



EARTH ENVIRONMENTAL
& GEOTECHNICAL

Phase 1 Desk Top Study

Prospect Street

Reading

Report Ref: R0260/19

October 2019

Earth Environmental & Geotechnical
(Southern) Ltd
200 Brook Drive, Green Park
Reading,
Berkshire
RG2 6UB

Tel : 01189253229

Email info@earthenvironmental.co.uk
www.earthenvironmental.co.uk



PROSPECT STREET

READING

PHASE I GEO-ENVIRONMENTAL
ASSESSMENT

FOR

HIVE STRUCTURE LTD

Earth Environmental & Geotechnical (Southern) Ltd.
200 Brook Drive, Green Park
Reading
Berkshire
RG2 6UB
Tel: 01189253229

Report No. R0260/19

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Report Title:	Land to rear of 8 Prospect Street, Reading Phase I Geo-Environmental Assessment	
Report Reference:	R0260/19	
Client:	Hive Structure Ltd	
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Drafted By:	Lily Cherry Geo-Environmental Consultant	
Authorised By:	John Grace Regional Director	

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1.0 INTRODUCTION

Appointment

- 1.1 Earth Environmental & Geotechnical was commissioned by Hive Structure Ltd (the Client) to undertake a Phase I Desk Study at the site located to the rear of 8 Prospect Street, Reading.
- 1.2 It is understood that a change of use from Light Industrial (Class B1(c)) to Residential (Class C3) is planned. This would involve converting the current structure into 5 residential flats.

Terms of Reference

- 1.3 EEGSL were commissioned by the Client to undertake a Phase I Geo-Environmental Desk Study at the site in accordance with a proposal reference R0260a on the 07th August 2019.
- 1.4 The objectives of this investigation are:
- *Undertake a desk-based review of the underlying geology and hydrology, current and historical site uses, potential contamination sources, radon potential, natural cavities and mining risks. And*
 - *Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use and in relation to off-site receptors.*

Sources of Information

- 1.5 The Phase 1 Desk Study comprises of a review of the following information sources:
- British Geological Survey online maps.
 - Google Earth imagery.
 - Environment Agency online data.
 - Historical Ordnance Survey maps.
 - The site and surrounding areas environmental, geological and mining data presented in the site-specific Groundsure Reports (Appendix 1 & 2).

Limitations of the Study

- 1.6 The report is written in the context of an agreed scope of work and budget and should not be used in a different context. New information, improved practices or changes in legislation may require a reinterpretation of the report in whole or in part. EEGSL reserve the right to amend either conclusions or recommendations in light of any further information that may become available. This report is provided for the sole use by the client and is confidential to them.
- 1.7 Recommendations within this report are based on records produced by others. It is assumed this information is accurate and no liability can be accepted for the accuracy of this information.

2.0 THE SITE

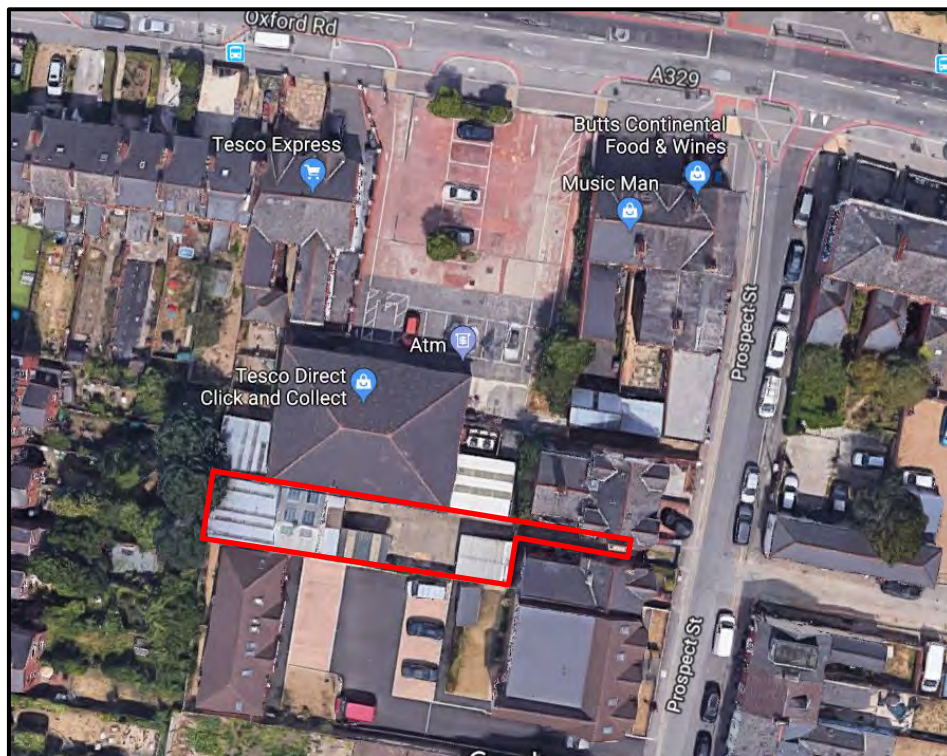
Site Location and Description

- 2.1 The site is currently occupied by a part two-story building (previously used for light industrial activities), an open sided single-story covered storage area, and an internal court yard. Access to the site is made via a drive which runs down the side of No.8 Prospect Street, and currently the site is entirely covered by concrete hard standing. The site itself is located within the central western area of Reading and is centred on National Grid Reference 470510, 173372.
- 2.2 A plan showing the site boundary and existing development is provided in Figure 1 below.



- 2.3 The site itself is relatively flat and occupies an area of approx. 0.0297ha. The site is bound to the east, south and west by residential developments associated with Prospect Street and Lorne Street whilst to the north the site is bound by a local Tesco Express Store.
- 2.4 An aerial photograph of the site and surrounding area is present within Figure 2.

Figure 2: Aerial Photograph Showing Site Location



- 2.5 As part of this assessment, a site visit was undertaken by EEGSL on the 15th August 2019. Photographs taken during the visit showing the general layout and condition of the site are provided within Figures 3 to 6.
- 2.6 Figure 3 below shows the main building where the conversion of the 5 new residential dwellings will be constructed. It is understood that the open sided building, seen in Figure 4, will be retained and used as a storage area.
- 2.7 From observations made during the site walkover, it would appear that the current building contains some asbestos roofing and cladding. During the walkover the materials observed were in a good condition with no significant signs of damage. EEGSL understand that all asbestos containing materials will be removed as part of the planned conversion.
- 2.8 In general the concrete hardstanding covering site, which can be seen in Figures 3 to 5, was noted as having some minor cracks and vegetation could be seen growing within some of the expansion joints. It was also noted that a form of permeable paving was located centrally along the drive area (as seen in Figure 3).

Figure 3: Photograph showing main building to the West of site and Concrete Hardstanding



Figure 4: Photograph of Open Sided Building Onsite



Figure 5: Photograph Showing Concrete Driveway as Main Access to the Site



Figure 6: Photograph of Ground Floor Area Inside Main Building

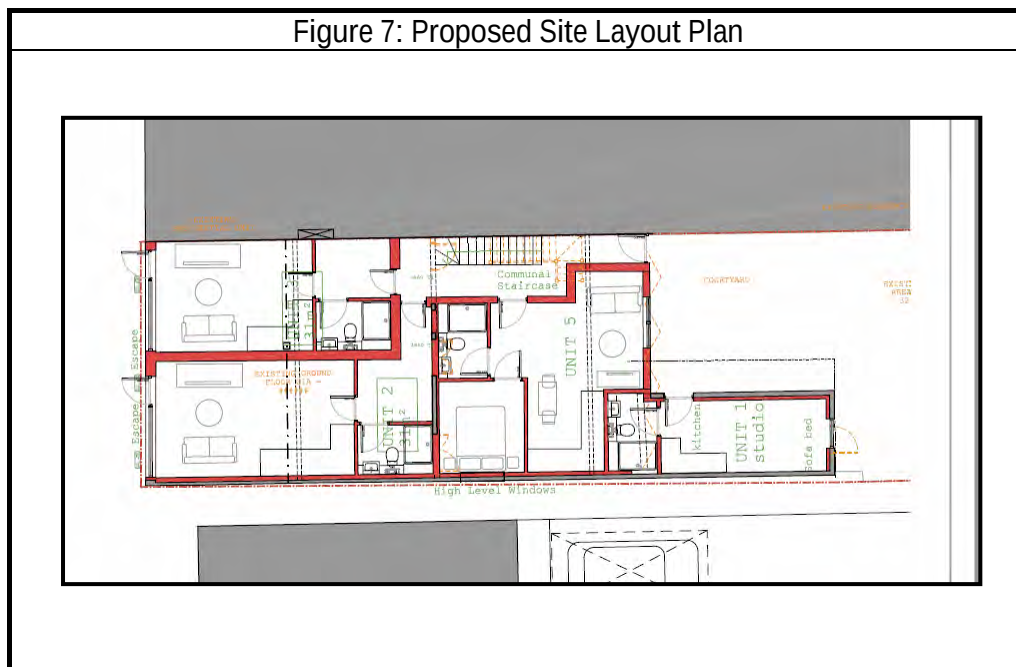


Site Utility Services

- 2.9 A site service plan has not been provided by the client. The status of all services should be checked with the statutory providers prior to any development (including site investigation) commencing.

Proposed Development

- 2.10 It is understood that the current use of the premises is Light industrial (Class B1(c)) and will be converted to 5 residential dwellings (Class C3). To enable this conversion, it is understood that the structure of the current building will be retained but the internal layout will be altered to accommodate for the new residential use.
- 2.11 A proposed site layout plan is provided within Figure 7 below.



3.0 ENVIRONMENTAL SETTING

3.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site-specific Groundsure Geo-Insight report (Appendix 1).

3.2 Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site-specific Groundsure Enviro-Insight report (Appendix 2).

Geology

3.3 The BGS states that the site is not underlain by artificial ground (Made Ground).

3.4 The BGS however superficial deposits are present. The Taplow Gravel Member consists of sand and gravel.

3.5 According to the BGS, the site is underlain by the superficial sands and gravel of the Taplow Gravel Member, beneath which are the Seaford Chalk Formation and Newhaven Chalk Formation bedrock.

3.6 There are no records of linear geological features within 500m of the site.

3.7 There are no records of any landslip activity within 500m of the site boundary.

3.8 There is 1 BGS public borehole record available within 135m of the site. Borehole ref: SU77SW809 exists north east of the site, approximately 10m in depth. The borehole identifies 1.10m of superficial deposits overlying the Chalk bedrock.

3.9 The site is in an area where the hazard rating is negligible to very low with regards to shrink-swell clays, landslides and running sands, compressible deposits and collapsible deposits.

3.10 The site is in an area where the hazard rating is moderate for the dissolution of soluble rocks. It is assumed this rating is applied due to the Chalk Bedrock at shallow depth. Chalk can be dissolved by acidic surface water runoff and the resulting cavities (dissolution features) can cause the ground to become unstable.

3.11 There are 2 estimated background soil chemistry records on site, both recording levels of arsenic at <15mg/kg, cadmium = <1.8mg/kg, chromium = 60-90mg/kg, nickel 15-30mg/kg and lead = <100mg/kg.

Ground Working

3.12 There are 2 records of historical surface ground working features located within 250m of the assessment site. Both are associated with an unspecified pit 240m from the site in 1913 and 1938.

3.13 There are no historical underground working features within 500m of the site.

3.14 There are no current ground working features noted within the Groundsure report within 500m of the assessment site.

- 3.15 There are no underground railway lines or railway tunnels within 250m of the site.

Mining and Other Underground Workings

- 3.16 There are no current or historical mining records or coal mining records within 1km of the site
- 3.17 There are no areas of brine extraction, gypsum extraction, tin mining or clay mining within 1km of the site.
- 3.18 There are no records of natural cavities within 250m of the assessment.
- 3.19 The Groundsure report does highlight a potential risk within the area associated with sporadic underground chalk mining of restricted extent. However, the Groundsure report goes on to identify that the potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

Radon Potential

- 3.20 According to the BGS and Public Health England, the property is not within a Radon Affected Area, as less than 1% of properties are above the Action level. Therefore, the new development will not need to include radon protection measures, as defined within publication BR211 by the Building Research Establishment

Hydrogeology and Hydrology

- 3.21 According to the Environment Agency (EA), the underlying Taplow Sand and Gravel Member is classified as a Secondary A Aquifer. The EA definition of a Secondary A Aquifer is given below:

'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'

- 3.22 In addition to the superficial deposits, the EA classify the underlying Chalk Bedrock as a Principle Aquifer. The EA definition of a Principle Aquifer is given below:

'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'

- 3.23 The groundwater vulnerability and soil leaching potential beneath site has been categorised as 'H1' which is defined as a Major Aquifer with High leaching potential.

- 3.24 There are no potable or surface water abstraction licence records within 250m of the site.

Landfill and Waste Management Activity

- 3.25 There are no recorded current or historical Landfills located within 250m of the assessment site.

- 3.26 There is one recorded historical Waste Treatment Facility located within 250m of the assessment site. The site was located 237m to the north and was a mixed metal recycling facility. The permit was surrendered in 1999.

Environmental Permits, Incidents and Registers

- 3.27 The Groundsure report includes records of environmental permits, incidents and registers within 250m of the site, which are summarised in Table 1.

Table 1: Environmental Permits, Incidents and Registers

Historic IPC Authorisations	None	
Part A (1) and IPPC Authorised Activities	None	
Red List Discharge Consents	None	
List 1 Dangerous Substances Inventory Sites	None	
List 2 Dangerous Substances Inventory Sites	None	
Part A (2) and Part B Activities and Enforcements	1	78m to the north. An environmental permit was granted to Texaco Service Station for the unloading of petrol into storage at service stations.
Category 3 or 4 Radioactive Substance Authorisations	None	
Licensed Discharge Consents	None	
Water Industry Referrals	None	
Planning Hazardous Substance Consents and Enforcements	None	
Dangerous or Hazardous (COMAH and NIHHS) Sites	None	
National Incidents Recording System (Pollution Incidents), List 2	None	
National Incidents Recording System (Pollution Incidents), List 1	None	
Sites Determined as Contaminated Land under Part 2A EPA1990	None	

Industrial Land Use Information

- 3.28 There are 17 records of historical potentially contaminative land uses within 250m of the assessment site. The vast majority are attributed to Railway Sidings and a Railway Station located between 214m and 247m to the west / north west (between 1913 and 1994). In addition to the railway, there are two unspecified pits recorded in 1913 and 1938 located 240m north west of the assessment site.
- 3.29 There are 10 records of historical energy features within 250m of the site. From a review of the data it would appear that the 10 records actually coincide with 3 electrical substations being present. The first substation is located 114m to the north west (present in 1993), the second is located 146m to the north east (present between 1971 and 1993) and the third is located between 195 and 211m south of the assessment site (present between 1971 and 1993).

- 3.30 There are 5 records of historical vehicle garages located within 250m of the site. Three of the records are located onsite and are recorded between 1959 and 1986. An additional record is located immediately north of the assessment site in 1958 and the fourth record is located 240m to the west in 1971.
- 3.31 There are no records of historical military sites within 500m of the site.
- 3.32 There are 2 records of potentially infilled land within 250m of the assessment site. The two records are both unspecified pits located 240m NW of the site recorded in 1913 and 1938.
- 3.33 There are 9 records of historical tanks within 250m of the assessment site. These records are all associated with unspecified tanks, the closest of which was located 117m east and recorded in 1958.
- 3.34 There are no National Grid high voltage underground electricity transmission cables, or high-pressure gas transmission pipelines within 500m of the site.
- 3.35 There are 12 records of current potentially contaminative land uses identified within 250m of the assessment site. The closest record is associated with a BP Service Station located 79m to the north of the assessment site along Oxford Road. In addition to the Service Station, two electrical substations are located 115m north west and 148m north east of the site alongside an unspecified Tank located 147m north east.

Environmentally Sensitive Sites

- 3.36 There are no significant environmentally sensitive sites within 250m of the assessment site.

Archaeology

- 3.37 An archaeological assessment falls outside the brief of this report. Where considered necessary, advice should be sought from an archaeological specialist.

Potential Flood Risks

- 3.38 Detailed assessment of flood risk is outside the scope of this report. However, it is highlighted that the site falls outside of any Environment Agency flood zone 2 or 3 designated areas. The Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating for the assessment is very low.

Previous Site Investigations

- 3.39 EEGSL are aware of one investigation being undertaken by Delta-Simons Environmental Consultants immediately north of the assessment site where the Tesco Express store is currently located. The purpose for the investigation works were to further assess the extent of identified groundwater contamination and possible pollutant linkages, in particular the risks to controlled waters, current site occupiers and neighbouring properties.
- 3.40 The investigations, undertaken in October 2013 and September 2014, comprised of 22 dynamic sampler boreholes to depths between 5-7 mbgl and 4 rotary boreholes to a maximum depth of

20.45mbgl. In total 16 boreholes were installed as groundwater monitoring wells, and across the two investigations a total of 52 soil samples and 29 groundwater samples were collected and analysed, along with two rounds of ground gas and groundwater level monitoring

- 3.41 The encountered ground conditions comprised of Made Ground over possible alluvial deposits and /or the Taplow Gravel Formation (Secondary A Aquifer), underlain by the Newhaven and Seaford Chalk Formation (Principle Aquifer)
- 3.42 In October 2013, localised groundwater contamination was identified associated with the former use as a garage and petrol filling station. In addition to the groundwater contamination, ground gas monitoring identified elevated concentrations of methane and carbon dioxide (associated with hydrocarbon groundwater contamination). Chrysotile cement bound type asbestos was also identified within one sample of the Made Ground.
- 3.43 A series of risk assessments were undertaken by Delta-Simons which concluded that the contamination identified did not pose a significant risk to the sites current use (Tesco Extra Store) however, the contamination did pose a risk to local groundwater and also represented a potential ground gas and vapour migration risk to offsite users.
- 3.44 To mitigate the potential risks to controlled waters and neighbouring human health receptors, localised groundwater remediation was recommended within the 2014 Delta-Simons report. The proposed groundwater remediation would not only remove the risk to local groundwater but would also reduce the potential ground gas / vapour migration risk.
- 3.45 After a thorough search of information available on the council's website, EEGSL instructed Reading Borough Council to complete a review all documents associated with the above project to confirm if the proposed remediation had been undertaken. At the time of writing, the councils review has returned inconclusive, with Reading Borough Council confirming that they currently hold no record of the remediation being completed (Appendix 3).
- 3.46 Given the above, it is considered that there is still a potential for the groundwater contamination to be present beneath the neighbouring site, and therefore the ground gas / vapour migration risk to neighbouring sites may also still be present.

4.0 SITE HISTORY

4.1 The historical development of the site has been determined by reference to historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site.

4.2 The site history is summarised in the Table 2.

Table 2: Summary of Site History

Date	Site	Surrounding Land Use
1877-1879	The site is part of an open lot / area of landscaping assumed to be part of Sydney Lodge to the south.	Residential properties and their associated gardens are present to the east and west of the assessment site. Oxford Road runs east to west to the north of the site and Prospect Street runs south from Oxford Road forming the sites eastern boundary. In general, the area is a mix of residential and commercial properties.
1897-1900	What appears to be a semi-detached residential building can now be seen present within the eastern area of site fronting Prospect Street. And the centre of site is occupied by the rear half of a larger (potentially commercial) building which appears to be accessed via Oxford Road.	More development of residential properties has occurred within the vicinity of the site and a school is now located 100m North.
1911-1912	The residential dwelling now appears as detached on maps with access gained to the central building on site via a drive feeding off of Prospect Street. A third building is now present and occupies the western end of the assessment site. Given the layout of the site, it is assumed the two buildings are commercial or light industrial in nature.	Development surrounding the assessment site continues with further residential properties being built along Prospect Street.
1931-1932	No significant change	Sydney Lodge is no longer present on maps of this time. The area has been developed with higher density housing.
1938	No significant change	No significant change.
1959	No significant change	The buildings immediately north of the assessment site (which formally were adjoined to the central building on site) are now labelled as a Garage. A large depot can also be seen 130m NW from the site.
1961	No significant change	No significant change
1971	The site can be seen labelled as a Builders Yard which continues beyond the southern site boundary.	Depot now labelled as Milk Depot. Approx. 90m to the NW, along the northern boundary of Oxford Road is a site resembling a petrol station.
1977-1978	No significant change	Site located 90m NW from the site now labelled filling station
1986-1988	No significant change	No significant change
1993	No significant change	Filling station label disappears, and the former Milk Depot can be seen redeveloped into several small residential streets.

2002	No significant change	No significant change
2010	No significant change	No significant change
2014	No significant change	The former garage immediately to the north of the assessment site is now a Tesco Local.
2019	No significant change	No significant change

4.3 Selected extracts from historical maps are presented in Figures 7 to 12.

Figure 8: OS Map Extract 1877-1879

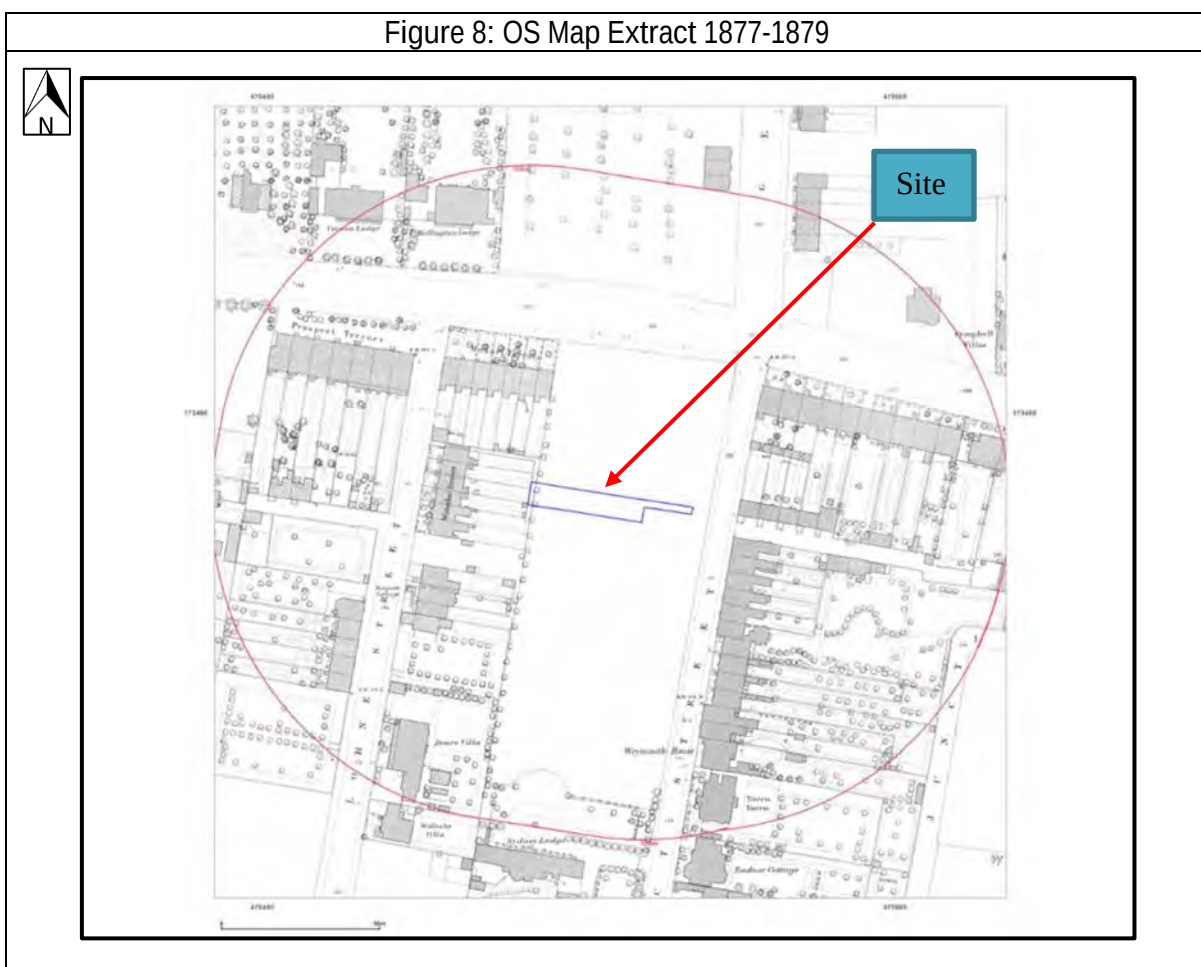


Figure 9: OS Map Extract 1931-1932

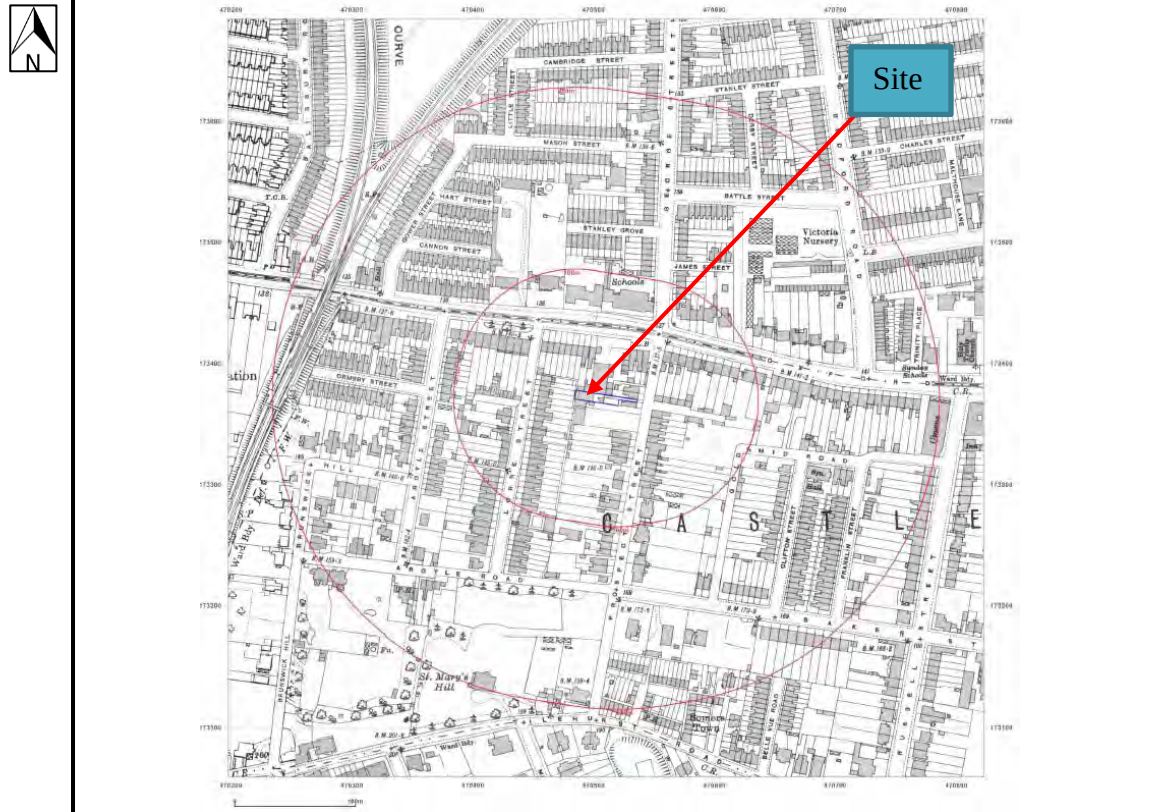


Figure 10: OS Map Extract 1959

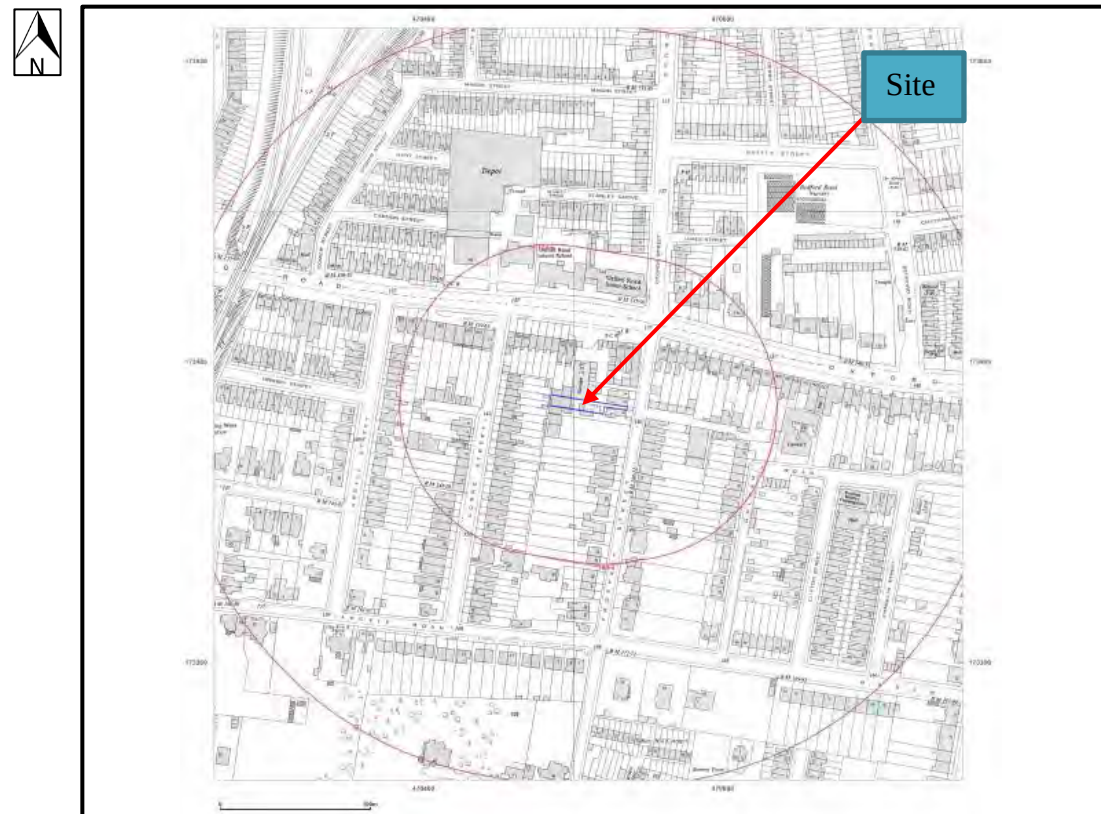


Figure 11: OS Map Extract 1971

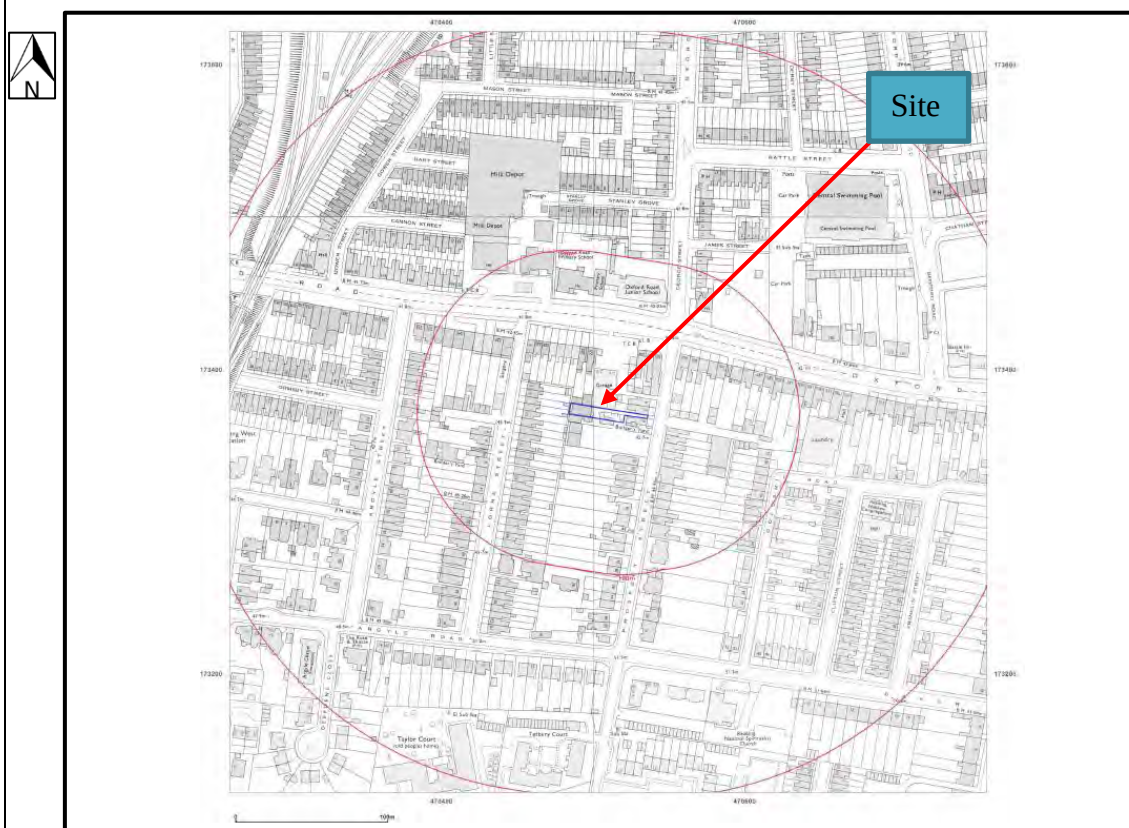


Figure 12: OS Map Extract 1993

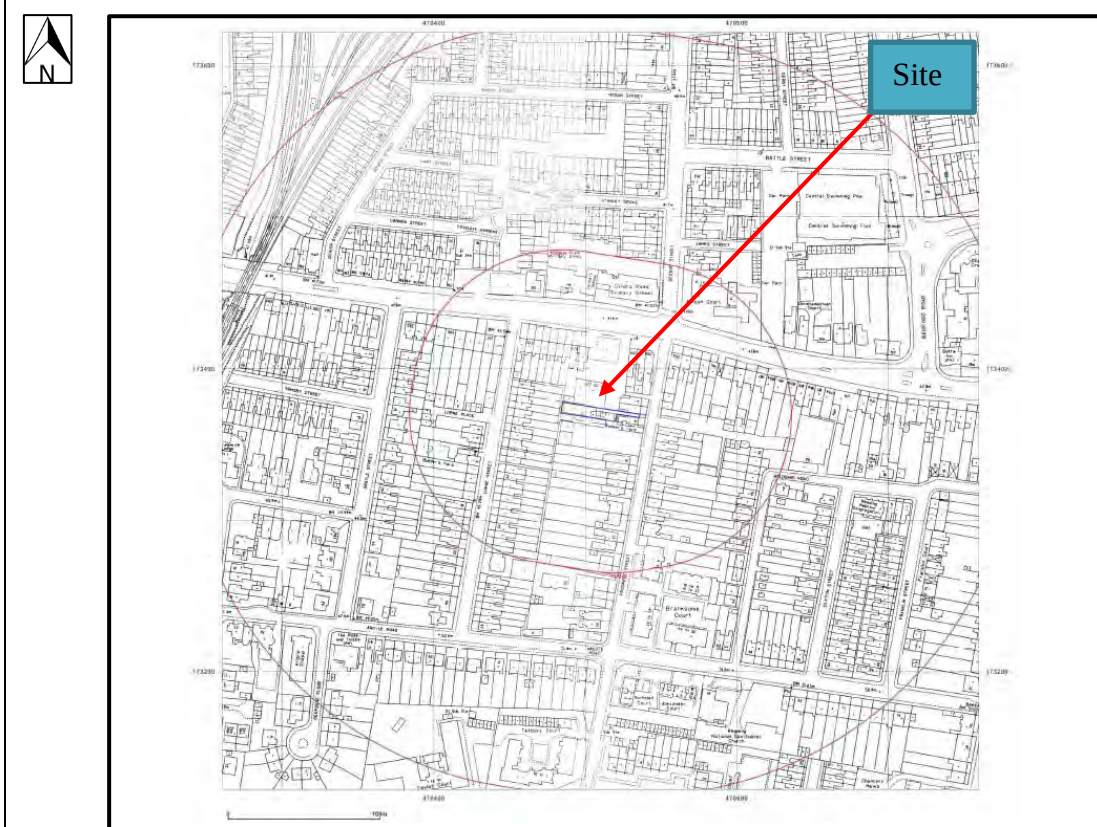
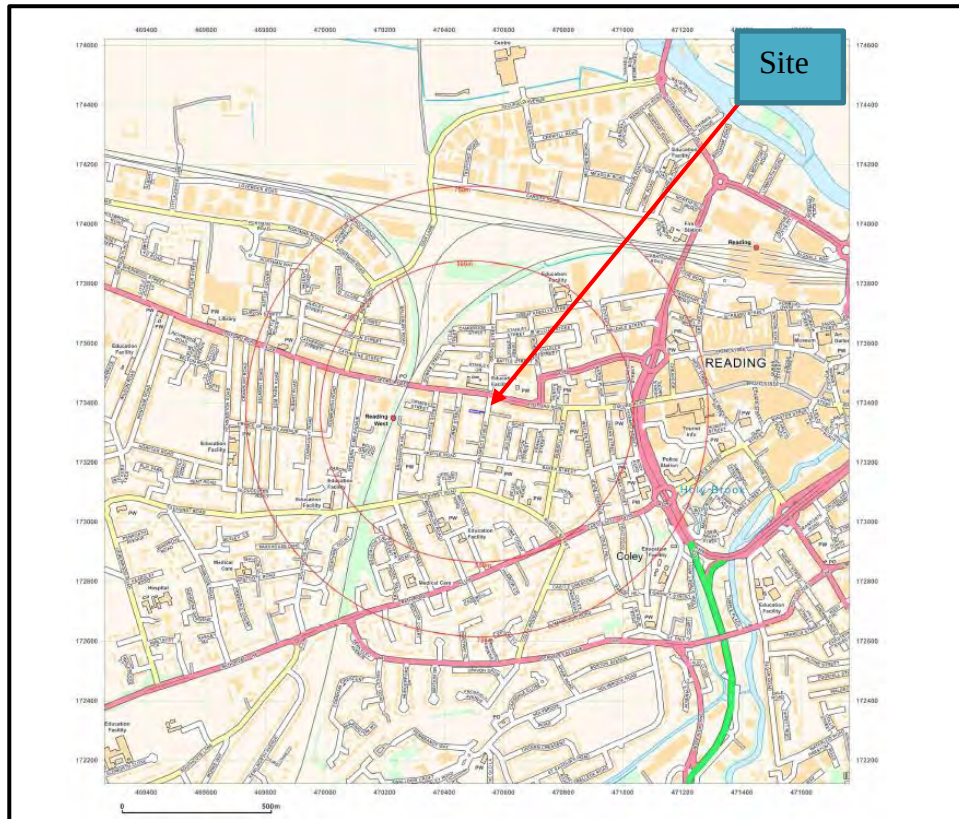


Figure 13: OS Map Extract 2014



5.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

- 5.1 The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site based on the above desk study information as defined by DEFRA and the EA Model Procedures for the Management of Land Contamination, CLR11(2004).
- 5.2 Table 5 provides a Preliminary Conceptual Model (PCM) which considers the source-pathway-receptor linkages present alongside the likelihood, severity and risk level as defined within Table 3 and Table 4 below. The assessment of probability, a modified risk table, and certain consequence definitions are based on CIRIA C552 and CLR11.
- 5.3 Table 5 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a possible linkage is identified, it does not necessarily mean that a significant risk exists but indicates that further information is required through appropriate site investigation to substantiate the conceptual model.
- 5.4 The PCM/PRA is based on a proposed residential end use.

Table 3: Consequence, Probability and Risk

Probability	Consequence,	Risk
High Likelihood- There is a pollution linkage and an event either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution	Very High – acute risk to the human health likely to result in significant harm. Risk of severe or irreversible effect on ground/surface water quality. Catastrophic damage to buildings / property.	Very High – there is a high potential that the source-pathway-receptor scenarios may give rise to harm to human health or the environment and remedial action is likely to be required.
Likely – there is a pollution linkage and all the elements are present, which means that it is probable an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.	High – Severe or irreversible effect on human health. Temporary severe or irreversible effect on ground/surface water quality. Reduction of water quality rendering groundwater or surface water unfit to drink and/or substantial adverse impact on groundwater dependant environmental receptors.	High – it is likely that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, which may require remediation and/or control measures to mitigate risks
Low likelihood– there is a pollutant linkage and circumstances are possible for an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term	Moderate – Long term or short term moderate effect on human health. Moderate effect on ground/surface water quality, reversible with time. Reduced reliability of a supply at a groundwater or surface water abstraction source	Moderate – it is possible that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, however it is either relatively unlikely that such are would be severe, or if any harm were to occur it is more likely that harm would be mild.
Unlikely – there is a pollution linkage, but circumstances are such that it is doubtful that an event would occur even in the very long term.	Low – Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.) Slight effect on ground/surface water quality, reversible with time. Marginal reduced reliability of a supply at a groundwater or surface water abstraction source.	Low – it is possible that harm could arise at the source, however it is likely that they would at worst be mild.
		Very Low – it is unlikely that the source-pathway-receptor scenarios will give rise to an impact on human health or the environment.

Table 4: Estimation of Level of Risk by Comparison of Consequence and Probability

		Consequence			
		High	Moderate	Low	Very low
Probability	High Likelihood	Very High	High risk	Moderate risk	Moderate to low risk
	Likely	High risk	Moderate risk	Moderate to low risk	Low risk
	Low Likelihood	Moderate risk	Moderate to low risk	Low risk	Very low risk
	Unlikely	Moderate to low risk	Low risk	Very low risk	Very low risk

Potential Sources

5.5 The following potential sources have been considered for the assessment site.

- Contamination of the ground beneath the site due to its historical use as a builder's yard.
- Contamination of the ground beneath the site due to contamination of the ground beneath the historical Garage and fuel station located immediately to the north (Current Tesco Extra Store).

5.6 Additional off-site sources of contamination have also been identified during this assessment, however their potential to impact the site have been considered as negligible in this instance.

Potential Receptors

5.7 The following receptors have been considered as part of this assessment.

- Current site users (commercial);
- Adjacent land users;
- Future land users (residential);
- Construction workers during site development; and
- Controlled Waters.

Potential Pathways

5.8 The following pathways have been considered as part of this assessment.

- Direct / dermal contact, ingestion, inhalation pathways of potentially contaminated soils;
- Vertical or horizontal migration of contamination via leaching into the underlying shallow groundwater;
- Vertical or horizontal migration of ground gas and vapours.

Table 5: Preliminary Conceptual Model

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
Contamination of the ground beneath the site due to its current use as a builder's yard	Dermal contact, ingestion and inhalation of soils dust	Current Site users	Low likelihood	Moderate	Low to Moderate Risk	Considering the site has historically been used as a builders' yard, there is a potential for contamination to be present within the shallow soils due to the former use and storage of hazardous materials (oils, solvents, fuels, potential asbestos containing materials, paints and other hazardous construction materials). In addition there is the potential for made ground to be present due to the sites redevelopment. However, considering the sites current industrial use, and given that the site is currently covered in a layer of concrete hardstanding, the risk to current site users from direct contact is considered LOW. This is primarily due to the concrete hardstanding providing a physical barrier between any contamination present within the shallow soils and the current site uses.
		Adjacent Site users	Unlikely	Moderate	Low Risk	Due to the current buildings and hardstanding across much of the site, there is very limited potential for migration of contamination present within the shallow soils towards neighbouring land uses. The current risk to adjacent site users is therefore considered LOW.
		Future Site users	Low likelihood	Moderate	Low to Moderate Risk	Given that the proposed residential development will use the current building structure and there are no areas of proposed soft landscaping, the risk to future sites users is also deemed low in this instance. It should be noted that asbestos materials have been identified within the structure of building currently on site, and hence a full asbestos survey should be undertaken, and any remedial actions taken prior to the site being occupied by the new users.
		Construction Workers	Low Likelihood	Moderate	Low Risk	Assuming appropriate health and safety measures are adopted (in line with CDM and other relevant health and safety guidance) a LOW risk to construction workers is anticipated during the redevelopment of the site. Once again it should be noted that asbestos materials have been identified within the current structure of building on site.
	Vertical or horizontal migration of contamination via leaching into the underlying	Controlled Waters	Low Likelihood	Moderate	Low to Moderate Risk	Considering the site has historically seen some use as a builders yard, there is a potential for contamination to be present within the shallow soils beneath site, which could impact the underlying ground water (via infiltration and leaching). However, the sources of contamination are

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
	shallow groundwater					expected to be limited in volume and the potential for leaching is greatly reduced by the current covering of hardstanding. Considering the above, the risk to controlled waters from contamination present on site is considered LOW in this instance.
Contamination of the ground beneath the site due to the historical Garage located immediately to the north of the assessment site	Vertical or horizontal migration of contamination via leaching into the underlying shallow groundwater	Current Site users	Low likelihood	Moderate	Low to Moderate Risk	Hydrocarbon contamination within shallow groundwater has been identified associated with the former garage and fuel station neighbouring site to the north. Given the high leaching potential and granular nature of the underlying geology it is possible that contaminated groundwater may have migrated towards the assessment site. However, given the current hardstanding present at the assessment site, it is considered unlikely that this contamination, if present, could impact the current site users. The risk to current site users is therefore considered LOW in this instance.
		Future Site users	Low likelihood	Moderate	Low to Moderate Risk	The potential for contamination to migrate towards the assessment site from adjoining sources is considered moderate in this instance. However, once again given that the proposed development will maintain the current hardstanding the risk of future site users being exposed to contamination present within shallow soils beneath site is deemed unlikely. The risk to future site users is therefore also considered LOW. (It should be noted that new water pipes may require protecting due to the potential contamination being present)
	Vertical or horizontal migration of ground gas	Current Site users	Low likelihood	Moderate to High	Moderate Risk	As identified within sections 3.39-3.46 of this report, a potential ground gas and vapour migration risk has been identified associated with the former use of the neighbouring site. Taking into account the works undertaken by Delta-Simons in 2013 and 2014, and the current understanding that no remediation works have been completed, it is assumed that this risk may still be present. Therefore, it is considered that a MODERATE risk exists for the site's current users. The main risk being accumulation of gases beneath the buildings causing asphyxiation or the potential for explosive gases to be present.
		Future Site users	Low likelihood	Moderate to High	Moderate Risk	Taking into account the information currently available, it is considered that a MODERATE risk is present to future site

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
						users due to the potential migration of ground gas and vapours.

Preliminary Risk Assessment

- 5.9 From review of historical and current day information it has been identified that the assessment site itself has seen development since the early 1900s, with commercial use assumed from around 1911. In 1971 the site was labelled as a builder's yard and it is assumed this use has remained on site until the present day.
- 5.10 With regards to off site development, most of the adjoining areas have been predominantly residential, except for a former fuel station and garage (now redeveloped into a Tesco Extra) which is present immediately to the north of the assessment site.
- 5.11 From review of historical information, and through discussions with Reading Borough Council, it has been identified that contamination, present as hydrocarbon impacted groundwater, has been identified beneath the former fuel station and garage site to the north.
- 5.12 Taking the former use of the site and neighbouring land uses into consideration, the primary sources of contamination considered as part of this assessment have been;
- 5.13 The presence of asbestos within the fabric of the buildings currently present on site; and
- 5.14 The potential for hydrocarbon contamination (including migrating ground gas and vapours) present immediate to the north.
- 5.15 Given that the proposed development is to convert the current structure and does not include any soft landscaping, the risk to future site users from contamination present within shallow soils is deemed to be LOW. However, given the potential risk from ground gas generated from the neighbouring former garage and fuel station, the risk to future site users from ground gas has been deemed as MODERATE.
- 5.16 It should be noted that a MODERATE risk to current site users has also been attributed given the potential for ground gas to be present. However, currently the site is unoccupied, and therefore no receptors are thought to be present on site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

- 6.1 The PRA and CSM have highlighted potential risks associated with the migration of contamination from offsite sources. Currently given the lack of evidence to suggest these sources have been appropriately remediated, a MODERATE risk has been assigned.
- 6.2 Given the above conclusions, it is recommended that ground investigation works are completed at the assessment site to ascertain whether these off site sources are causing a potential significant impact.

Other Matters

- 6.3 As with every redevelopment project, due diligence is required, and should any new evidence of contamination be found, appropriate investigation and / or remediation should be undertaken. The significance of any contamination not discovered by this assessment is outside the scope of this report.

APPENDIX 1

GEO-INSIGHT REPORT

Earth Environmental & Geotechnical Ltd
KINGSBURY HOUSE, KINGSBURY SQUARE,
MELKSHAM, SN12 6HL

Groundsure Reference: GS-6236707

Your Reference: R0260

Report Date 12 Aug 2019

Report Delivery Method: Email - pdf

Geo Insight

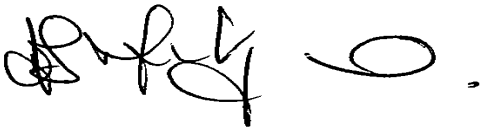
Address: LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: LAND REAR OF PROSPECT STREET, READING, RG1 7YG
Date: 12 Aug 2019
Reference: GS-6236707
Client: Earth Environmental & Geotechnical Ltd

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 20-Apr-2015
Grid Reference: 470510,173372
Site Size: 0.0297ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	No

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

No

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

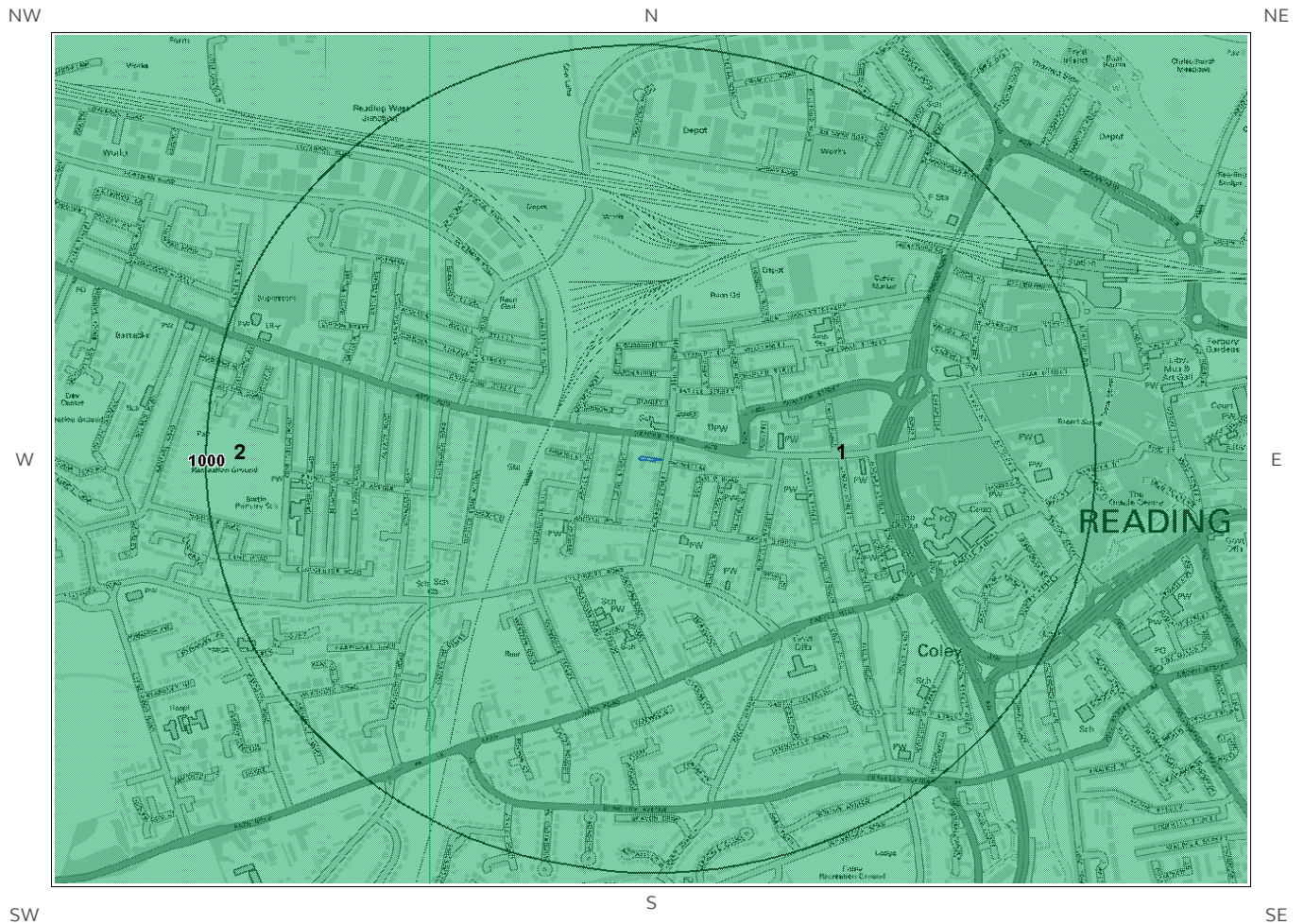
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	2	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	40

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	1	0	0	2	3
5.4 Non-Coal Mining*	1	0	0	4	41
5.5 Non-Coal Mining Cavities	0	0	0	4	18
5.5 Natural Cavities	0	0	0	6	42

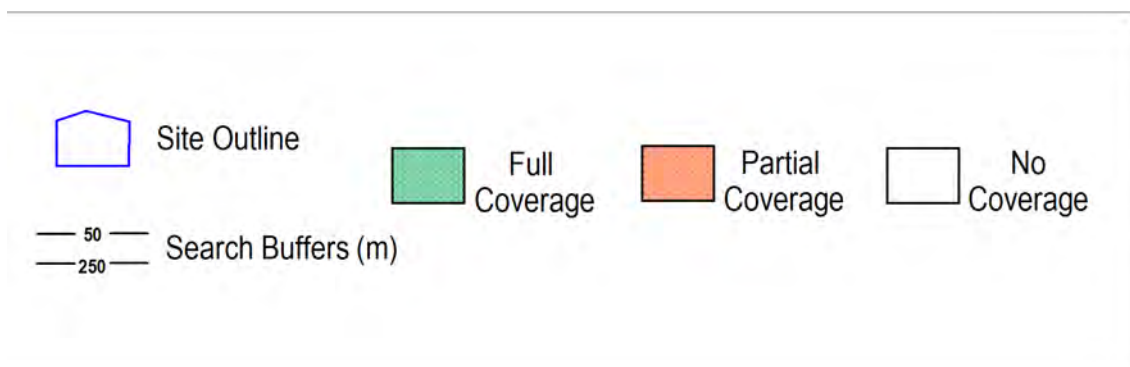
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Negligible				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Moderate				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	10		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	2	2	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	15	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	32	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	484.0	Some deposits are mapped	Full	Full	No coverage
N3	1622.0	Some deposits are mapped	Full	Full	No coverage
N4	1693.0	Some deposits are mapped	Full	Full	No coverage

Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

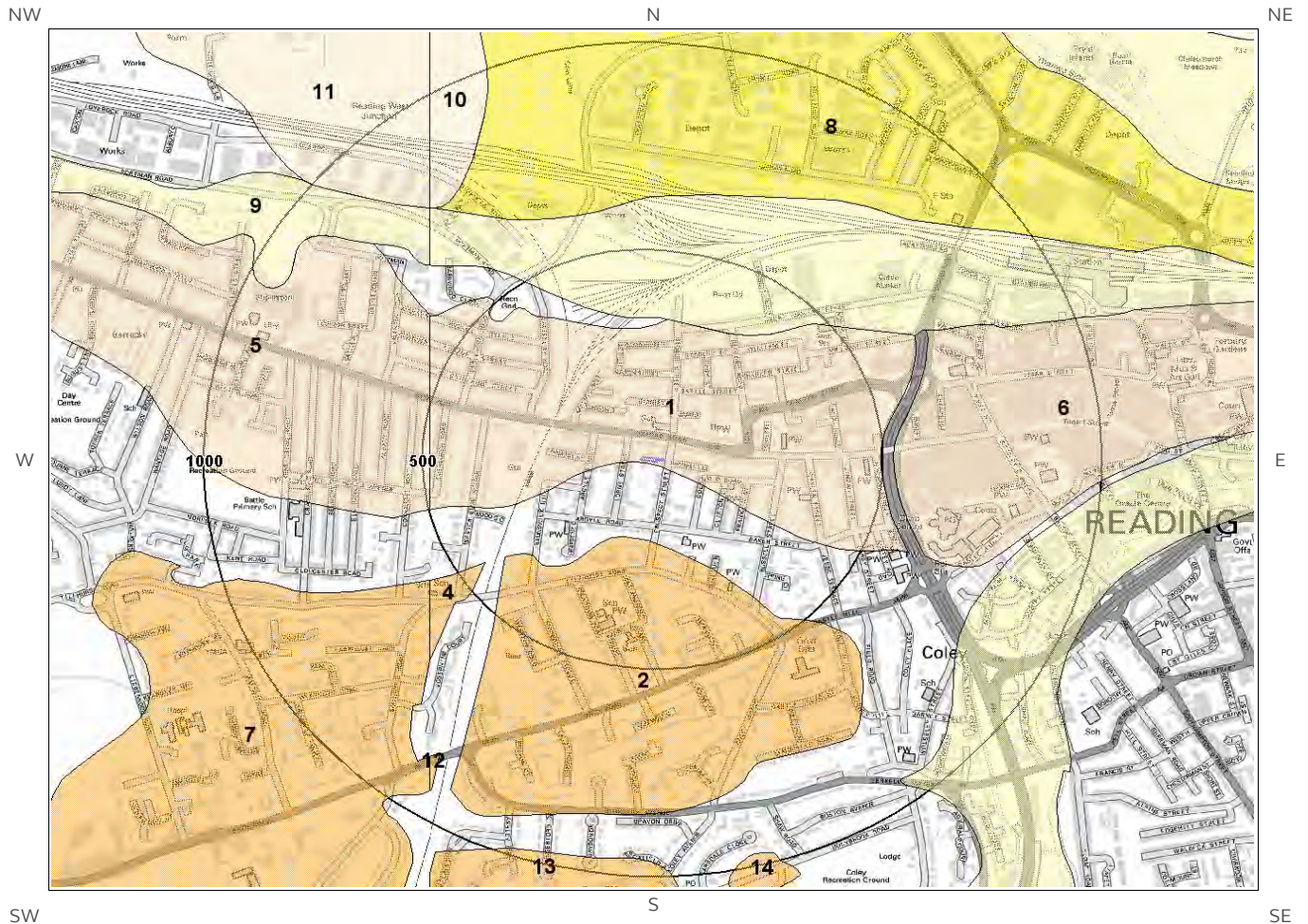
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

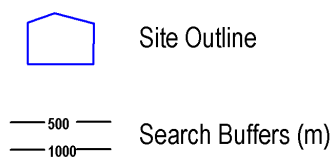
ID	Distance	Direction	LEX Code	Description	Rock Description
1	205.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	266.0	S	WGR-VOID	Worked Ground (Undivided)	Void
3	345.0	SW	WGR-VOID	Worked Ground (Undivided)	Void
4	447.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
5	494.0	E	WGR-VOID	Worked Ground (Undivided)	Void

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel
2	190.0	S	LHGR-XSV	Lynch Hill Gravel Member - Sand And Gravel	Sand And Gravel
3	333.0	N	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
4	434.0	SW	LHGR-XSV	Lynch Hill Gravel Member - Sand And Gravel	Sand And Gravel
5	484.0	W	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

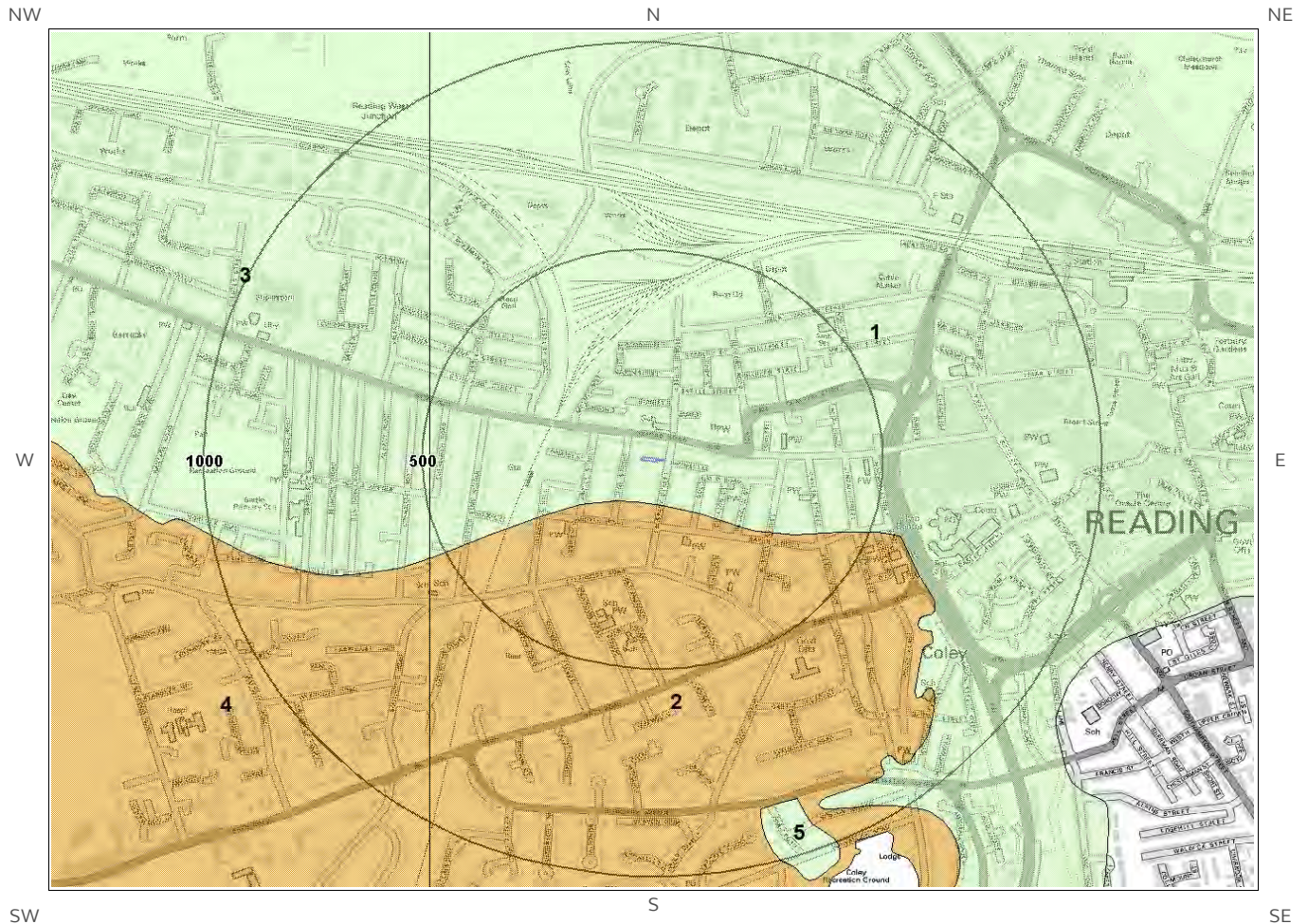
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

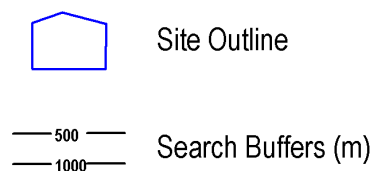
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age
2	101.0	S	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	Paleocene Epoch
3	484.0	W	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age

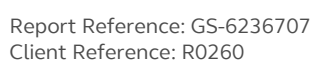
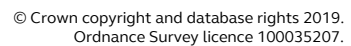
1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.



2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 268

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? No

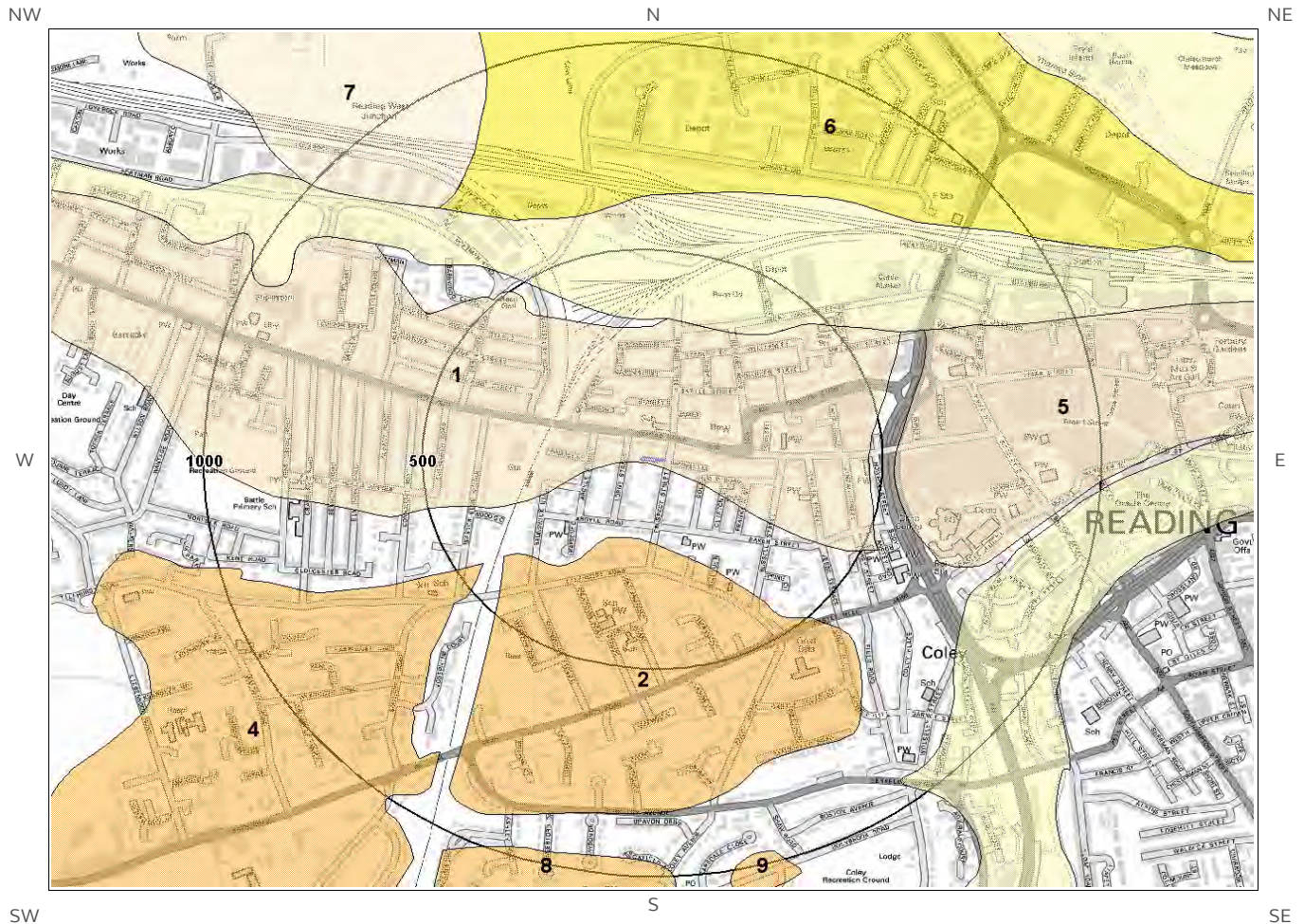
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

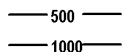
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TPGR-XSV	TAPLOW GRAVEL MEMBER	SAND AND GRAVEL
2	189.0	S	LHGR-XSV	LYNCH HILL GRAVEL MEMBER	SAND AND GRAVEL
3	333.0	N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
4	440.0	SW	LHGR-XSV	LYNCH HILL GRAVEL MEMBER	SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	High

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

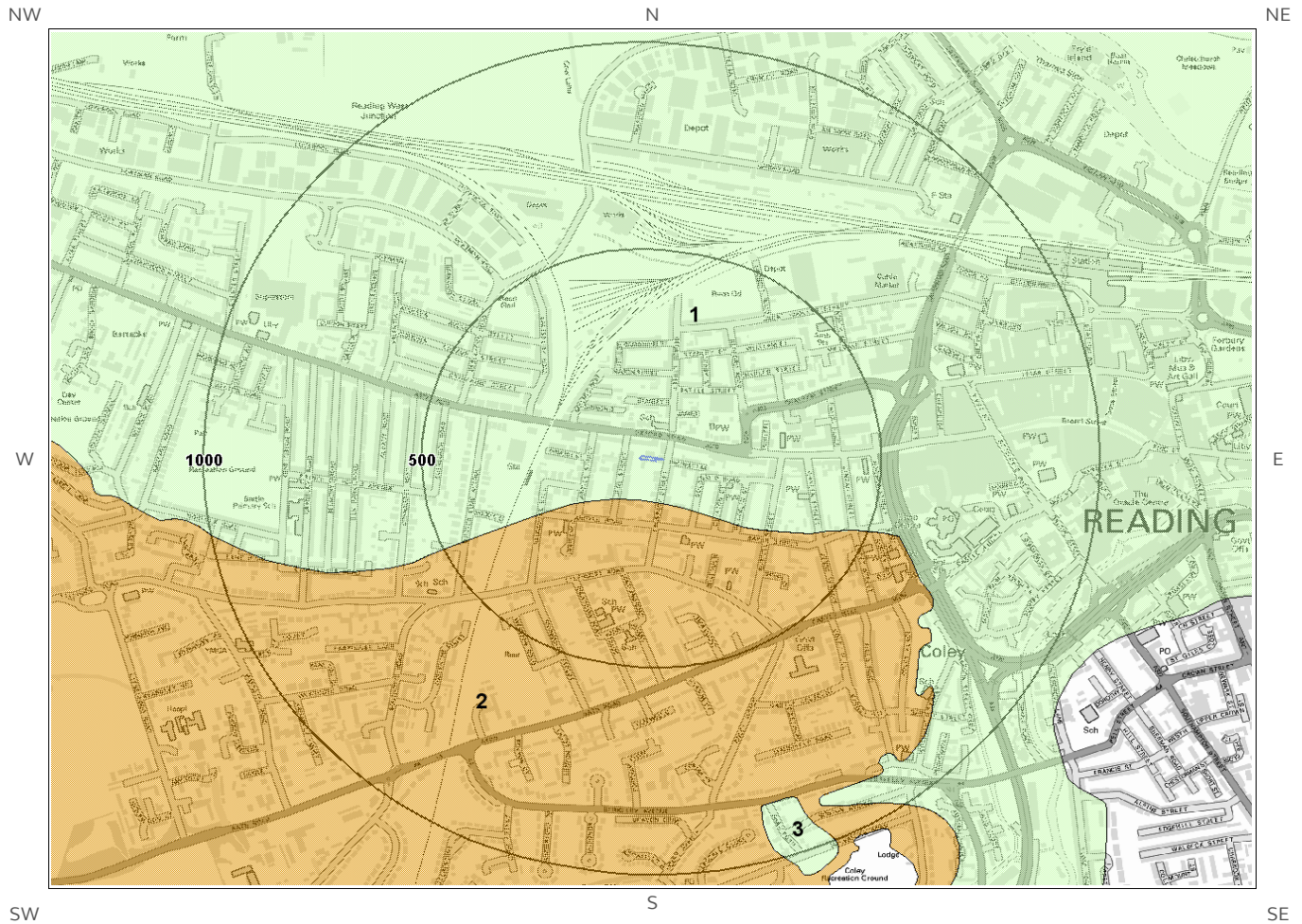
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

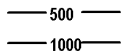
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 268

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	CONIACIAN
2	97.0	S	LMBE-XCZS	LAMBETH GROUP - CLAY, SILT AND SAND	THANETIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Very High	Very High

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

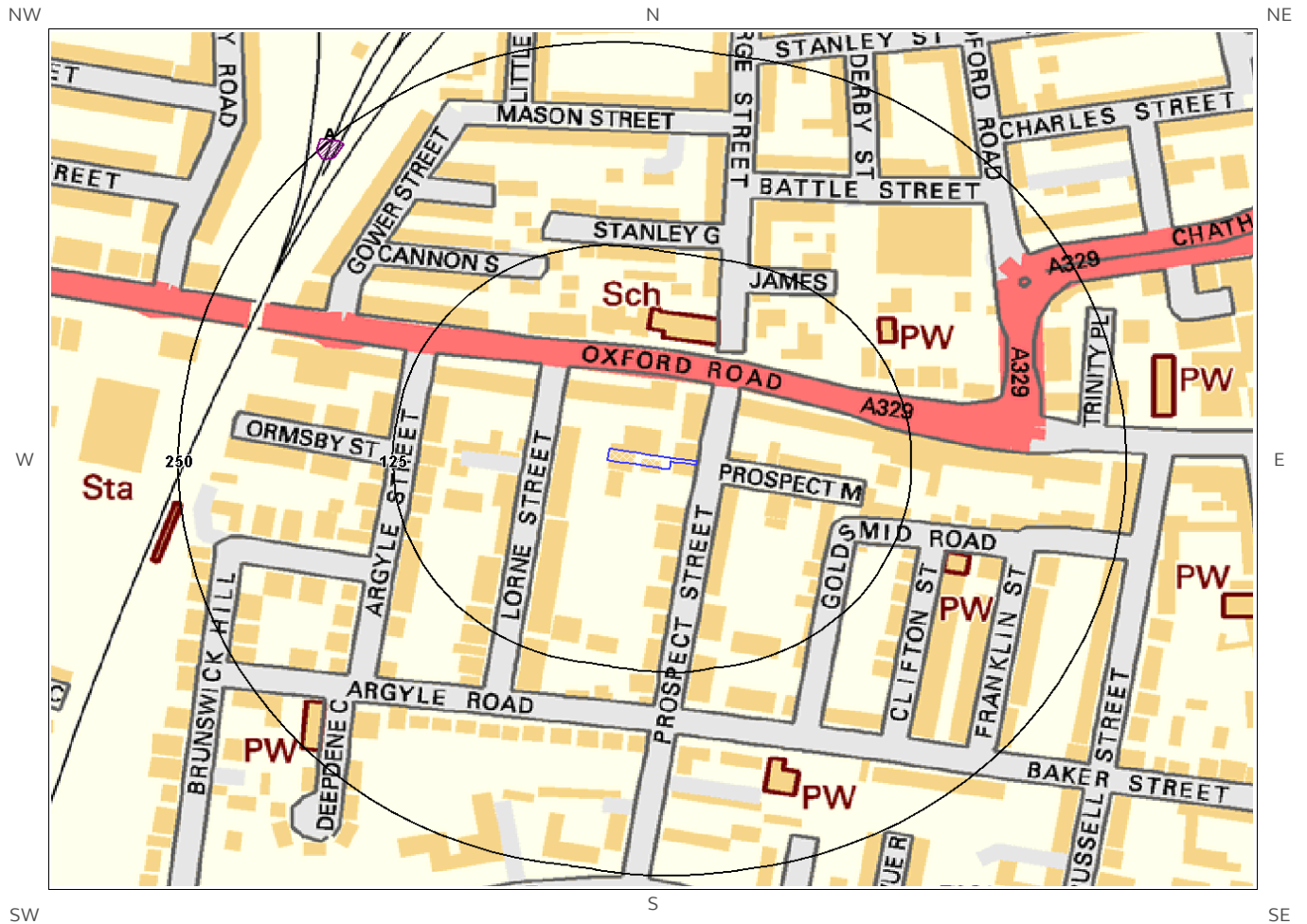
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

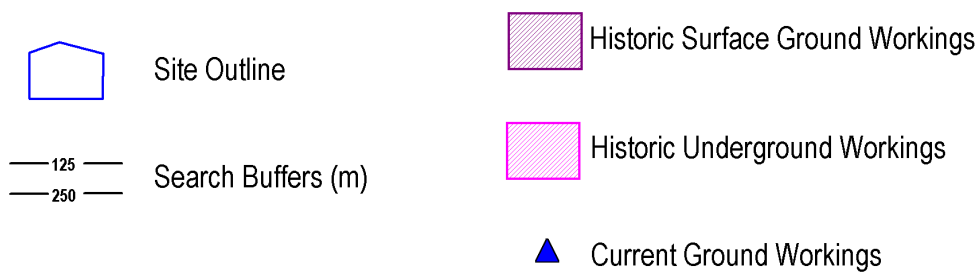
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1A	240.0	NW	470323 173562	Unspecified Pit	1913
2A	240.0	NW	470323 173562	Unspecified Pit	1938

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

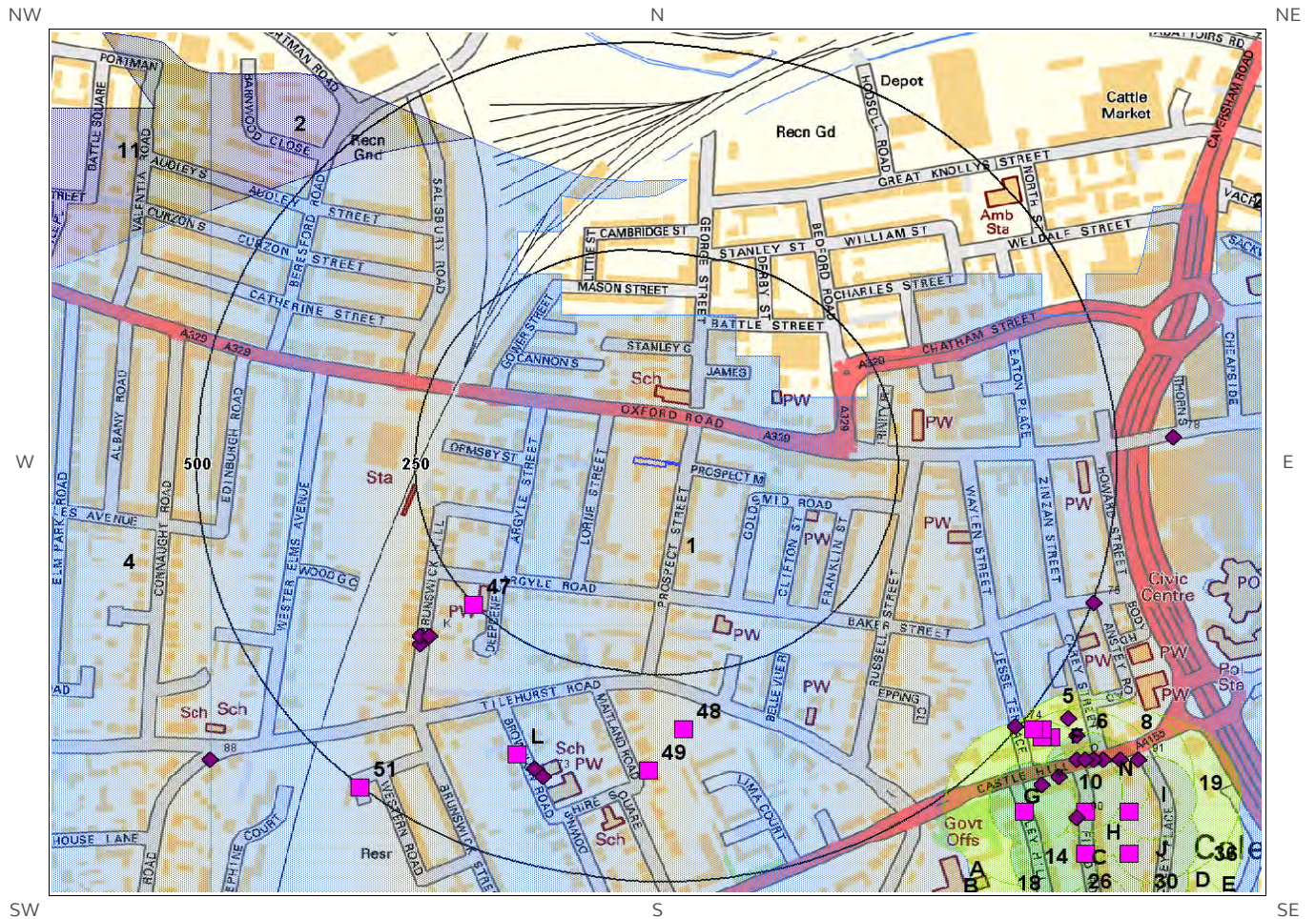
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	501.0	NW	470178 173774	Sand & Gravel	Battle Farm Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	573.0	SE	470938 172960	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	597.0	SE	471002 172996	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	602.0	SE	470991 172974	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	619.0	SE	471023 172986	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	636.0	SE	470964 172898	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	643.0	SE	471021 172946	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	648.0	SE	470981 172898	Chalk	Neuk & Bramley Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	650.0	SE	470968 172883	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	674.0	SE	471076 172966	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	683.0	SW	469864 173084	Sand	Tilehurst Road Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	688.0	SE	471017 172877	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	699.0	SE	470978 172827	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	703.0	SE	470946 172797	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	708.0	SE	471079 172914	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	710.0	SE	470959 172798	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	714.0	SE	471002 172827	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	730.0	SE	471067 172868	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	731.0	SE	471021 172821	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	733.0	SE	470915 172741	Gravel	Coley Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	742.0	SE	471010 172798	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	750.0	SE	471030 172804	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	753.0	SE	471070 172838	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	767.0	SE	471033 172784	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	770.0	SE	471066 172810	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	771.0	SE	470985 172742	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	774.0	SE	471018 172763	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	776.0	SE	470957 172717	Gravel	Coley Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

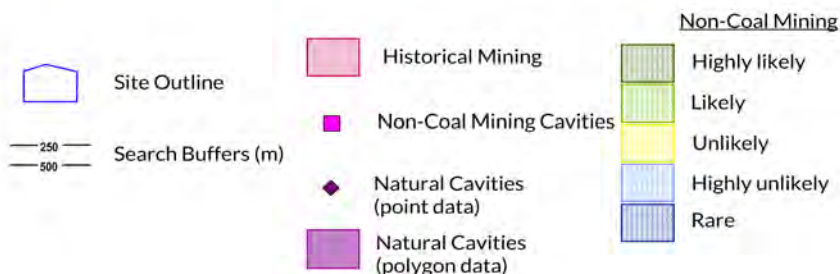
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	782.0	SE	470992 172733	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	789.0	SE	471074 172792	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	804.0	SE	471031 172735	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	819.0	S	470502 172547	Gravel	Coley Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	819.0	SE	471053 172733	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	847.0	SE	471077 172717	Chalk	Reading Chalk Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	856.0	SE	471044 172680	Clay & Shale	Coley Pottery	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	907.0	S	470815 172505	Clay & Shale	Avenue Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	944.0	W	469570 173135	Clay & Shale	Prospect Park Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	978.0	W	469545 173097	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	994.0	S	470881 172436	Clay & Shale	Avenue Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	996.0	SW	469628 172862	Sand & Gravel	Parkside Road Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



**Mining, Extraction and
Natural Cavities Legend**

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? Yes

The following information provided by JPB is not represented on mapping: Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Chalk	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	427.0	NW	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
3	474.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
4	484.0	W	Not available	Chalk	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
5	497.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
6	509.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
7G	524.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
8	528.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
9F	547.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
10	553.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
11	569.0	NW	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
12N	571.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
13A	578.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
14	592.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
15B	607.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
16A	610.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
17B	611.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
18	625.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
19	625.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
20I	636.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
21H	645.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	654.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	660.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
24C	665.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
25C	674.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
26	675.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
27J	684.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	697.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
29	728.0	NE	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
30	730.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	732.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	738.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	741.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	742.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
35D	762.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
36	765.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	769.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
38D	773.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
39E	807.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
40E	809.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	814.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	832.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	838.0	SE	Not available	Chalk	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
Not shown	876.0	SE	Not available	Chalk	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	887.0	W	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
Not shown	994.0	W	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
47	251.0	SW	470300 173200	Coopers Brick & Lime Manufactory, Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
48	316.0	S	470540 173050	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk
49	366.0	S	470500 173000	Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
50L	376.0	S	470350 173020	Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
51	501.0	SW	470170 172980	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk
52F	515.0	SE	470940 173050	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
53F	523.0	SE	470950 173050	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
54F	529.0	SE	470950 173040	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
55F	537.0	SE	470960 173040	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
56G	575.0	SE	470930 172950	Reading (Coley), Berkshire	Lynch Hill Gravels	Lambeth Group, Upper Chalk Formation	Chalk
57H	625.0	SE	471000 172950	Reading (Coley), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
58C	659.0	SE	471000 172900	Reading (Coley), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
59I	663.0	SE	471050 172950	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	692.0	SE	470970 172830	Reading (Coley), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
61J	696.0	SE	471050 172900	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	703.0	SE	470950 172800	Reading (Coley), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	716.0	SW	470110 172760	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk
Not shown	734.0	SE	471000 172800	Castle Hill Kiln, Reading (Coley), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	769.0	SE	470980 172740	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	815.0	SE	471030 172720	Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	875.0	SE	471100 172700	Coley Potteries, Reading (Coley), Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	943.0	S	470750 172450	Avenue Works, Reading (Coley), Berkshire	Worked Ground	Lambeth Group, Upper Chalk Formation	Chalk

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary?

Yes

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
69K	315.0	SW	470250 173160	-	Chalk Group, Lambeth Group	Solution Pipe x 1
70K	322.0	SW	470240 173160	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
71K	329.0	SW	470240 173150	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
72L	388.0	S	470370 173000	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 2
73	395.0	S	470380 172990	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
74	499.0	SE	470920 173050	-	Chalk Group, Lambeth Group	Solution Pipe x 1
75	503.0	E	471010 173200	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 3
76F	541.0	SE	470980 173060	-	Chalk Group, Lambeth Group	Solution Pipe x 1
77	561.0	SE	470990 173040	-	Chalk Group, Lambeth Group	Solution Pipe x 1
78	565.0	E	471100 173400	Taplow Gravel	Chalk Group	Solution Pipe x 3
79M	568.0	SE	470950 172980	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 2
80M	576.0	SE	470970 172990	-	Chalk Group, Lambeth Group	Solution Pipe x 1
81O	579.0	SE	470990 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
82N	587.0	SE	471000 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
83O	587.0	SE	471000 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
84O	587.0	SE	471000 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
85N	595.0	SE	471010 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
86N	595.0	SE	471010 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
87N	603.0	SE	471020 173010	-	Chalk Group, Lambeth Group	Solution Pipe x 1
88	604.0	SW	470000 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
89N	619.0	SE	471040 173010	-	Chalk Group, Lambeth Group	Solution Pipe x 1
90	624.0	SE	470990 172940	-	Chalk Group, Lambeth Group	Solution Pipe x 1
91	635.0	SE	471060 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
Not shown	676.0	S	470490 172690	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	703.0	SE	471000 172840	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	709.0	SE	471025 172845	-	Chalk Group, Lambeth Group	Solution Pipe x 3
Not shown	751.0	SE	470990 172770	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	767.0	SW	469950 172820	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	773.0	SE	471000 172750	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	797.0	SE	471000 172720	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	804.0	SE	471150 172850	-	Chalk Group	Solution Widened Joint or Fissure x 1
Not shown	817.0	SW	469900 172800	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe
Not shown	827.0	SW	470000 172700	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	830.0	SE	471100 172760	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	861.0	SE	471040 172670	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	866.0	S	470500 172500	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1
Not shown	872.0	SE	471130 172730	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	875.0	SE	471020 172640	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	878.0	SE	471040 172650	-	Chalk Group	Solution Pipe x 1
Not shown	879.0	SE	471140 172730	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	881.0	E	471400 173200	Taplow Gravel	Chalk Group	Solution Pipe x 2
Not shown	886.0	SE	471040 172640	-	Chalk Group	Solution Pipe x 1
Not shown	888.0	SE	471030 172630	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	903.0	SW	470130 172540	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	913.0	SW	469980 172610	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	964.0	E	471500 173400	Taplow Gravel	Chalk Group	Solution Pipe x 3

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
Not shown	967.0	E	471500 173300	Taplow Gravel	Chalk Group	Solution Pipe x 1
Not shown	967.0	SW	469900 172600	Lynch Hill Gravel	Chalk Group, Lambeth Group	Unknown x 3

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

This dataset provides information on metalliferous mining areas in Cornwall/Devon and is derived from records held by Mining Searches UK.

Are there any Cornwall and Devon Metalliferous Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

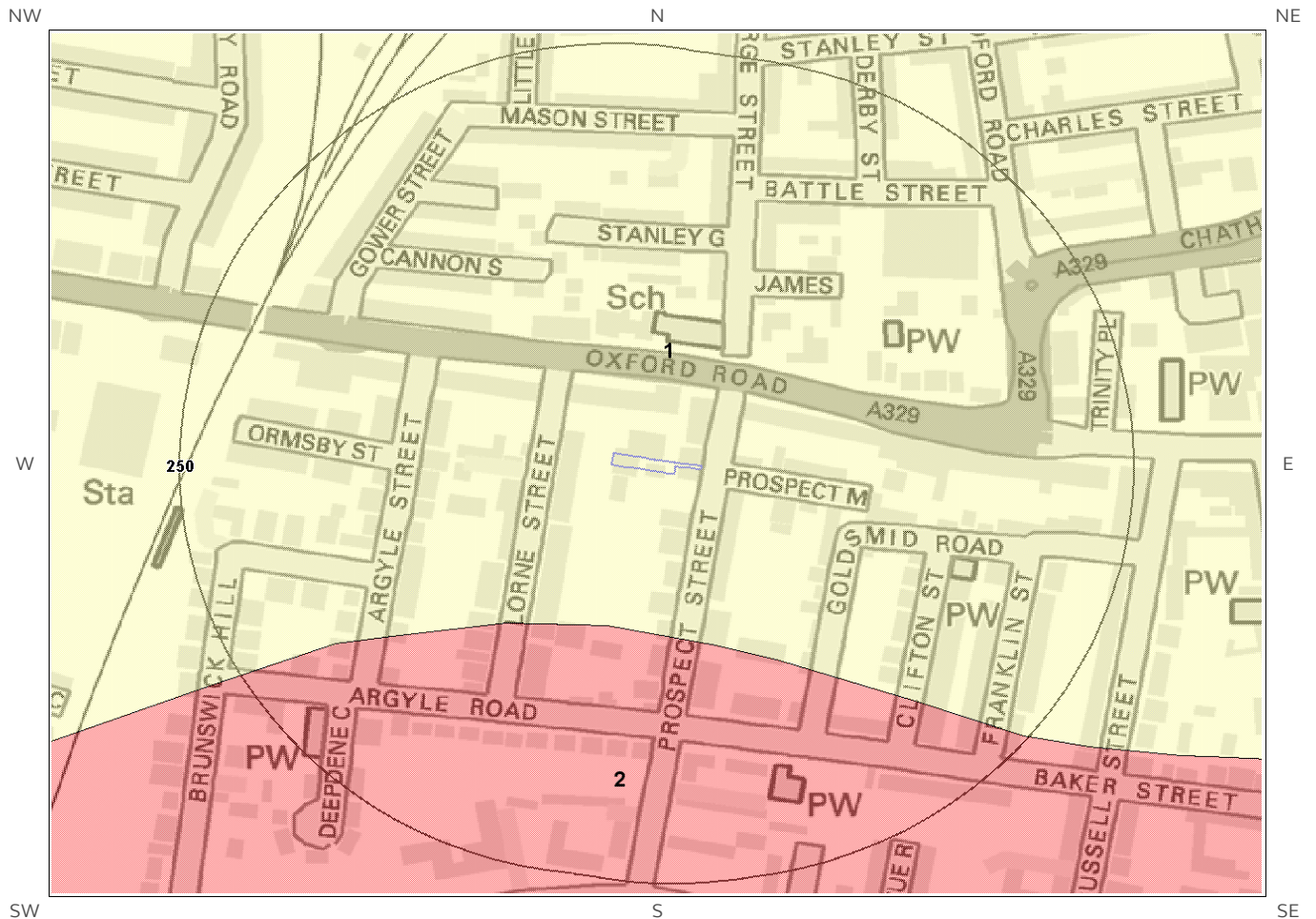
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

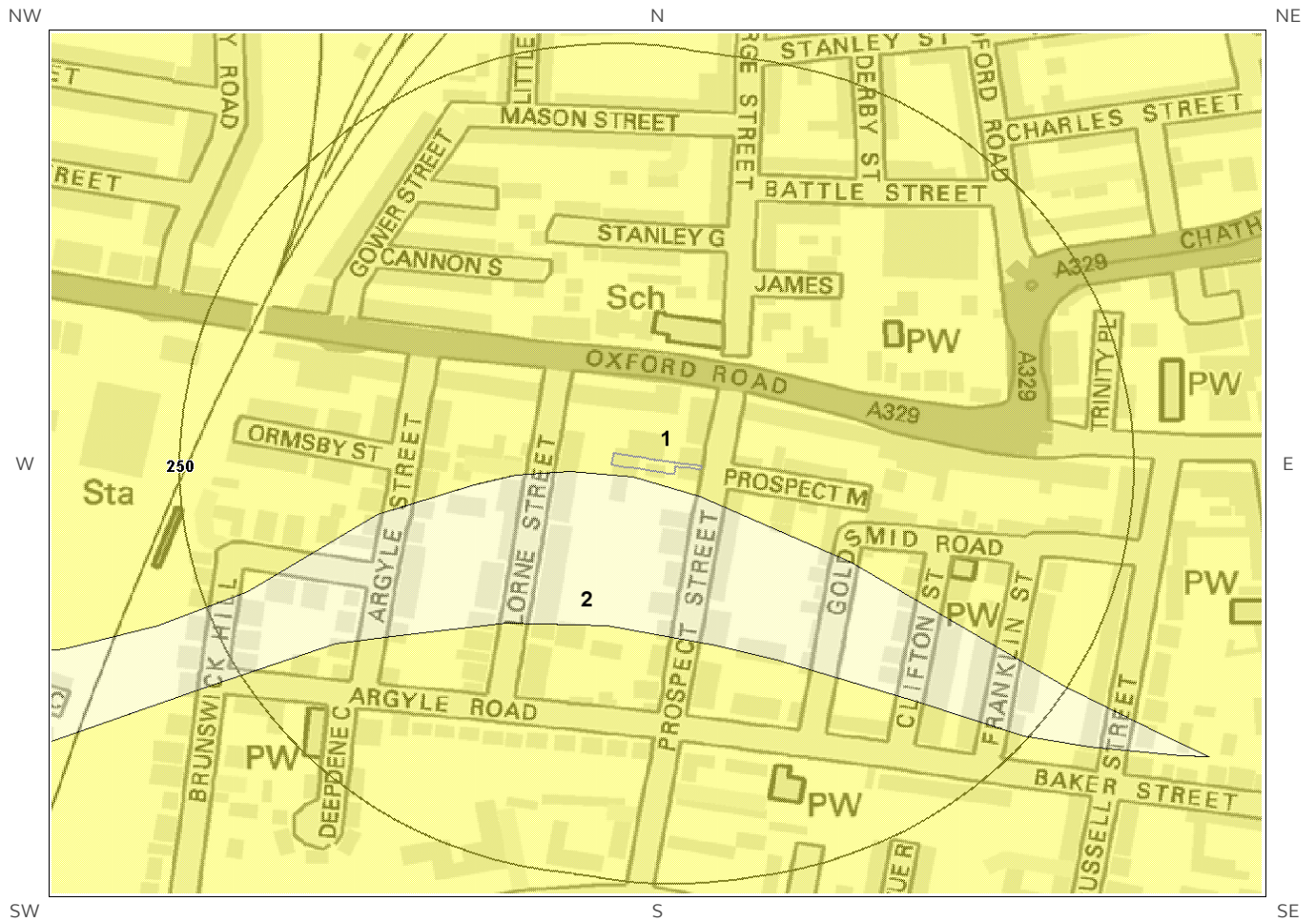


Shrink Swell Clay Legend

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6.2 Landslides map

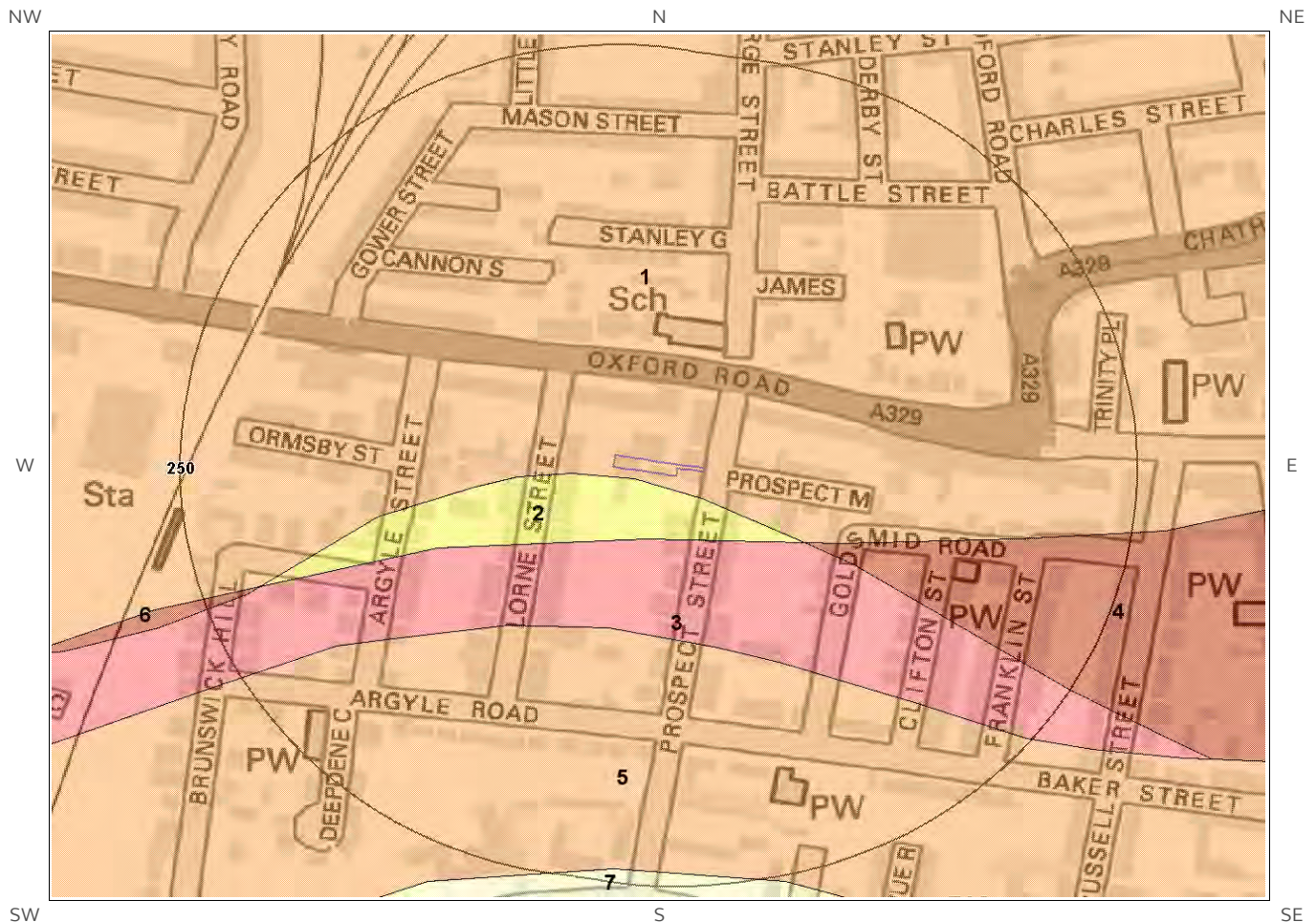


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks map

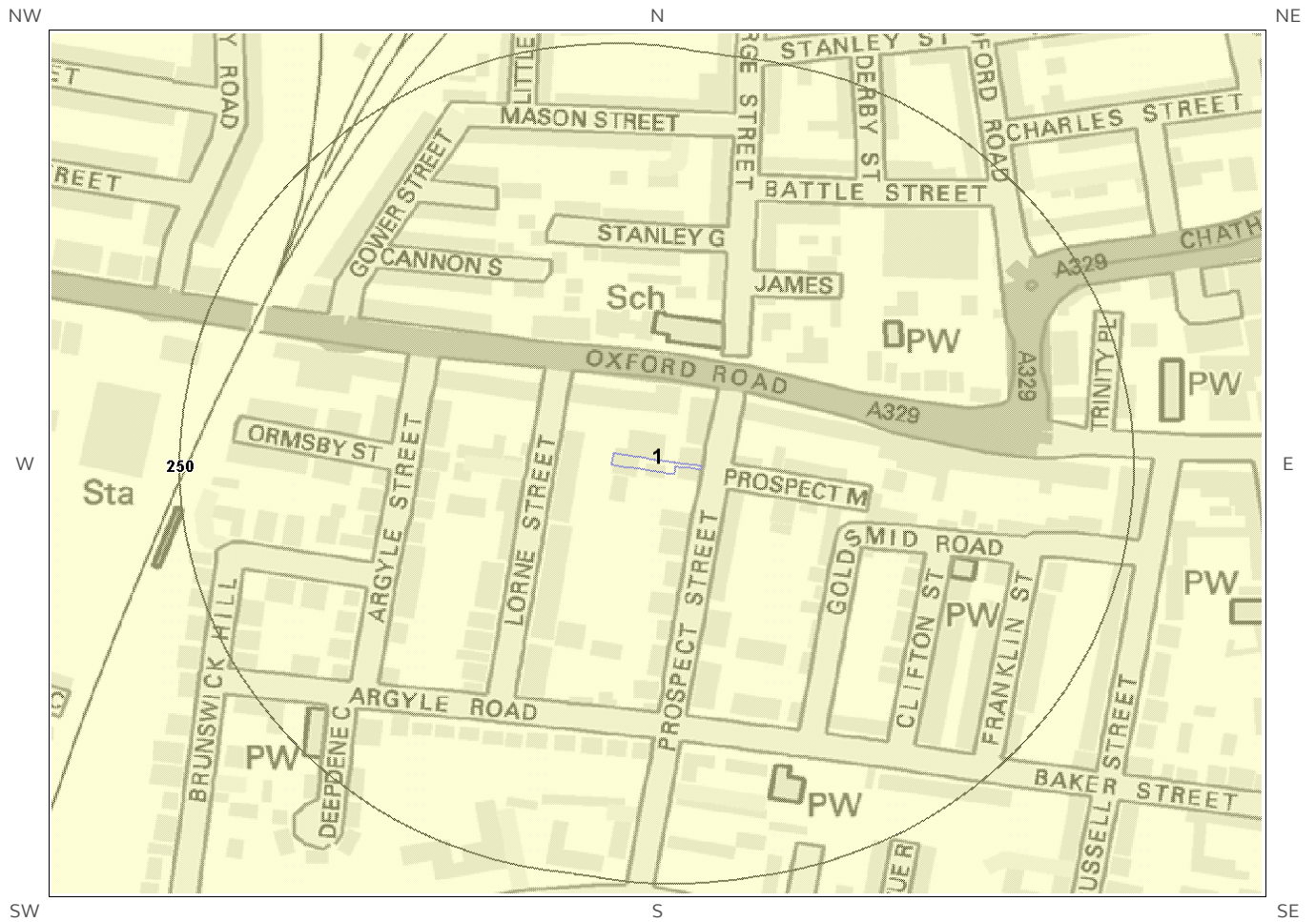


Ground Dissolution
Soluble Rocks Legend

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6.4 Compressible Deposits map



Compressible Deposits Legend

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6.5 Collapsible Deposits map

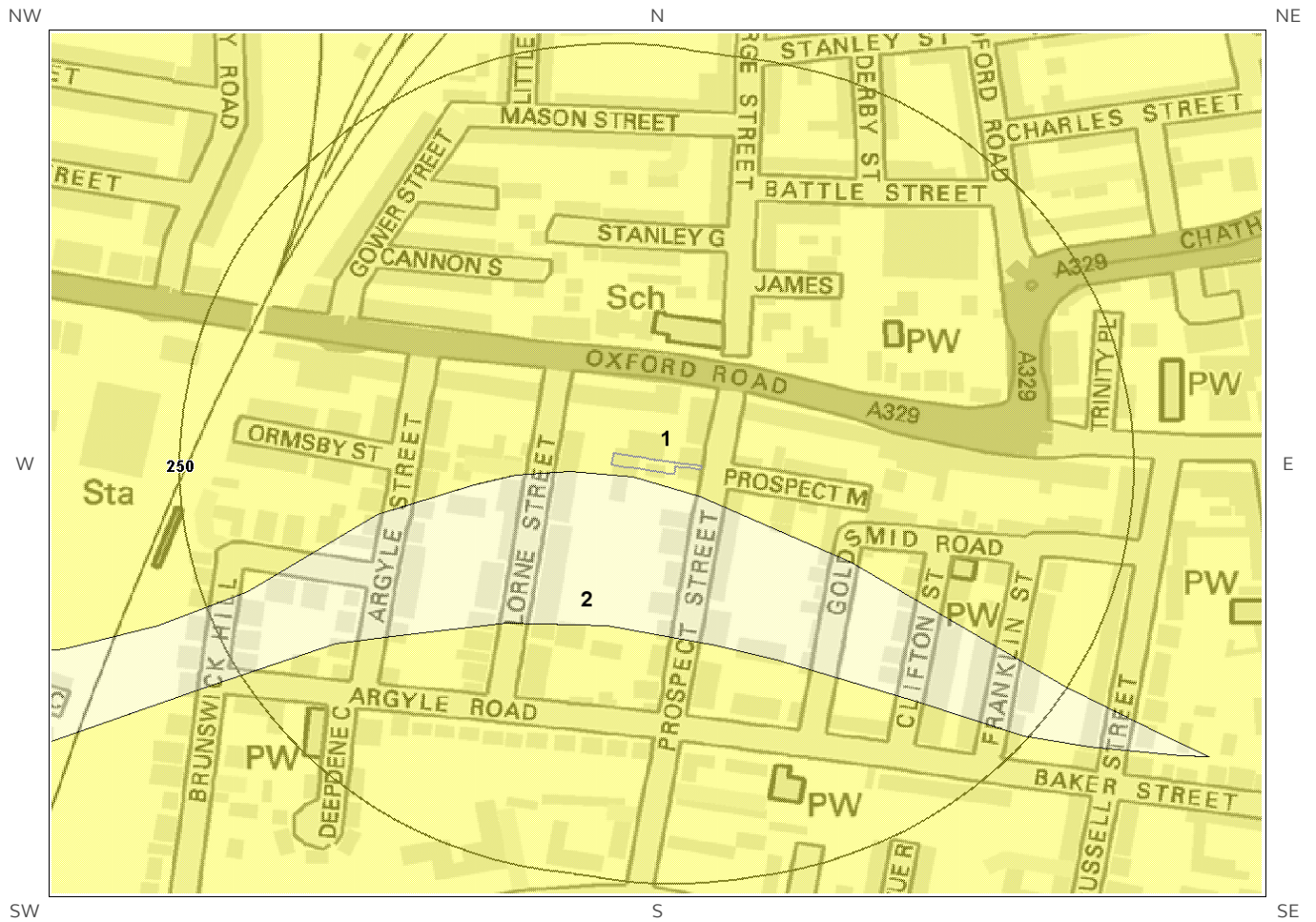


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Moderate

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	5.0	S	Negligible	No indicators for slope instability identified. No special actions required to avoid problems due to landslides. No special ground investigation required and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build - site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property - possible increase in insurance risk due to soluble rocks.
2	5.0	S	Very Low	Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.
3	39.0	S	Moderate	Very significant soluble rocks are present, with a moderate possibility of local natural subsidence due to high surface or subsurface water flow. Do not load the land or undertake building work before obtaining specialist advice. Do not dispose of drainage to the ground. Some possibility groundwater pollution. Maintain drainage infrastructure. For new build - specialist site investigation and stability assessment may be necessary before construction. Construction work may cause subsidence. Increased construction costs are likely. For existing property - probable increase in insurance risk due to soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

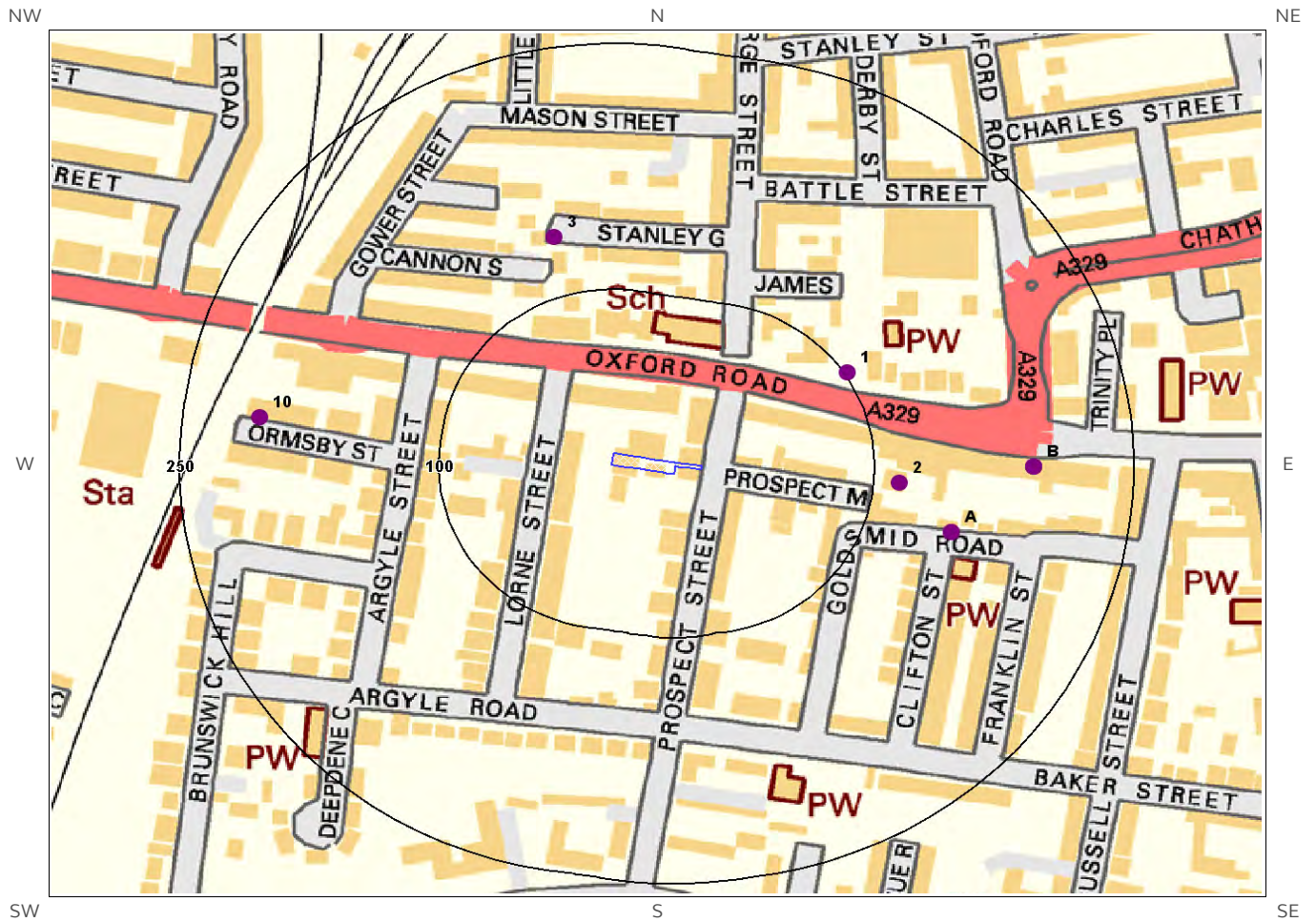
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

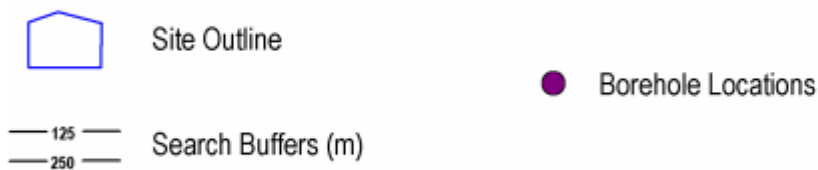
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	5.0	S	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

10

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	101.0	NE	470620 173427	SU77SW809	9.95	CHATHAM STREET - READING 1
2	114.0	E	470650 173360	SU77SW667	45.72	GOLDSMID RD READING
3	136.0	N	470450 173510	SU77SW666	86.26	CO-OP DAIRY READING
4A	149.0	E	470680 173330	SU77SW825	3.1	26-28 GOLDSMITH ROAD- READING TP 1
5A	149.0	E	470680 173330	SU77SW826	3.1	26-28 GOLDSMITH ROAD- READING TP 2
6B	192.0	E	470728 173370	SU77SW807	3	GOLDSMID ROAD READING TP 3
7B	192.0	E	470728 173370	SU77SW805	2.1	GOLDSMID ROAD READING TP 1
8B	192.0	E	470728 173370	SU77SW808	2.5	GOLDSMID ROAD READING TP 4
9B	192.0	E	470728 173370	SU77SW806	2.2	GOLDSMID ROAD READING TP 2
10	206.0	W	470280 173400	SU77SW784	3.5	22 ORMSBY STREET READING 1

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/15616909
 #2: scans.bgs.ac.uk/sobi_scans/boreholes/428819
 #3: scans.bgs.ac.uk/sobi_scans/boreholes/428818
 #4A: scans.bgs.ac.uk/sobi_scans/boreholes/15618023
 #5A: scans.bgs.ac.uk/sobi_scans/boreholes/15618026
 #6B: scans.bgs.ac.uk/sobi_scans/boreholes/15615016
 #7B: scans.bgs.ac.uk/sobi_scans/boreholes/15615013
 #8B: scans.bgs.ac.uk/sobi_scans/boreholes/15615017
 #9B: scans.bgs.ac.uk/sobi_scans/boreholes/15615015
 #10: scans.bgs.ac.uk/sobi_scans/boreholes/15047468

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

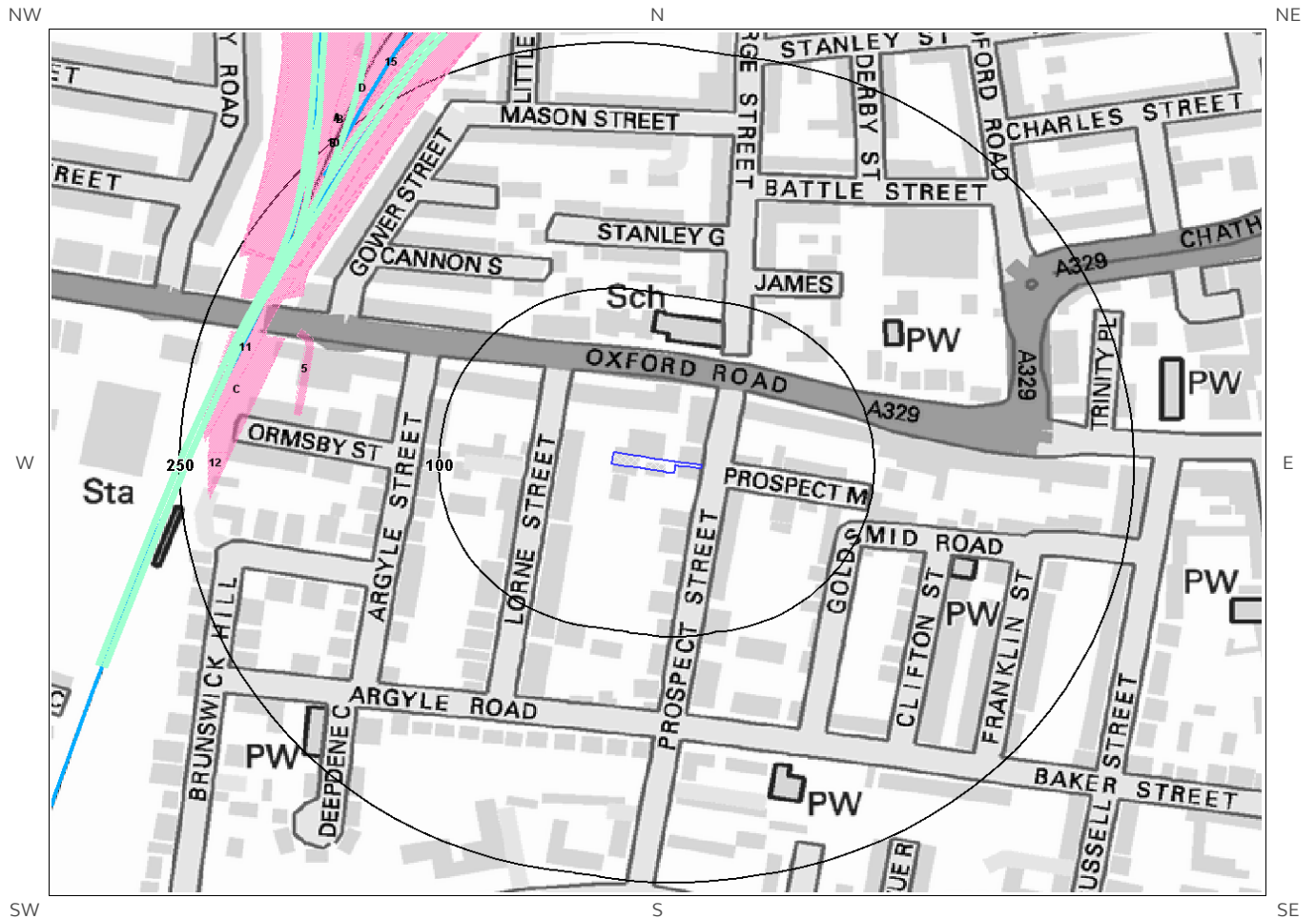
4

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
5.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
6.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

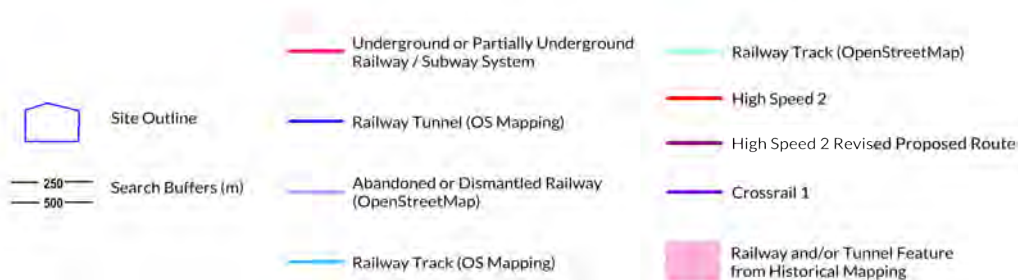
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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© OpenStreetMapContributors



9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
5	182	W	470306 173427	Tramway Sidings	1900
6C	203	W	n/a	Railway	1931
7C	203	W	n/a	Railway	1877
8	203	NW	n/a	Railway	1931
9	206	NW	n/a	Railway	1900
10	208	NW	n/a	Railway	1879
11	213	NW	n/a	Railway	1906
1A	214	NW	471493 173844	Railway Sidings	1994

ID	Distance (m)	Direction	NGR	Details	Date
2A	214	NW	471493 173844	Railway Sidings	1989
3B	215	NW	470437 173767	Railway Sidings	1971
4B	215	NW	470437 173767	Railway Sidings	1977
12	221	W	n/a	Railway	1900
13D	224	NW	470376 173652	Railway Sidings	1988
14D	242	NW	470349 173687	Railway Sidings	1971
15	246	NW	470423 173696	Railway Sidings	1958

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Name	Type
222	NW	Reading to Taunton line	rail
222	NW	Reading to Taunton line	rail
222	NW	Not given	rail
222	NW	Not given	Multi Track
222	NW	Not given	Multi Track
222	NW	Reading to Taunton line	rail
222	NW	Reading to Taunton line	rail
222	NW	Not given	rail
223	NW	Reading to Taunton line	rail
223	NW	Not given	Multi Track
223	NW	Not given	Multi Track
223	NW	Not given	Multi Track
223	NW	Not given	Multi Track

Distance (m)	Direction	Name	Type
223	NW	Reading to Taunton line	rail
225	W	Reading to Taunton line	rail
225	NW	Reading to Plymouth Line	rail
225	W	Reading to Taunton line	rail
225	NW	Reading to Plymouth Line	rail
226	NW	Reading to Plymouth Line	rail
226	NW	Not given	rail
226	NW	Reading to Plymouth Line	rail
226	NW	Reading to Plymouth Line	rail
226	NW	Not given	rail
226	NW	Reading to Plymouth Line	rail
229	W	Reading to Plymouth Line	rail
229	W	Reading to Plymouth Line	rail
233	NW	Reading to Plymouth Line	rail
233	NW	Reading to Plymouth Line	rail
238	NW	Not given	rail
238	NW	Not given	Multi Track
238	NW	Not given	Multi Track
238	NW	Not given	rail

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX



The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettell Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505
Website: <http://www.ordnancesurvey.co.uk/>



Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website: <http://www1.getmapping.com/>



Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail: reading@pba.co.uk
Website: <http://www.peterbrett.com/home>



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Standard Terms and Conditions

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<https://www.groundsure.com/terms-and-conditions-feb11-2019>

APPENDIX 2

ENVIRO-INSIGHT REPORT



Earth Environmental & Geotechnical Ltd
KINGSBURY HOUSE, KINGSBURY SQUARE,
MELKSHAM, SN12 6HL

Groundsure Reference: GS-6236706
Your Reference: R0260

Report Date 12 Aug 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Date: 12 Aug 2019

Reference: GS-6236706

Client: Earth Environmental & Geotechnical Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 20-Apr-2015

Grid Reference: 470510,173372

Site Size: 0.0297ha

Report Reference: GS-6236706

Client Reference: R0260

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Overview of Findings

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1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	0	17	59
1.2 Additional Information – Historical Tank Database	0	0	9	16
1.3 Additional Information – Historical Energy Features Database	0	0	10	29
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	2	2
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	4	0	1	13
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	0	2	36
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	5
2.1.8 Records of Licensed Discharge Consents	0	0	0	4
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	1

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	2	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	1	0	7	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	12	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	2	2
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology				0-500m		
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	10	10
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	6
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	4	2
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	1	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	Yes	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	0	8	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	None identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	None identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	High					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	1	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Moderate
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Negligible
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Moderate
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	None identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	Identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

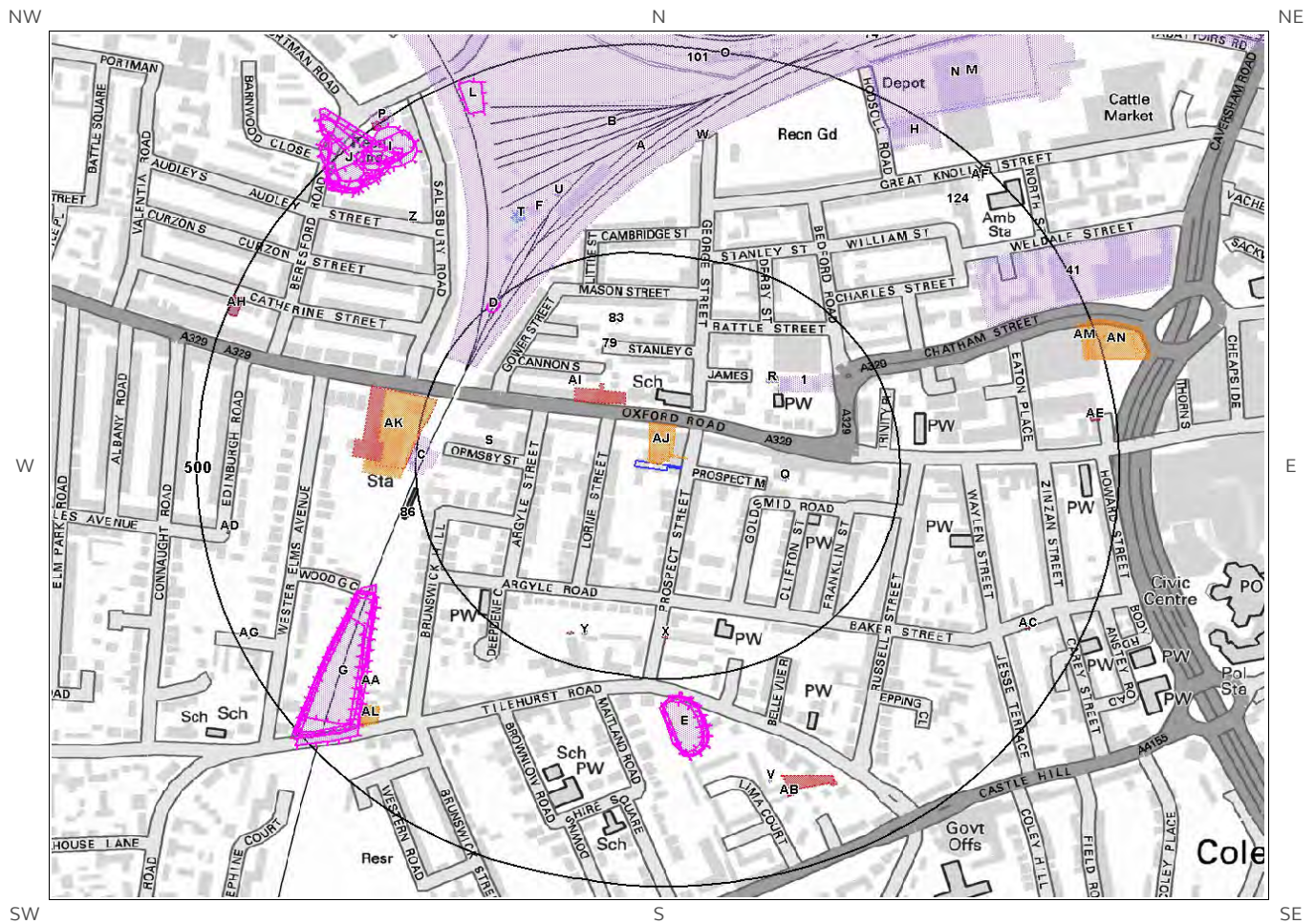
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

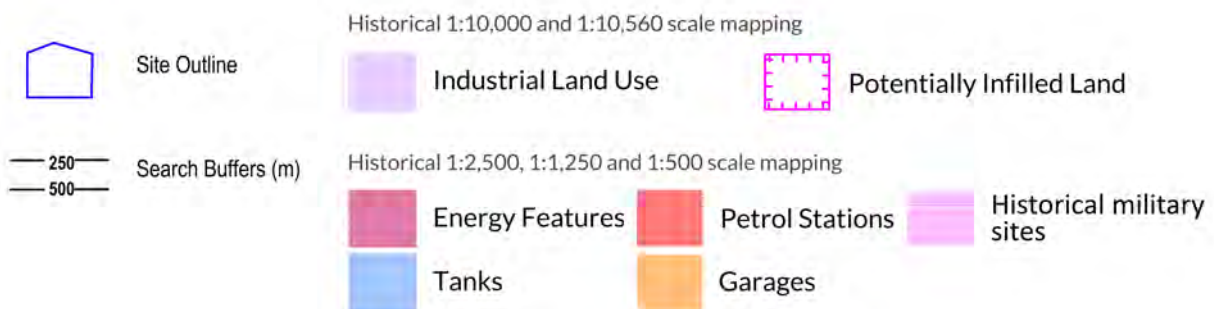
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 76

ID	Distance [m]	Direction	Use	Date
1	143	NE	Nursery	1913
2A	214	NW	Railway Sidings	1994
3A	214	NW	Railway Sidings	1989
4B	215	NW	Railway Sidings	1977
5B	215	NW	Railway Sidings	1971
6C	224	W	Railway Station	1971
7C	233	W	Railway Station	1977
8C	233	W	Railway Station	1989
9C	233	W	Railway Station	1994
10D	240	NW	Unspecified Pit	1938
11D	240	NW	Unspecified Pit	1913
12C	245	W	Railway Station	1932
13C	246	W	Railway Station	1962
14C	246	W	Railway Station	1910
15C	246	W	Railway Station	1938
16D	247	NW	Railway Building	1938
17D	247	NW	Railway Building	1962
18E	269	S	Unspecified Pit	1971
19E	269	S	Unspecified Pit	1994
20E	269	S	Unspecified Pit	1989
21E	269	S	Unspecified Pit	1977
22E	271	S	Unspecified Ground Workings	1933
23E	271	S	Unspecified Pit	1938
24E	271	S	Unspecified Pit	1938
25E	272	S	Unspecified Pit	1913
26E	272	S	Unspecified Pit	1938
27F	297	NW	Unspecified Depot	1977
28F	297	NW	Unspecified Depot	1989
29F	297	NW	Railway Buildings	1971
30F	297	NW	Unspecified Depot	1994
31G	328	SW	Cuttings	1962
32G	335	SW	Cuttings	1938
33G	335	SW	Cuttings	1898

34G	335	SW	Cuttings	1910
35G	335	SW	Cuttings	1932
36G	335	SW	Cuttings	1898
37G	364	SW	Cuttings	1994
38G	364	SW	Cuttings	1971
39G	364	SW	Cuttings	1977
40G	364	SW	Cuttings	1989
41	389	NE	Unspecified Depot	1977
42I	442	NW	Old Gravel Pit	1898
43K	448	NW	Unspecified Ground Workings	1910
44J	449	NW	Unspecified Pit	1962
45H	451	NE	Unspecified Works	1977
46H	451	NE	Unspecified Commercial/Industrial	1989
47H	451	NE	Unspecified Commercial/Industrial	1994
48I	451	NW	Old Gravel Pit	1898
49J	452	NW	Unspecified Pit	1938
50K	452	NW	Unspecified Pit	1977
51K	452	NW	Unspecified Pit	1971
52K	452	NW	Unspecified Pit	1994
53K	452	NW	Unspecified Pit	1989
54J	452	NW	Unspecified Pit	1932
55J	452	NW	Unspecified Pit	1932
56L	454	N	Cuttings	1971
57L	454	N	Cuttings	1989
58L	454	N	Cuttings	1977
59L	454	N	Cuttings	1994
60J	455	NW	Gravel Pit	1898
61J	462	NW	Gravel Pit	1898
62M	472	NE	Corporation Yard	1994
63M	472	NE	Corporation Yard	1989
64N	476	NE	Corporation Yard	1962
65N	476	NE	Corporation Yard	1913
66N	476	NE	Corporation Yard	1938
67N	477	NE	Corporation Yard	1938
68N	480	NE	Corporation Yard	1933
69O	484	N	Railway Building	1994
70O	484	N	Railway Building	1989
71P	492	NW	Pumping Station	1994
72P	492	NW	Pumping Station	1989
73P	493	NW	Pumping Station	1977
74	496	N	Railway Sidings	1938
75O	499	N	Railway Building	1977
76O	499	N	Railway Building	1971

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

25

ID	Distance (m)	Direction	Use	Date
77Q	117	E	Unspecified Tank	1958
78Q	117	E	Unspecified Tank	1959
79	137	N	Unspecified Tank	1988
80R	140	NE	Unspecified Tank	1986
81R	140	NE	Unspecified Tank	1993
82R	141	NE	Unspecified Tank	1971
83	166	N	Unspecified Tank	1931
84S	169	W	Unspecified Tank	1877
85S	169	W	Unspecified Tank	1877
86	264	W	Unspecified Tank	1932
87T	316	NW	Tanks	1971
88T	317	NW	Tanks	1993
89T	317	NW	Tanks	1988
90U	329	N	Unspecified Tank	1971
91U	330	N	Unspecified Tank	1993
92U	330	N	Unspecified Tank	1988
93V	385	S	Unspecified Tank	1879
94V	385	S	Unspecified Tank	1879
95V	387	S	Unspecified Tank	1931
96V	387	S	Unspecified Tank	1900
97V	387	S	Unspecified Tank	1912
98W	388	N	Filter Tanks	1971
99W	388	N	Filter Tanks	1993
100W	388	N	Filter Tanks	1986
101	483	N	Unspecified Tank	1993

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

39

ID	Distance (m)	Direction	Use	Date
102AI	114	NW	Electricity Substation	1993
103R	146	NE	Electricity Substation	1993
104R	146	NE	Electricity Substation	1986
105R	146	NE	Electricity Substation	1971
106X	195	S	Electricity Substation	1971
107X	196	S	Electricity Substation	1986
108X	196	S	Electricity Substation	1993
109Y	205	S	Electricity Substation	1971
110Y	211	S	Electricity Substation	1993
111Y	211	S	Electricity Substation	1978
112Z	383	NW	Electricity Substation	1993
113Z	383	NW	Electricity Substation	1988
114AA	399	SW	Electricity Substation	1993
115AA	399	SW	Electricity Substation	1978
116AB	407	S	Electricity Substation	1988
117AB	407	S	Electricity Substation	1968
118AB	407	S	Electricity Substation	1993
119AB	408	S	Electricity Substation	1976
120AB	408	S	Electricity Substation	1969
121AC	435	SE	Electricity Substation	1986
122AC	435	SE	Electricity Substation	1993
123AC	436	SE	Electricity Substation	1971
124	445	NE	Electricity Substation	1971
125AD	466	W	Electricity Substation	1993
126AD	466	W	Electricity Substation	1978
127AD	467	W	Electricity Substation	1971
128AE	470	E	Electricity Substation	1988
129AE	471	E	Electricity Substation	1970
130AE	471	E	Electricity Substation	1980
131AF	483	NE	Electricity Substation	1993
132AF	483	NE	Electricity Substation	1986
133AG	484	SW	Electricity Substation	1993
134AG	484	SW	Electricity Substation	1978
135AH	487	W	Electricity Substation	1993
136AH	488	W	Electricity Substation	1971
137AH	488	W	Electricity Substation	1988
138P	494	NW	Electricity Substation	1993
139P	494	NW	Electricity Substation	1988
140P	499	NW	Electricity Substation	1971

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

4

ID	Distance (m)	Direction	Use	Date
141AI	69	N	Filling Station	1978
142AK	239	W	Filling Station	1978
143AB	386	S	Filling Station	1976
144AB	386	S	Filling Station	1988

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary:

18

ID	Distance (m)	Direction	Use	Date
145AJ	0	On Site	Garage	1986
146AJ	0	On Site	Garage	1959
147AJ	0	On Site	Garage	1971
148AJ	0	N	Garage	1958
149AK	240	W	Garage	1971
150AL	410	SW	Garage	1993
151AL	410	SW	Garage	1978
152AL	411	SW	Garage	1959
153AL	411	SW	Garage	1971
154AL	411	SW	Garage	1958
155AM	478	E	Garage	1971
156AM	482	E	Multistorey Garage and Car Park	1979
157AN	482	E	Multistorey Garage and Car Park	1993
158AN	482	E	Multistorey Garage and Car Park	1988
159AN	482	E	Car Park and Garage	1994
160AN	482	E	Car Park and Garage	1996
161AN	487	E	Car Park and Garage	1986
162AN	487	E	Car Park and Garage	1969

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

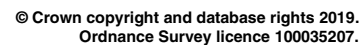
1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 38

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
163D	240	NW	Unspecified Pit	1938
164D	240	NW	Unspecified Pit	1913
165E	269	S	Unspecified Pit	1977
166E	269	S	Unspecified Pit	1971
167E	269	S	Unspecified Pit	1989
168E	269	S	Unspecified Pit	1994
169E	271	S	Unspecified Ground Workings	1933
170E	271	S	Unspecified Pit	1938
171E	271	S	Unspecified Pit	1938
172E	272	S	Unspecified Pit	1938
173E	272	S	Unspecified Pit	1913
174G	328	SW	Cuttings	1962
175G	335	SW	Cuttings	1910
176G	335	SW	Cuttings	1898
177G	335	SW	Cuttings	1938
178G	335	SW	Cuttings	1932
179G	335	SW	Cuttings	1898
180G	364	SW	Cuttings	1971
181G	364	SW	Cuttings	1977
182G	364	SW	Cuttings	1989
183G	364	SW	Cuttings	1994
184I	442	NW	Old Gravel Pit	1898
185K	448	NW	Unspecified Ground Workings	1910
186J	449	NW	Unspecified Pit	1962
187I	451	NW	Old Gravel Pit	1898

188J	452	NW	Unspecified Pit	1938
189J	452	NW	Unspecified Pit	1989
190J	452	NW	Unspecified Pit	1971
191J	452	NW	Unspecified Pit	1977
192J	452	NW	Unspecified Pit	1994
193J	452	NW	Unspecified Pit	1932
194J	452	NW	Unspecified Pit	1932
195L	454	N	Cuttings	1994
196L	454	N	Cuttings	1977
197L	454	N	Cuttings	1989
198L	454	N	Cuttings	1971
199J	455	NW	Gravel Pit	1898
200J	462	NW	Gravel Pit	1898



- 19

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

2

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
7	78	N	470465 173454	Address: Texaco Service Station (Krisco Services Limited), 150 Oxford Road, Reading, RG1 7PJ 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
8	374	S	470665 173017	Address: Tilehurst BP Connect Service Station, Tilehurst Road, Reading, Berkshire, RG1 7TW 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

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

5

The following RAS Licence (3 or 4) records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
14B	496	S	470700 172900	Classic Hospitals Ltd, Bupa Dunedin Hospital, 16 Bath Road, Reading, Berkshire, RG1 6NB	Classic Hospitals Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BZ4250	Date of Approval: 10/8/2005 Effective from: 10/8/2005 Last date of update: 2015-01-01	Revoked/cancelled
15B	496	S	470700 172900	British United Provident Association Ltd, Bupa Dunedin Hospital, 16 Bath Road, Reading, Berkshire, RG1 6NB	British United Provident Association Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BU1873	Date of Approval: 11/3/2003 Effective from: 11/3/2003 Last date of update: 2015-01-01	Revoked/cancelled
16B	496	S	470700 172900	Classic Hospitals Ltd, Bupa Dunedin Hospital, 16 Bath Road, Reading, Berkshire, RG1 6NB	Classic Hospitals Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BZ4241	Date of Approval: 10/8/2005 Effective from: 10/8/2005 Last date of update: 2015-01-01	Superseded By Variation

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
17B	496	S	470700 172900	British United Provident Association Ltd, Bupa Dunedin Hospital, 16 Bath Road, Reading, Berkshire, RG1 6NB	British United Provident Association Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BU1890	Date of Approval: 11/3/2003 Effective from: 11/3/2003 Last date of update: 2015-01-01	Revoked/cancelled
18B	496	S	470700 172900	Classic Hospitals Ltd, Bupa Dunedin Hospital, 16 Bath Road, Reading, Berkshire, RG1 6NB	Classic Hospitals Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	CB6194	Date of Approval: 19/9/2007 Effective from: 19/9/2007 Last date of update: 2015-01-01	Revoked/cancelled

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

4

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
3	460	NW	470300 173800	Address: Reading, Cow Lane, Reading, Cow Lane Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1771 Permit Version: 1 Receiving Water: VASTERN DITCH Status: REVOKED - UNSPECIFIED Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 27/01/1997
4	472	N	470595 173839	Address: COW LANE BRIDGE, COW LANE, READING, BERKSHIRE, RG1 8NA Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: EPRHB3597RH Permit Version: 1 Receiving Water: TRIBUTARY OF RIVER THAMES Status: NEW ISSUED UNDER EPR 2010 Issue date: 10/05/2018 Effective Date: 01-Jun-2018 Revocation Date: -
5A	484	N	470530 173860	Address: PERMANENT WAY STAFF ACCOMMODATION B, PERMANENT WAY STAFF ACCOMMODATION, N BLOCK, COW LANE, READING. Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0130 Permit Version: 2 Receiving Water: MADE GROUND OVERLYING ALLUVIUM Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/05/2007 Effective Date: 12-May-2007 Revocation Date: 24/05/2010
6A	484	N	470530 173860	Address: PERMANENT WAY STAFF ACCOMMODATION B, PERMANENT WAY STAFF ACCOMMODATION, N BLOCK, COW LANE, READING. Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0130 Permit Version: 1 Receiving Water: MADE GROUND OVERLYING ALLUVIUM Status: TRANSFERRED FROM COPA 1974 Issue date: 10/07/1985 Effective Date: 10-Jul-1985 Revocation Date: 12/05/2007

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

1

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	438	N	470653.0 173792.0	Incident Date: 23-Jul-2007 Incident Identification: 516354.0 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

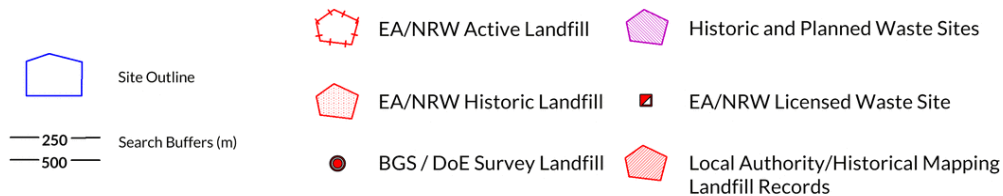
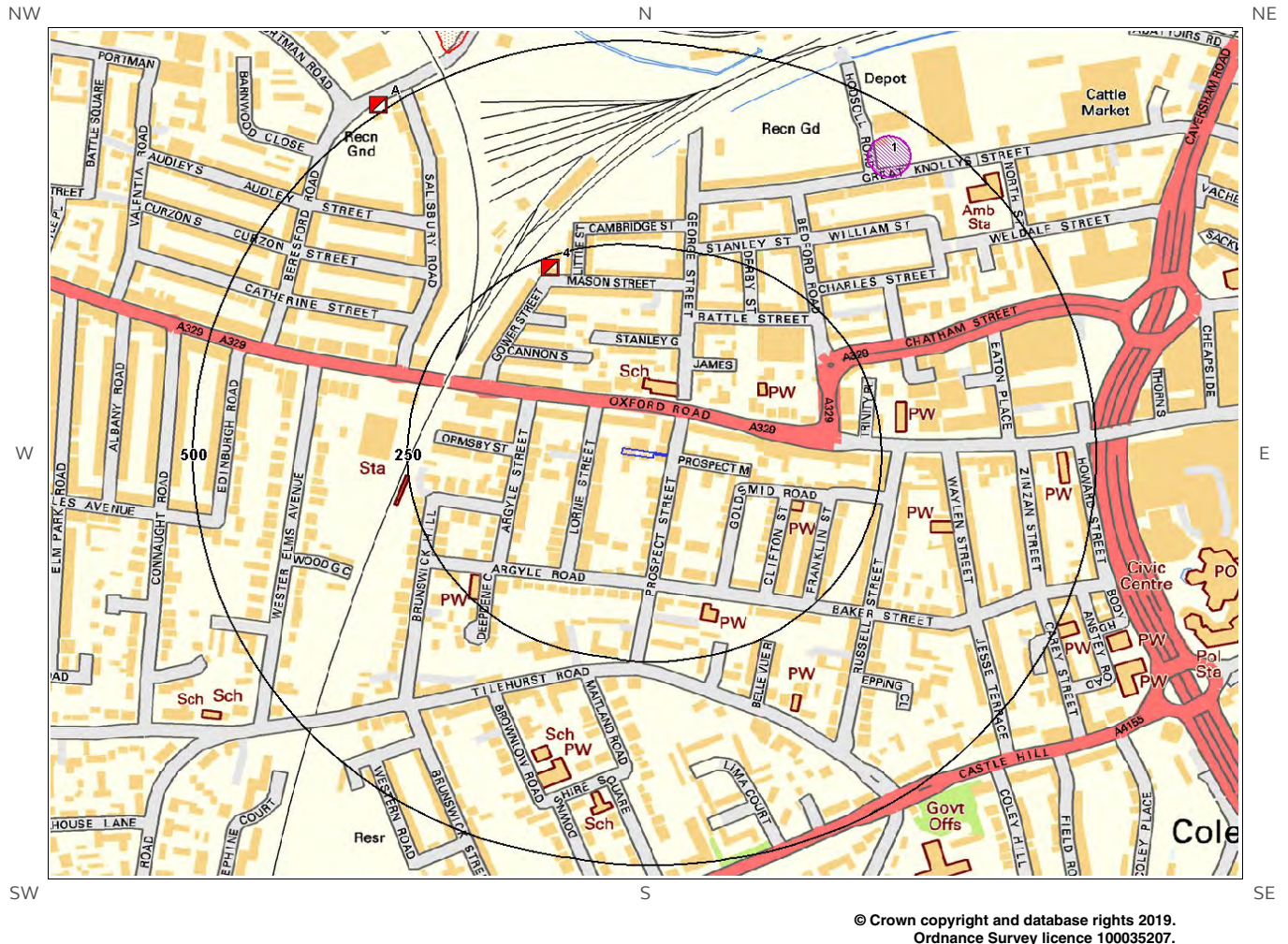
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 1

The following records are represented as polygons on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Description	Location	Category	Year Identified
2	303	N	470506 173722	B(a)P in made ground and compost. Source of B(a)P probably ash added by allotment holders & adjacent railway runoff.	George Street Allotments, George Street, Reading	Potentially Contaminated Land - Remediated	2008

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

2

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
2	527	NW		Site Address: Cow Lane, Reading, Berkshire Waste Licence: - Site Reference: TP0340, RDG4 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1959
Not shown	978	N		Site Address: Richfield Avenue, Reading, Berkshire Waste Licence: - Site Reference: RDG11, TP0122 Waste Type: Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1970 Last Recorded: 31-Dec-1979

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	423	NE	470794 173736	Type of Site: Surface Car Park/Waste Station Site Address: Great Knollys Street, Hodsoll Road, READING, Berkshire, RG1 7HP Planning Application Reference: 96/0097/R3/NJP Date: 01/09/1996 Further Details: Relocation of a public car park and civic amenity recycling centre with associated landscaping. Relocation of a public car park and civic amenity recycling centre with associated landscaping. Detailed plans approved 29th May, 1996. An application (ref: 96/0097/R3/NJP) for Detailed Planning permission was submitted to Reading B.C. on 14th February 1996. Data Source: Historic Planning Application Data Type: Point

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

9

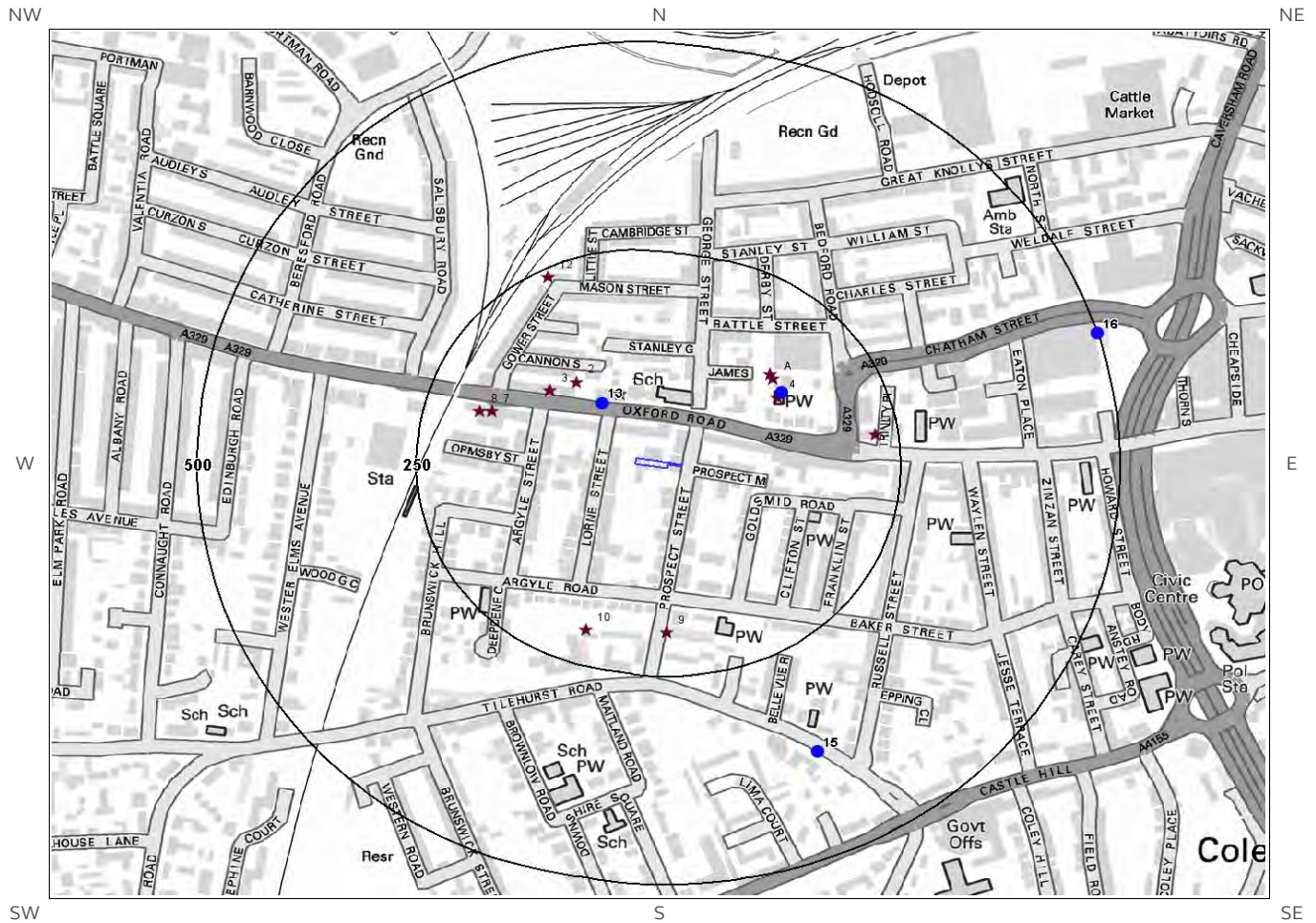
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
4	237	N	470400 173600	Site Address: E.G.W Carter, 54, Gower Street, Reading, Berkshire, RG1 7PE Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CAR001 EPR reference: EA/EPR/LP3699EF/S004 Operator: E G W Carter Waste Management licence No: 86001 Annual Tonnage: 9322.0 Issue Date: 19/03/1996 Effective Date: - Modified: - Surrendered Date: Jul 23 1999 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: E G W Carter Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
5A	509	NW	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: - Operator: Simsmetal Uk Limited Waste Management licence No: 86002 Annual Tonnage: 4999.0	Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 26/04/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Simsmetal U K Limited Correspondence Address: 4, The Uplands, Nailsea, Somerset, BS48 4RR
6A	509	NW	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR197 EPR reference: EA/EPR/CB3909KB/S002 Operator: Parsons Metal Recycling Limited Waste Management licence No: 86002 Annual Tonnage: 0.0	Issue Date: 06/04/1993 Effective Date: 26/06/2015 Modified: 27/08/2014 Surrendered Date: Mar 8 2016 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Parsons Metal Recycling Limited Correspondence Address: -
7A	509	NW	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: EA/EPR/LP3199EB/V006 Operator: Sims Group U K Ltd Waste Management licence No: 86002 Annual Tonnage: 74999.0	Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 27/08/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Sims Group U K Ltd Correspondence Address: -
8A	509	NW	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: EA/EPR/LP3199EB/V005 Operator: Sims Group Uk Limited Waste Management licence No: 86002 Annual Tonnage: 74999.0	Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 20/04/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Sims Group U K Ltd Correspondence Address: -
Not shown	788	N	470497 174166	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte Materials Recycling Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCO003 EPR reference: EP3893VZ/A001 Operator: M Collard Waste Management Services Ltd Waste Management licence No: 101199 Annual Tonnage: 0.0	Issue Date: 11/02/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: M Collard Waste Management Services Ltd Correspondence Address: -
Not shown	796	N	470500 174174	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte HCI Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCO003 EPR reference: EA/EPR/EP3893VZ/V002 Operator: M Collard Waste Management Services Ltd Waste Management licence No: 101199 Annual Tonnage: 74999.0	Issue Date: 11/02/2010 Effective Date: - Modified: 09/07/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: M Collard Waste Management Services Ltd Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	796	N	470500 174174	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte HCI Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RCO001 EPR reference: EA/EPR/EB3500KB/V002 Operator: R Collard Limited Waste Management licence No: 101199 Annual Tonnage: 74999.0	Issue Date: 11/02/2010 Effective Date: 11/10/2016 Modified: 16/10/2018 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: R Collard Limited Correspondence Address: -
Not shown	1050	NW	469718 174096	Site Address: Part A, Unit B, 75, Loverock Road, Tilehurst, Reading, Berkshire, RG30 1DZ Type: 75kte HCI Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OAK056 EPR reference: EA/EPR/EP3993VE/A001 Operator: Oakford U K Ltd Waste Management licence No: 101222 Annual Tonnage: 74999.0	Issue Date: 18/11/2009 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Loverock Road Waste Transfer Station Correspondence Address: -

4. Current Land Use Map



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Site Outline

★ Current Industrial Sites

— Electricity Transmission Cables

— 250 — Search Buffers (m)
— 500 —

● Petrol & Fuel Sites

— Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

12

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	79	N	BP Service Station	470465 173455	150, Oxford Road, Reading, Berkshire, RG1 7PJ	Petrol and Fuel Stations	Road and Rail
2	115	NW	Electricity Sub Station	470416 173470	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
3	129	NW	Zam-zam Halal Superstore	470385 173460	162-164, Oxford Road, Reading, Berkshire, RG1 7PJ	Fish, Meat and Poultry Products	Foodstuffs
4	136	NE	Matinee	470645 173451	132-134, Oxford Road, Reading, Berkshire, RG1 7NL	Recording Studios and Record Companies	IT, Advertising, Marketing and Media Services
5A	147	NE	Tank	470640 173474	Berkshire, RG1	Tanks (Generic)	Industrial Features
6A	148	NE	Electricity Sub Station	470636 173479	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
7	174	W	M T C Motorcycles	470320 173435	267-271, Oxford Road, Reading, Berkshire, RG1 7PY	Vehicle Repair, Testing and Servicing	Repair and Servicing
8	188	W	Dreamz Time	470306 173435	275, Oxford Road, Reading, Berkshire, RG1 7PY	Furniture	Consumer Products
9	196	S	Electricity Sub Station	470519 173169	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
10	207	S	Electricity Sub Station	470427 173172	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
11	224	E	Richer Sounds	470757 173407	118a, Oxford Road, Reading, Berkshire, RG1 7NL	Electronic Equipment	Industrial Products
12	240	NW	W N Thomas	470383 173596	54, Gower Street, Reading, Berkshire, RG1 7PE	Recycling, Reclamation and Disposal	Recycling Services

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

4

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
13	77	NW	470445 173444	BP	150 Oxford Road, Reading, Reading, RG1 7PJ	No	Open
14A	142	NE	470649 173457	OBSOLETE	211-221 Oxford Road, Reading, Reading, RG1 7PX	Not Applicable	Obsolete
15	377	SE	470691 173025	BP	Tilehurst Road, Reading, Reading, RG1 7TW	No	Open
16	500	E	471010 173528	OBSOLETE	Chatham Street, Reading, Reading, RG1 7JF	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TPGR-XSV	TAPLOW GRAVEL MEMBER	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

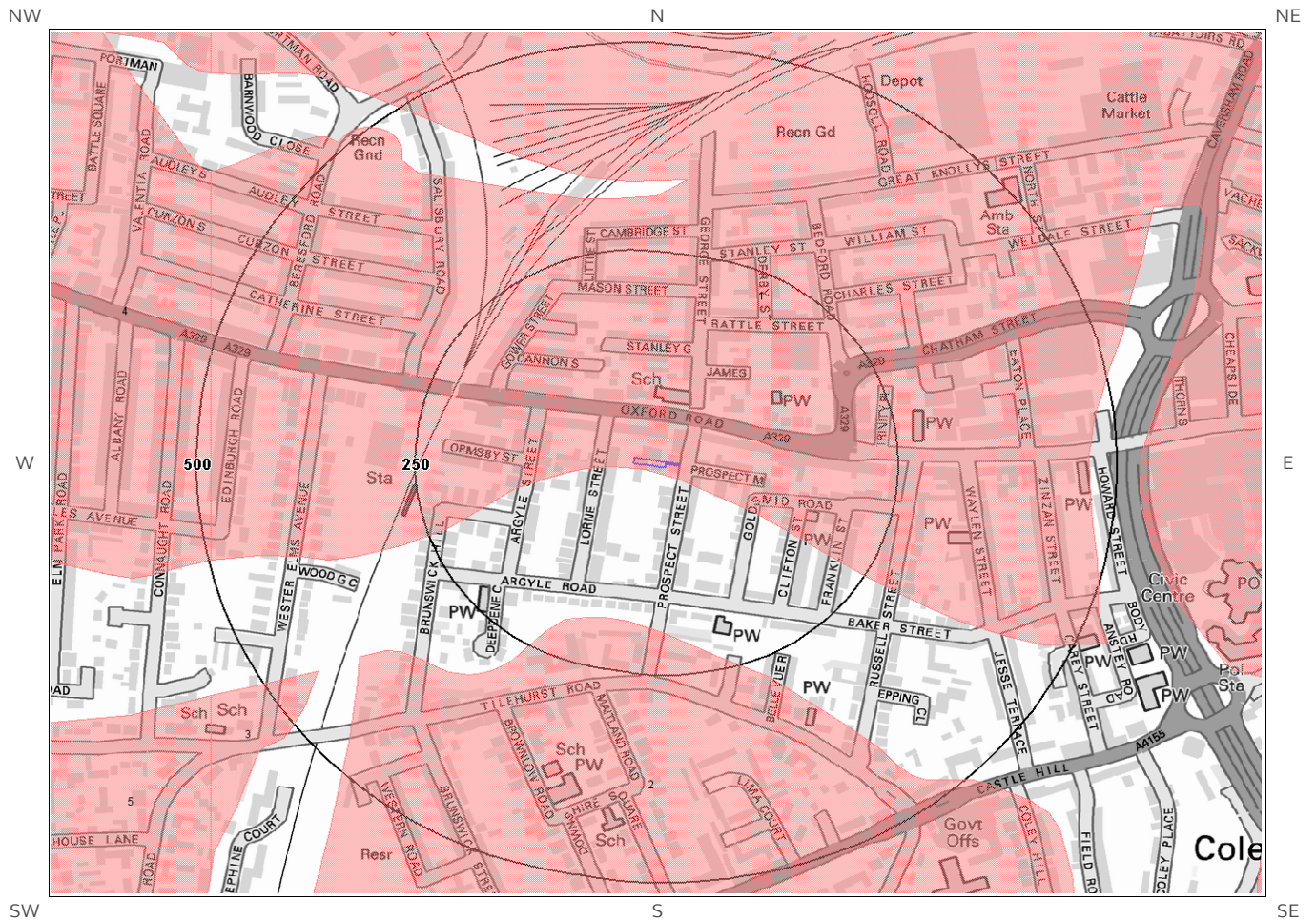
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED)	CHALK

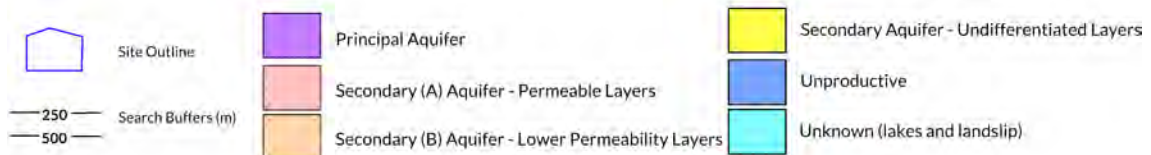
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

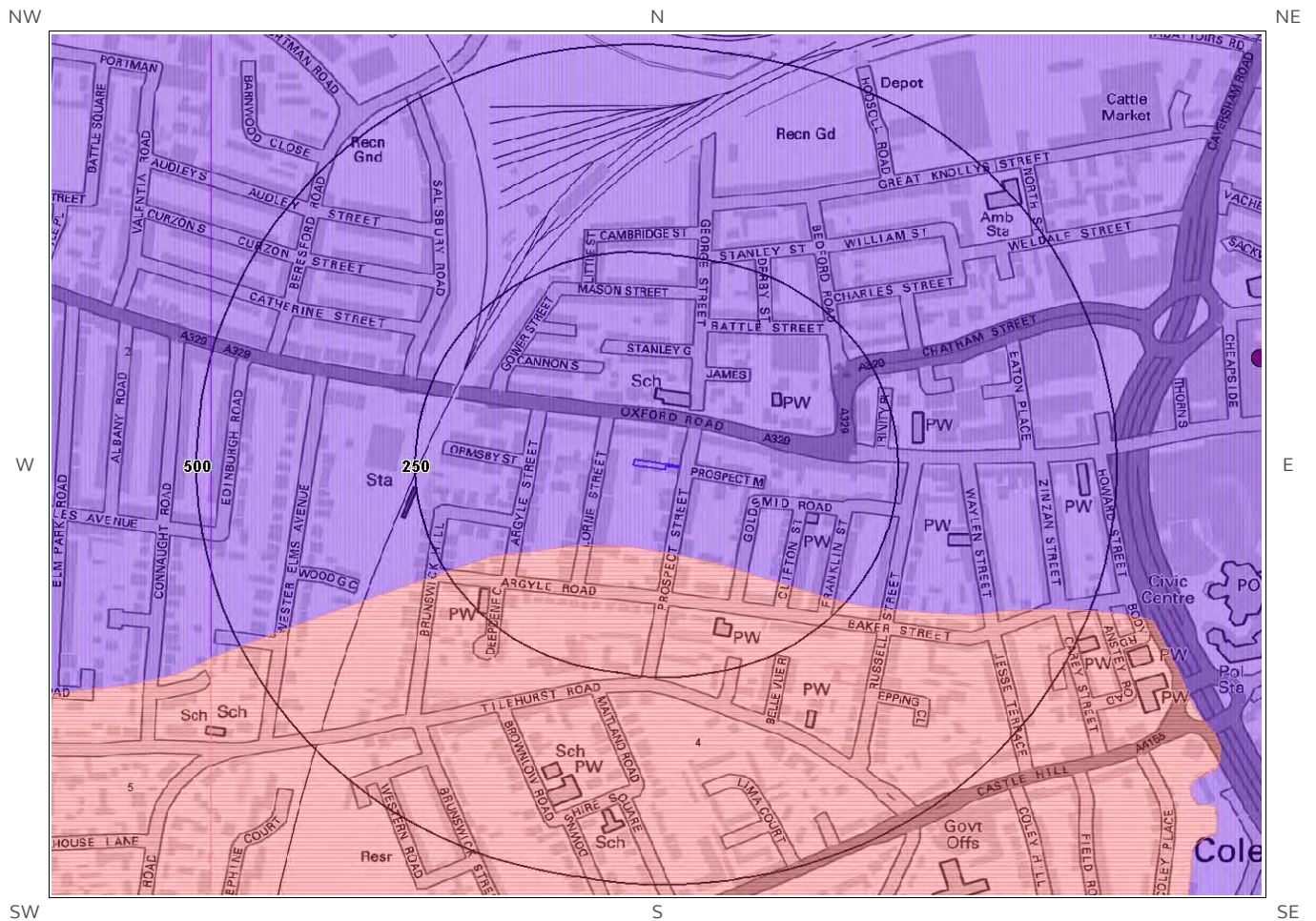
6a. Aquifer Within Superficial Geology



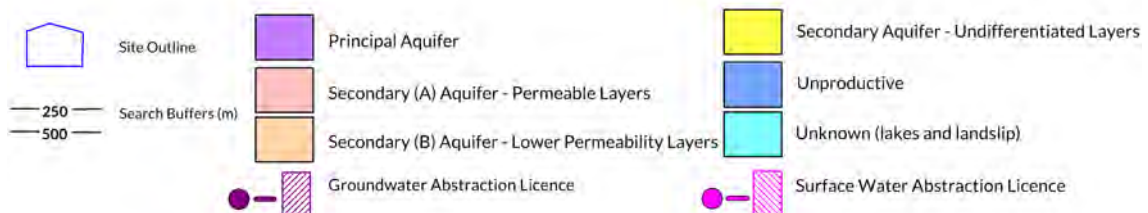
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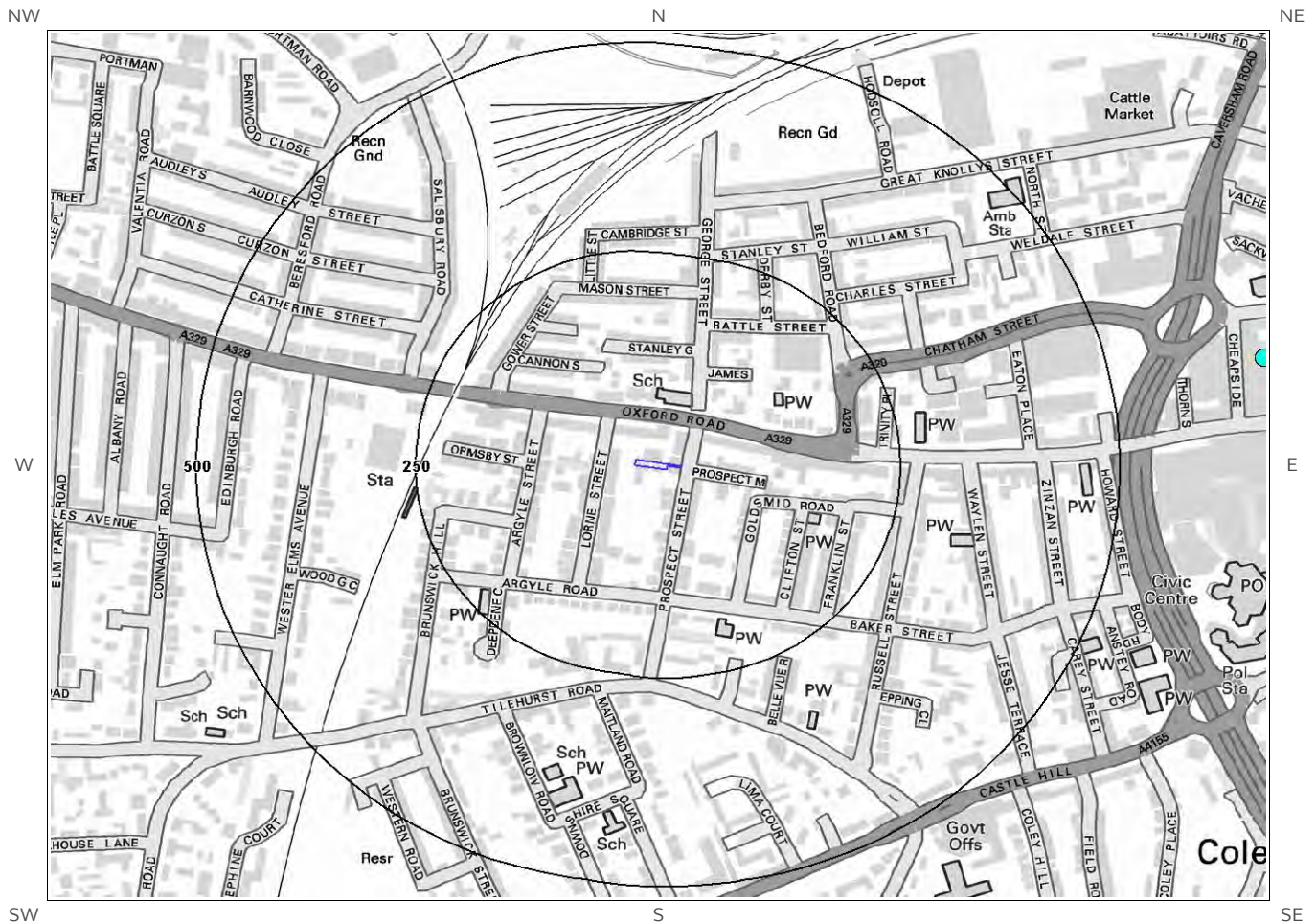
6b. Aquifer Within Bedrock Geology and Abstraction Licences



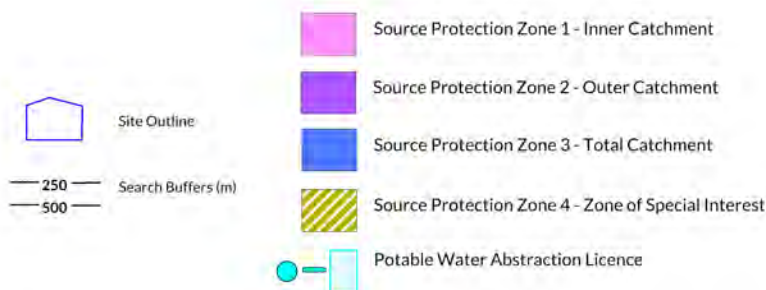
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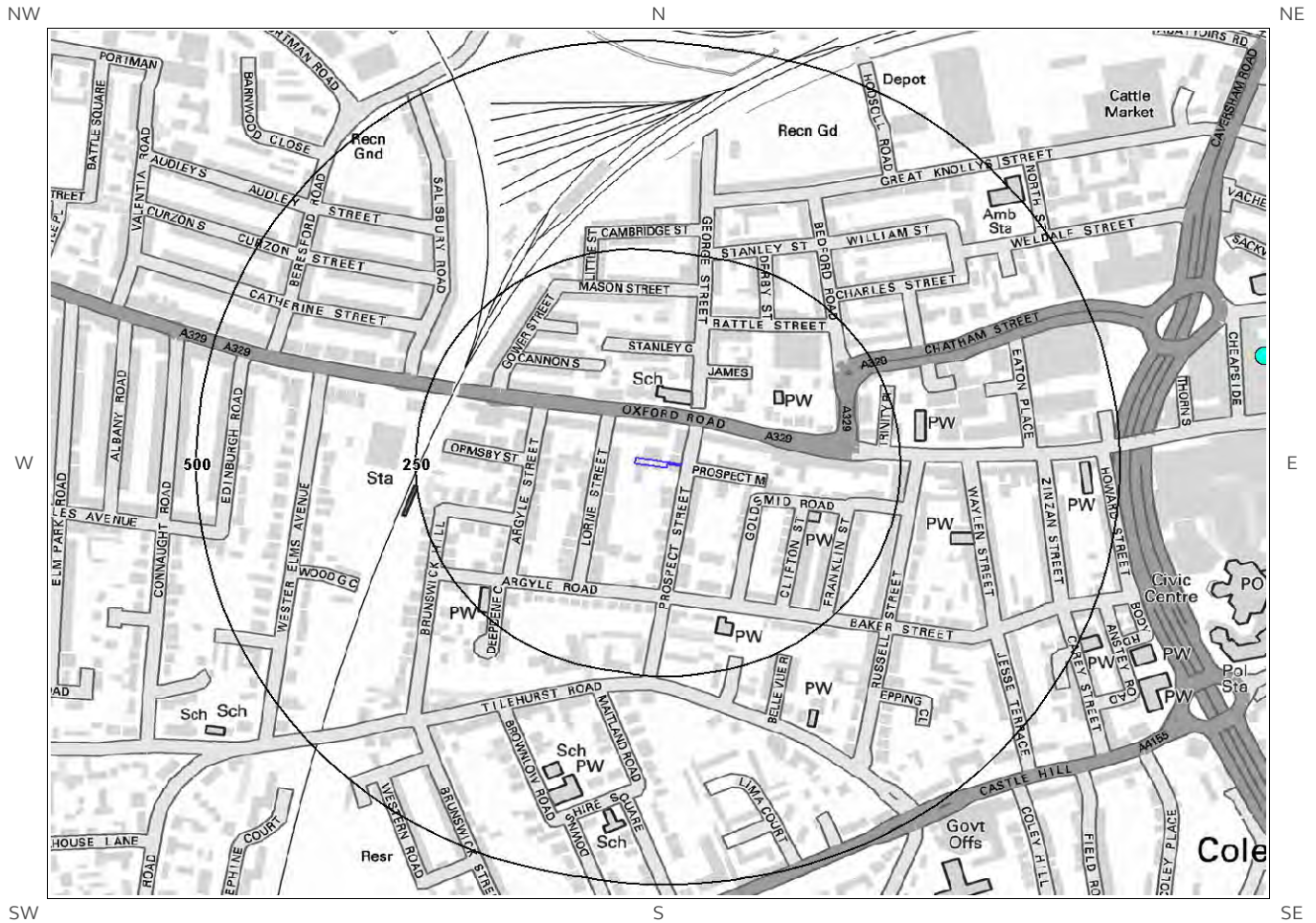
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



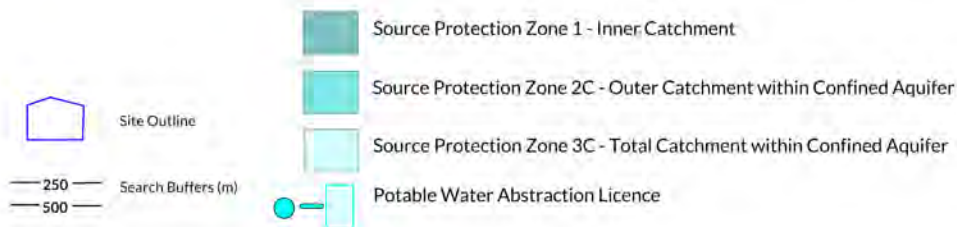
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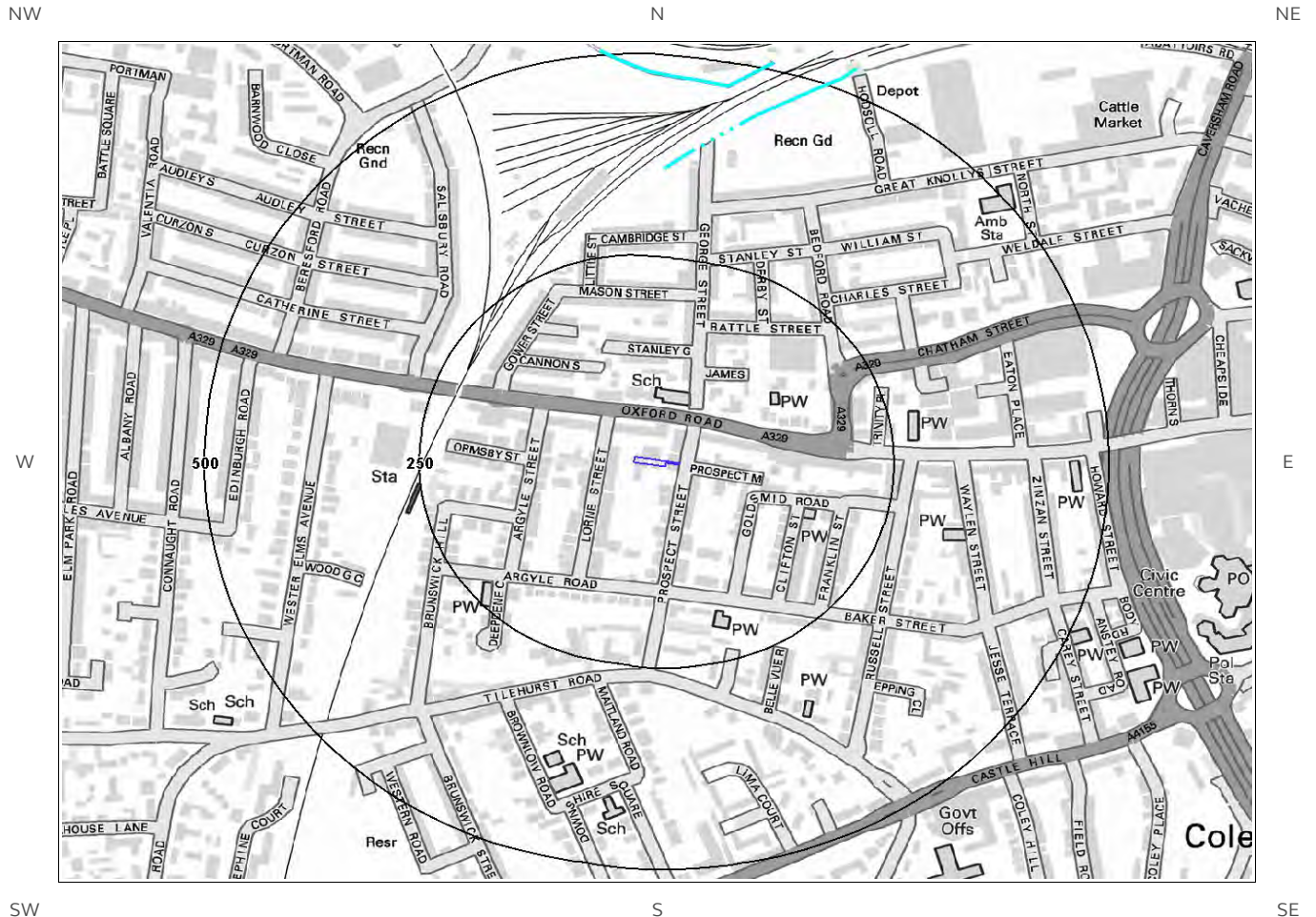
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	189	S	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
3	440	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
4	484	W	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

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	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
4	97	S	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	484	W	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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	632	N	470600 174000	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 Annual Volume (m³): 6682 Max Daily Volume (m³): 27.28 Original Application No: - Original Start Date: 22/01/1975 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
Not shown	643	N	470359 174009	Status: Active Licence No: TH/039/0023/032 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: BERKSHIRE DOWNS CHALK AT COW LANE, READING, BERKSHIRE Data Type: Poly4 Name: Network Rail Infrastructure Limited Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 28/01/2019 Expiry Date: 30/06/2019 Issue No: 1 Version Start Date: 28/01/2019 Version End Date:
8	677	E	471200 173500	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 Annual Volume (m³): 14933 Max Daily Volume (m³): 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:
Not shown	727	N	470400 174100	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 Annual Volume (m³): 6682 Max Daily Volume (m³): 27.28 Original Application No: - Original Start Date: 22/01/1975 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
Not shown	815	NE	470900 174100	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 Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/07/1966 Version End Date:
Not shown	815	NE	470900 174100	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 Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/07/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	815	NE	470900 174100	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 Annual Volume (m³): 90920 Max Daily Volume (m³): 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:
Not shown	815	NE	470900 174100	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 Annual Volume (m³): 90920 Max Daily Volume (m³): 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:
Not shown	861	NW	469800 173900	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 Annual Volume (m³): 136875 Max Daily Volume (m³): 400 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: 07/01/1999 Version End Date:
Not shown	999	NW	470100 174300	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 Annual Volume (m³): 9819 Max Daily Volume (m³): 26.82 Original Application No: - Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date:
Not shown	1281	N	470100 174600	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 Annual Volume (m³): 9819 Max Daily Volume (m³): 26.82 Original Application No: - Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date:
Not shown	1283	NW	469500 174200	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 Annual Volume (m³): 9819 Max Daily Volume (m³): 26.82 Original Application No: - Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date:
Not shown	1288	NW	469700 174400	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 Annual Volume (m³): 9819 Max Daily Volume (m³): 26.82 Original Application No: - Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1288	NW	469700 174400	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	Annual Volume (m³): 9819 Max Daily Volume (m³): 26.82 Original Application No: - Original Start Date: 09/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1967 Version End Date:
Not shown	1709	NE	471900 174400	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: Berendsen UK Limited	Annual Volume (m³): 68190 Max Daily Volume (m³): 300.04 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: 12/01/2016 Version End Date:
Not shown	1847	NW	469100 174600	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	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 17/11/1976 Expiry Date: - Issue No: 100 Version Start Date: 17/11/1976 Version End Date:
Not shown	1890	SW	469600 171700	Status: Historical Licence No: 28/39/22/0266 Details: General use relating to Secondary Category (Medium Loss) Direct Source: THAMES GROUNDWATER Point: RAILTRACK PROPERTY, SOUTHCOTE, READING Data Type: Point Name: NETWORK RAIL INFRASTR LTD	Annual Volume (m³): 250035 Max Daily Volume (m³): 909.22 Original Application No: - Original Start Date: 12/12/1966 Expiry Date: - Issue No: 101 Version Start Date: 03/02/2003 Version End Date:
Not shown	1942	NW	468900 174500	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	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1992 Version End Date:
Not shown	1942	NW	468900 174500	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	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1992 Version End Date:
Not shown	1949	E	472400 172800	Status: Active Licence No: 28/39/22/0521 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ROYAL BERKSHIRE HOSPITAL Data Type: Point Name: ROYAL BERKSHIRE HOSPITAL	Annual Volume (m³): 127750 Max Daily Volume (m³): 350 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: 17/01/1992 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1077	E	471590 173150	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 Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 16/02/2000 Expiry Date: - Issue No: 1 Version Start Date: 16/02/2000 Version End Date:
Not shown	1077	E	471590 173150	Status: Active 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 Annual Volume (m³): 737856 Max Daily Volume (m³): 2016 Application No: - Original Start Date: 16/02/2000 Expiry Date: - Issue No: 1 Version Start Date: 16/02/2000 Version End Date:
Not shown	1408	NE	471440 174450	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 Annual Volume (m³): - Max Daily Volume (m³): - 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:
Not shown	1408	NE	471440 174450	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 Annual Volume (m³): 31536 Max Daily Volume (m³): 86.4 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:
Not shown	1408	NE	471440 174450	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 Annual Volume (m³): 1.752 Max Daily Volume (m³): 4800 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:
Not shown	1739	NE	472072 174185	Status: Active 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: The Reading Sustainability Centre CIC Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 19/02/2016 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 19/02/2019 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

Identified

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
1	677	E	471200 173500	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 Annual Volume (m³): 14933 Max Daily Volume (m³): 40.91 Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 101 Version Start Date: - Version End Date: -
Not shown	815	NE	470900 174100	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 Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date: -
Not shown	815	NE	470900 174100	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 Annual Volume (m³): 90920 Max Daily Volume (m³): 727.4 Original Application No: - Original Start Date: 23/01/1990 Expiry Date: - Issue No: 101 Version Start Date: - Version End Date: -
Not shown	861	NW	469800 173900	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 Annual Volume (m³): 136875 Max Daily Volume (m³): 400 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date: -
Not shown	1942	NW	468900 174500	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 Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date: -
Not shown	1949	E	472400 172800	Status: Active Licence No: 28/39/22/0521 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ROYAL BERKSHIRE HOSPITAL Data Type: Point Name: ROYAL BERKSHIRE HOSPITAL Annual Volume (m³): 127750 Max Daily Volume (m³): 350 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date: -

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site

Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
170	S	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
484	W	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site

Identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	990	SE	471351 172807	River Name: Kennet Reach: Foudry Brook - Holy Brook End/Start of Stretch: Sample Point NGR	B	A	A	A	A
Not shown	1486	E	472020 173440	River Name: Kennet Reach: Holy Brook - Thames End/Start of Stretch: Start of Stretch NGR	B	A	A	A	A
Not shown	1486	E	472020 173440	River Name: Kennet Reach: Foudry Brook - Holy Brook End/Start of Stretch: End of Stretch NGR	B	A	A	A	A

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/Direction	Name	Type of Watercourse	Additional Details
1	359 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	359 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
2	385 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	385 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	428 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	428 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	472 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
Not shown	472 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6

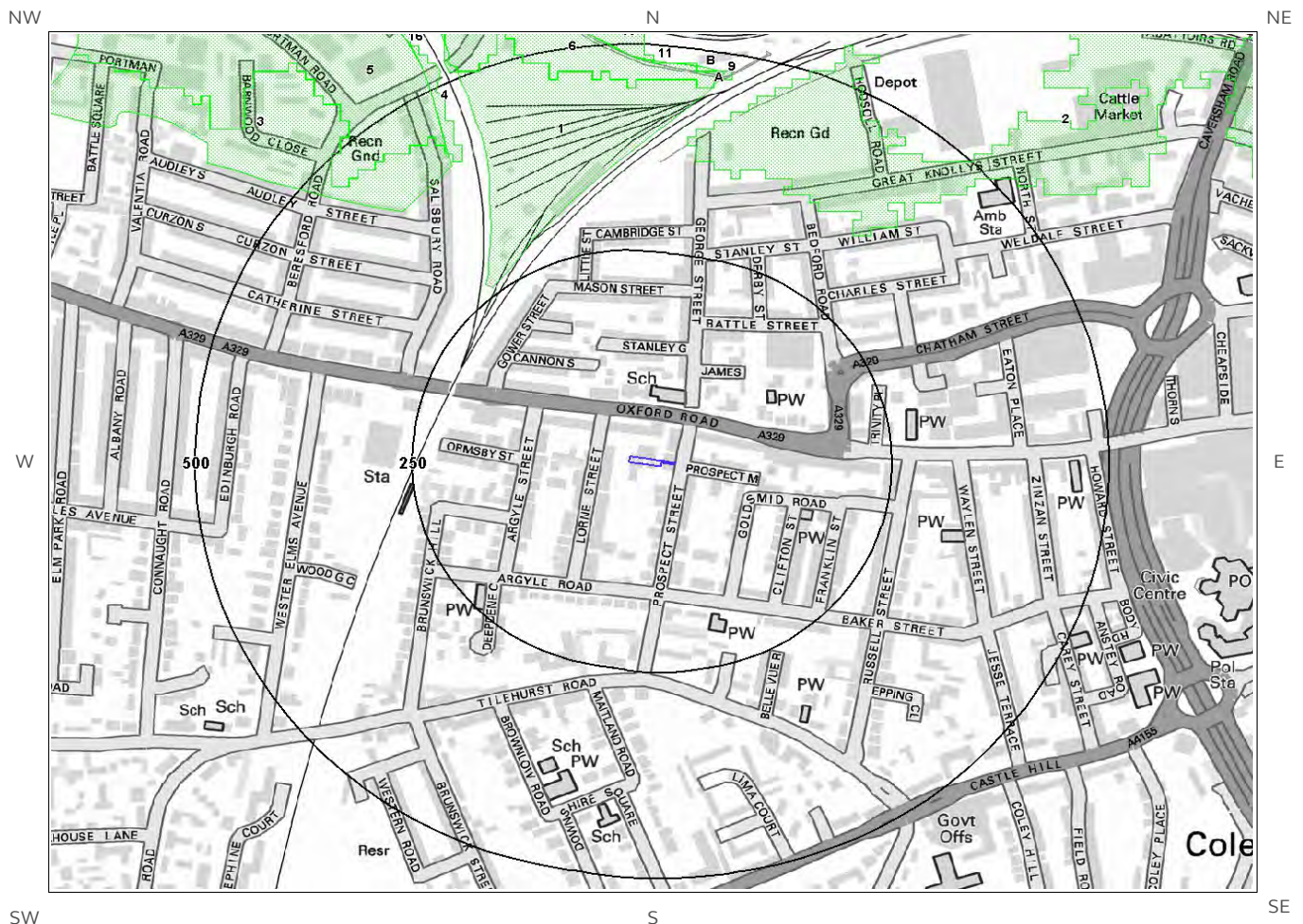
6.11 Surface Water Features

Surface water features within 250m of the study site

None identified

Database searched and no data found.

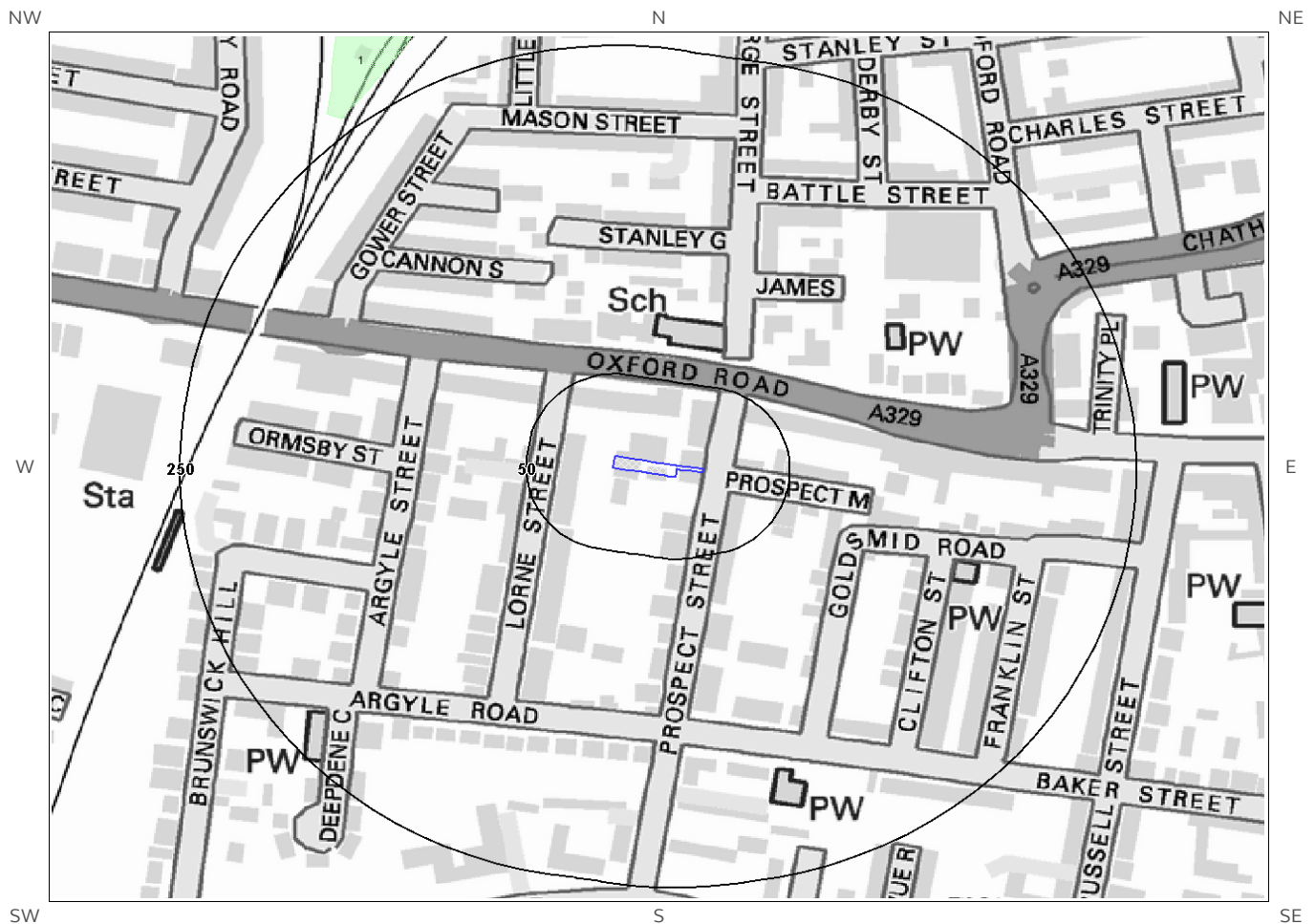
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



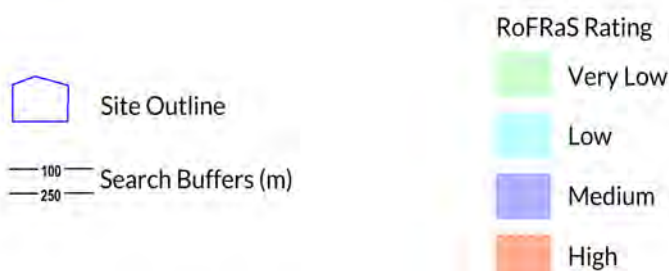
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m None identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m None identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Flood Defences within 250m of the study site None identified
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site

None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

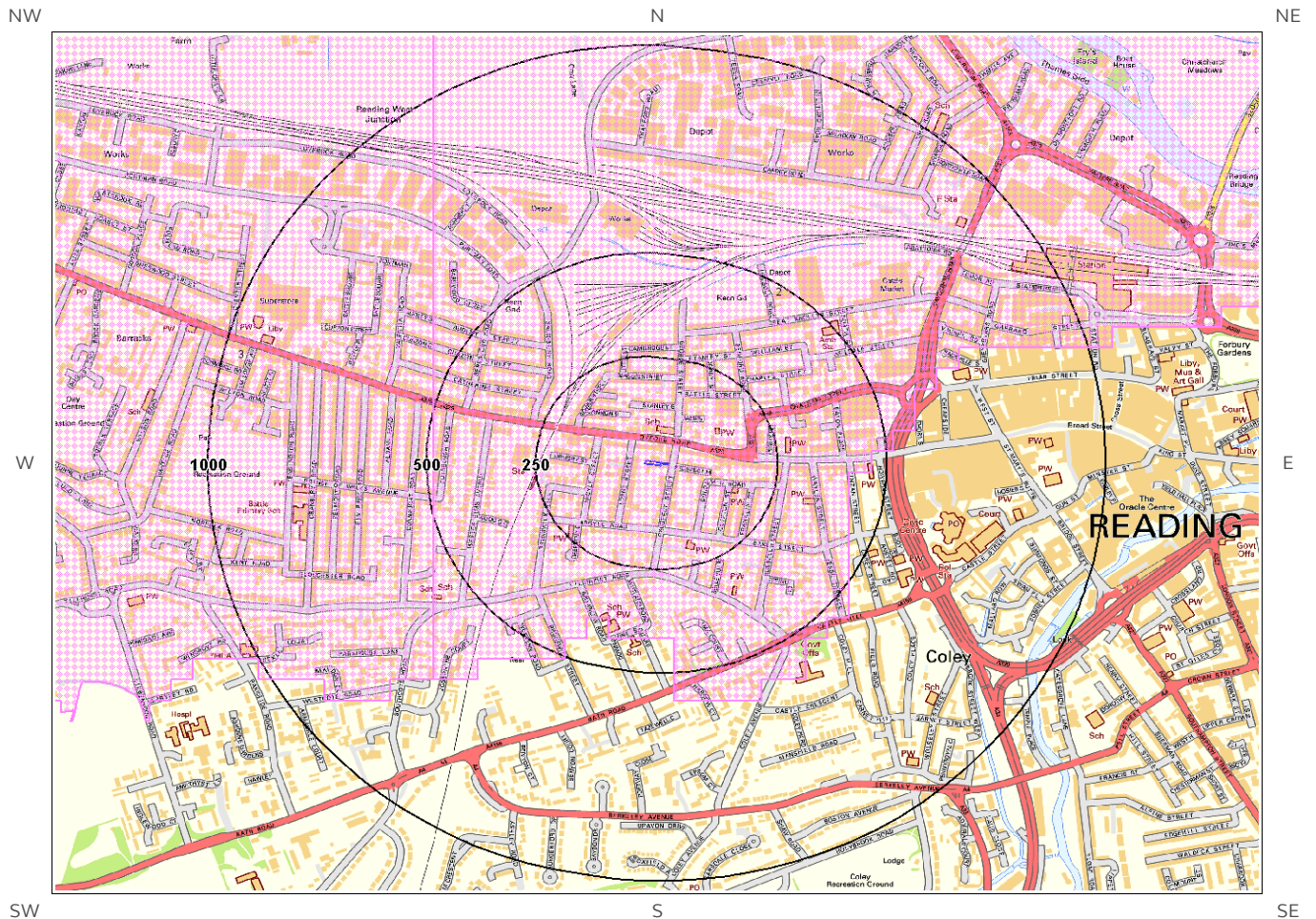
British Geological Survey confidence rating in this result

High

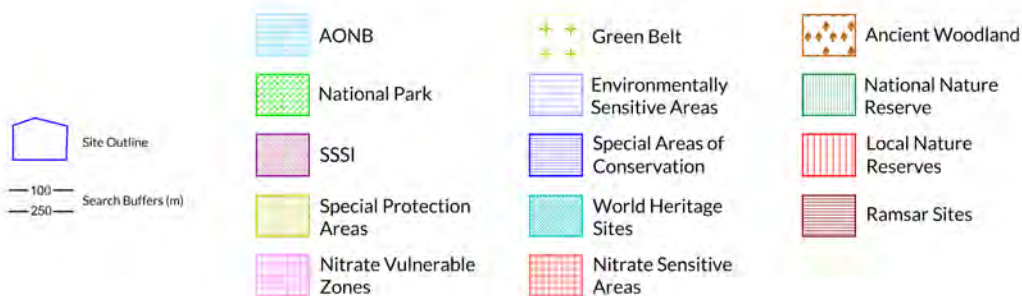
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site	Identified
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8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

0

Database searched and no data found.

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1930	W	Lousehill Copse	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

2

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Existing	DEFRA
3	484	W	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very significant soluble rocks are present, with a moderate possibility of local natural subsidence due to high surface or subsurface water flow. Do not load the land or undertake building work before obtaining specialist advice. Do not dispose of drainage to the ground. Some possibility groundwater pollution. Maintain drainage infrastructure. For new build specialist site investigation and stability assessment may be necessary before construction. Construction work may cause subsidence. Increased construction costs are likely. For existing property probable increase in insurance risk due to soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

Identified

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Chalk	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:



Web: www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority
Authority: Reading Borough Council
Phone: 0118 937 3787
Web: <http://beta.reading.gov.uk/>
Address: Civic Offices, Bridge Street, Reading, RG1 2LU

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1879

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1879
Edition N/A
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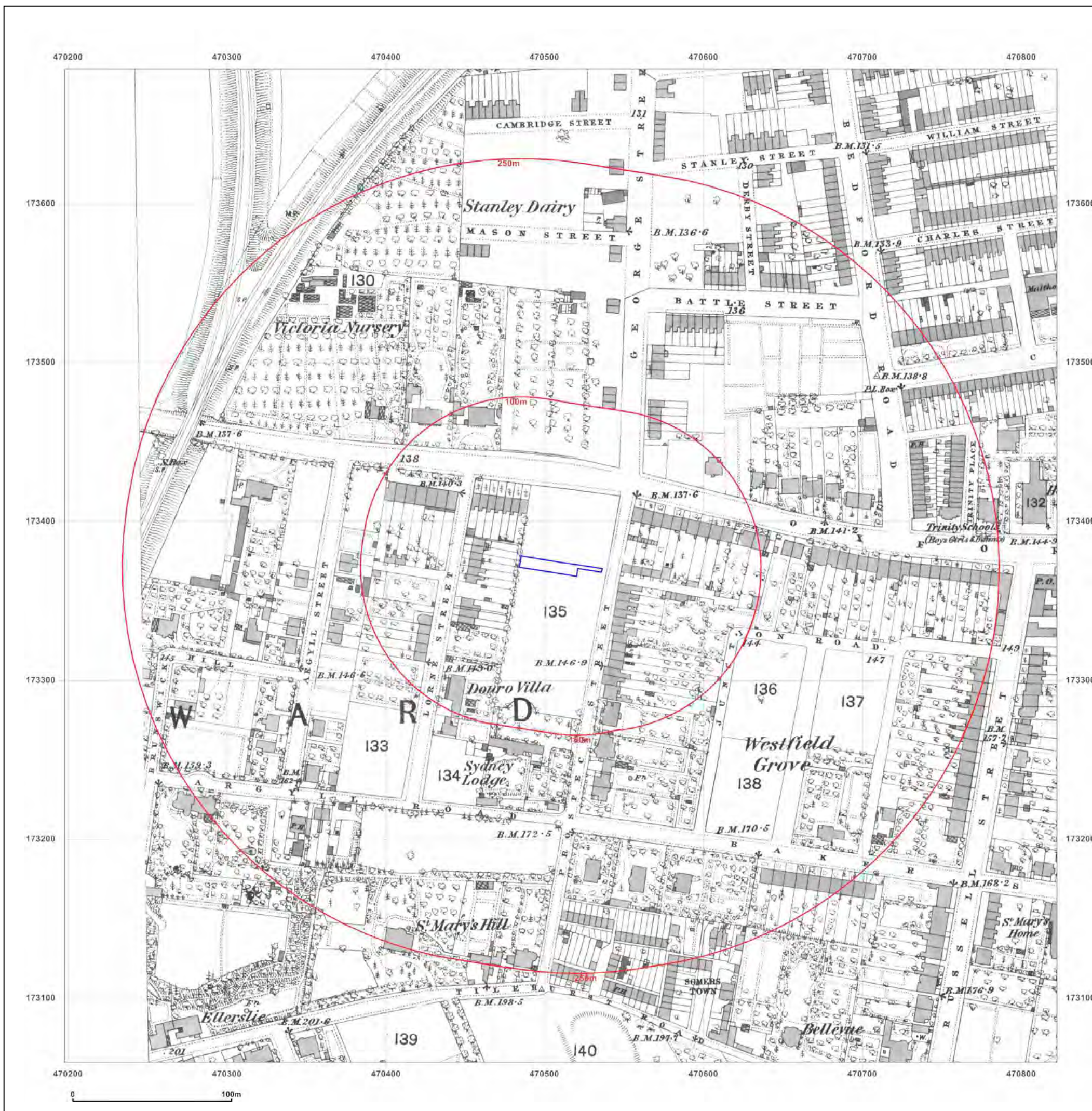


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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series Town Plan

Map date: 1877-1879

Scale: 1:500

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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1899-1900

Scale: 1:2,500

Printed at: 1:2,500



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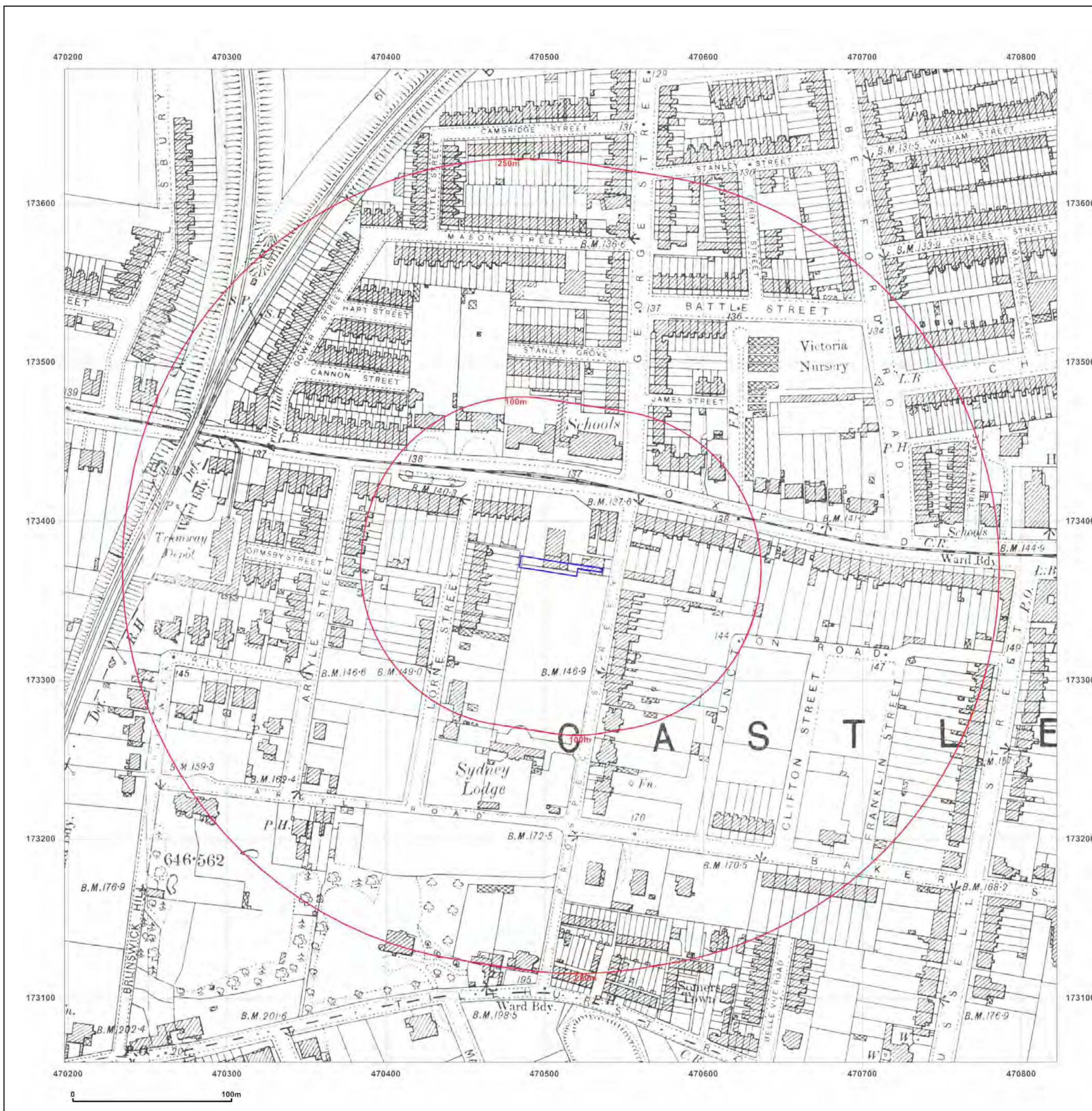


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Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1911-1912

Scale: 1:2,500

Printed at: 1:2,500



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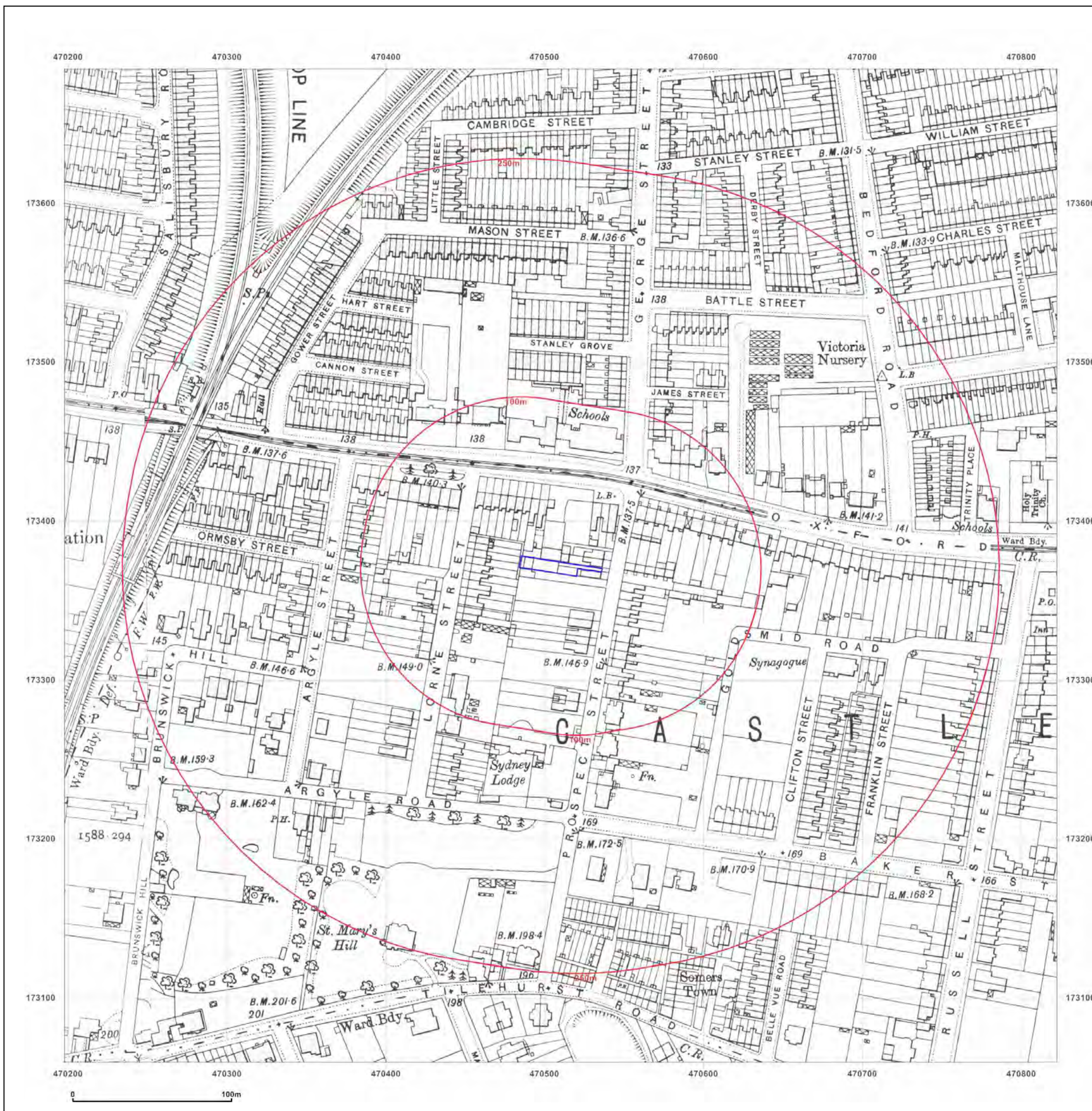


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Map Name: County Series

Map date: 1931-1932

Scale: 1:2,500

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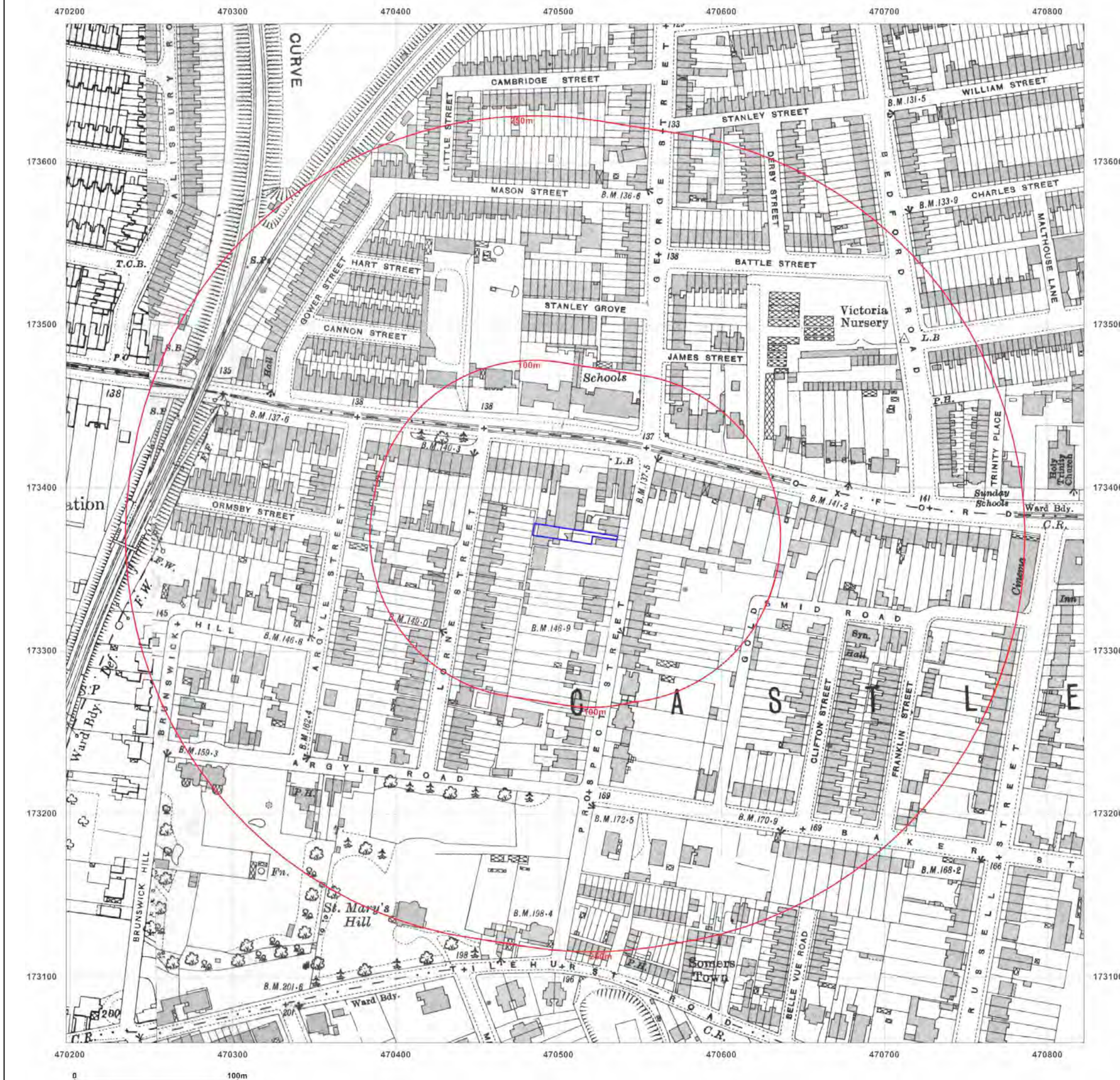


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Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1959

Scale: 1:1,250

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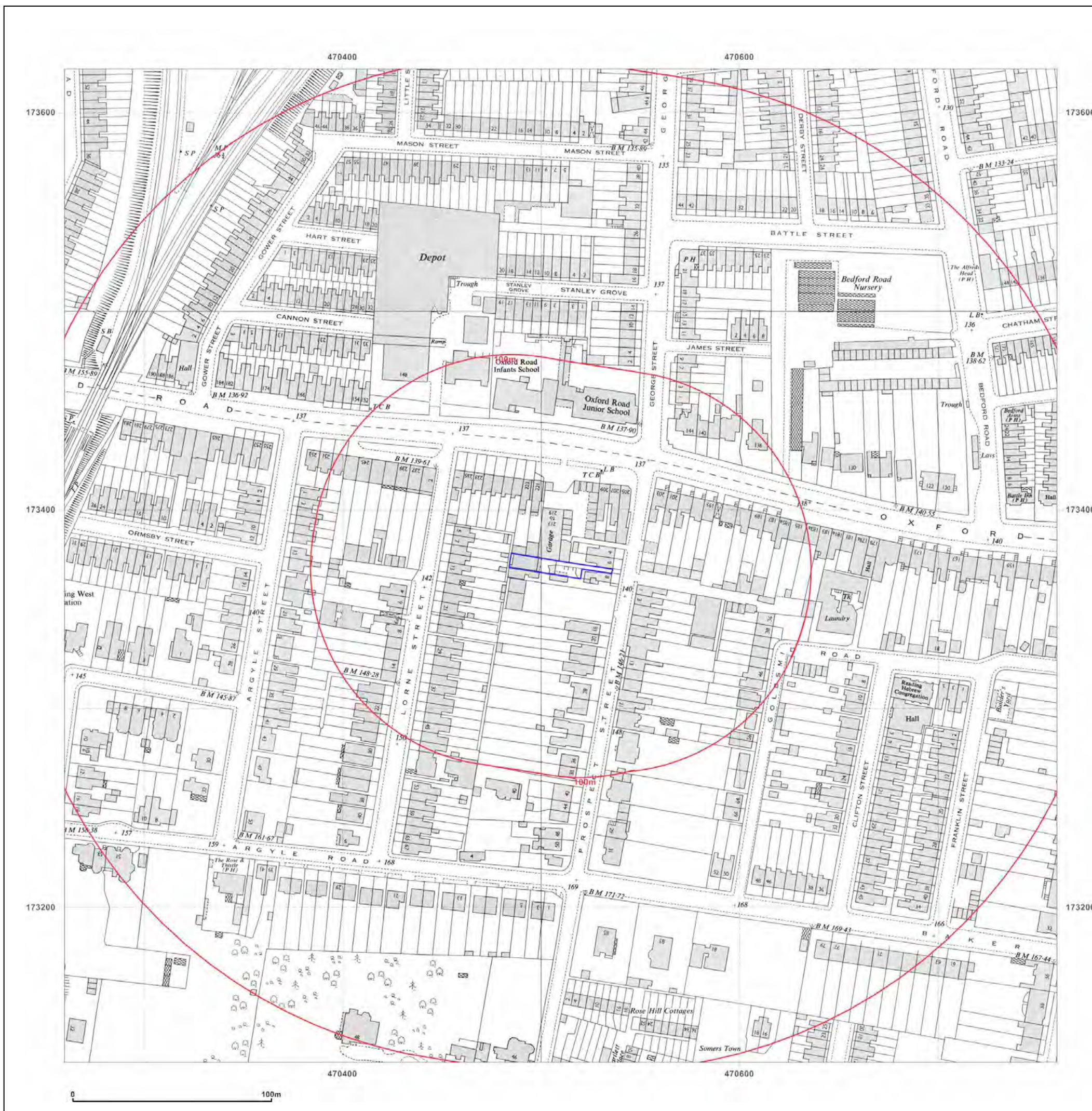


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Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1961

Scale: 1:2,500

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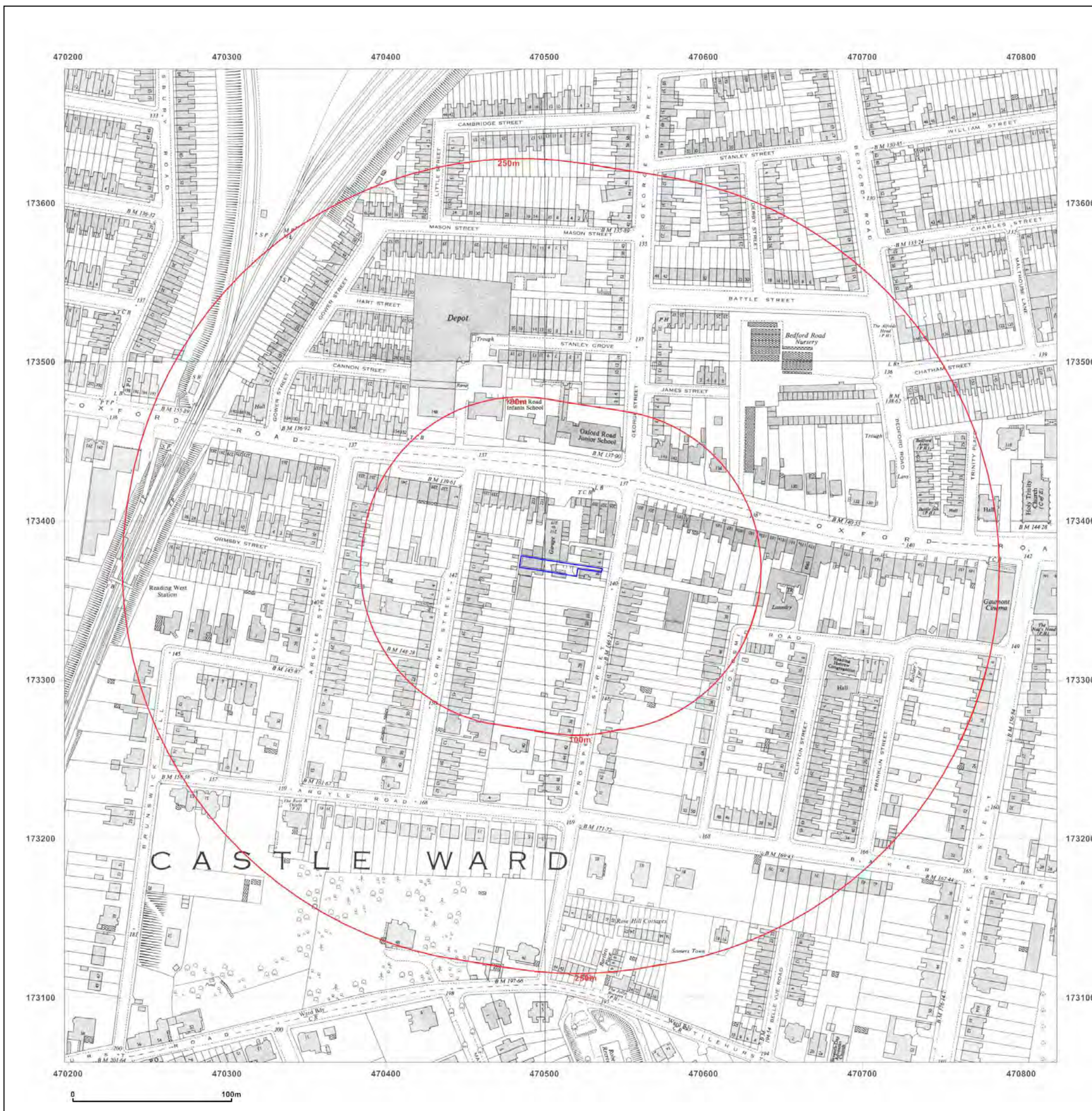


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Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1971

Scale: 1:1,250

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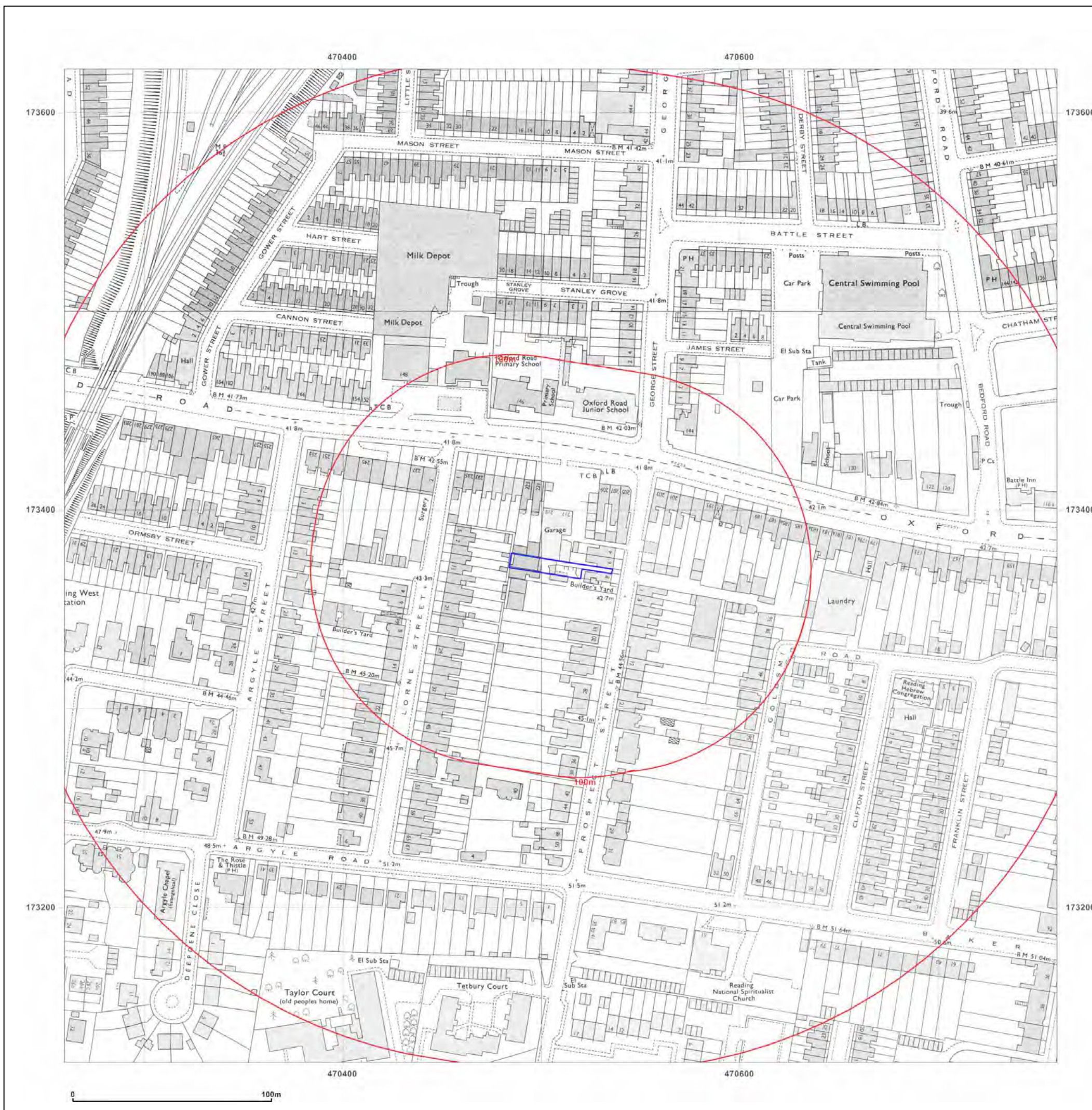


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Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1977-1978

Scale: 1:1,250

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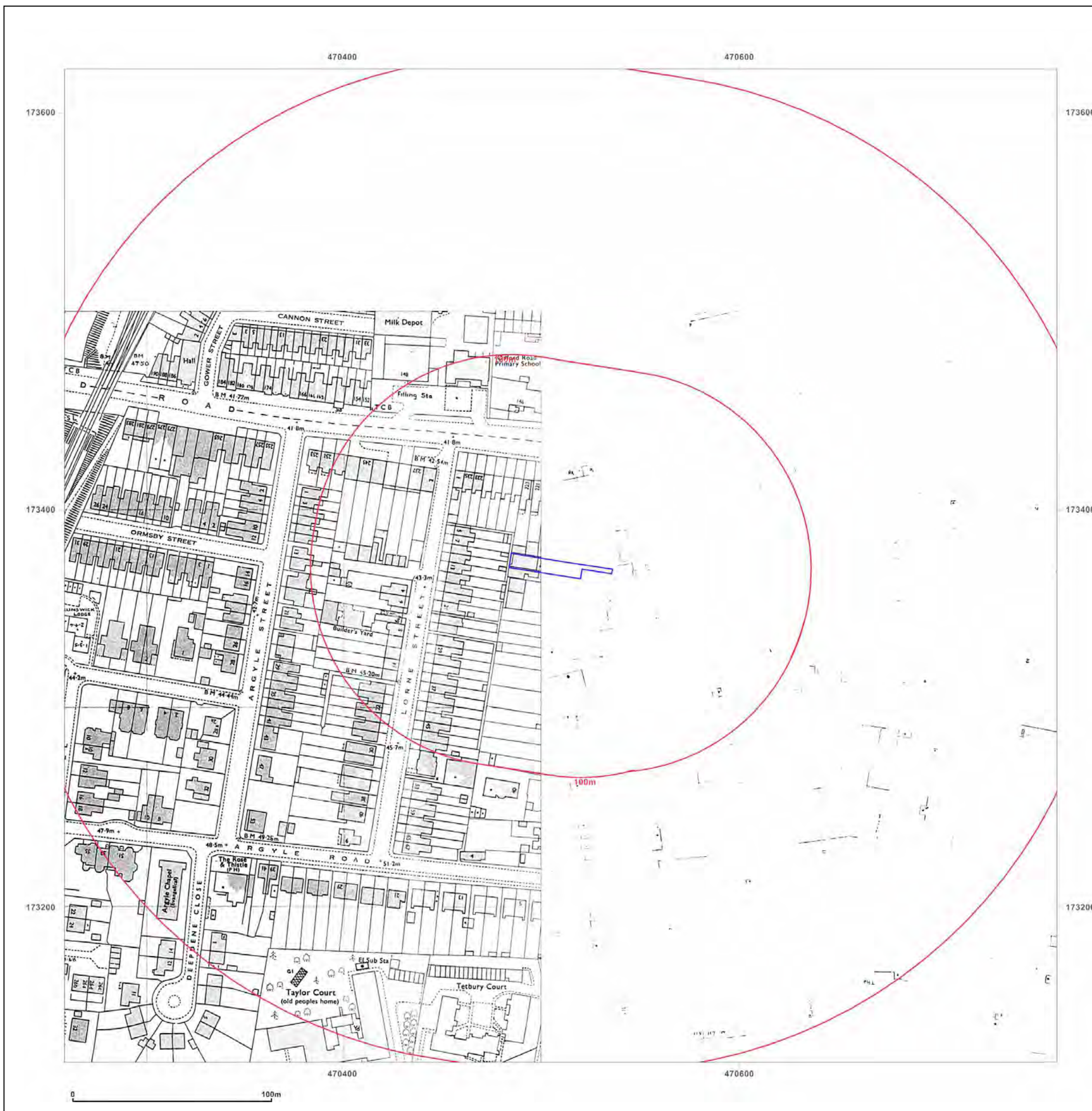


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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1986-1988

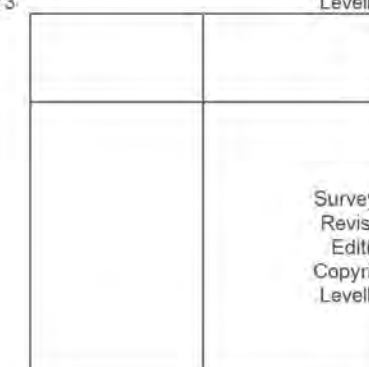
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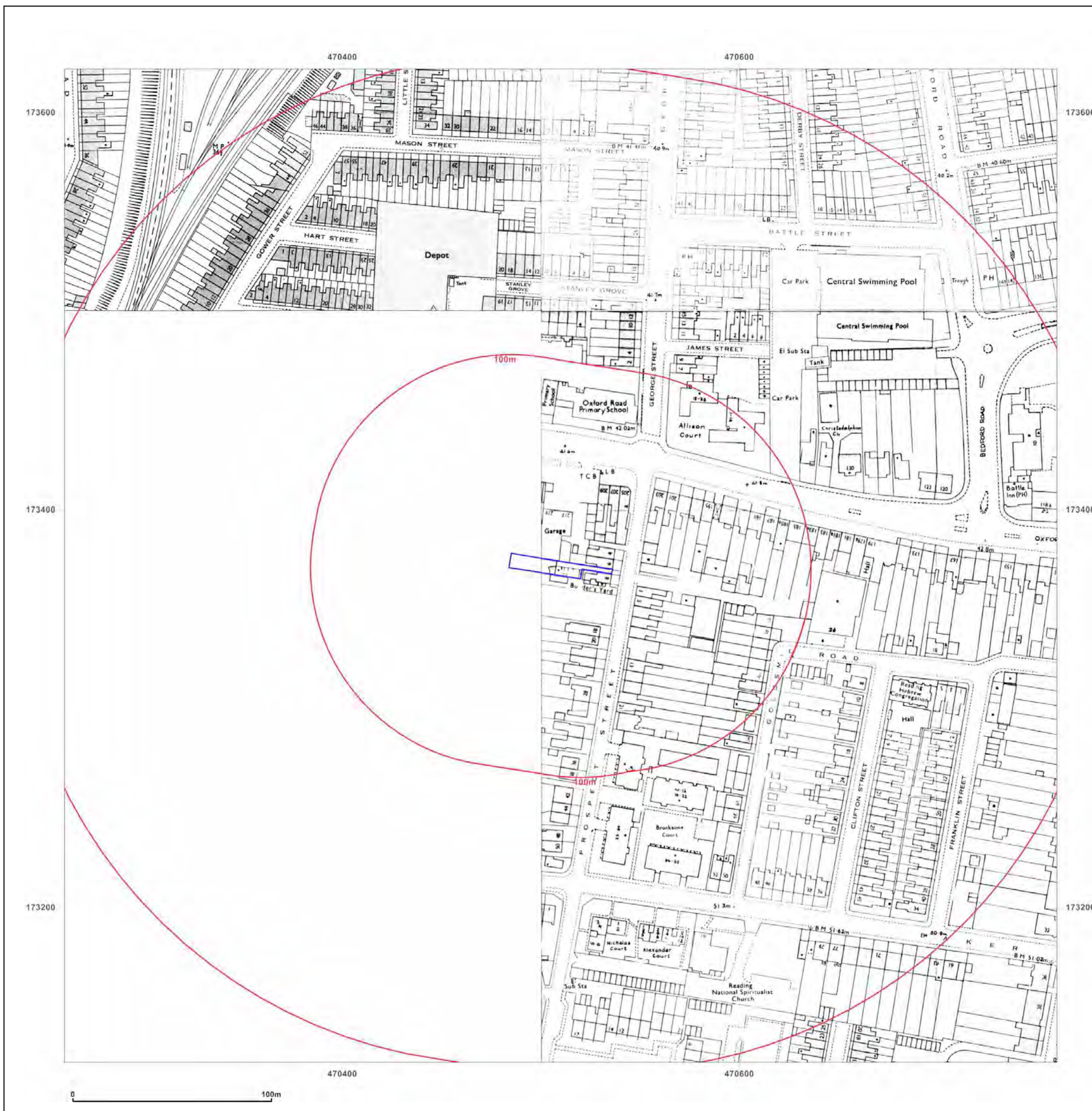


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Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1993

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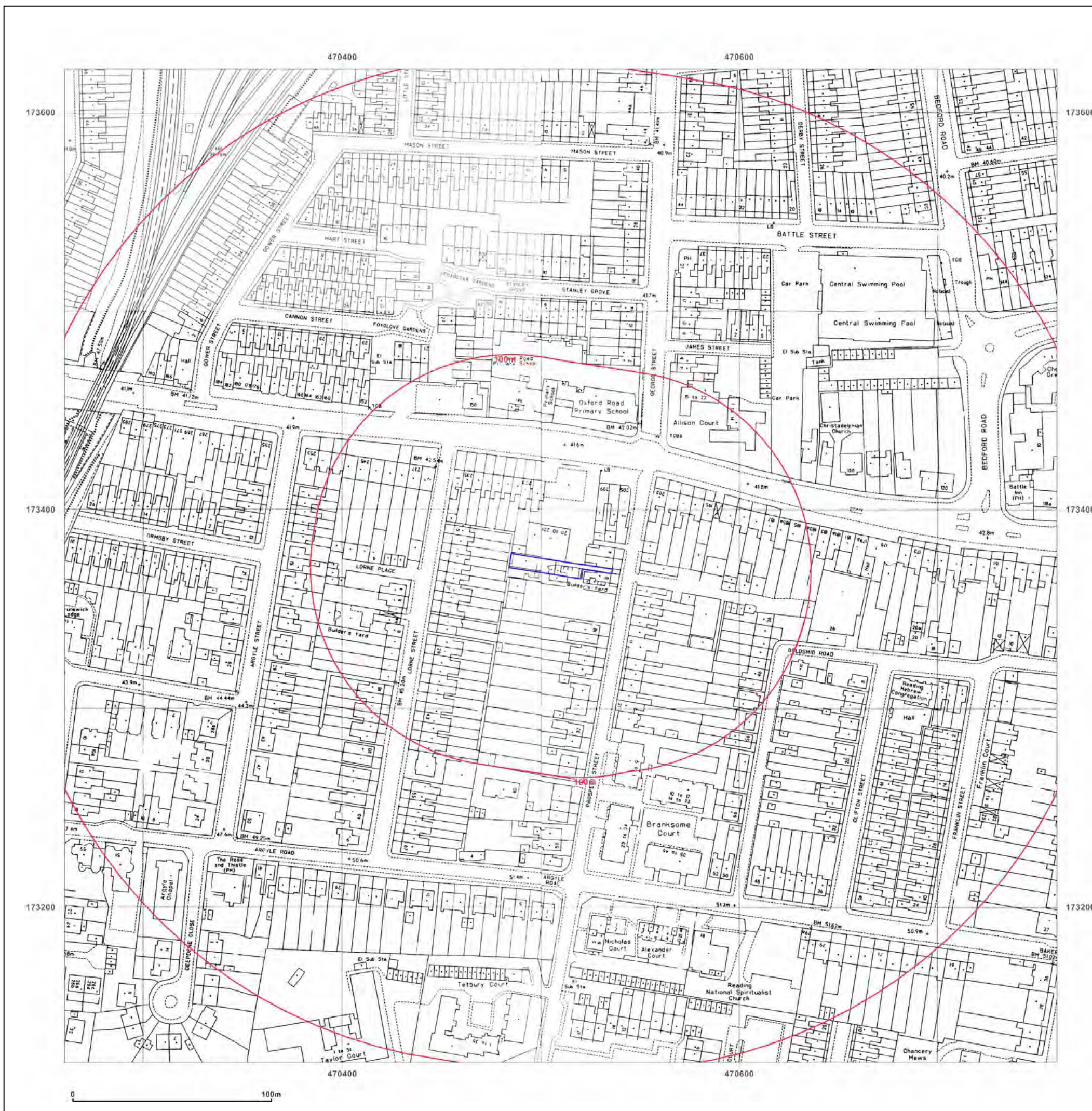


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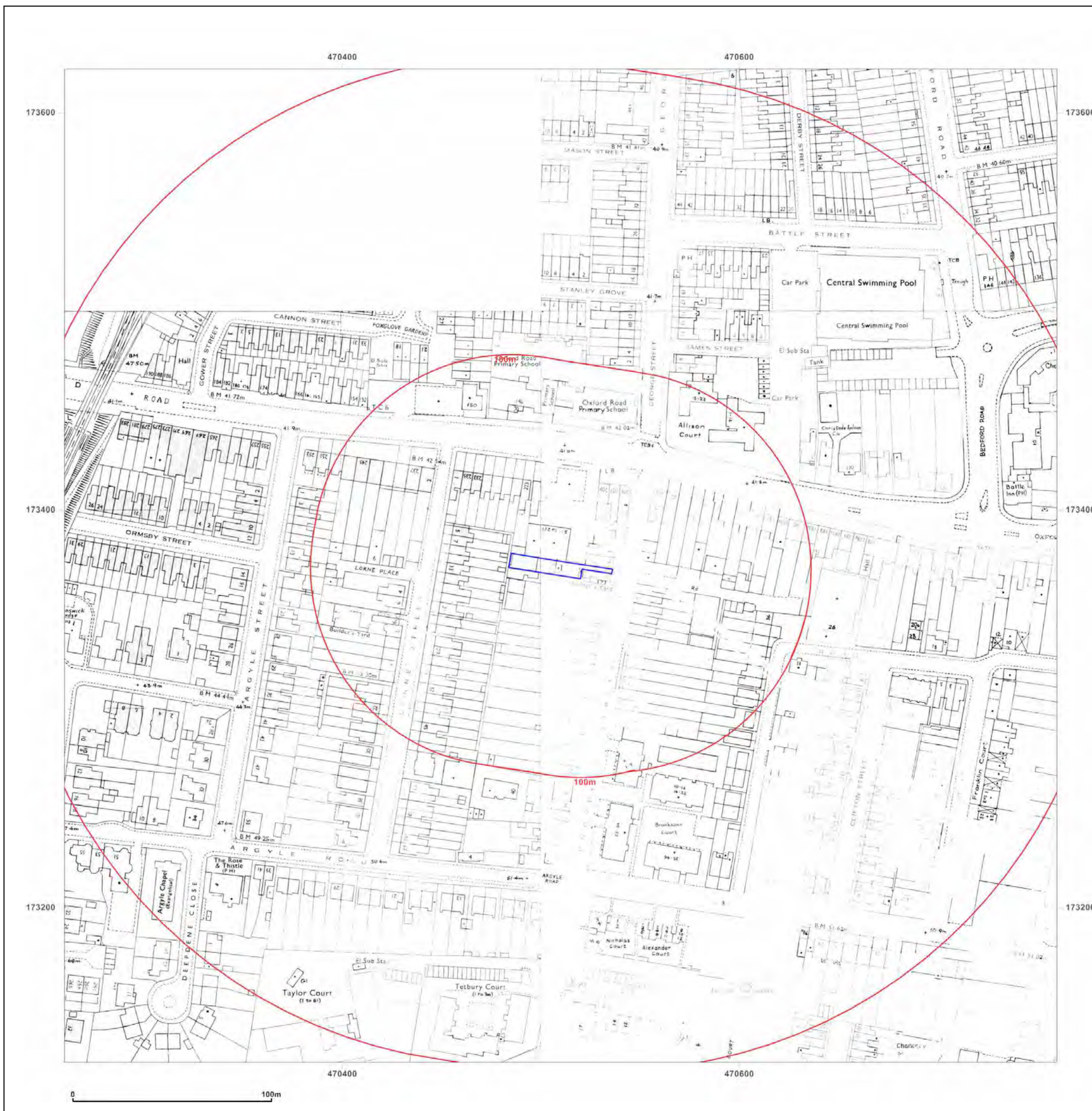


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STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

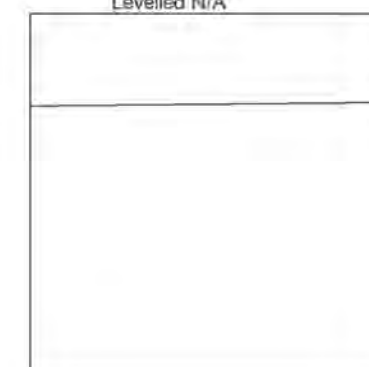
Map date: 1878

Scale: 1:10,560

Printed at: 1:10,560



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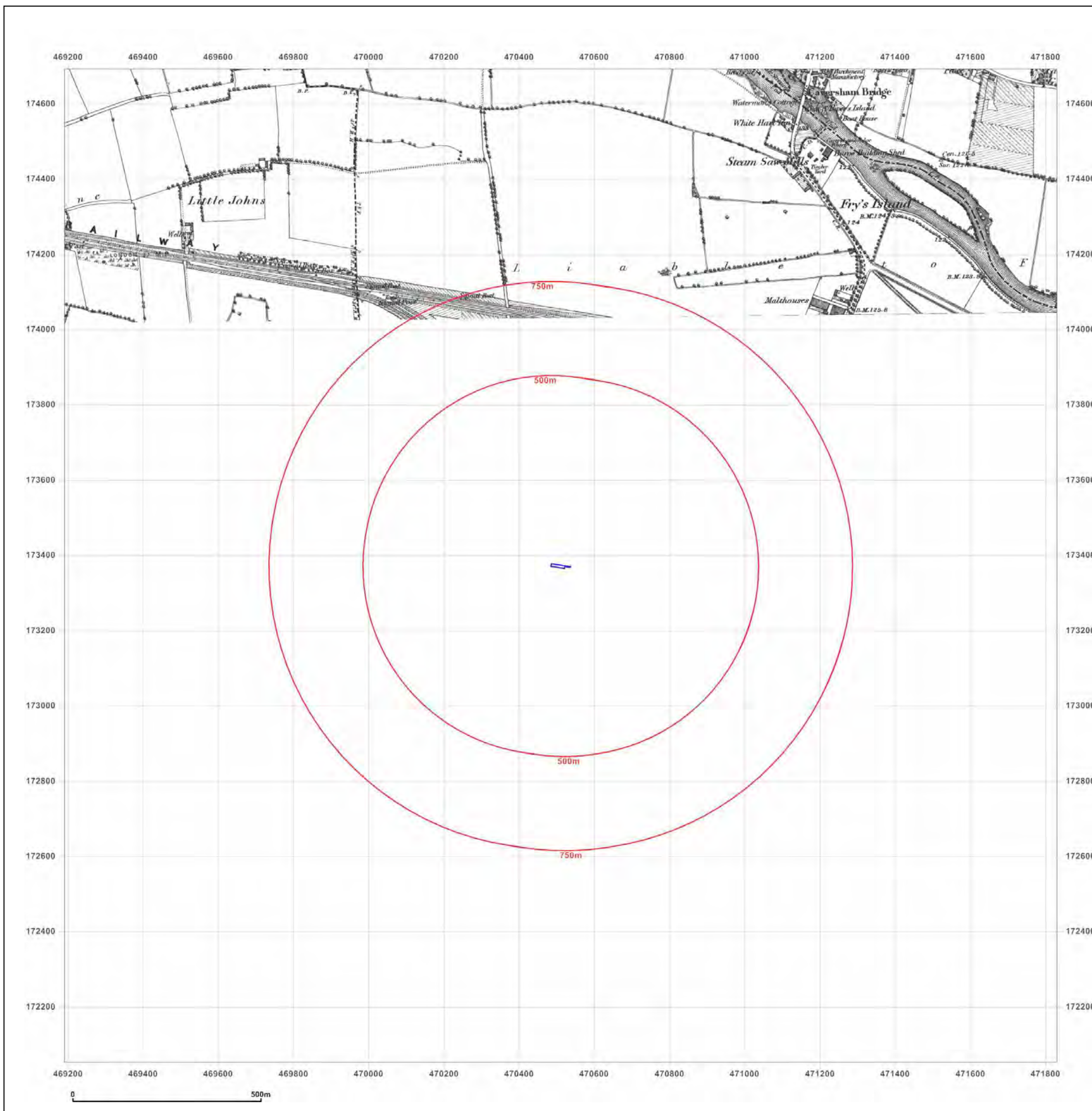


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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1910-1913

Scale: 1:10,560

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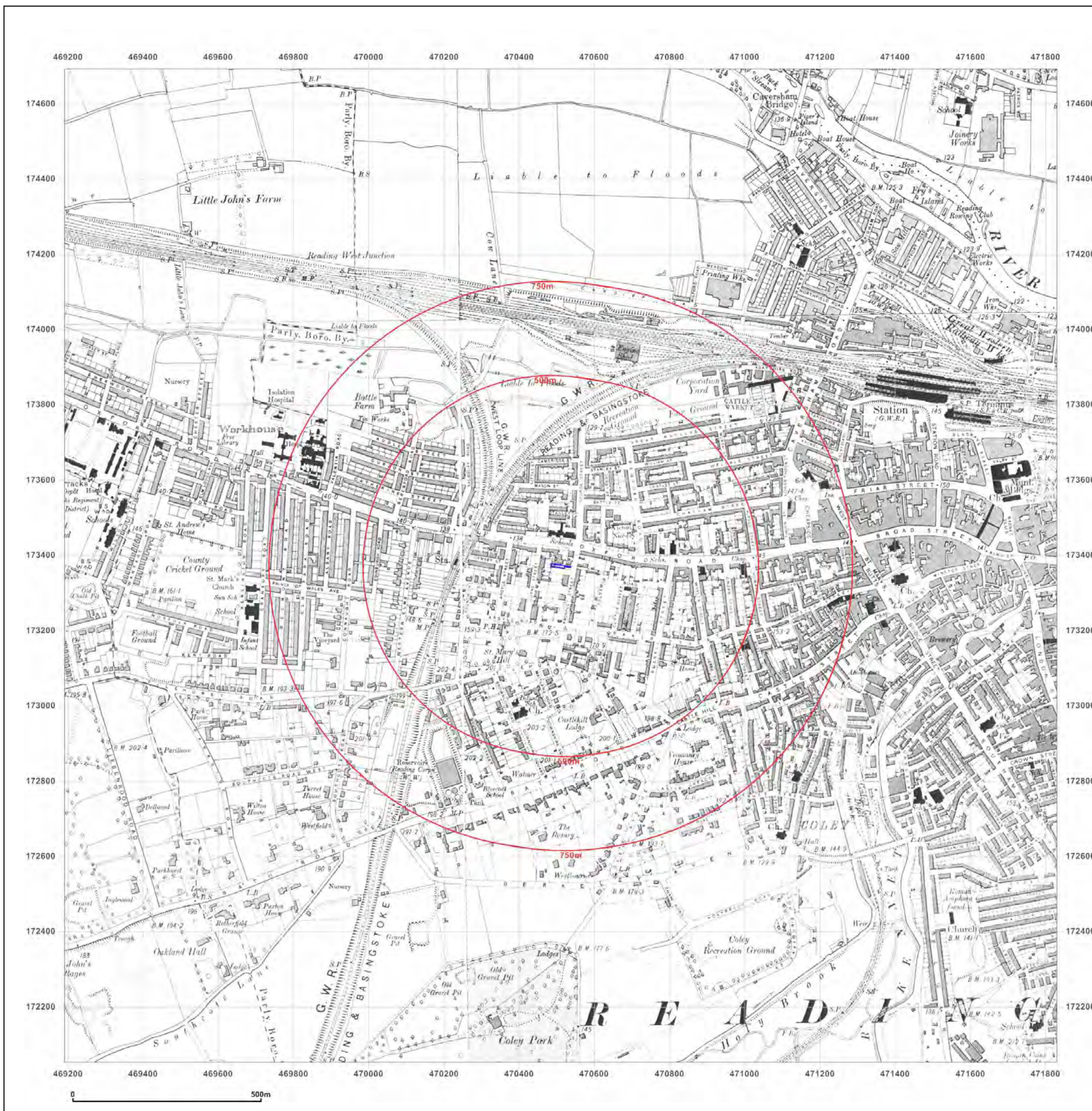


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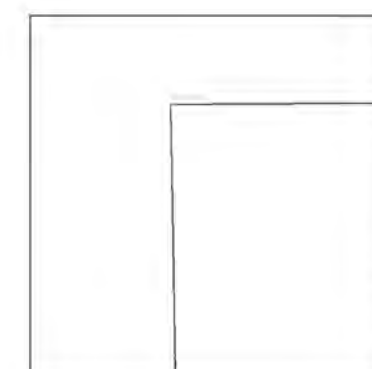
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Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1914

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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

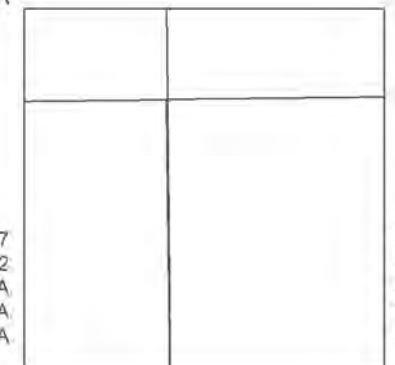
Map date: 1932-1933

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Grid Ref: 470510, 173372

Map Name: County Series

Map date: 1938

Scale: 1:10,560

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Levelled N/A

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

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

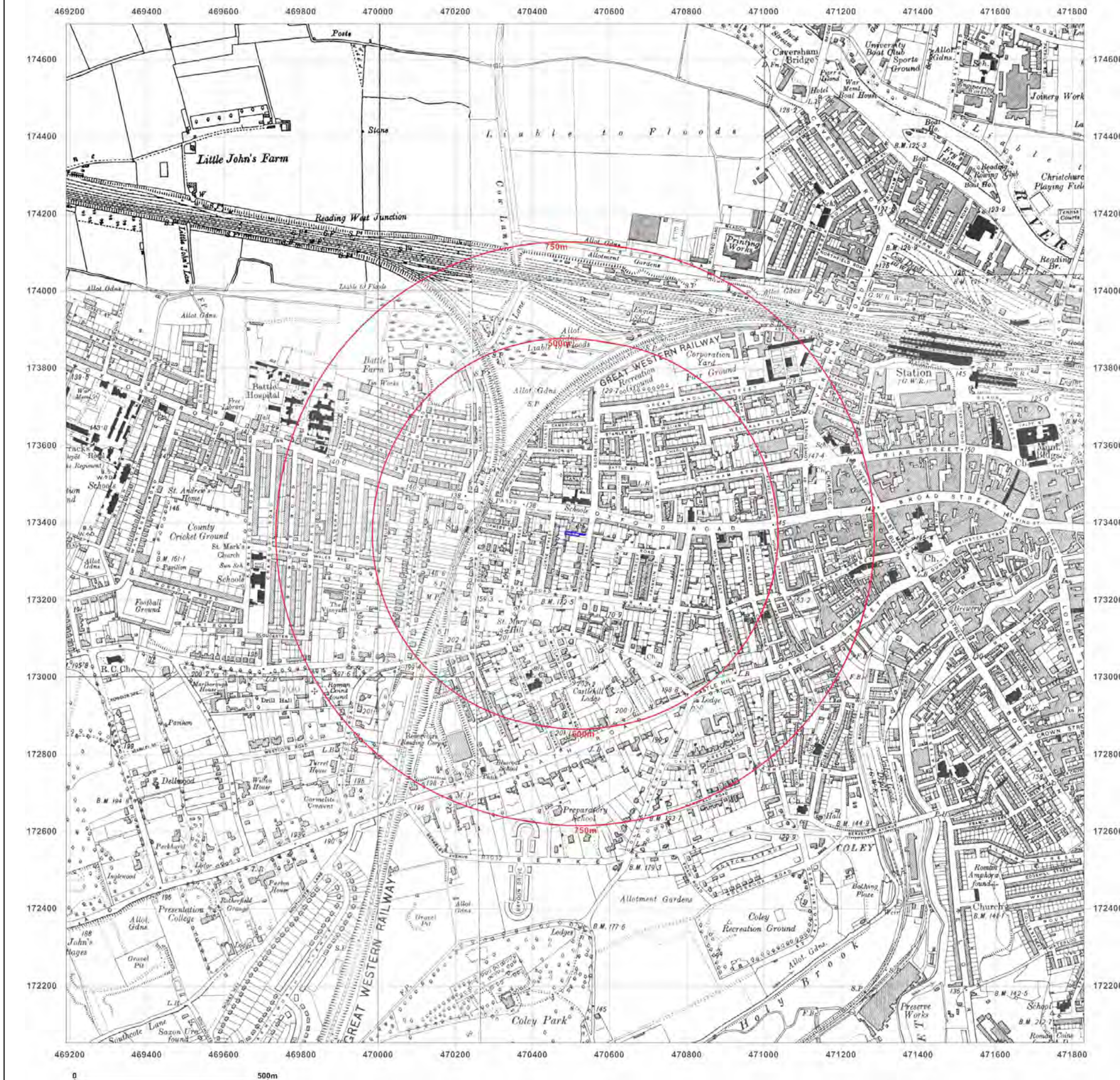


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

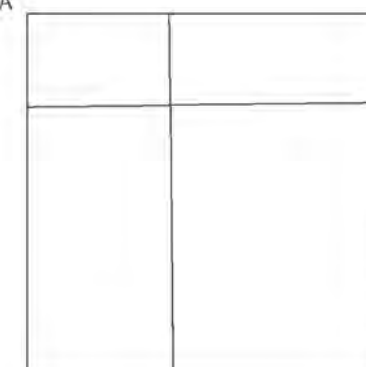
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Scale: 1:10,560

Printed at: 1:10,560



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



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

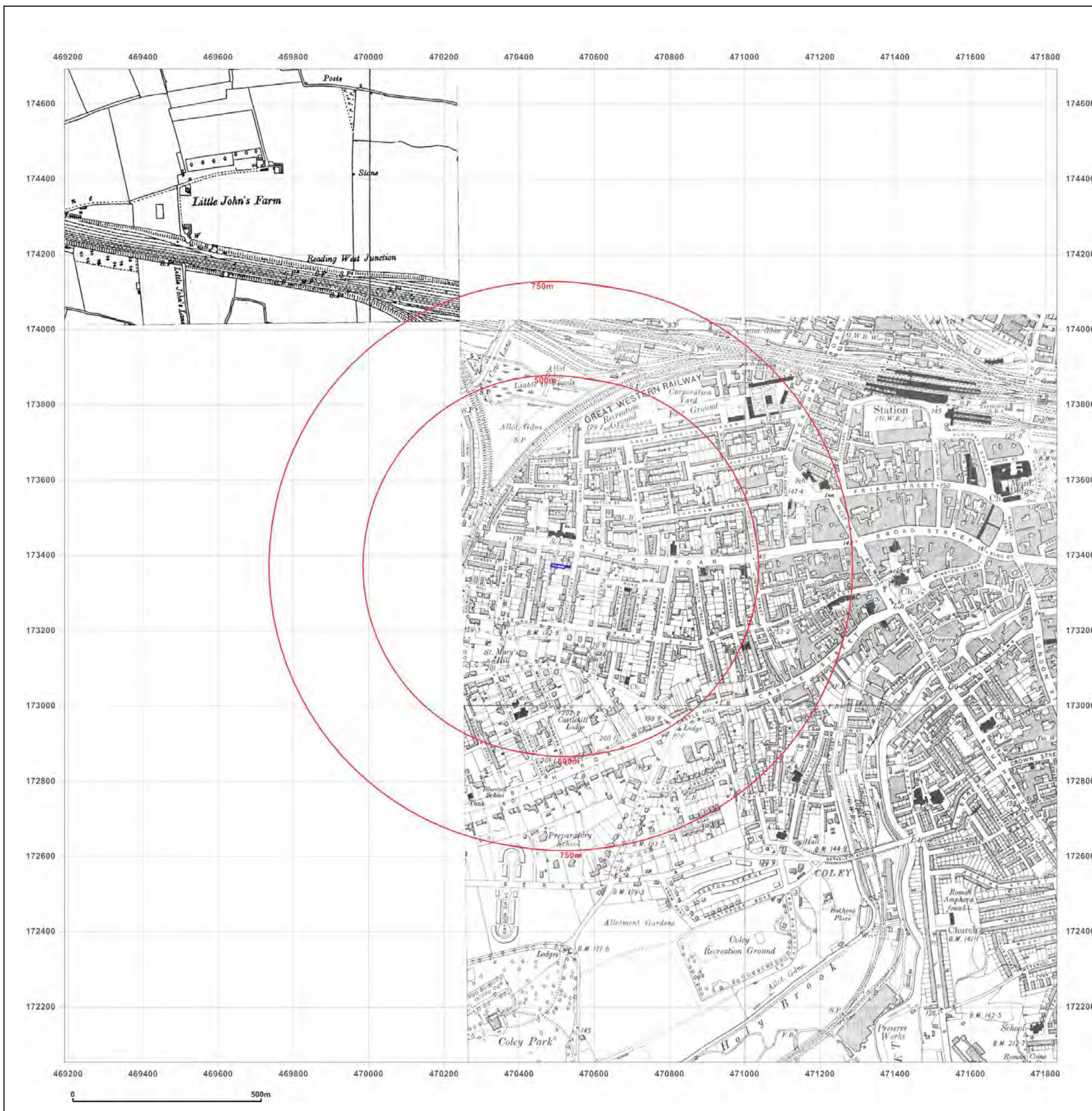


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Site Details:

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Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: County Series

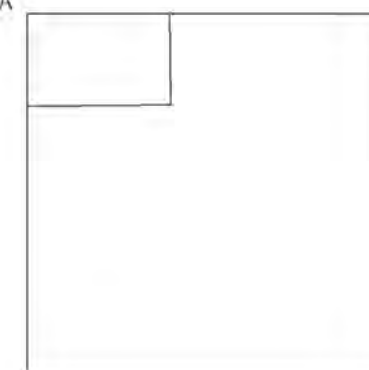
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Surveyed 1877
 Revised 1938
 Edition N/A
 Copyright N/A
 Levelled N/A

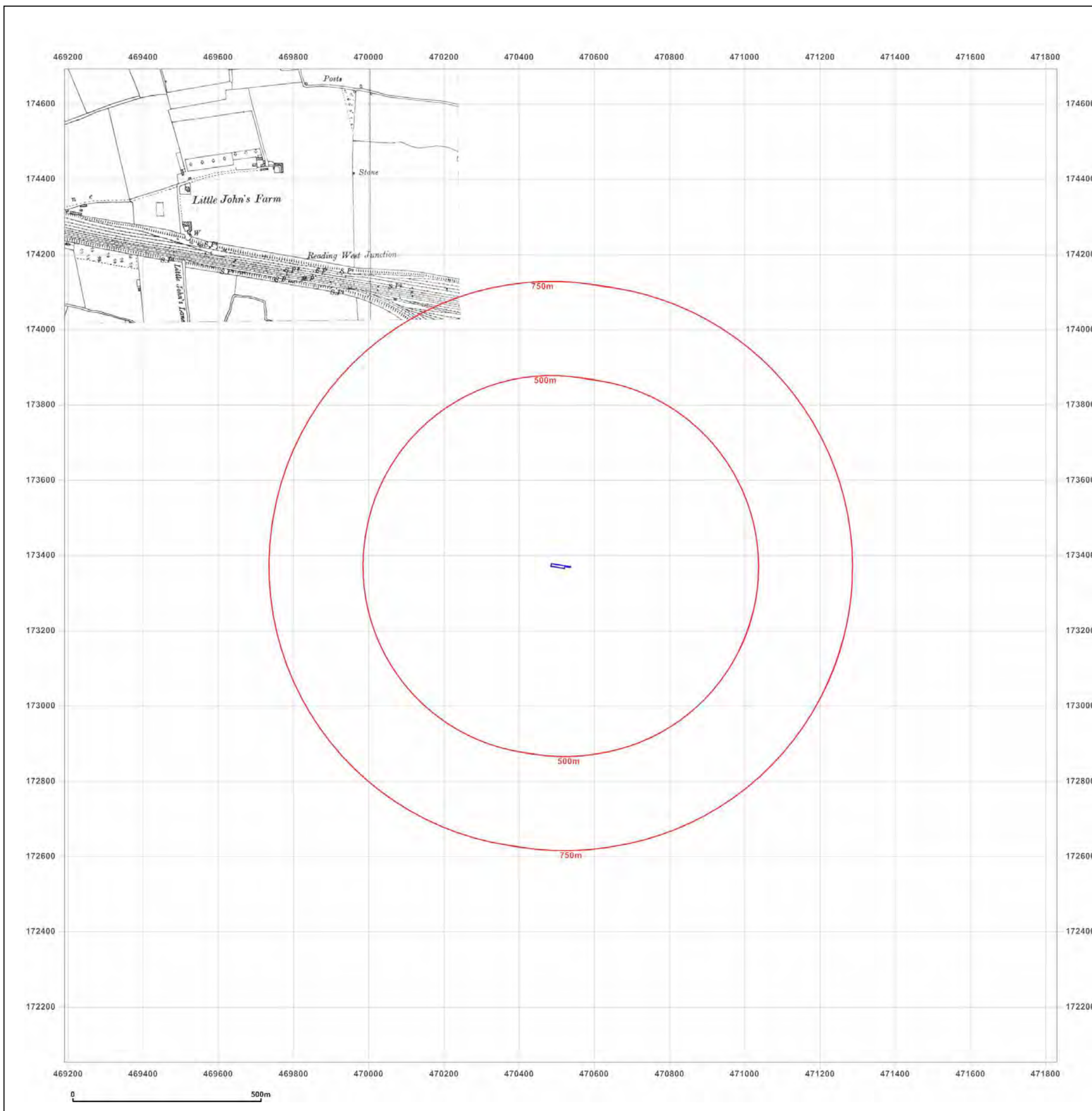


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: Provisional

Map date: 1961-1962

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1959
Revised 1961
Edition N/A
Copyright 1962
Levelled N/A

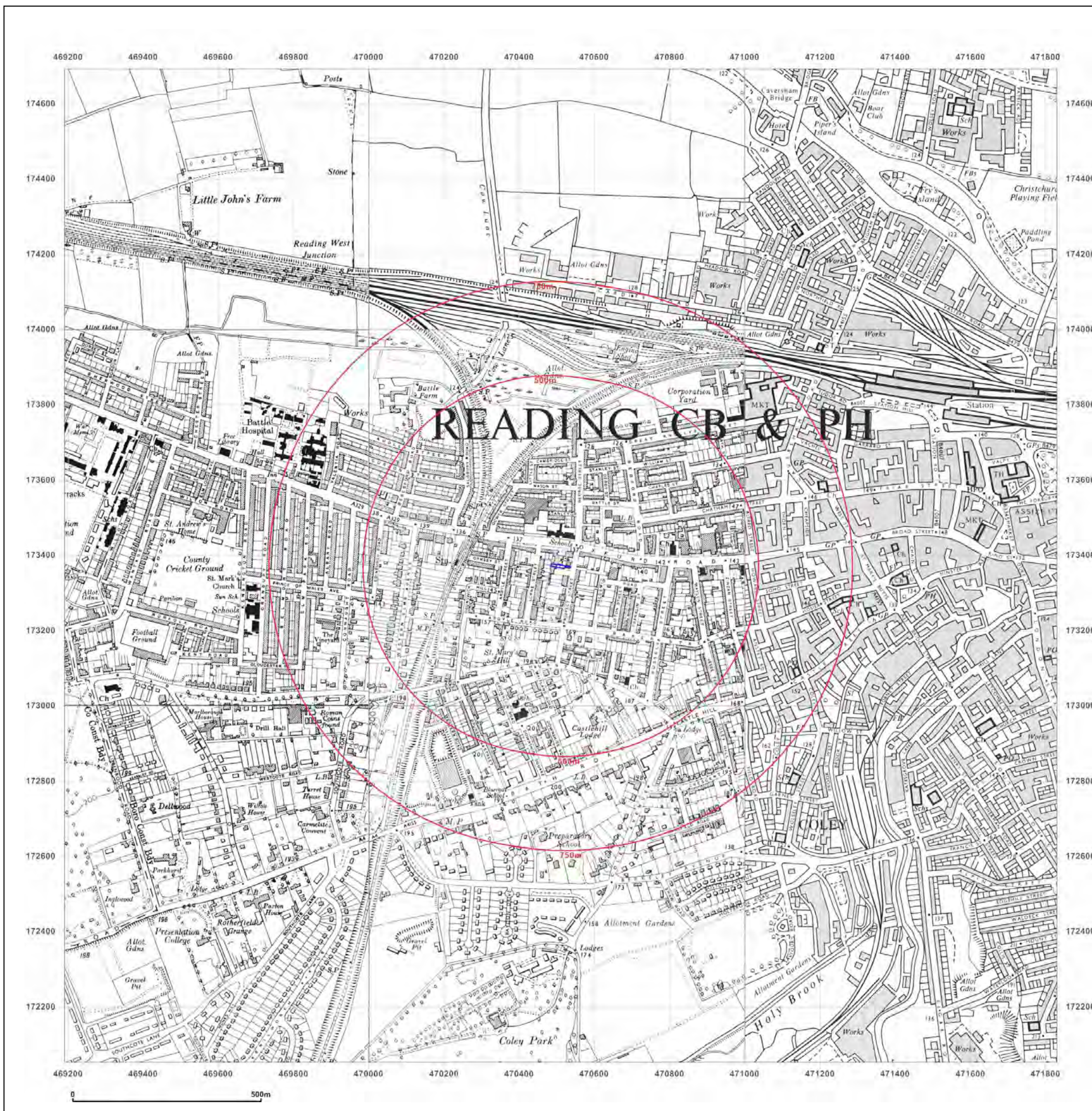


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Site Details:

LAND REAR OF PROSPECT
STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1968
Edition N/A
Copyright 1961
Levelled N/A

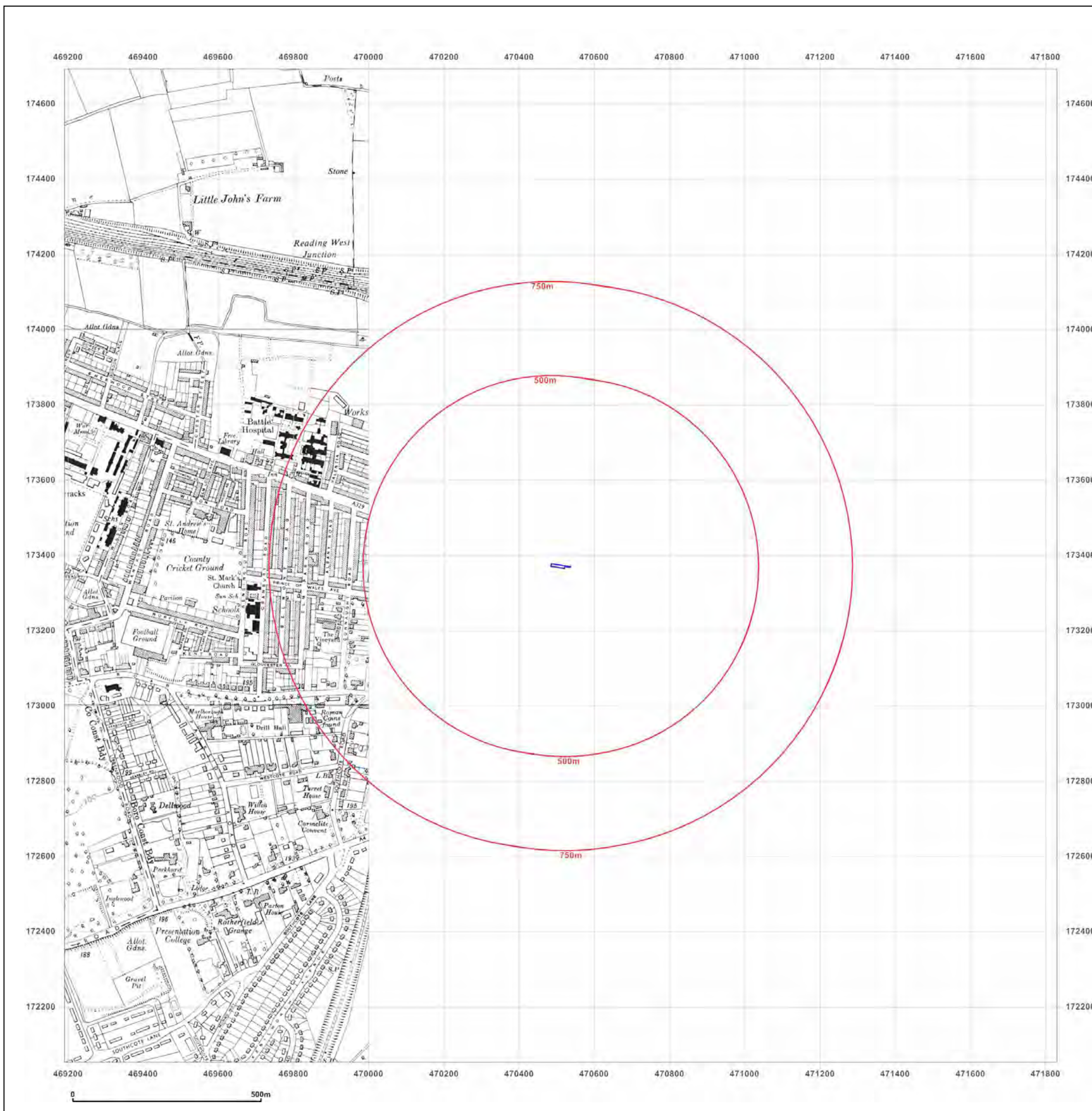


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1973-1976

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
 Revised 1975
 Edition N/A
 Copyright 1976
 Levelled 1969

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

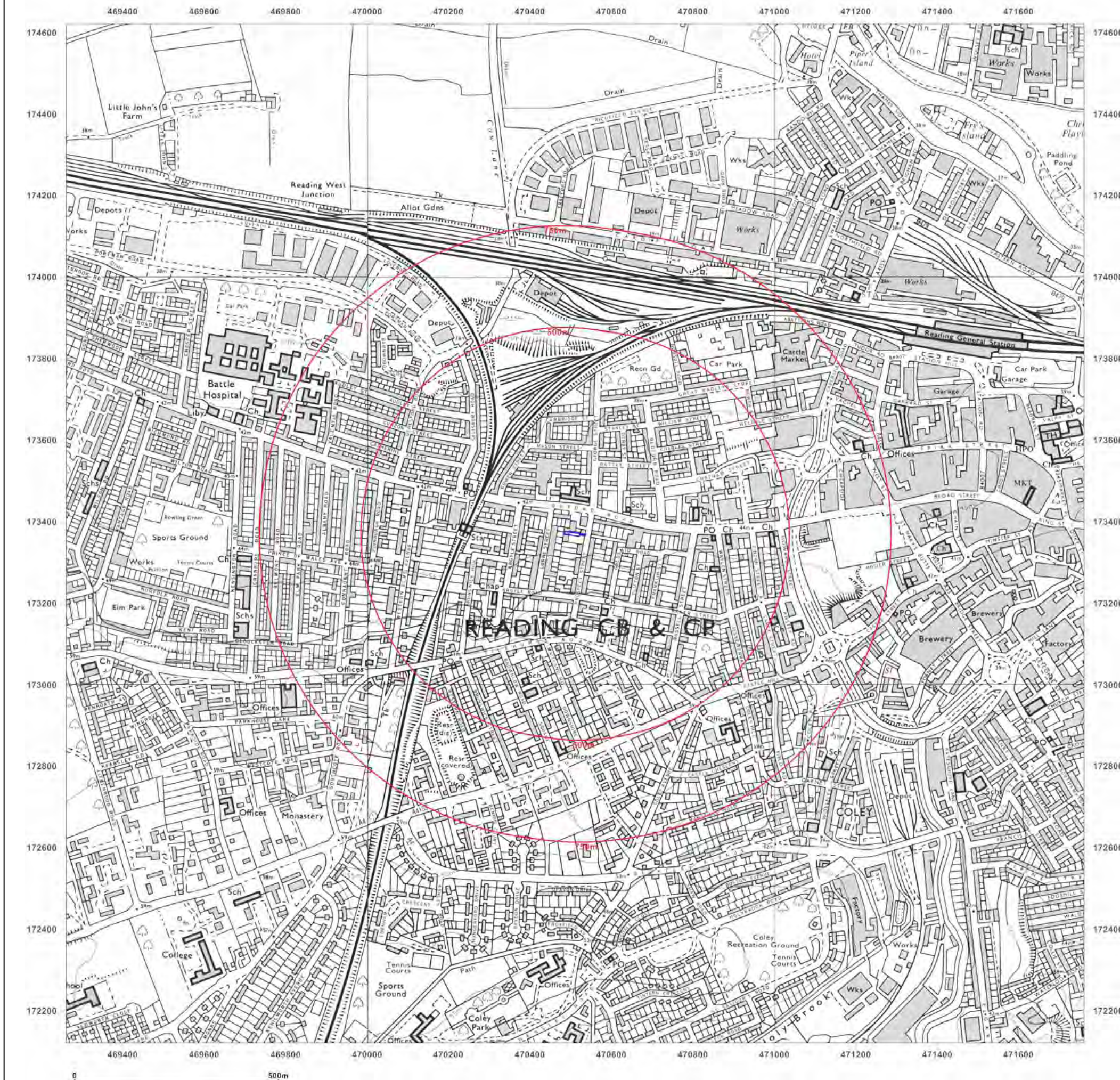


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1979-1982

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1981
 Revised 1982
 Edition N/A
 Copyright N/A
 Levelled N/A

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

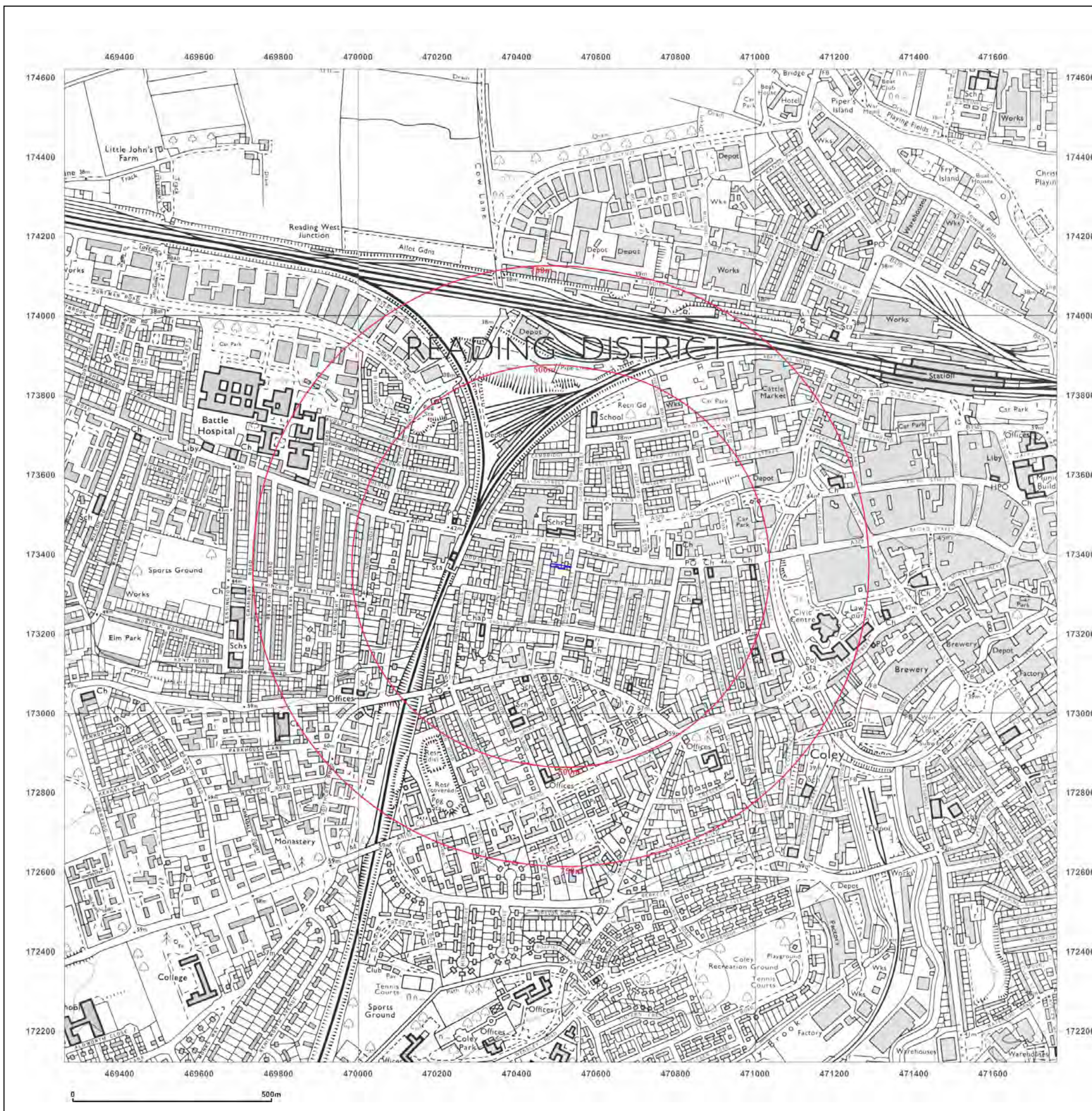


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 1989-1991

Scale: 1:10,000

Printed at: 1:10,000



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

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

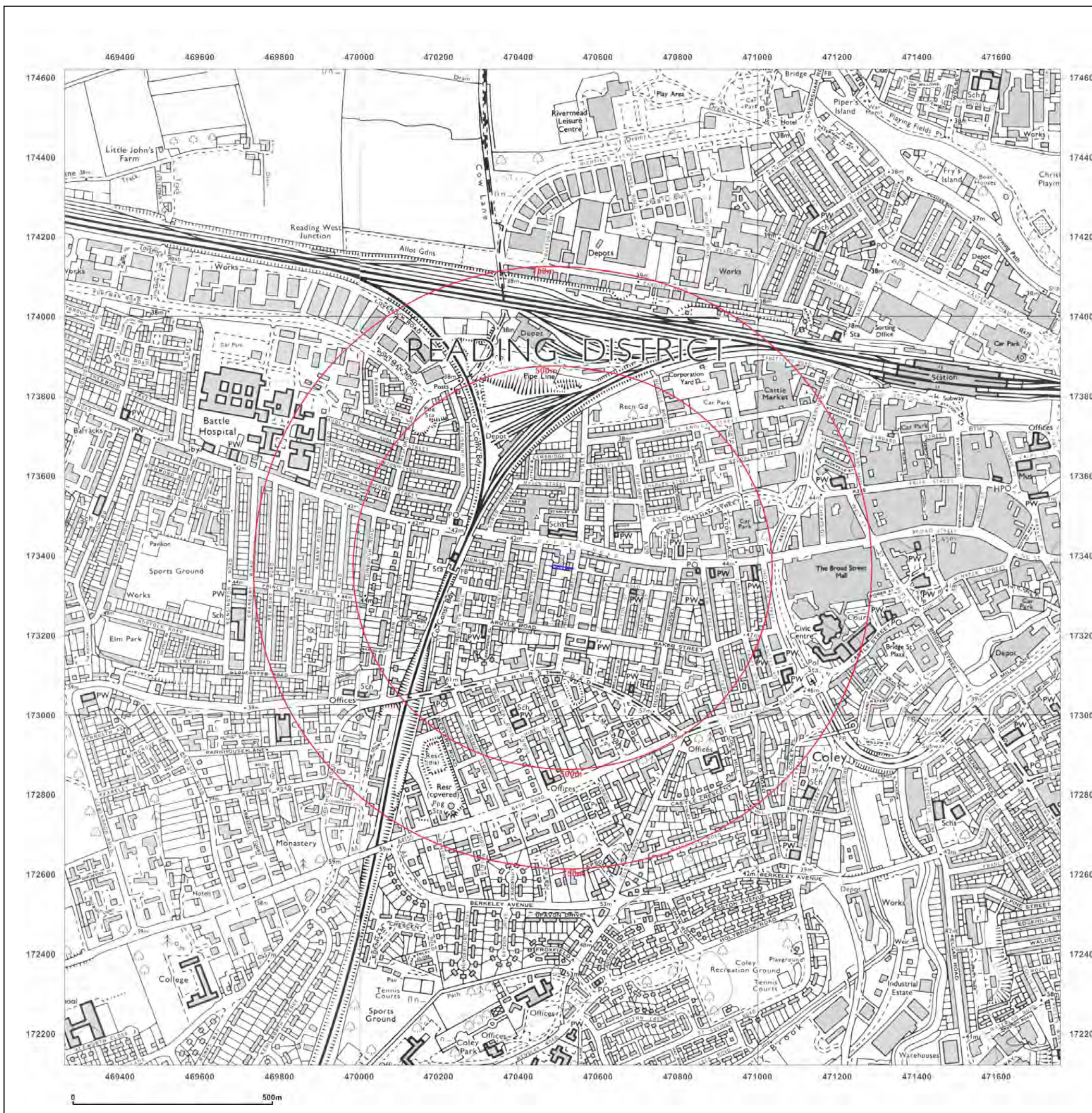


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

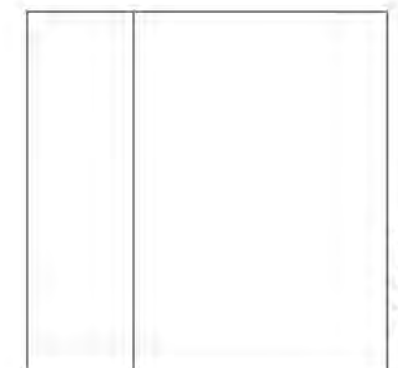
Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

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

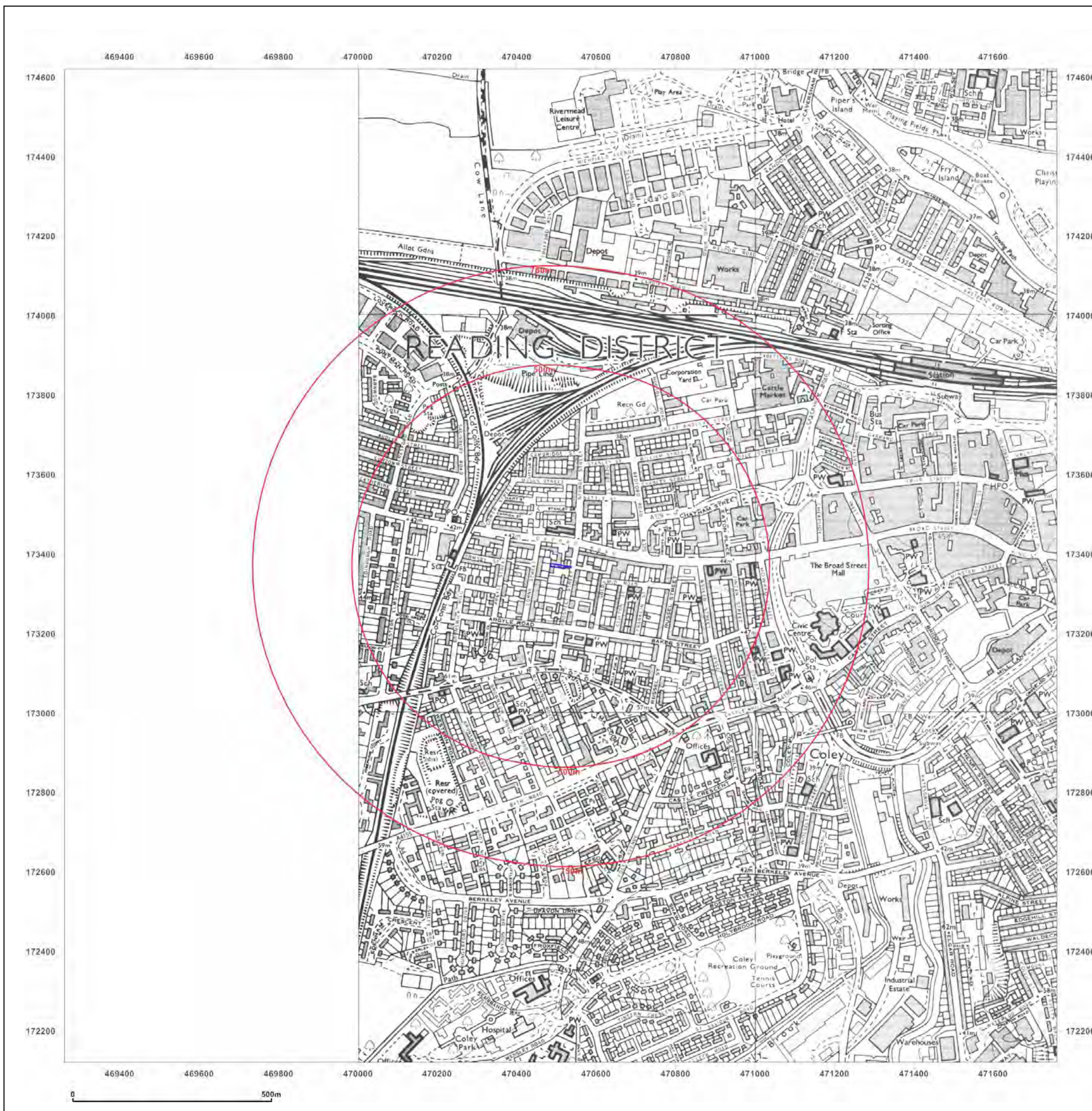


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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

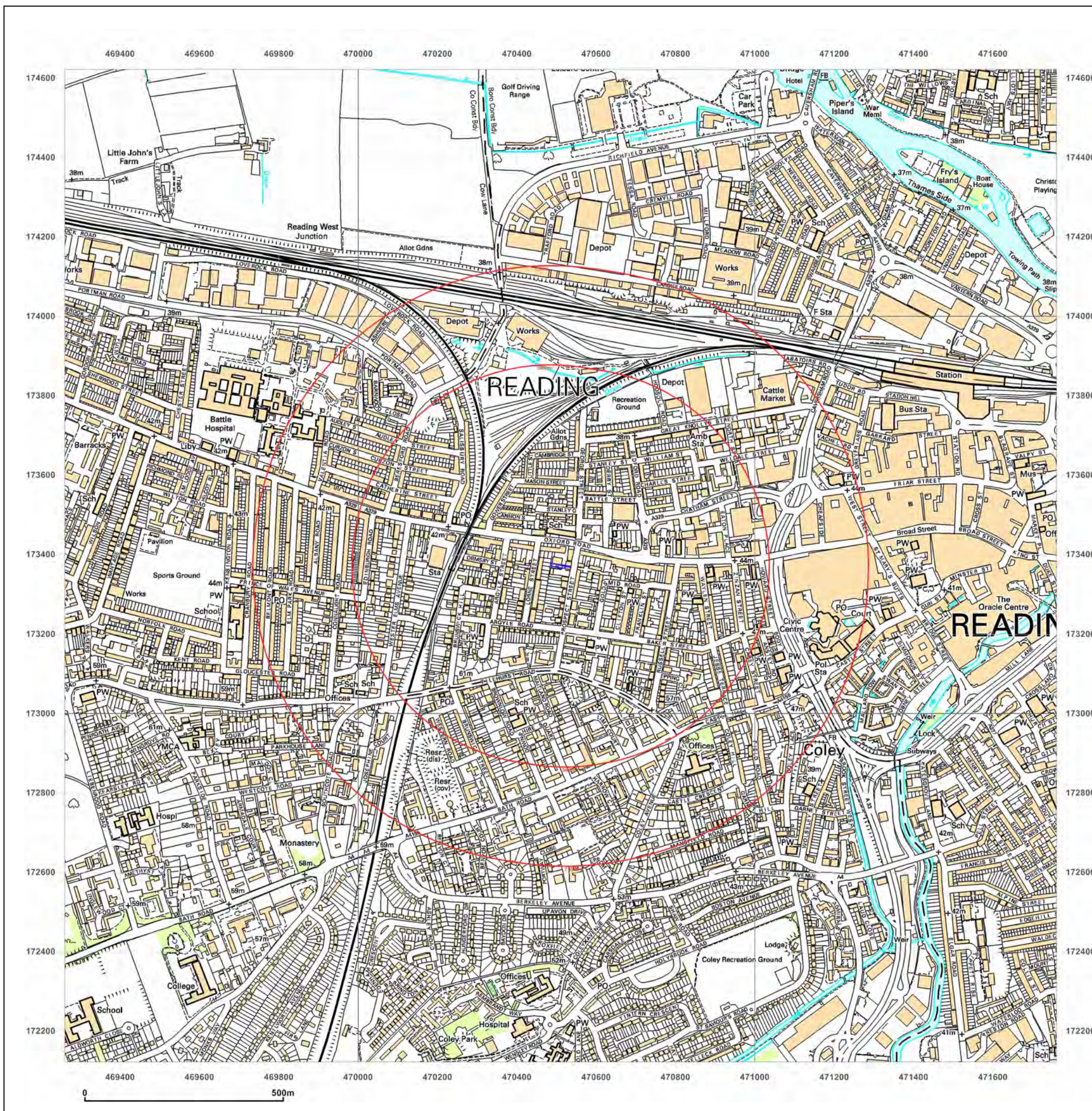


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Production date: 12 August 2019

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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

LAND REAR OF PROSPECT STREET, READING, RG1 7YG

Client Ref: R0260
Report Ref: GS-6236708
Grid Ref: 470510, 173372

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000

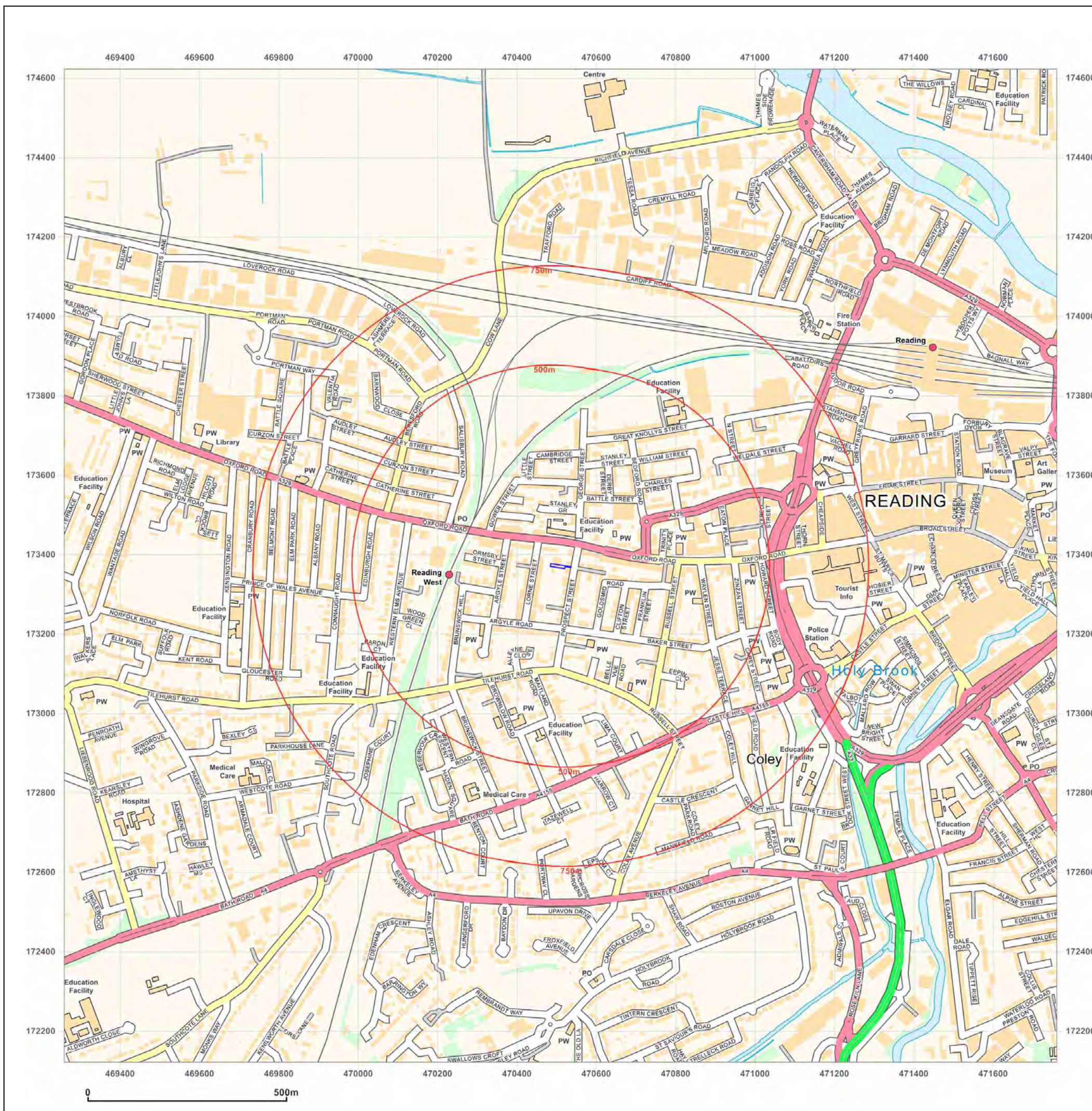


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APPENDIX 3

READING BOROUGH COUNCIL LETTER

Mr John Grace
9 Greyfriars Road
Reading
RG1 1NU

Frances Martin
Executive Director of Economic Growth &
Neighbourhood Services
Civic Offices, Bridge St, Reading, RG1 2LU

☎ 0118 937 3787

Our Ref:655026

Direct: ☎ 0118 9372314
e_mail: ross.jarvis@reading.gov.uk

19 September 2019

Your contact is: **Ross Jarvis - Environmental Protection & Nuisance**

Dear Mr Grace

ENVIRONMENTAL INFORMATION REGULATIONS 2004

RE: Environmental Information Request: Parsons Garage 217 Oxford Road, Reading, RG1 7PX

I write with reference to your recent request for environmental information in relation to the above site. A search of records held at Reading Borough Council has found the following:

1. The site has been identified by Reading Borough Council as being potentially contaminated due to its former use as a Garage.
2. Council records show that the site was decommissioned. Following this the site was redeveloped as a Tesco Express under planning application number 11/00767/FUL.
3. During the redevelopment a site investigation identified hydrocarbon contamination of land and groundwater at the site. To date it has not been possible to find records that show if remediation of the contamination has taken place.
4. The Council now plan to investigate what work has been carried out to ensure that the site poses no significant risk of harm to human health or ground water. Any further records that are identified will be passed onto you for your information.
5. To ensure that the site at the rear of 8 Prospect Street is suitable for the intended use I would recommend that a contaminated land site investigation is carried out including testing for land gas/vapours.

The information in this letter is given on the understanding that the Council accepts no liability for the use to which it is put and gives no guarantee as to the state of the land in question.

The information given represents the position within the Environmental Health database at the date of this letter and the Council can give no guarantee as to the impact of any future events in relation to the site in question.

If you would like to discuss the contents of this letter further, I can be contacted on 0118 9372314.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'R Jarvis', is written over a faint, dotted rectangular area.

Ross Jarvis
Senior Environmental Health Officer
Environmental Protection

APPENDIX 4

REPORT LIMITATIONS

LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with all reasonable skill, and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget and staff resources allocated to the project.

Other than that expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2019 and should be read in light of any subsequent changes in legislation, statutory requirements and industry best practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice of Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.

Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas or other radioactive materials.

The services are based upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth Environmental & Geotechnical Ltd interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on, and surrounding, the site.