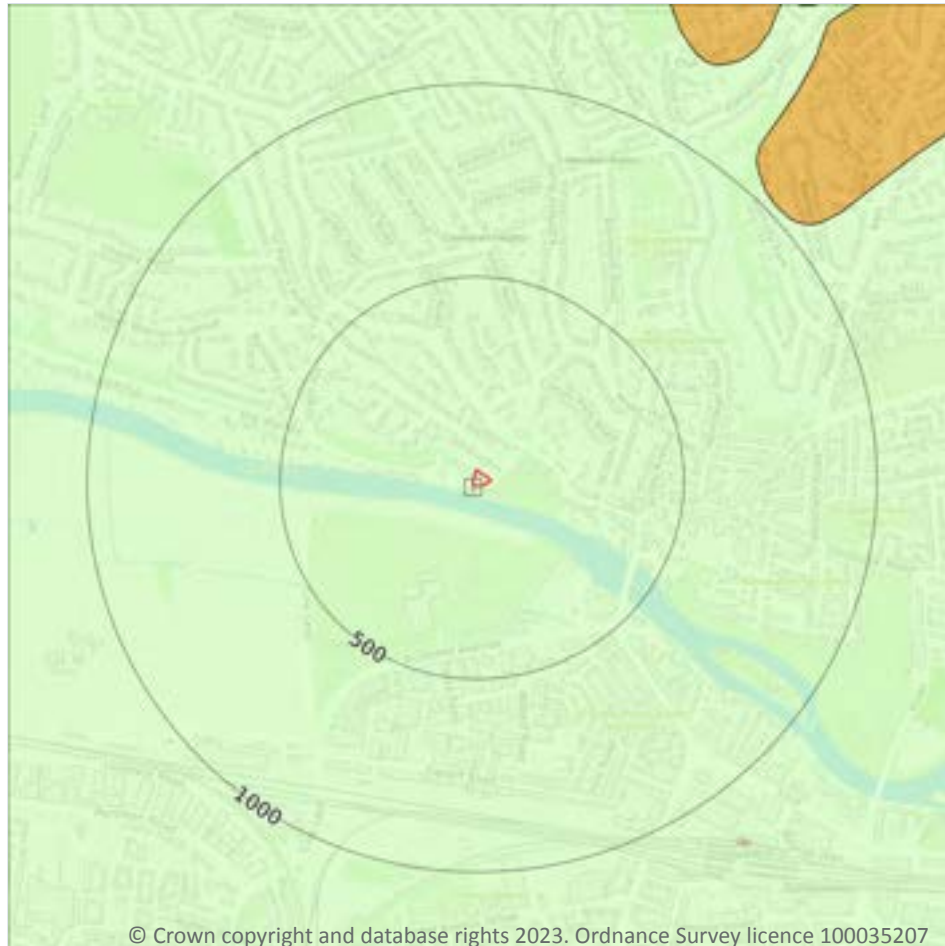
0

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.

15.8 Bedrock geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 93](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	CONIACIAN

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

2

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.

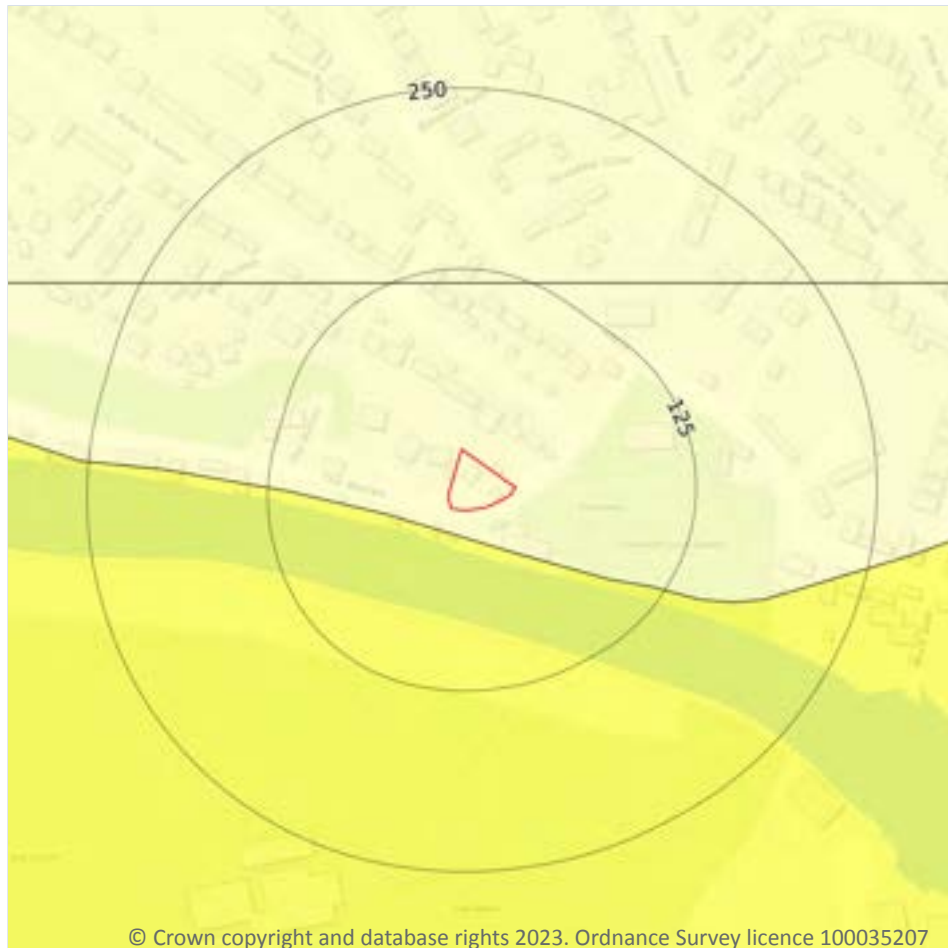
Features are displayed on the Boreholes map on [page 95](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	144m NW	470670 175000	WARREN HOUSE ST PETERS AVENUE READING	31.69	N	427869 ↗
2	250m NE	471000 175000	MR DEACON'S, HENLEY ROAD, CAVERSHAM	26.21	N	12841246 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

2

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).

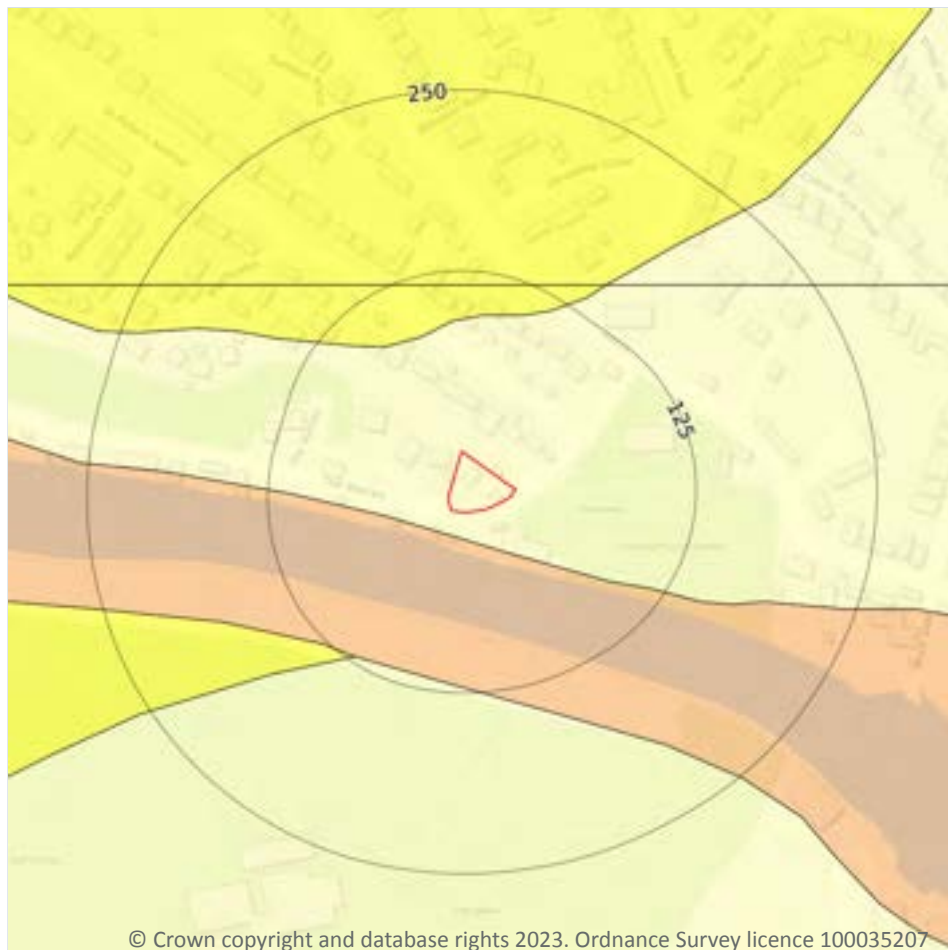
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 96](#) >

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
17m SW	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

2

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 97](#) >

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

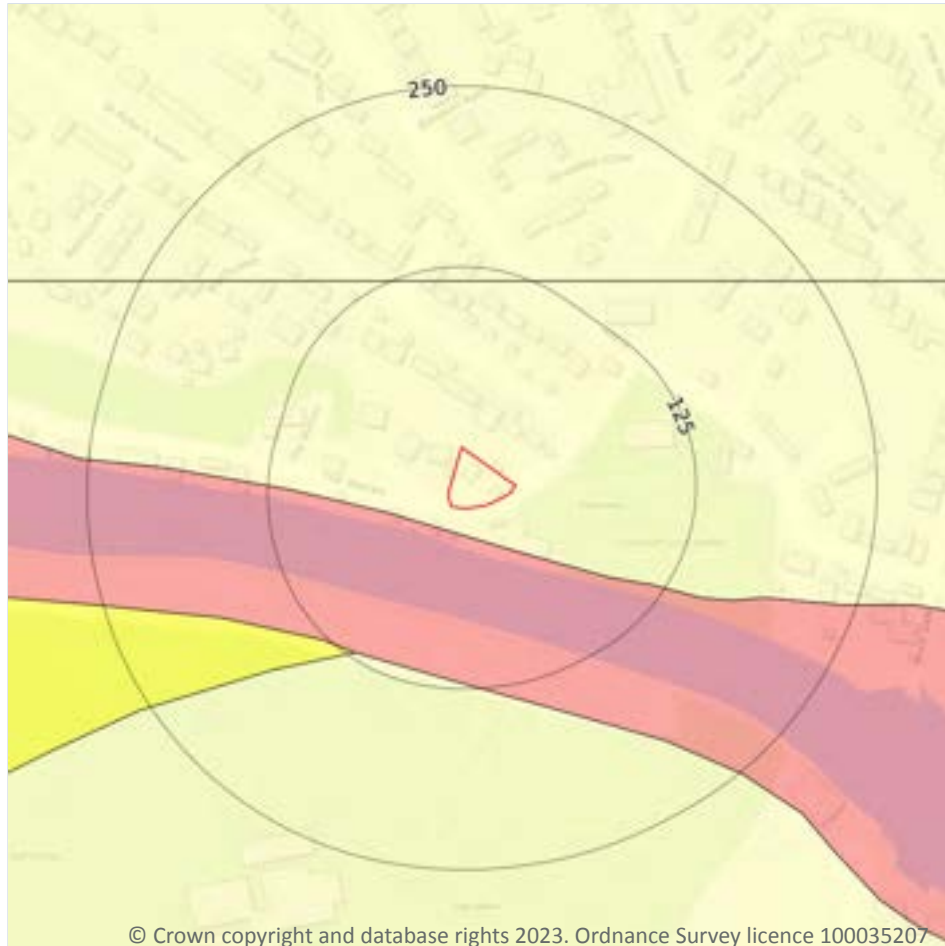


Location	Hazard rating	Details
17m SW	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

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 99 >](#)

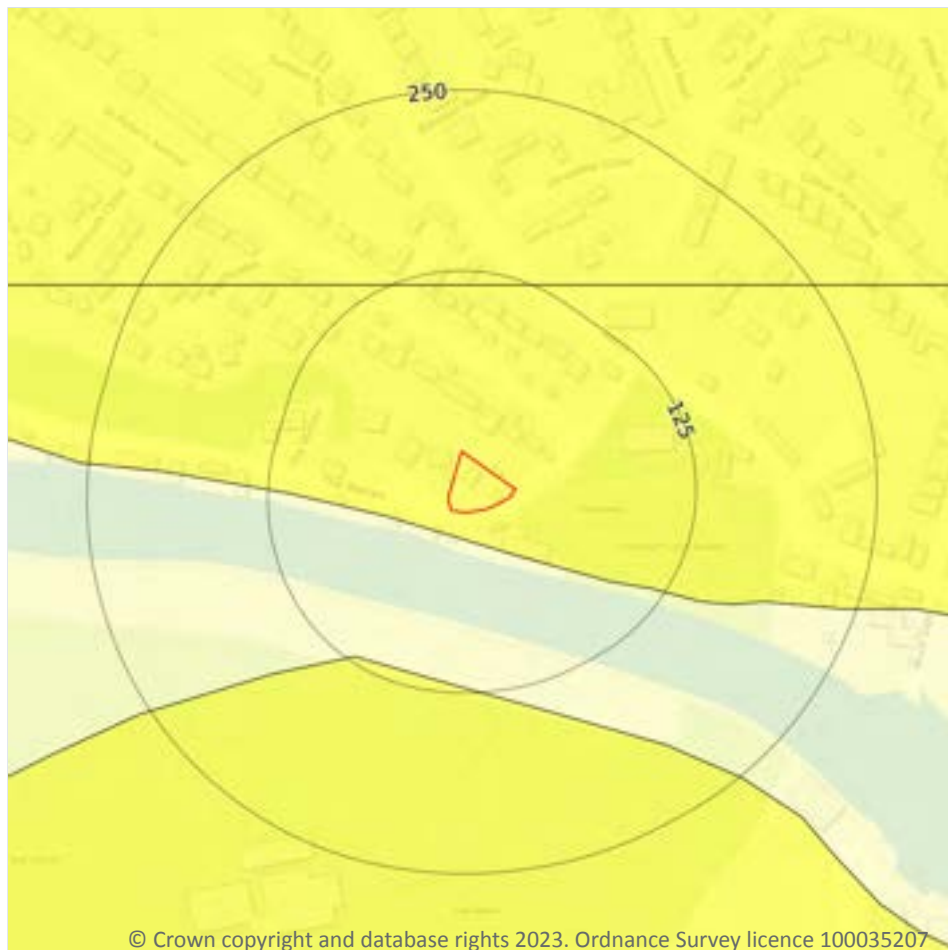
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
17m SW	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

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.

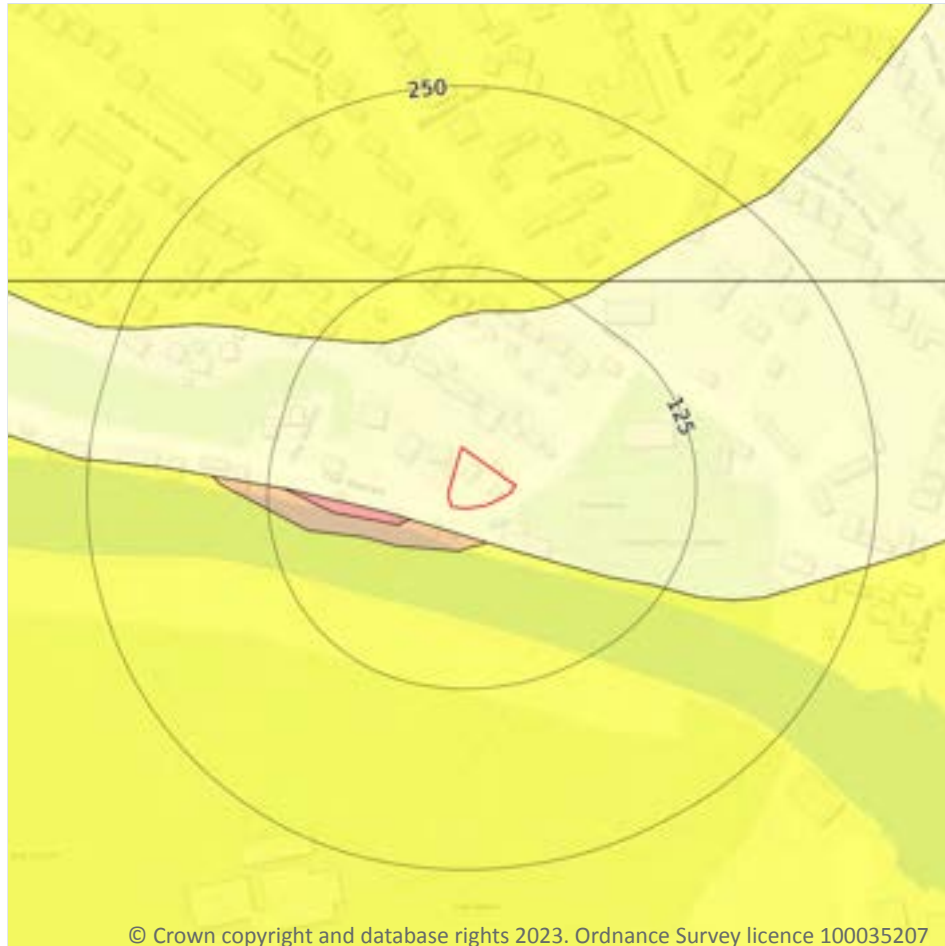
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 101 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
17m SW	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

4

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 102 >](#)

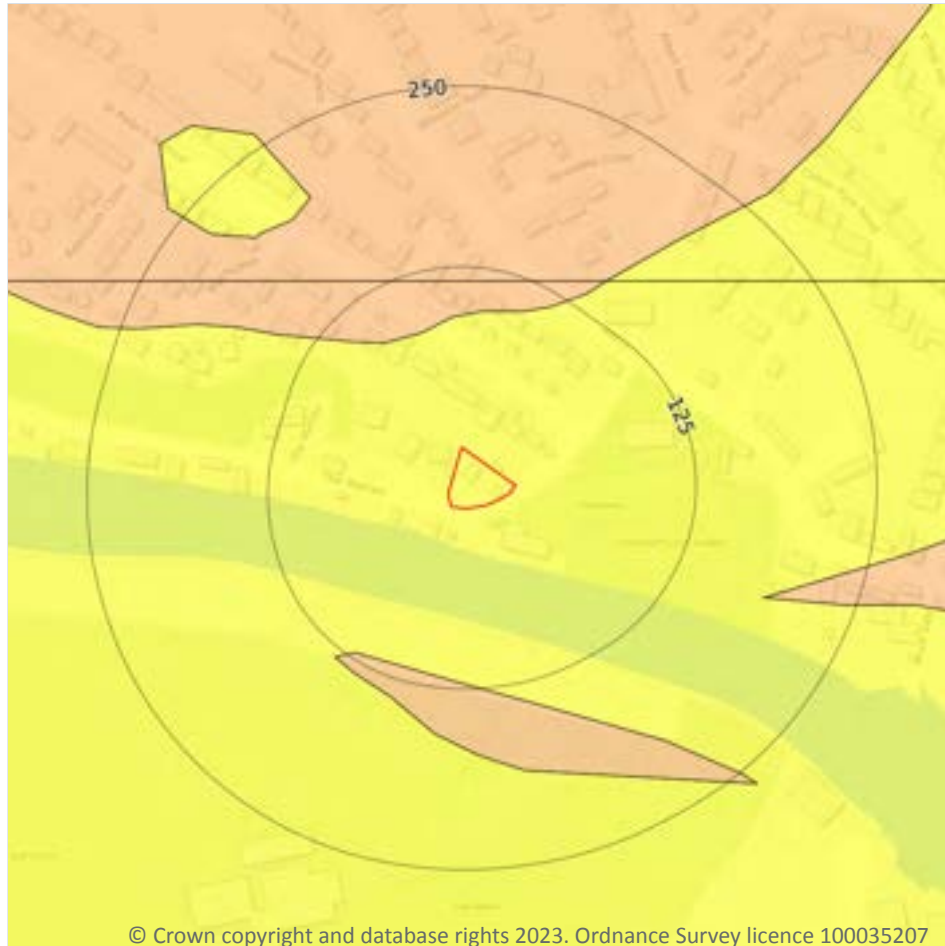
Location	Hazard rating	Details
On site	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
17m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
25m S	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.
30m SW	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 104 >](#)

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

1

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.

Features are displayed on the Mining and ground workings map on [page 106](#) >

ID	Location	Details	Description
B	205m NE	Name: St Peter's Hill Chalk Pit Address: CAVERSHAM, Berkshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	19
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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 106 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
2	73m E	Grave Yard	1878	1:10560
A	75m W	Unspecified Ground Workings	1938	1:10560
A	75m W	Unspecified Ground Workings	1910	1:10560
A	78m W	Unspecified Pits	1989	1:10000
A	78m W	Unspecified Pits	1977	1:10000
A	78m W	Unspecified Pits	1962	1:10560
A	78m W	Unspecified Pits	1971	1:10000
A	78m W	Unspecified Pits	1994	1:10000
3	112m S	Pond	1971	1:10000
B	136m NE	Chalk Pit	1897	1:10560
B	136m NE	Unspecified Pit	1938	1:10560
B	136m NE	Chalk Pit	1910	1:10560
B	137m NE	Cuttings	1989	1:10000
B	137m NE	Cuttings	1977	1:10000
B	137m NE	Cuttings	1962	1:10560
B	137m NE	Cuttings	1971	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
B	137m NE	Chalk Pit	1900	1:10560
B	142m NE	Unspecified Pit	1878	1:10560
B	181m NE	Unspecified Quarry	1961	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 **3**

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 106 >](#)



ID	Location	Name	Commodity	Class	Likelihood
1	On site	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.
4	115m N	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.
-	770m 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

1

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

Location	Details
On site	Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) may have information such as mining plans and maps held within their archive that have occurred within 1km of this property. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk ↗.

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

1

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.

Location	Mineral type
75m W	Stone

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

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



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

19.1 Natural cavities

Records within 500m

1

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.

Features are displayed on the Ground cavities and sinkholes map on [page 112](#) >

ID	Location	Details	Source
1	419m N	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Boyn Hill Gravel Bedrock Geology: Chalk Group	Simple Bibliography: Reading Borough Council Full Bibliography: - Confidentiality: Data source can be revealed, data can be used freely



This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

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



— Site Outline
Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

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 115 >](#)

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

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
17m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 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> ↗.

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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1877

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1877
Revised 1877
Edition N/A
Copyright N/A
Levelled N/A

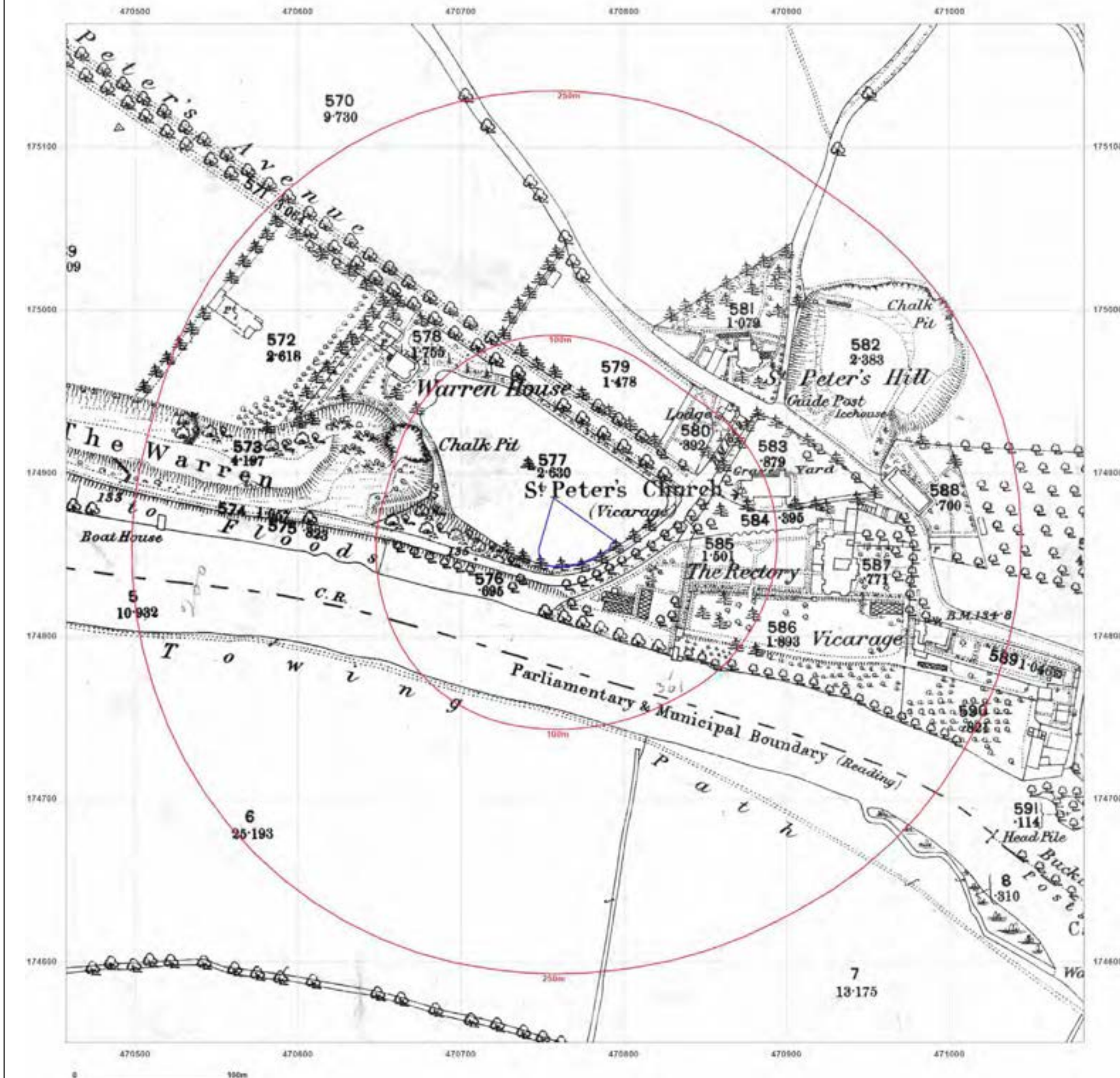


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1881

Scale: 1:2,500

Printed at: 1:2,500



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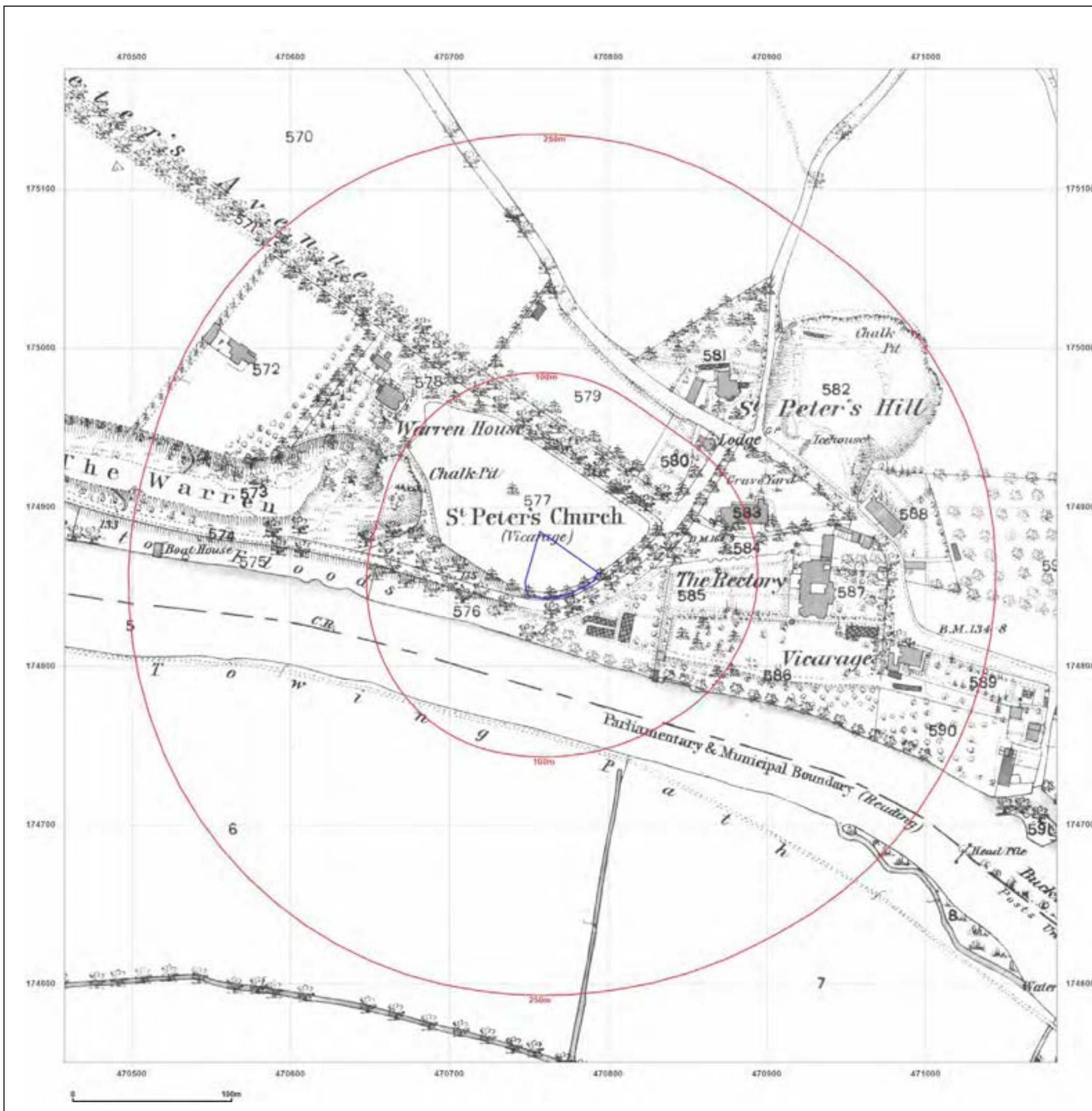


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Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1899

Scale: 1:2,500

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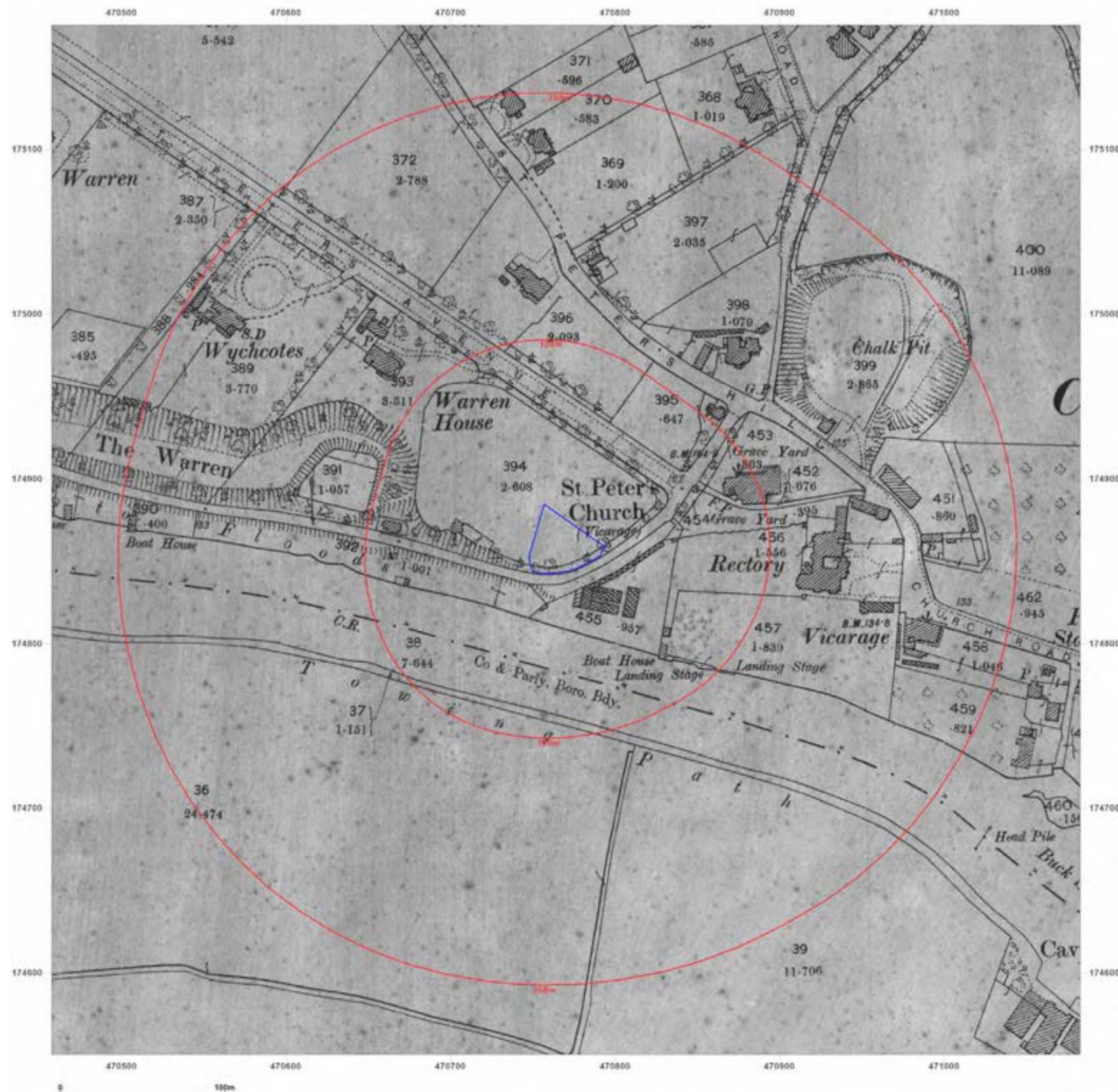


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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1913

Scale: 1:2,500

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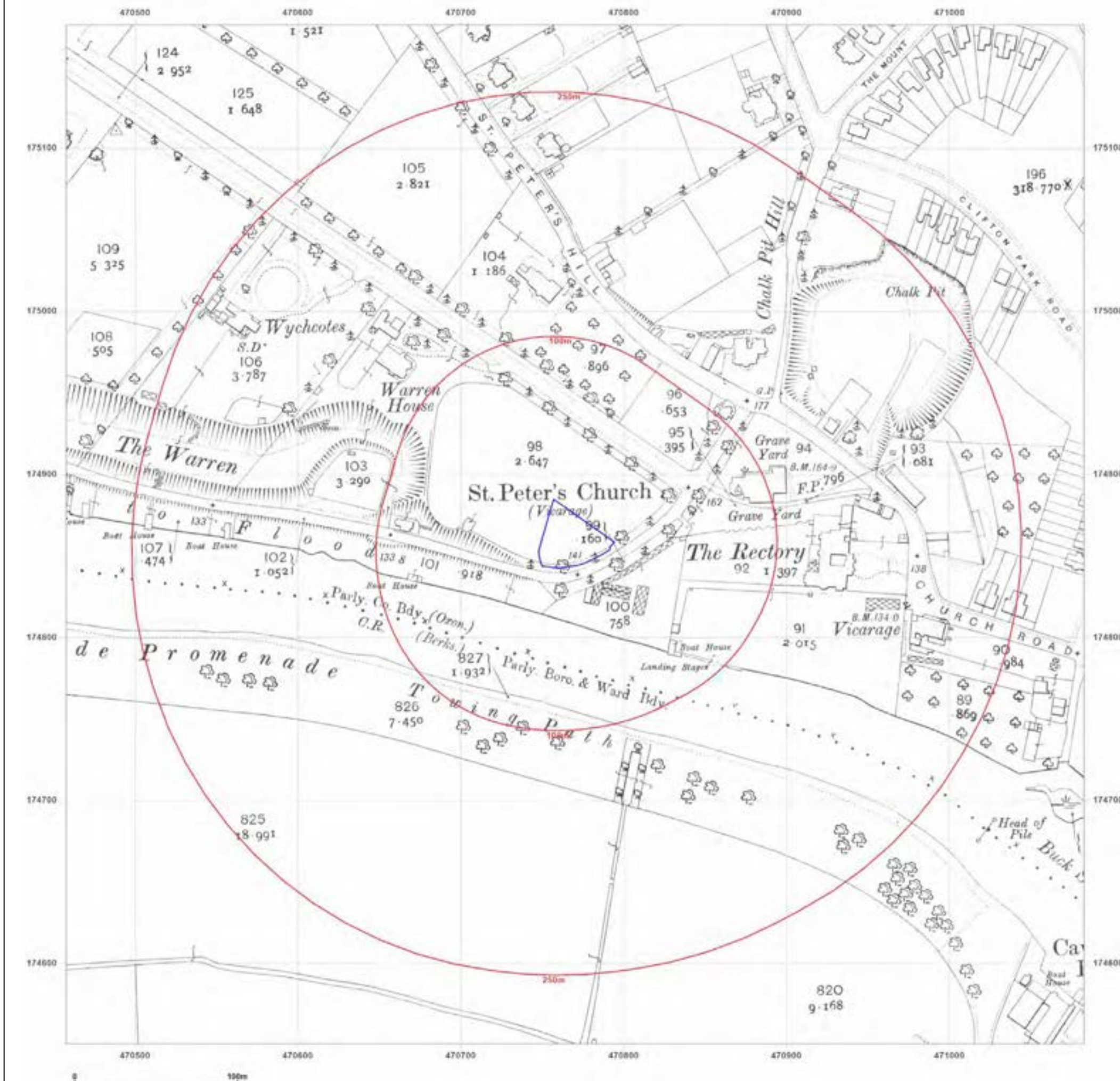


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Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1936

Scale: 1:2,500

Printed at: 1:2,500



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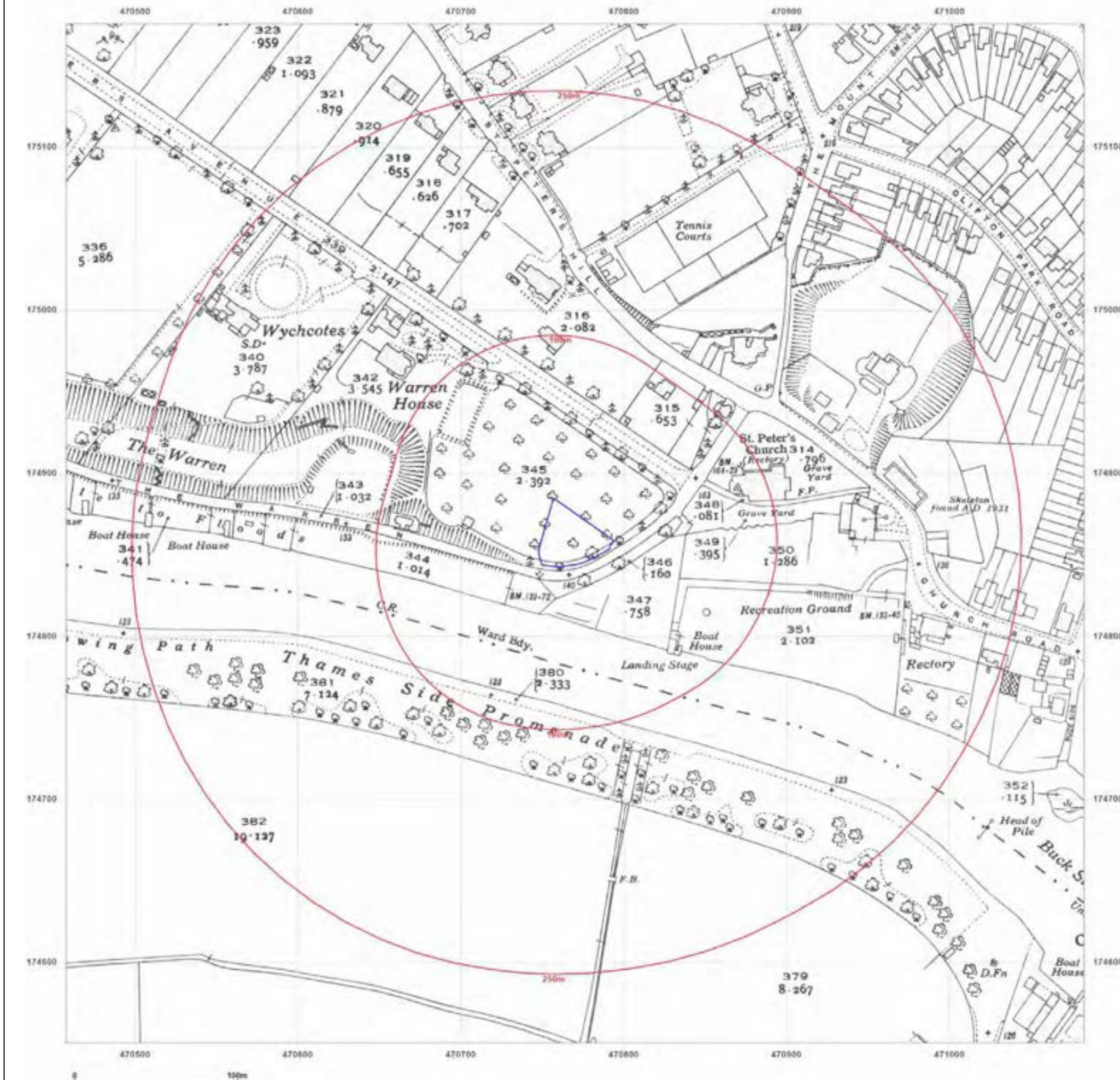


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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1956-1959

Scale: 1:1,250

Printed at: 1:2,000



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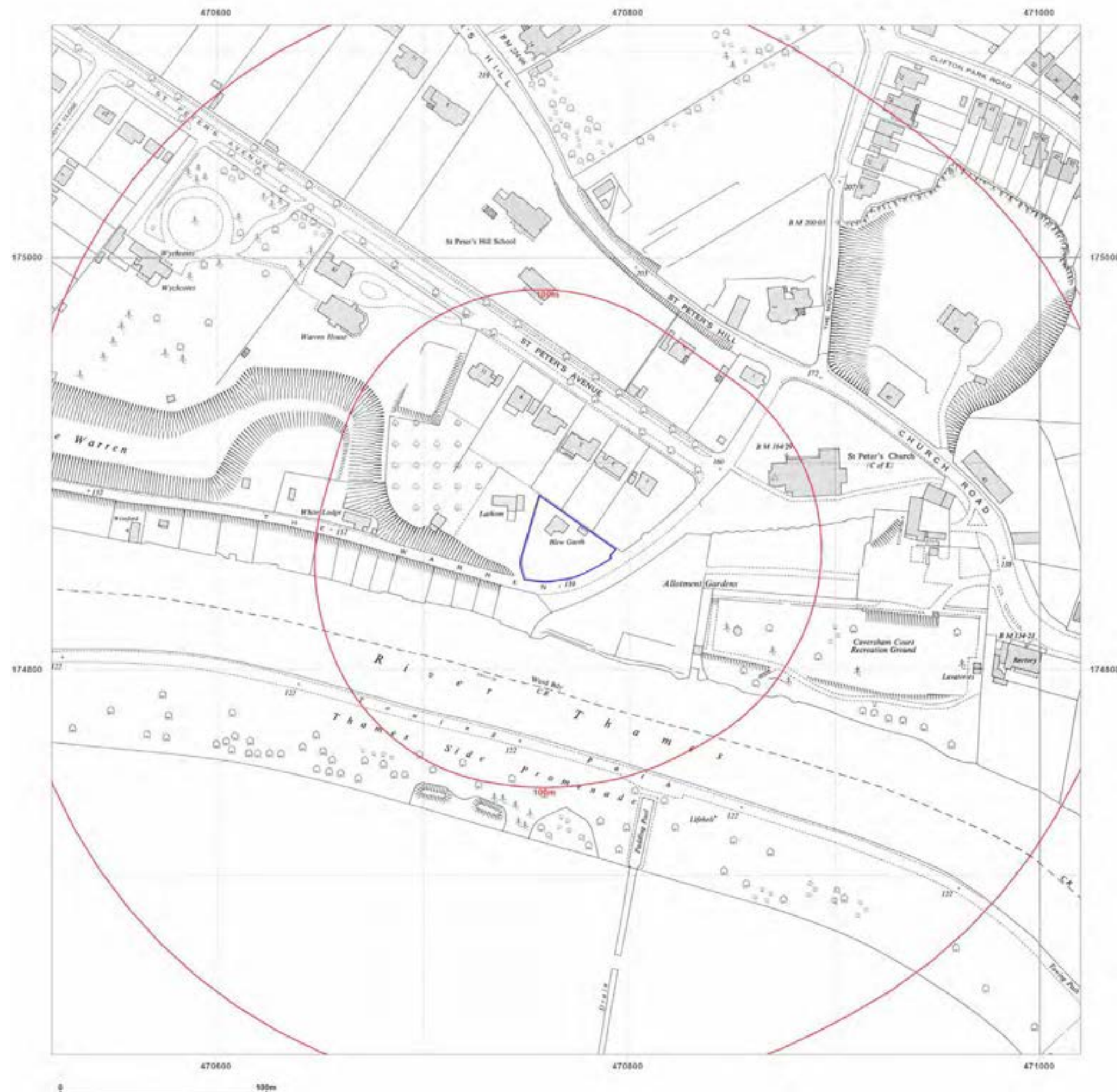


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Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1961

Scale: 1:2,500

Printed at: 1:2,500



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Edition 1961
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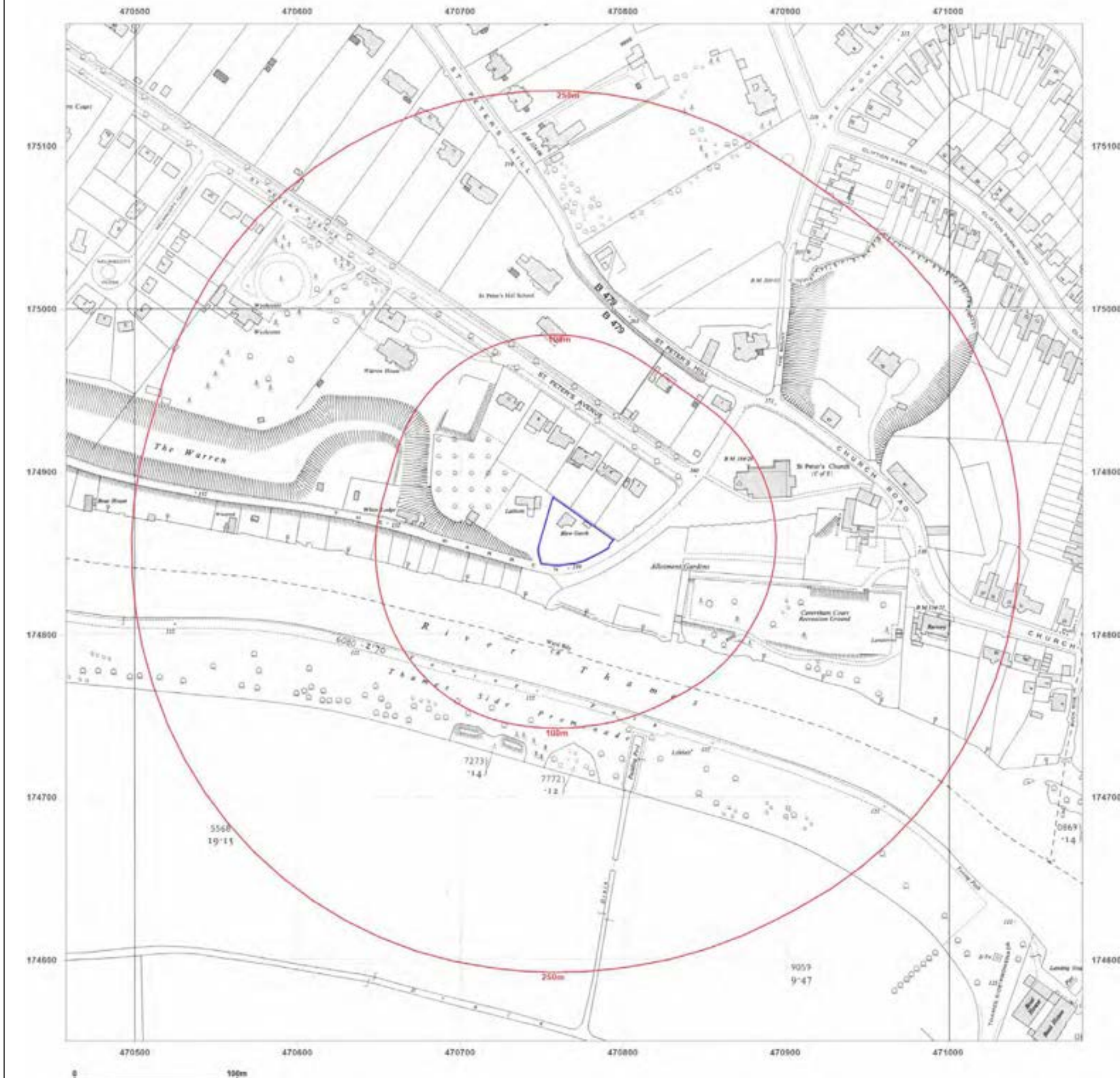


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Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1971-1976

Scale: 1:1,250

Printed at: 1:2,000



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Levelled 1951

Surveyed N/A
Revised N/A
Edition N/A
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Surveyed 1956
Revised 1970
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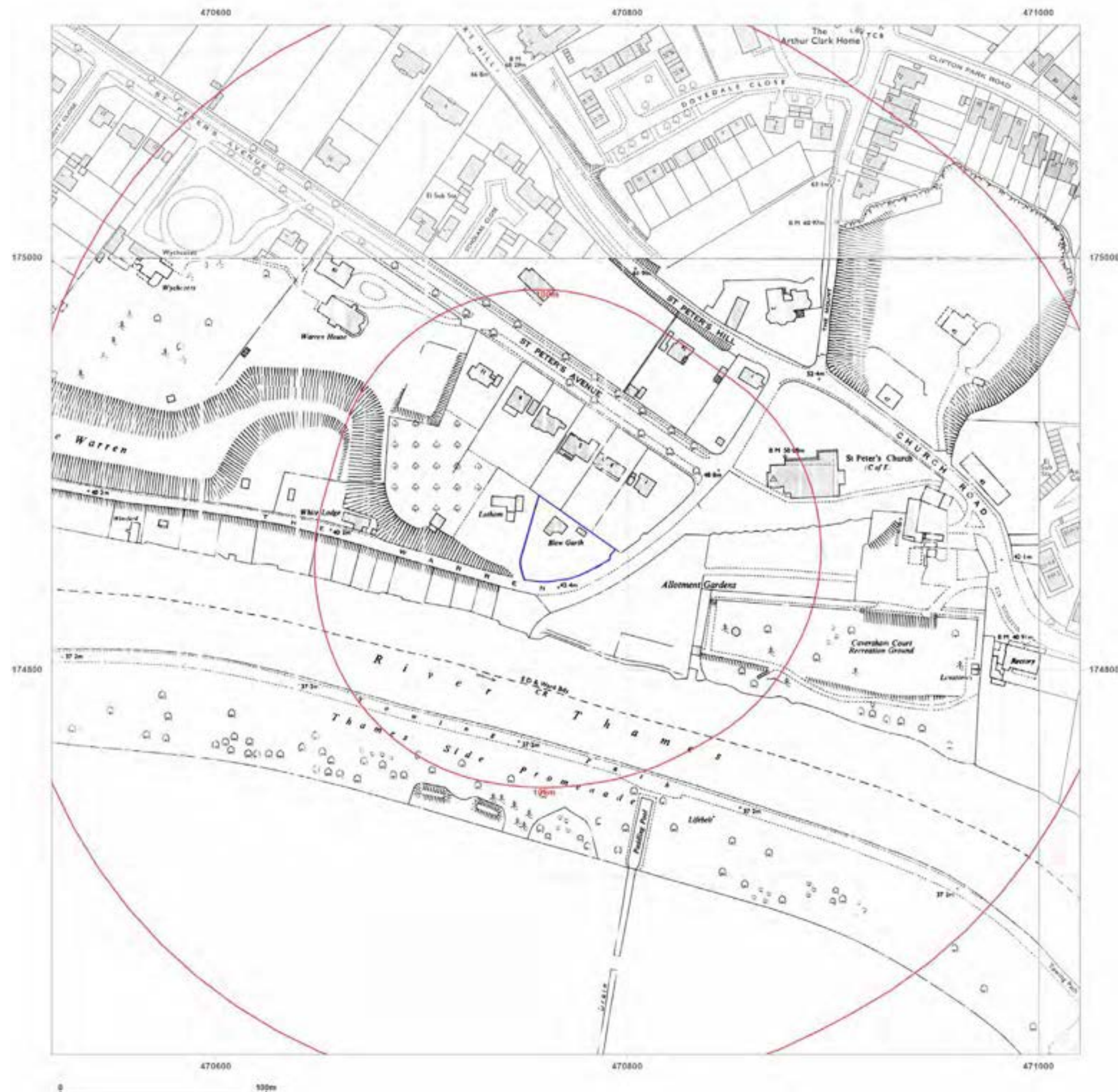


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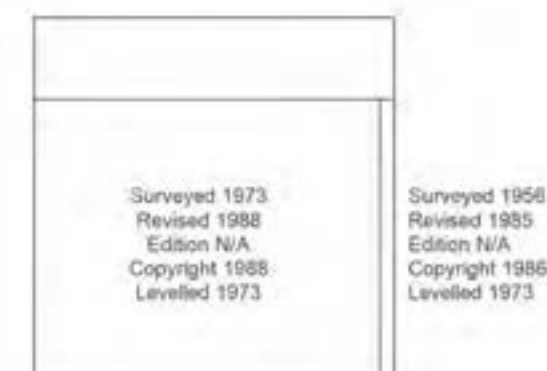
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Map Name: National Grid

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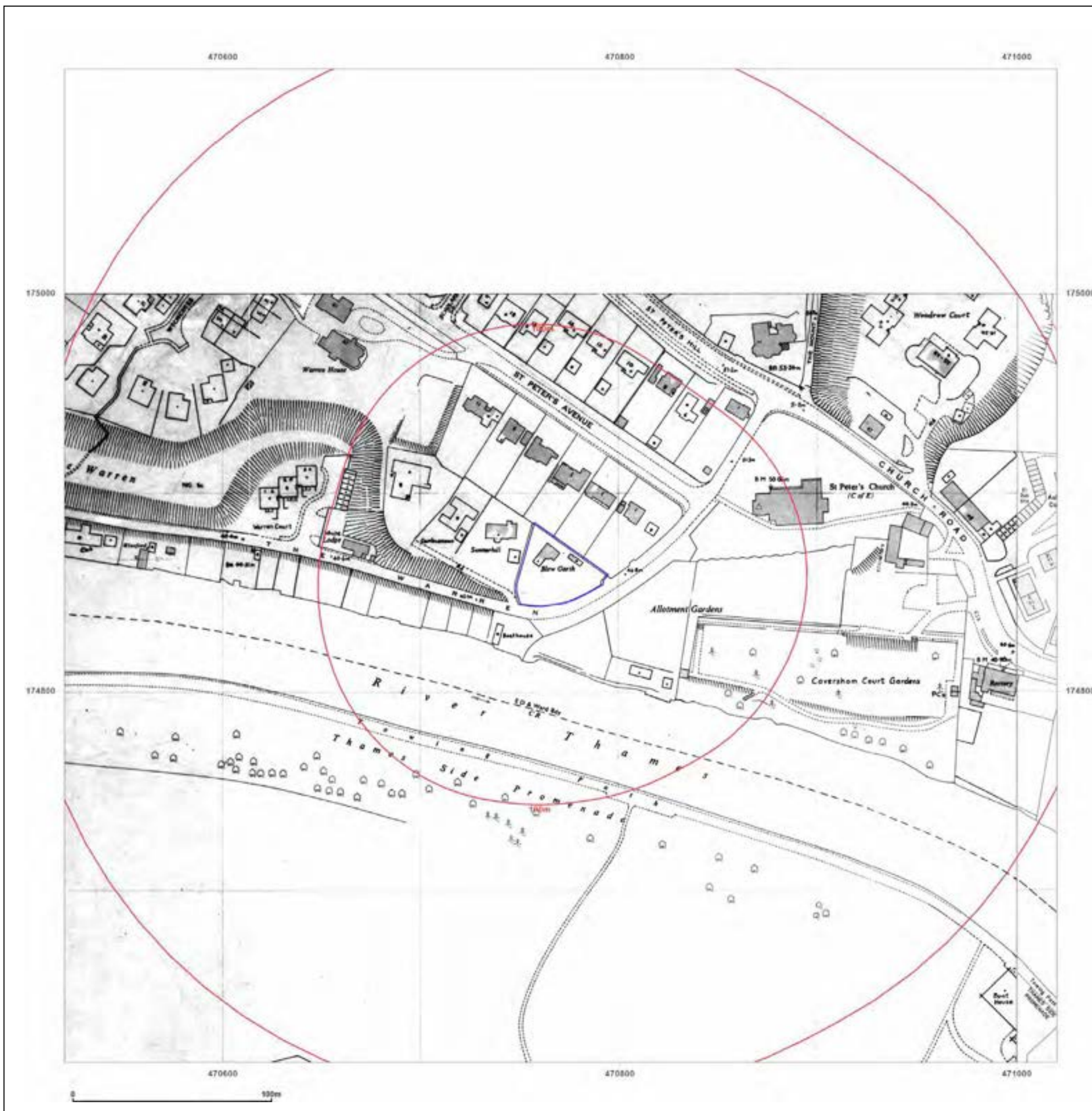


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



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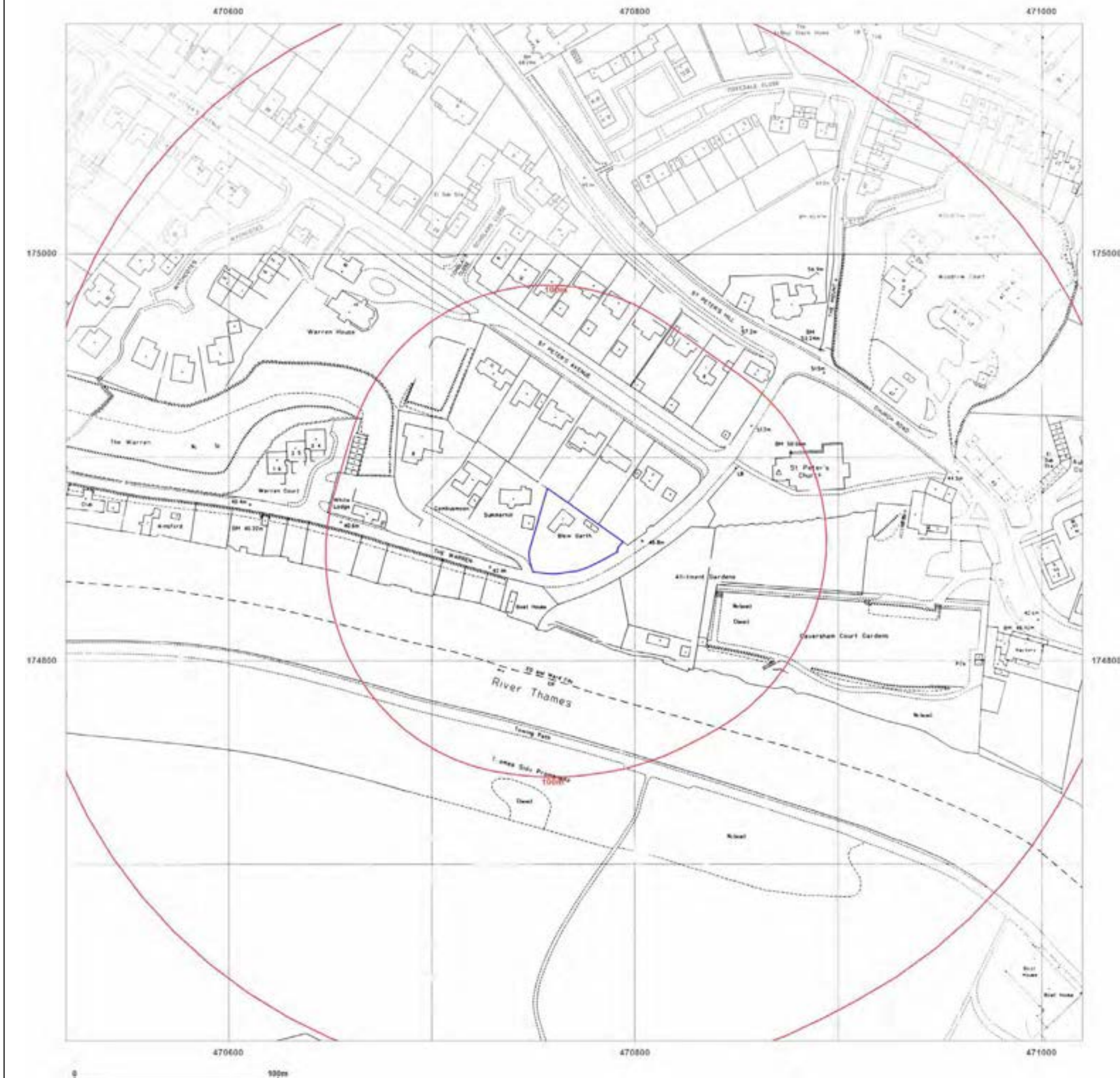


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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

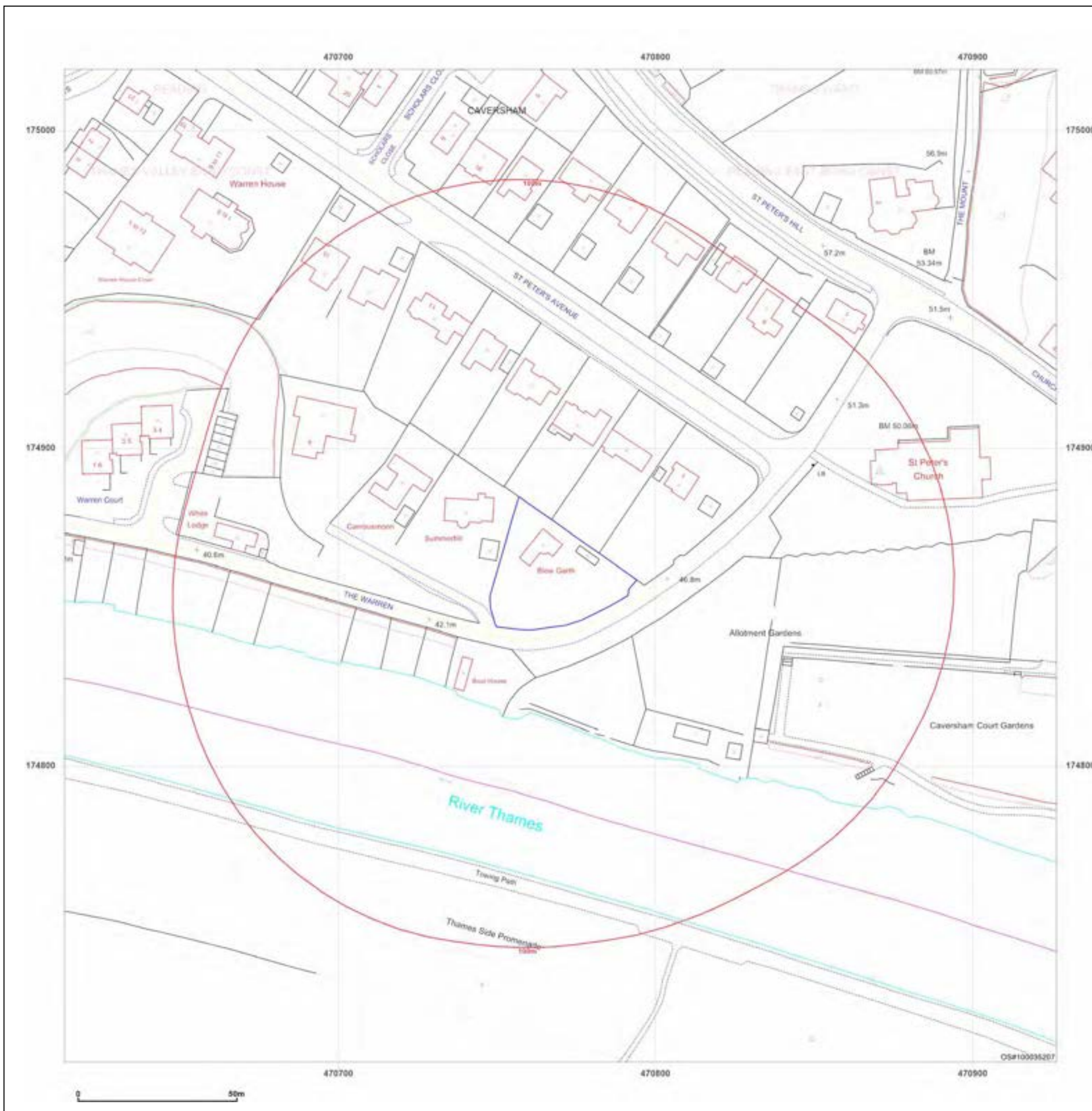


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1878

Scale: 1:10,560

Printed at: 1:10,560



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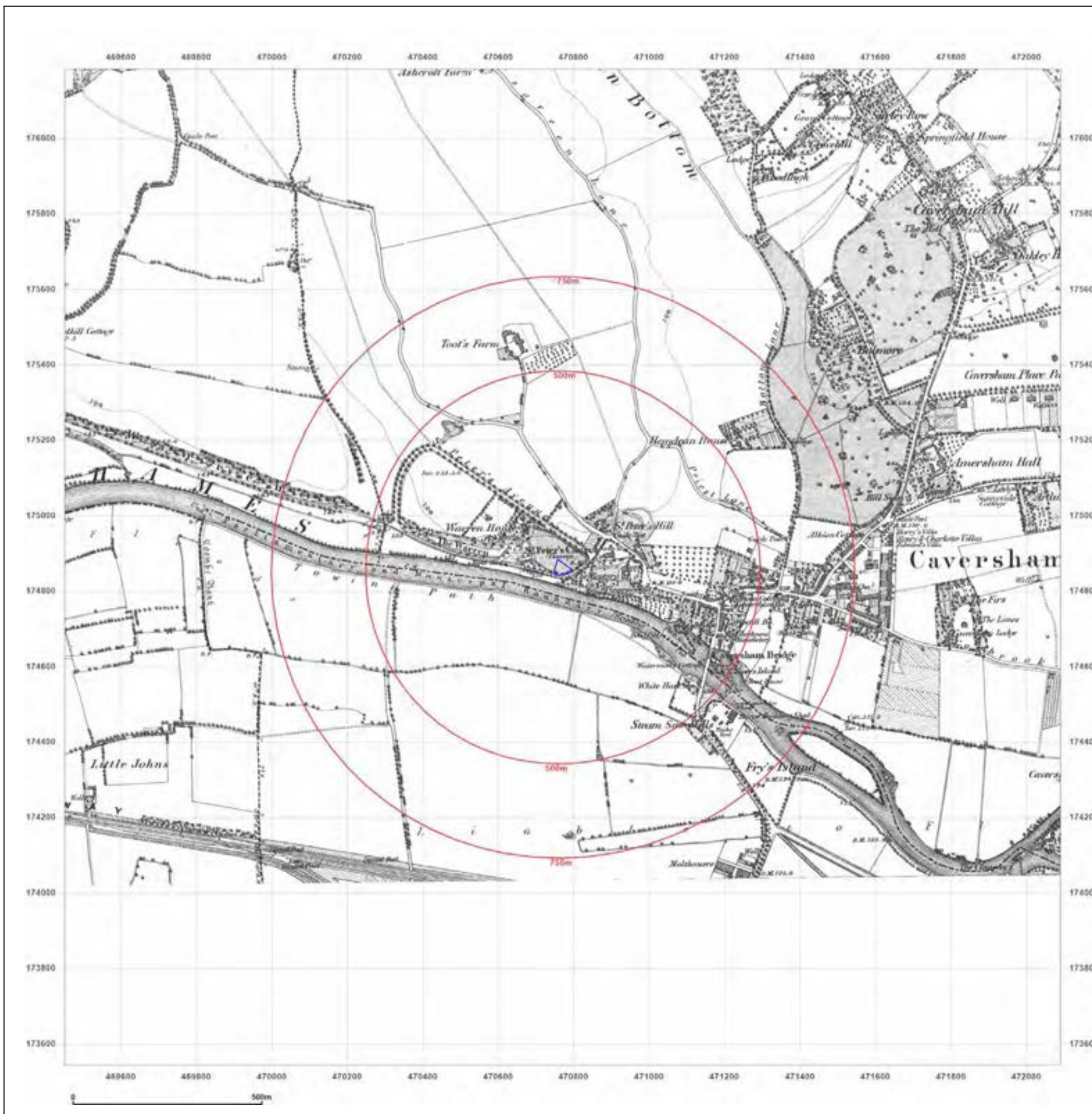


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1897-1900

Scale: 1:10,560

Printed at: 1:10,560



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Edition 1900
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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1898-1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877 Revised 1898 Edition 1900 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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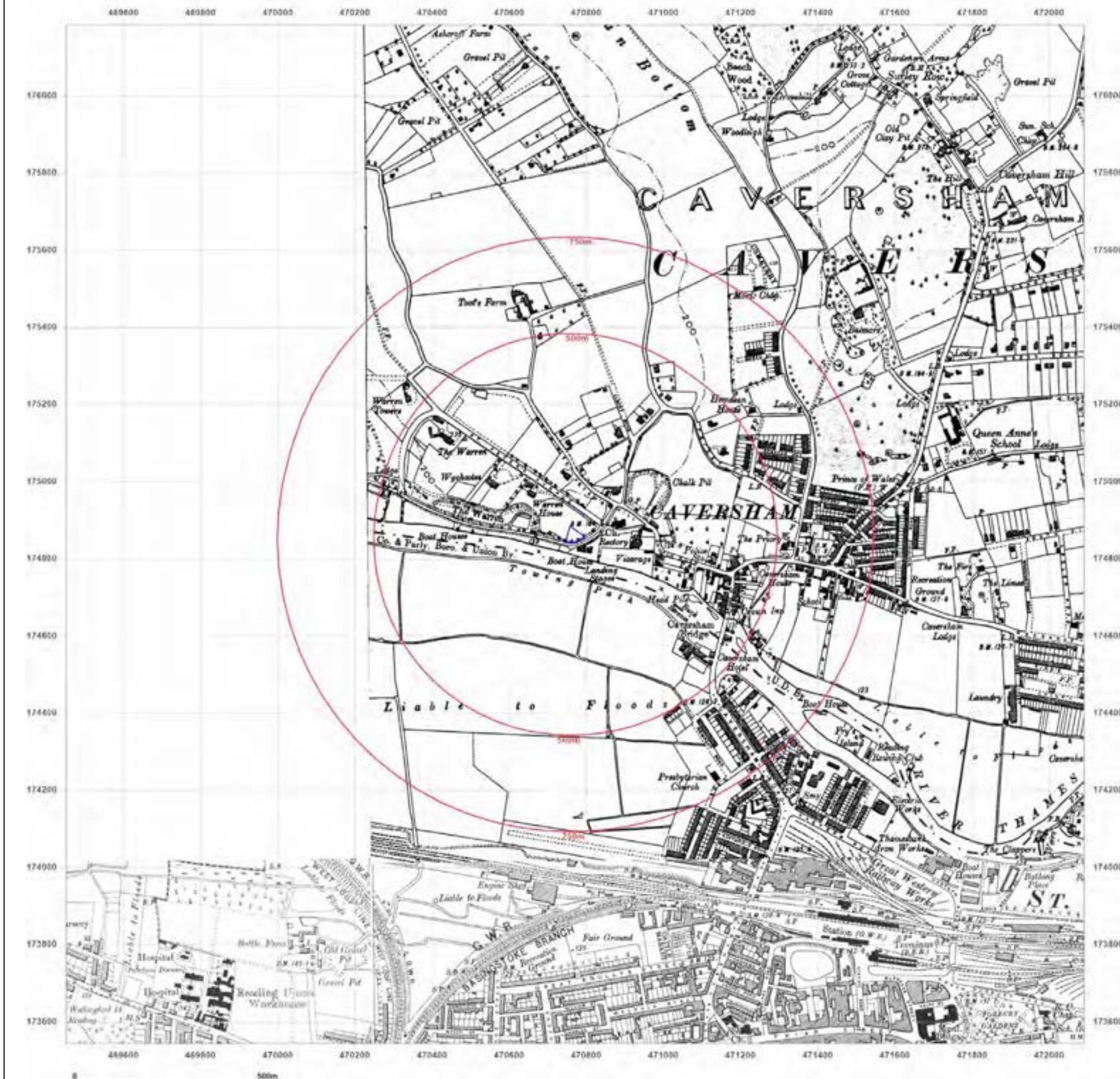


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Site Details:

THE WARREN, THE WARREN,
CAVERSHAM, READING, RG4
7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1897
Edition 1900
Copyright N/A
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

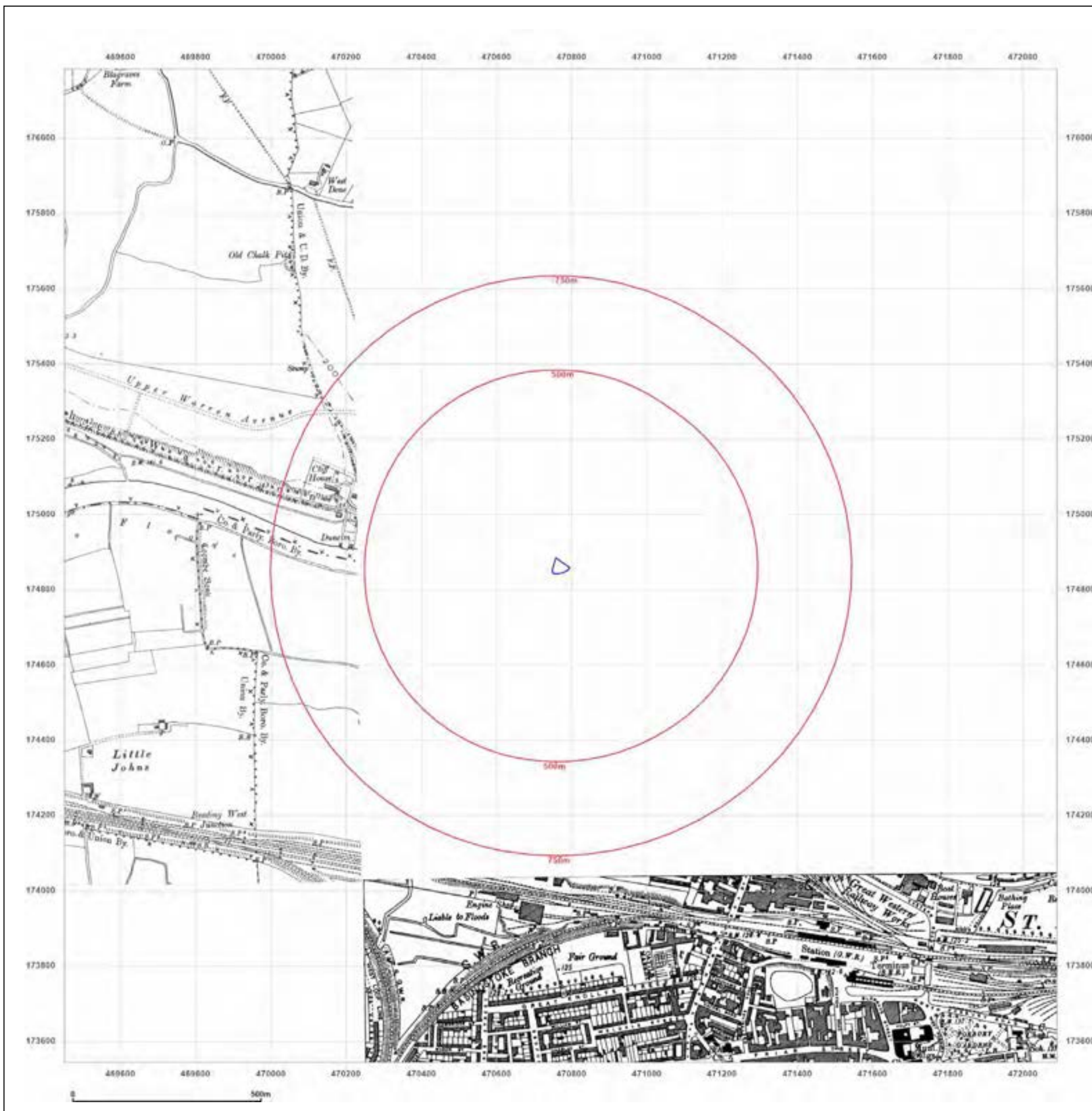


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Site Details:

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CAVERSHAM, READING, RG4
7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1910-1914

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1914
Edition 1913
Copyright N/A
Levelled N/A

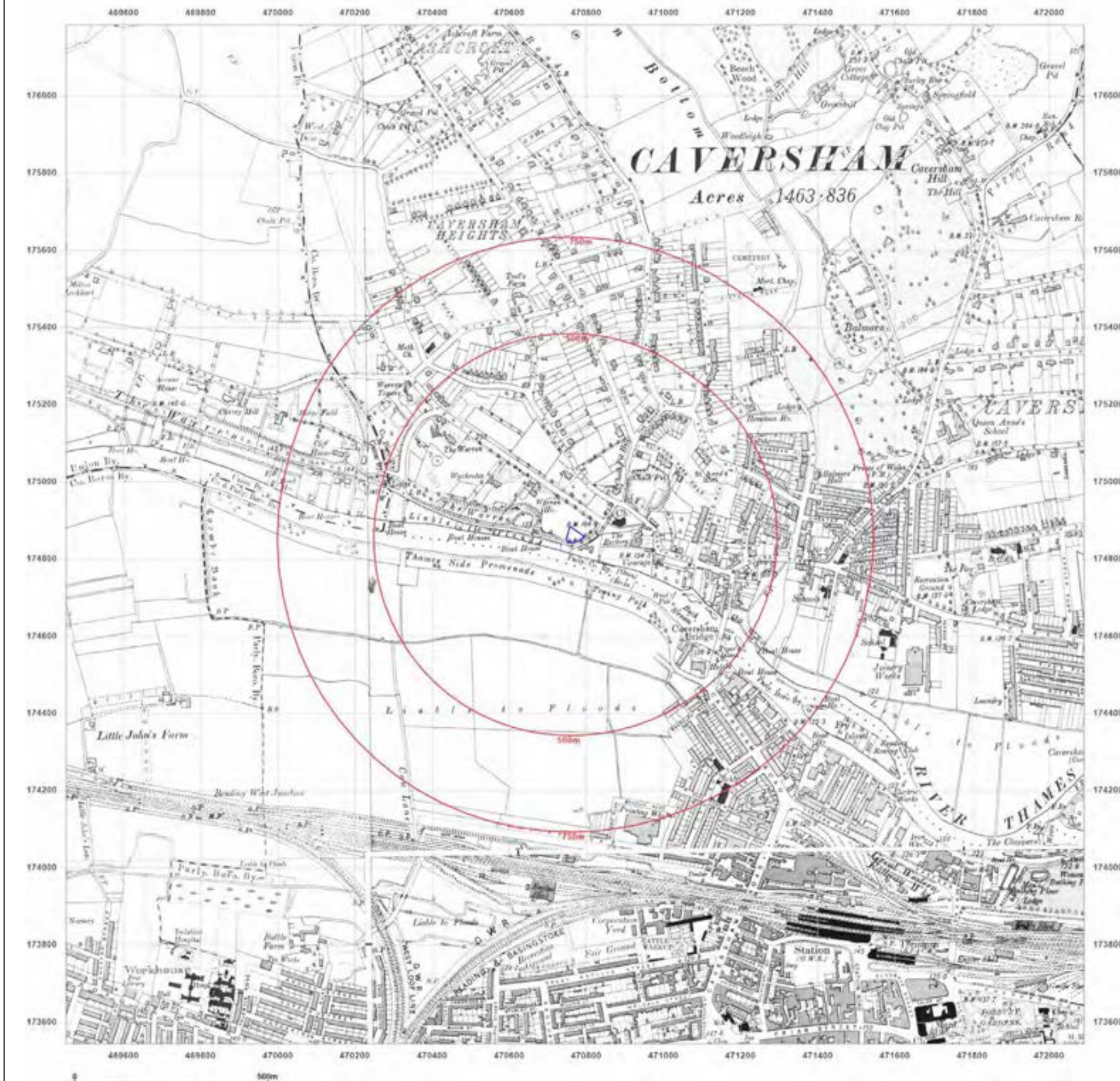


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Site Details:

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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1913-1914

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1910
Edition 1914
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1910
Edition 1913
Copyright N/A
Levelled N/A

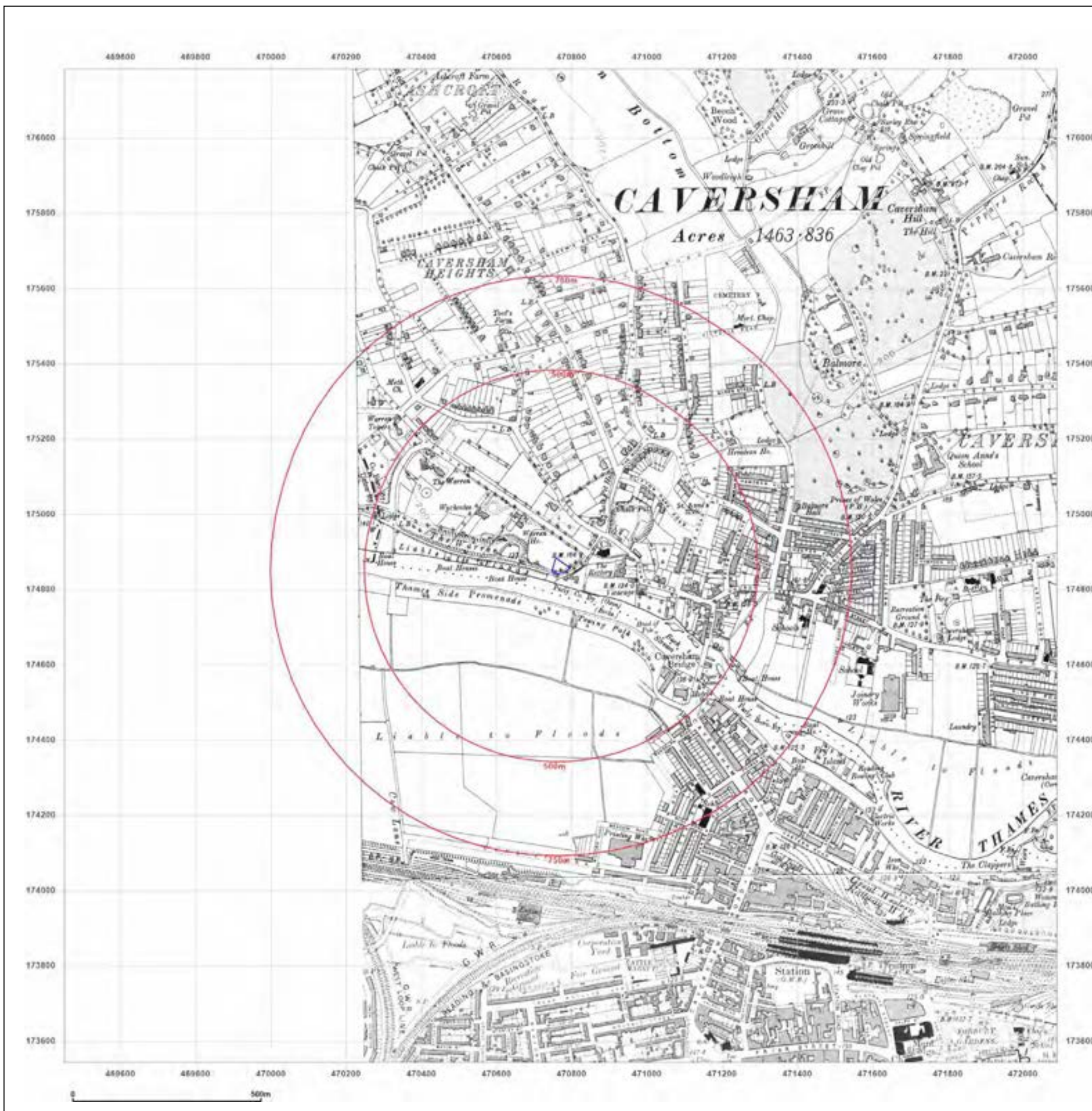


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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1932-1933

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1877
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

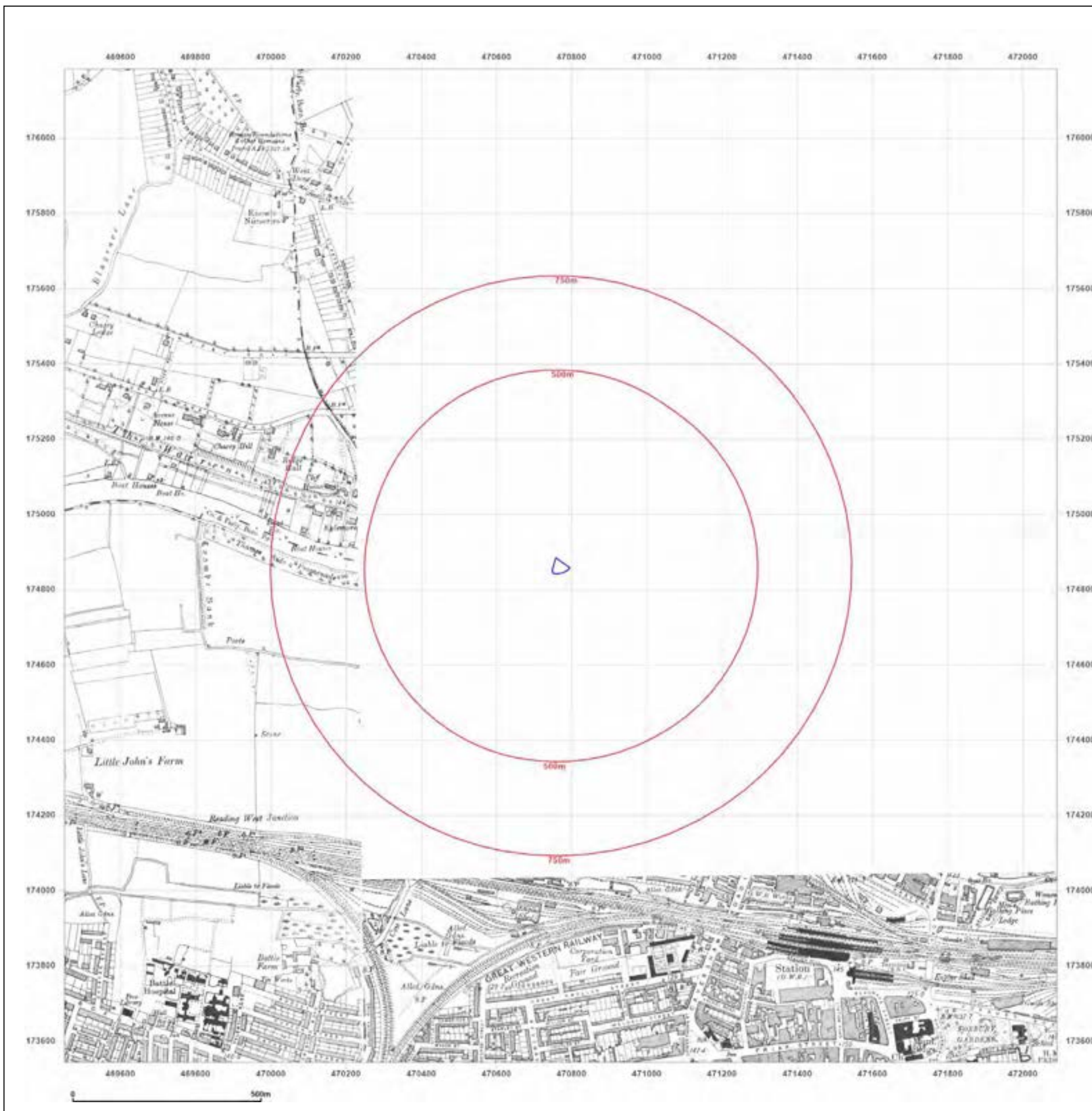


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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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Revised N/A
Edition 1938
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Levelled N/A

Surveyed 1877
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

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Revised 1938
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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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



Surveyed 1877
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

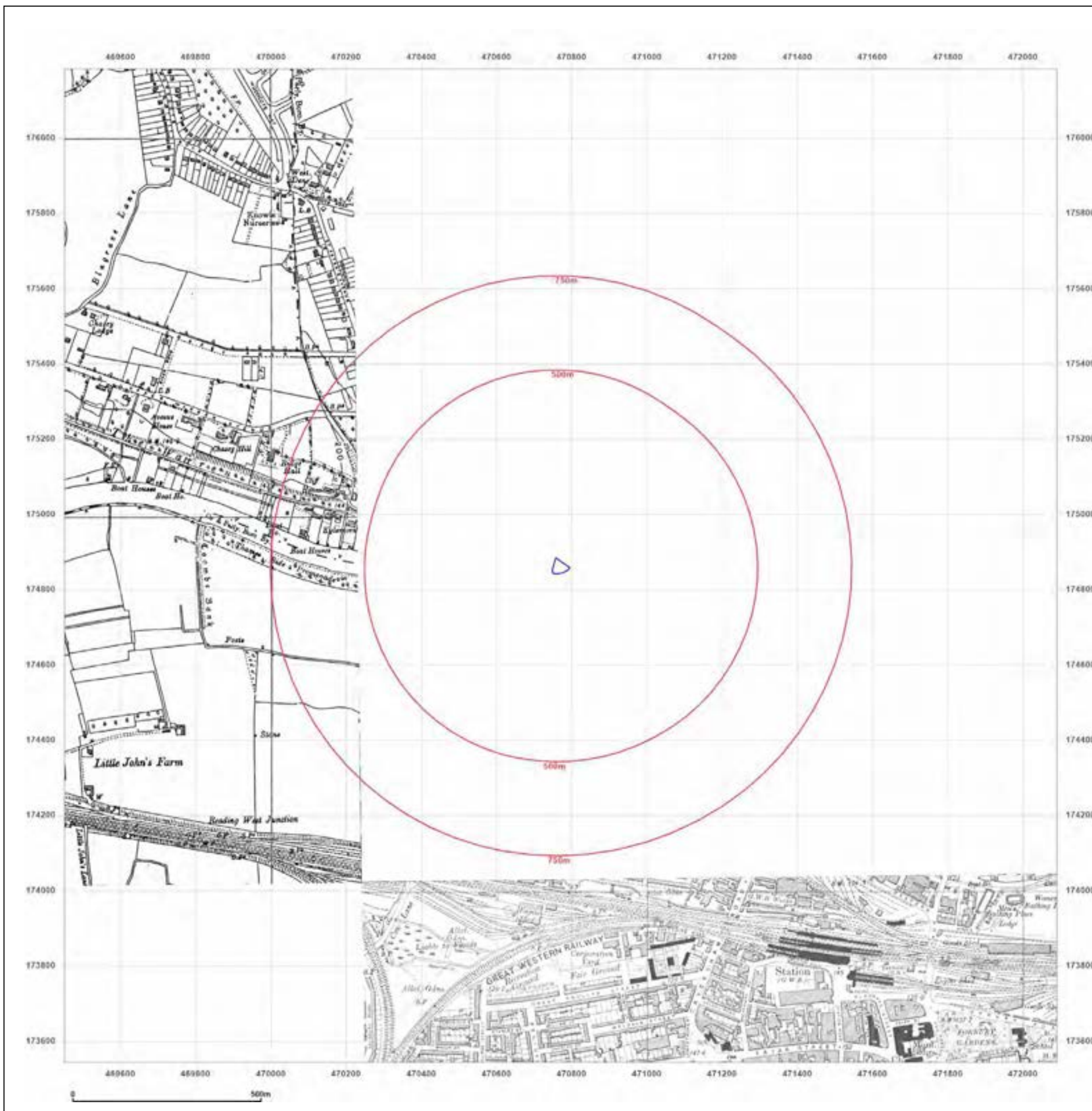


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: County Series

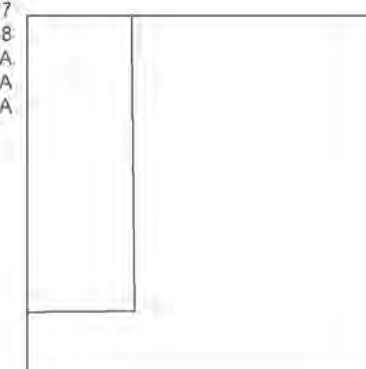
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Printed at: 1:10,560



Surveyed 1877
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

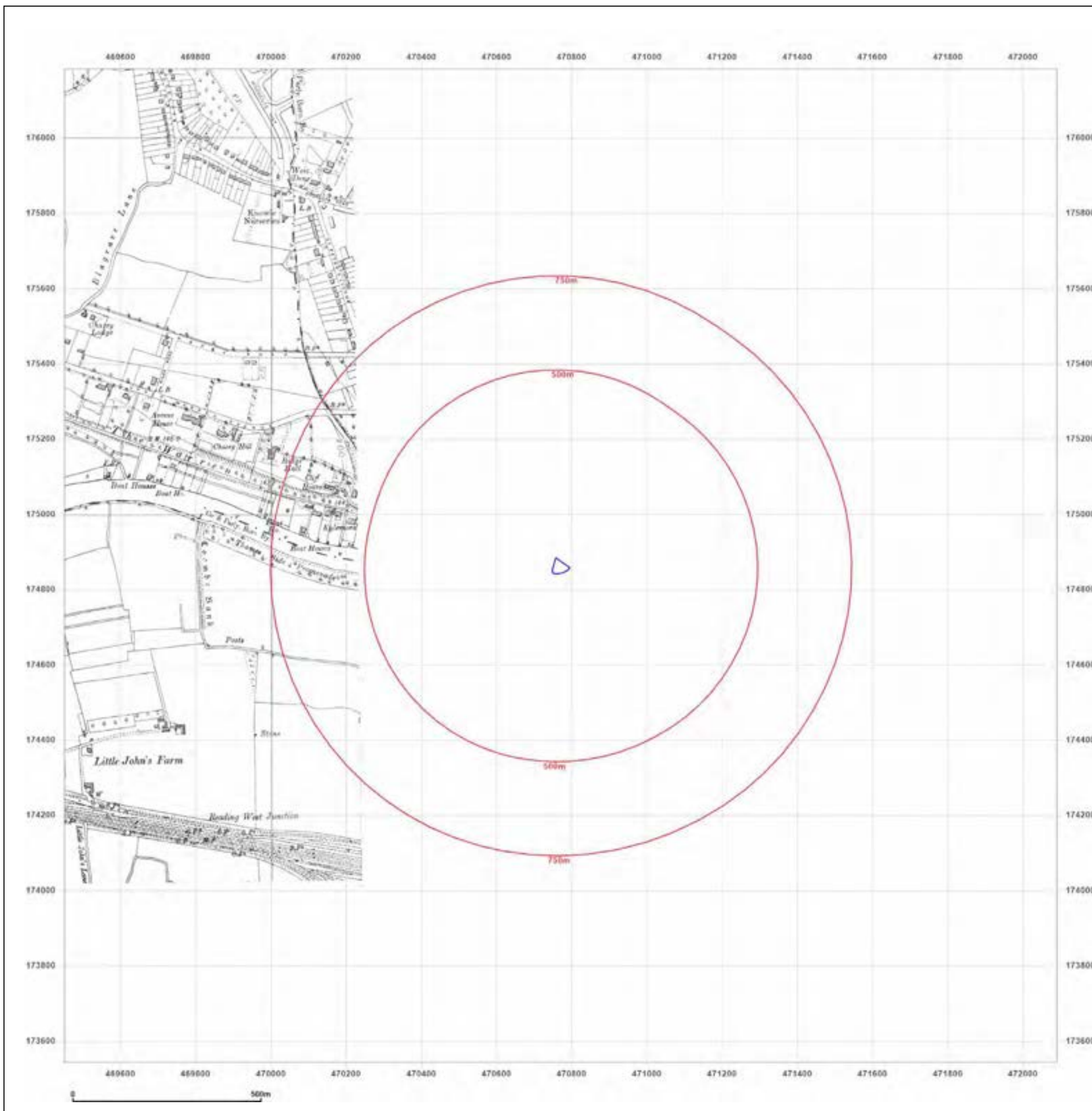


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Site Details:

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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: Provisional

Map date: 1960-1962

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1956
Revised 1956
Edition N/A
Copyright 1960
Levelled N/A

Surveyed 1877
Revised 1950
Edition N/A
Copyright 1961
Levelled N/A

Surveyed N/A
Revised 1960
Edition 1961
Copyright 1961
Levelled N/A

Surveyed 1959
Revised 1961
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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1970-1973

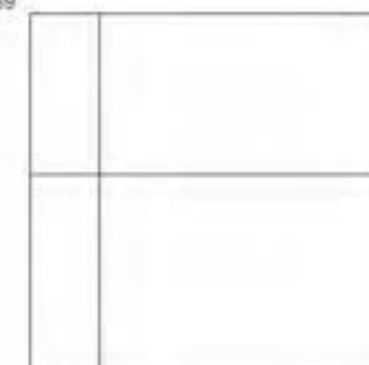
Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1968
Revised 1970
Edition N/A
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Levelled 1969

Surveyed 1971
Revised 1973
Edition N/A
Copyright 1973
Levelled 1969



Surveyed 1970
Revised 1973
Edition N/A
Copyright 1973
Levelled N/A

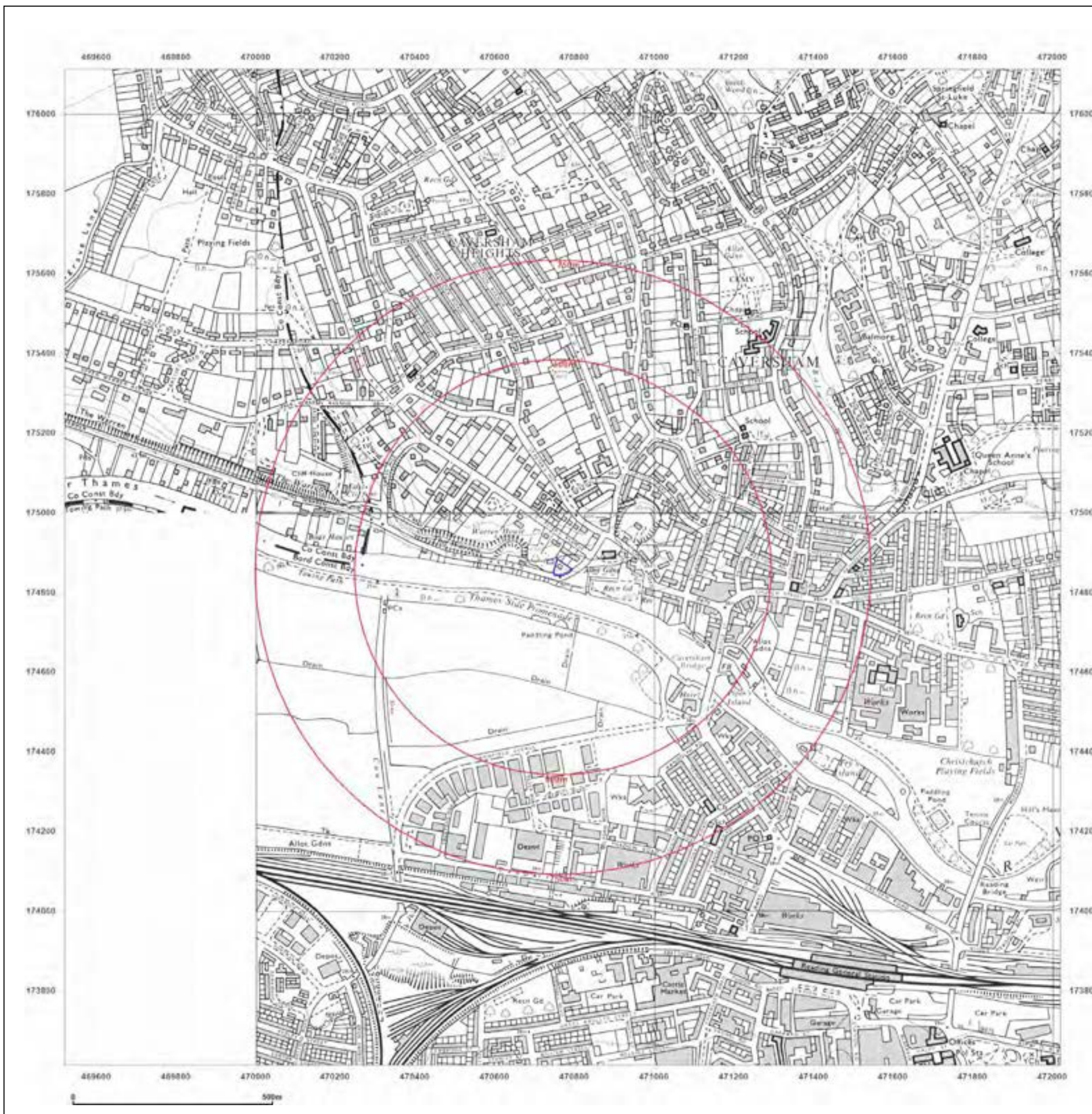


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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1976-1979

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
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Edition N/A
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Levelled 1969

Surveyed 1977
Revised 1979
Edition N/A
Copyright 1979
Levelled 1969

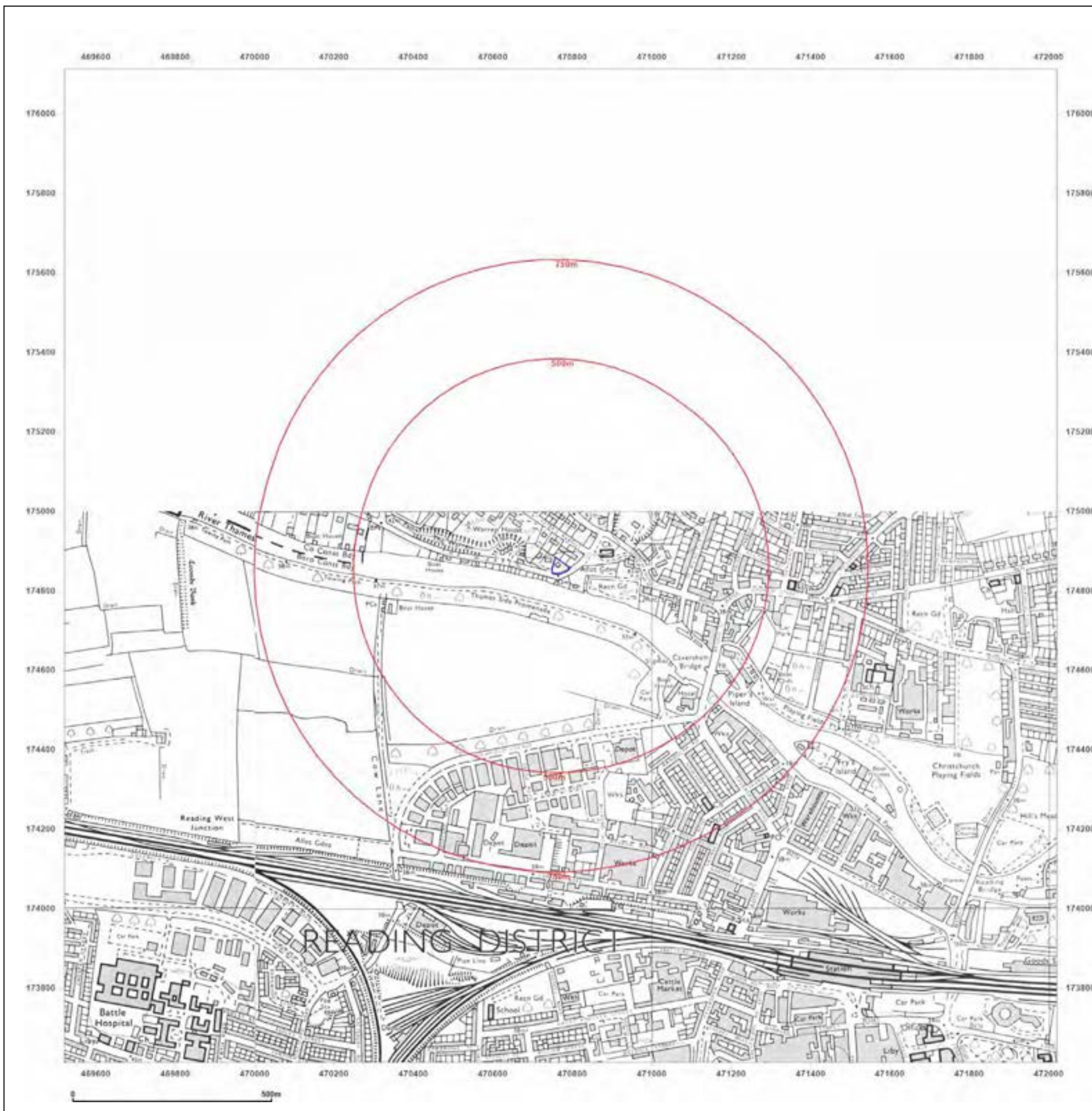


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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1989-1991

Scale: 1:10,000

Printed at: 1:10,000



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Surveyed 1990
Revised 1991
Edition N/A
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Surveyed 1987
Revised 1989
Edition N/A
Copyright N/A
Levelled N/A

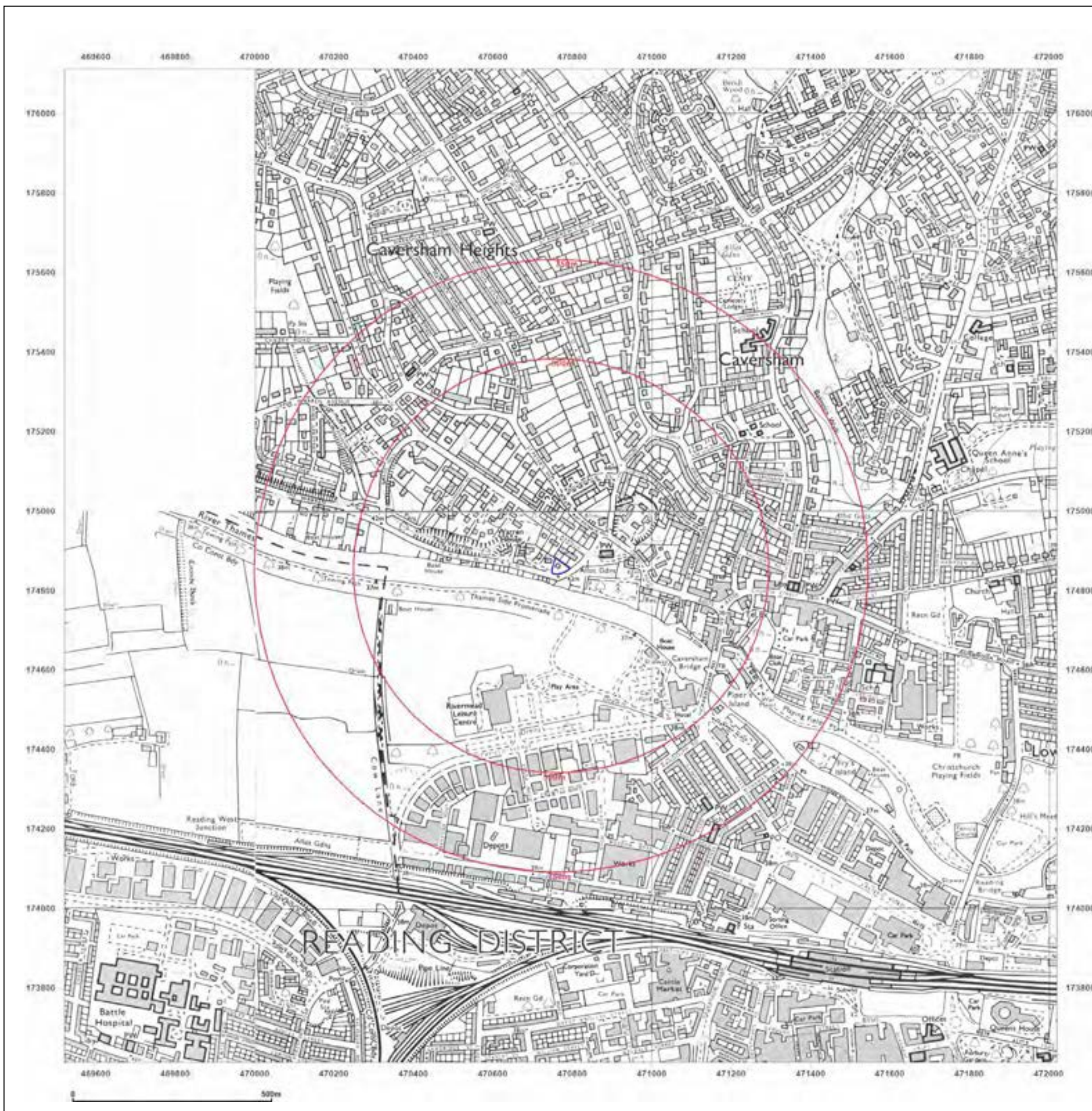


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7TH

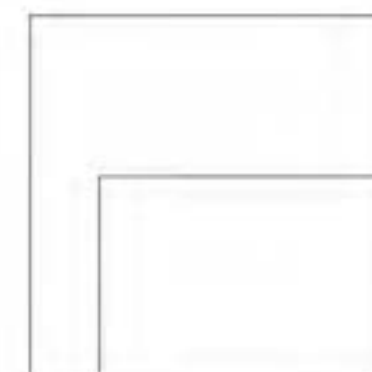
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Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 1994

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1987
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

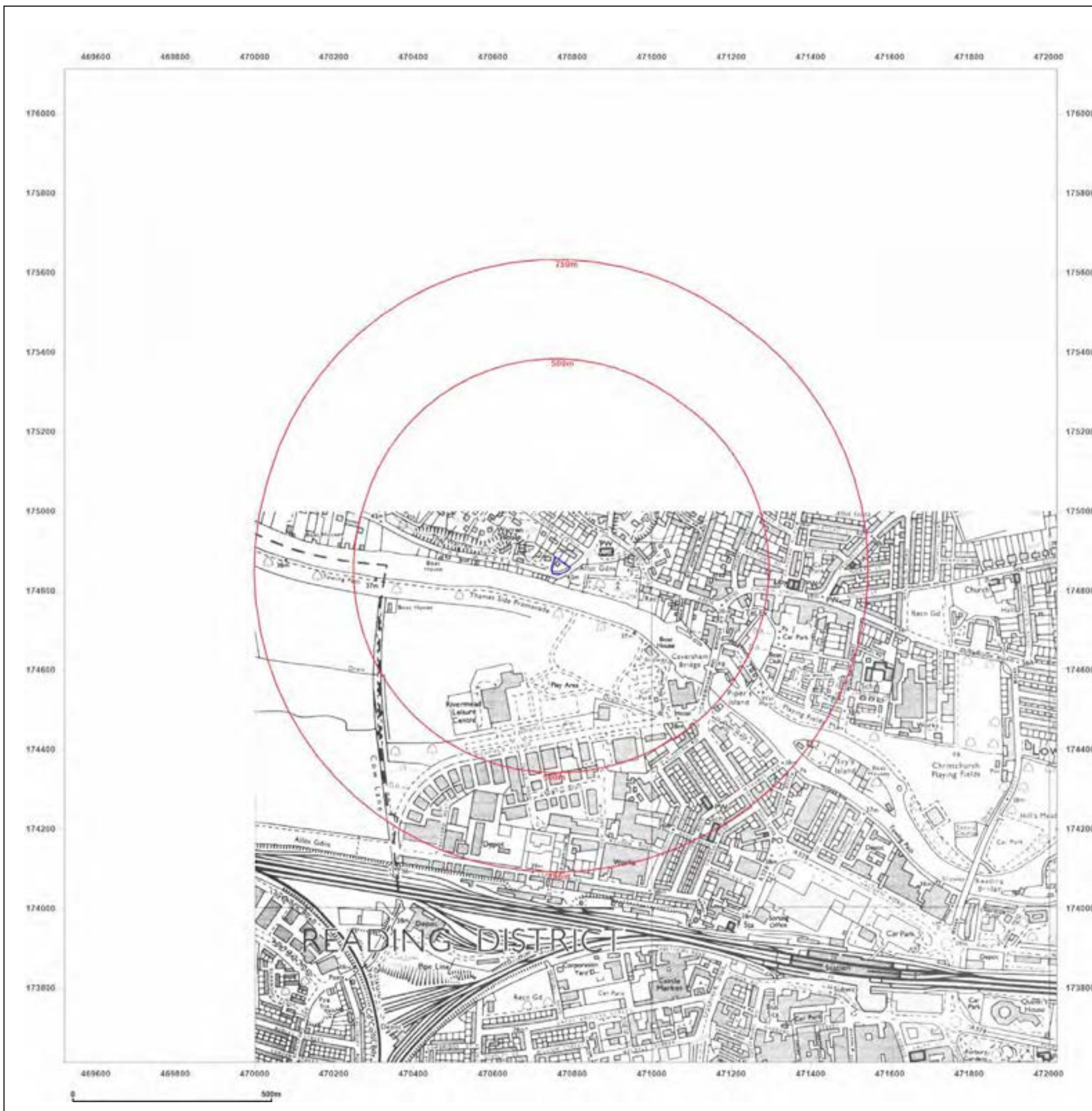


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Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

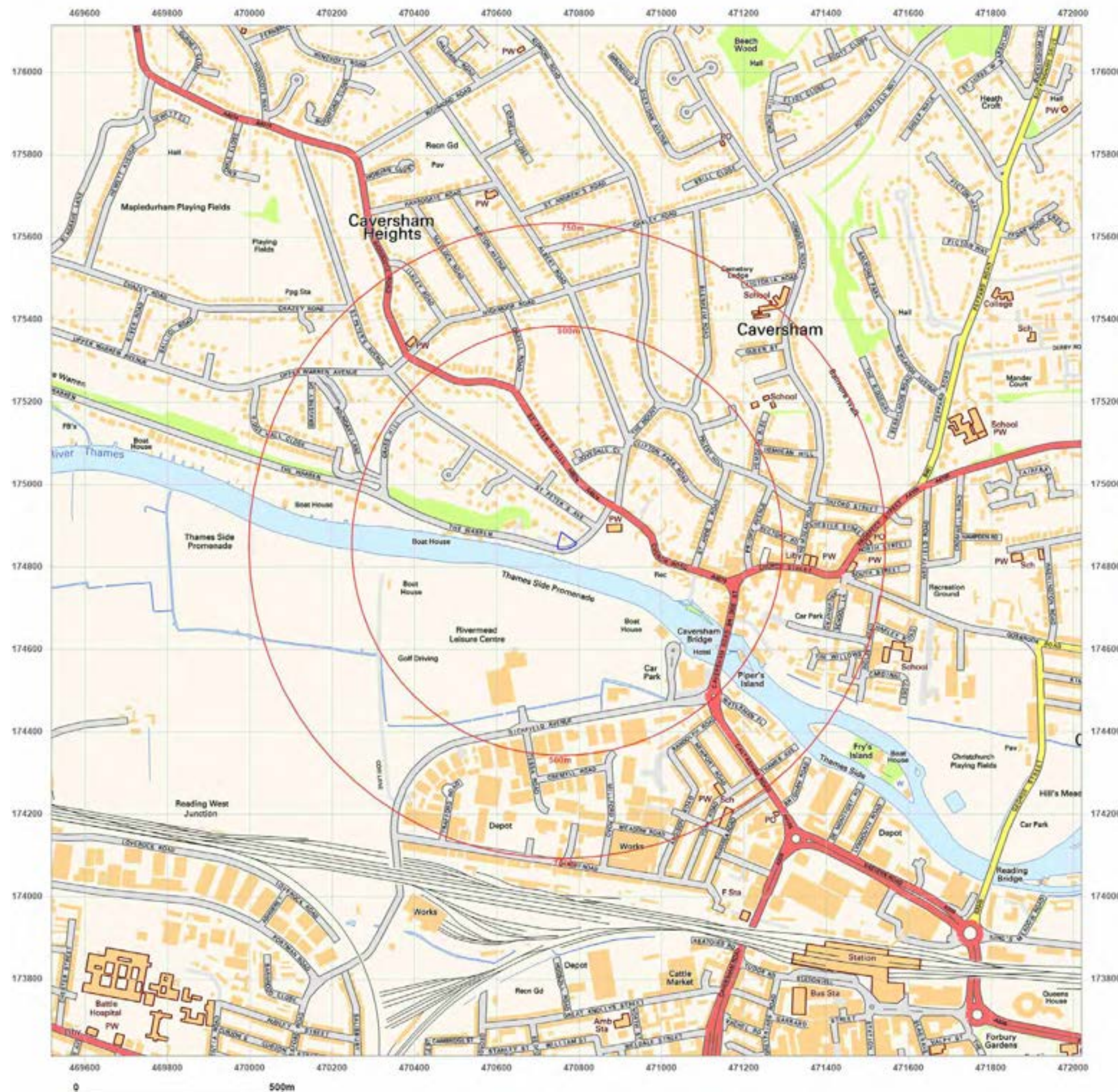


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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

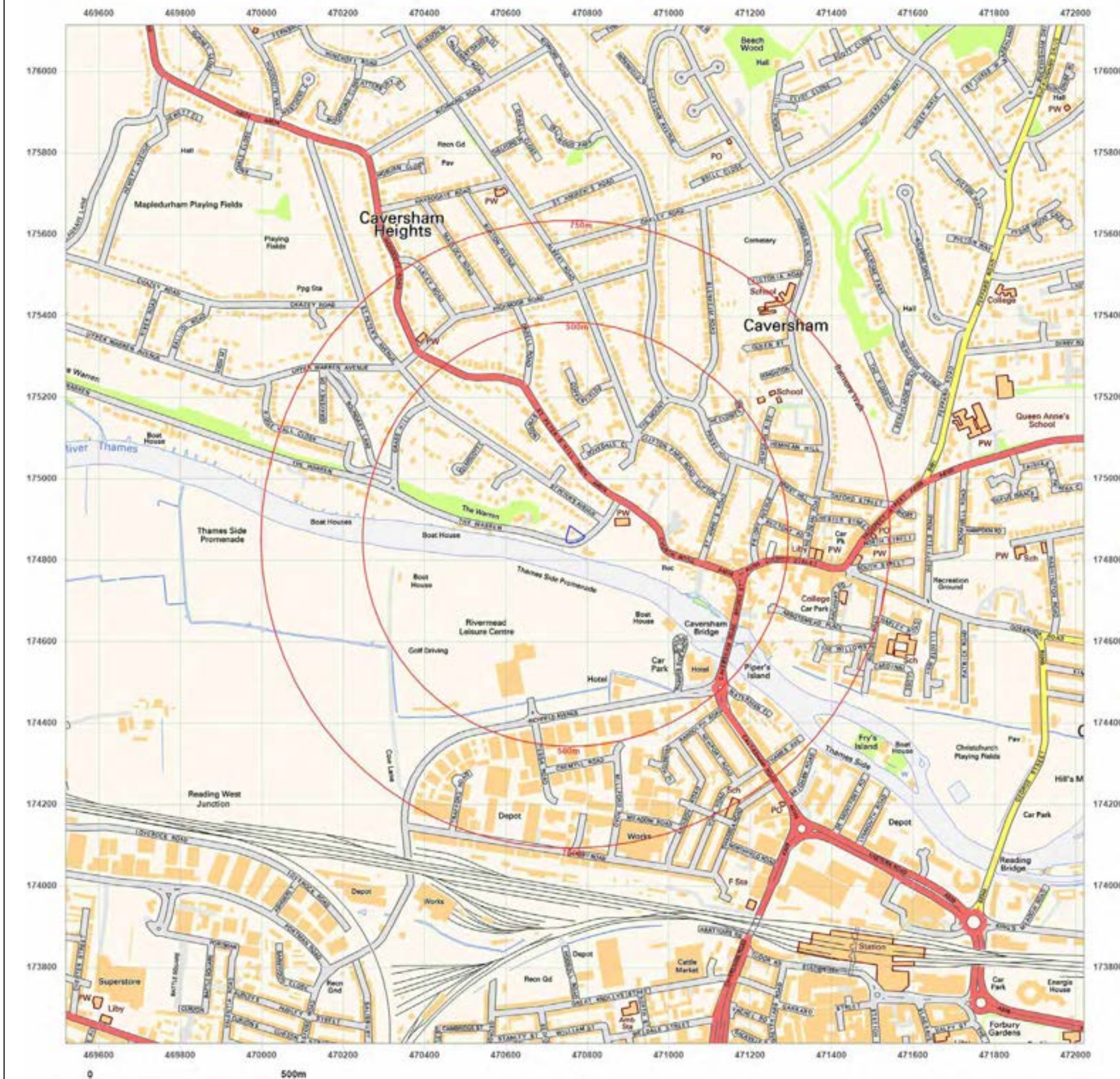


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Site Details:

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7TH

Client Ref: ICE0180
Report Ref: GS-AC6-S9N-H6D-JDE
Grid Ref: 470770, 174863

Map Name: National Grid

Map date: 2023

Scale: 1:10,000

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