

Phase 1 contaminated land report

Land adjacent to 28 Southampton Street,
Reading, RG1 2QL

Site address	Land adjacent to 28 Southampton Street Reading RG1 2QL
Site coordinates	471582, 172957
Report prepared for	Wexham Homes Ltd 27 Chalvey Road West Slough Berkshire SL1 2NF
Report reference	4097R1
Report status	Final
Date issued	05 April 2019
Report author	Andy Singleton Technical Director
Report reviewer	Andy Singleton Technical Director



Report summary: contaminated land risks

The purpose of this Ground First report is to provide clear and pragmatic advice regarding the nature and potential significance of contaminated land hazards which may be present at the study site.

Potential contaminated land risks have been assessed by considering two key items:

1. The likelihood that **sources of contamination** are present within the sub surface beneath the site. This gives a measure of the potential for contamination to be occurring at the site.
2. The **consequence or severity of any impacts** should contamination be present. The consequence or severity of impact is inferred from the nature of any **potential receptors** (i.e., something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body) as well as any **relevant pathways** (i.e., a route or means by which a receptor can be exposed to or affected by a contaminant) relating to the site and the surrounding area.

The assessment findings are summarised as follows:

1. Probability/likelihood of contamination being present at the Site	High likelihood	
	Likely	
	Low likelihood	
	Unlikely	
2. Potential severity/consequence of any impacts	Severe	
	Medium	
	Mild	
	Minor	
3. Overall land quality risks posed by the Site	Very high	
	High	
	Moderate	
	Moderate/low	
	Low	
	Very low	

Risk Key

Very High	High	Moderate	Moderate/Low	Low	Very Low
There is a high probability that severe harm could arise to a designated receptor from an identified hazard without appropriate remediation action	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remediation action	It is possible that without appropriate remediation action harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely any harm would be mild	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at worst if any harm was realised any effects would be mild	The presence of an identified hazard does not give rise to the potential to cause harm to a receptor

It is acknowledged that the risk assessment findings are based on documentary sources of information alone. Typically a proportionate programme of intrusive site investigations would be required to fully verify these findings.

Recommendations (for next steps)

	Undertake a proportionate Phase 2 ground investigation in order to clarify the presence and significance of any ground contamination	Based on the known history of the Site it is considered possible that localised ground contamination may be present within the sub-surface. The preliminary contaminated land risk assessment suggests that the risks posed by in situ land quality to future Site residents and local groundwater receptors are likely to be moderate to low. In order to quantify the extent and significance of these risks a proportionate programme of ground investigation is recommended. Given the presence of both the decking structure and an area of raised ground at the Site it would be prudent (if permissible) to undertake the ground investigations during future Site clearance/enabling works. The scope of any future ground investigation should be agreed with the Local Planning Authority in advance.
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1. Introduction

1.1 Background

The study site (from herein known as 'the Site') is situated on land adjacent to 28 Southampton Street, Reading, RG1 2QL. The Site is a c. 0.02 ha brownfield plot situated c. 500m south of Reading town centre. A location plan of the Site is shown in Section 1.5.

Planning permission is being sought from Reading Borough Council for the construction of a four storey block of flats. The development plans are shown in Section 1.6. No areas of soft standing or changes in the current ground elevation are proposed as part of the development plans.

In order to validate the planning application the Council has requested the following information:

Please provide a contaminated land survey and report in line with Section 4 of the validation requirements. Such information is required where contamination is known or suspected or the development site is in the vicinity of such land and ground-works are proposed; or, where there is a vulnerable or sensitive end user i.e. Residential, Schools, Nurseries, Hospitals and Allotments.

Part of the site includes an area of suspected contamination according to Council records. This information is required to determine the existence of contaminated land, its nature and the risks it may pose to the proposed development and whether remedial measures are feasible to satisfactorily reduce the contamination to an acceptable level. A desk study listing current and historic uses of the site and adjoining land, together with a site reconnaissance shall be provided, to determine the likelihood of contamination. In addition, where contamination is known or suspected or the site is in the vicinity of such land, a preliminary conceptual site model (showing all potential pathways between contaminants and receptors – known as pollutant linkages) shall be provided, together with a preliminary risk assessment of these pollutant linkages.

Ground First was commissioned by Wexham Homes Ltd in March 2019 to undertake a Phase 1 Land Quality Assessment for the Site in line with the Council's requirements.

This report has been undertaken by firstly compiling information concerning the Site and the surrounding area, including current and historical land uses, geological records and registered pollution incidents. The information which is gathered is then used to construct a 'conceptual site model', including an understanding of likely contaminant sources, pathways and receptors. Finally, a preliminary assessment of risks posed to identified receptors (i.e., people, buildings or the natural environment) from the anticipated land quality at the Site is performed. The risk assessment methodology is consistent with CIRIA C552 (2001); see Section 3.4 for details.

1.2 Purpose of this report

The purpose of this report is to provide clear and pragmatic advice regarding the nature and potential significance of any contamination hazards which may be present at the Site.

1.3 Report contents

This report is divided into two sections, as described below:

Section	Content	Purpose
Section 2: LAND QUALITY ASSESSMENT	A summary of the site history and environmental setting, the findings of the preliminary risk assessment and associated recommendations	To present a clear and concise overview of the land quality issues facing the Site, including recommendations of how to manage any land contamination which may be present
Section 3: SUPPORTING INFORMATION	A collection of site specific information on which the land quality assessment is based	To provide detailed information in support of the risk assessment; this section also represents a source of reference data for use in any subsequent site works/assessments

1.4 Report limitations

It is noted that the findings presented in this report are in part based on information supplied by third parties. Whilst we assume that all information is representative of past and present conditions we can offer no guarantee as to its validity.

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

1. Introduction

1.5 Site location plan



1. Introduction

1.6 Development plans



2. Land quality assessment

2.1 Site details

Site name:	Land adjacent to 28 Southampton Street, Reading	Current land cover:	The Site is covered by a mixture of tarmac/paving, a wooden deck and a raised area of recently cleared vegetation
Current use:	Derelict brownfield plot		
End use:	Proposed development for residential flats	Site area:	c. 0.017 ha

2.2 Conceptual understanding (potential sources of contamination)

 Site history (historical land use based on mapping presented in Section 3.5)	Date	Description of land use	Source description	LIKELY	PROBABILITY OF CONTAMINATION
	1879	The Site is entirely developed with available mapping indicating the presence of several adjoining buildings (of unspecified nature). Manor Court cul-de-sac is evident directly to the south of the Site and Southampton Street is present to the east. The land areas to the north, south and west are all developed, including the Red Lion public house (to the south). A burial ground is shown c. 25 m to the south of the Site; St Giles Church is situated c. 40 m to the east - the associated graveyard is positioned c. 75 m to the east. A malthouse is shown c. 60 m to the north-east. A tannery is located c. 80 m to the west.	The land use history suggests that there is potential for contamination to be present at the Site. Potential sources of contamination include: <i>Potential Made Ground associated with the construction and demolition of former on-Site structures (dating from the 1800s).</i> <i>Potential fuels and chemicals associated with former garage activities which may or may not have taken place at the Site.</i> <i>Possible petroleum hydrocarbons and PCBs associated with the former electricity sub station.</i> On balance, given the available information concerning the Site's past land use it is considered likely that some localised contamination may be present within the sub surface.		
	1900	No significant land uses changes on or adjacent to the Site. The former burial ground to the south is marked as disused.			
	1912	No significant land uses changes evident on-Site. A tramway is now shown along the central line of Southampton Street.			
	1931	No significant land uses changes evident on-Site. Various buildings have been demolished and several new structures erected on the land close to the northern, southern and western Site boundaries. The former malthouse to the north-east of the Site is now identified as a printing works.			
	1956 - 1957	The Site has been cleared of the previous structures and may be associated with a garage which now occupies the land directly to the south-west of the Site (it is noted that the Groundsure report contained in Section 3.3 refers to the presence of a garage on-Site during this period). The redevelopment of other surrounding plots is also evident. The former printing works to the north-east of the Site is now marked as a works; the former tannery to the north-west is labelled as warehousing. The tramway along Southampton Street is no longer evident.			
	1968 - 1970	No obvious land uses changes on or adjacent to the Site.			
	1972 - 1973	An electricity sub-station is marked in the western corner of the Site. The immediately surrounding land area appears relatively unchanged; the road layout has been remodelled c. 40 m to the north of the Site (including the existing roundabout).			
	1978 - 1979	No obvious land uses changes on-Site. All previous structures to the north-east of the Site (beyond Southampton Street) have been removed.			
	1980 -1982	No obvious land uses changes on-Site. The area to the north-east of the Site (beyond Southampton Street) has been fully redeveloped.			
	1982 -1986	No obvious land uses changes on-Site. The former garage to the south-west of the Site has been redeveloped for housing (St Giles Court); the former burial ground to the south has been redeveloped as Solent Court and Hamble Court (assumed housing).			
	1988 -1993	No obvious land uses changes on or adjacent to the Site. The electricity sub station is still shown in the west of the Site.			
	2003 - 2009	Aerial photography shows the entire Site to be covered with dense vegetation including tree cover.			
	2010	Aerial photography indicates that the vegetation has been cleared from the western half of the Site which includes three miscellaneous square features.			
	2017	Aerial photography indicates the presence of wooden decking in the west of the Site.			
2018	Aerial photography indicates that vegetation has once again encroached across the western part of the Site.				

2. Land quality assessment

2.2 Conceptual understanding (potential sources of contamination)																								
 Current land use	The Site is derelict and disused. There are no built structures on the Site other than a raised decking area formerly associated with the neighbouring derelict public house. Further details of the current Site condition are included in Section 2.5. There are no known buried storage tanks at the Site. There is no known bulk fuel or chemical storage on Site.	POTENTIAL SOURCES OF CONTAMINATION	The Site's present use is unlikely to have given rise to any significant land contamination.	UNLIKELY																				
 Neighbouring industrial land uses <i>(see environmental data report in Section 3.3 for full listing)</i>	The following potentially contaminative commercial or industrial land uses have been identified within 250 m of the Site. An electricity sub-station is recorded to be present on-Site. However, no such structure was observed during a recent Site walkover (see Section 2.5). Kevin Trayhorne (vehicle repair, testing and servicing) is located c. 90 m to the south-east Southampton Street Garage (car sales) is located c. 95 m to the south-east 24-7 Car Keys (vehicle repair, testing and servicing) is located c. 135 m to the south A container and storage depot is located c. 150 m to the north-east <table><thead><tr><th>Nr</th><th>Nearest distance</th><th>Land use / permitted activity / authorisation</th></tr></thead><tbody><tr><td>0</td><td>NA</td><td>Fuel station entries</td></tr><tr><td>0</td><td>NA</td><td>Gas pipelines and high voltage underground cables</td></tr><tr><td>0</td><td>NA</td><td>Control of major accident hazards sites (COMAH)</td></tr><tr><td>0</td><td>NA</td><td>Notification of installations handling hazardous substances (NIHHS) sites</td></tr><tr><td>0</td><td>NA</td><td>Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990</td></tr><tr><td>0</td><td>NA</td><td>Local Authority pollution prevention and control sites</td></tr></tbody></table>		Nr	Nearest distance	Land use / permitted activity / authorisation	0	NA	Fuel station entries	0	NA	Gas pipelines and high voltage underground cables	0	NA	Control of major accident hazards sites (COMAH)	0	NA	Notification of installations handling hazardous substances (NIHHS) sites	0	NA	Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990	0	NA	Local Authority pollution prevention and control sites	Given their position relative to the Site the identified off-Site land uses are unlikely to have given rise to any significant land contamination at the Site itself.
Nr	Nearest distance	Land use / permitted activity / authorisation																						
0	NA	Fuel station entries																						
0	NA	Gas pipelines and high voltage underground cables																						
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0	NA	Local Authority pollution prevention and control sites																						
PROBABILITY OF CONTAMINATION																								

2. Land quality assessment

2.2 Conceptual understanding (potential sources of contamination)				
 EA recorded pollution incidents	Four Environment Agency pollution incidents have been recorded within 250 m of the Site the nearest of which was c. 175 m to the north and related to pollution from an unidentified source in August 2001. The incident was judged to have had a 'minor impact' to water and 'no impact' to land or air. All other incidents recorded within 250 m had 'no impact' to land.	POTENTIAL SOURCES OF CONTAMINATION	The recorded incidents are considered to be of no significance to the Site itself given their nature, timing and location.	NEGLIGIBLE
 Landfills / waste sites <i>(taken within 500m radius of the Site boundary, see environmental data report in Section 3.3 for full listing)</i>	There are no Environment Agency listed historical landfills located within 500 m of the Site. There are no Environment Agency listed operational landfills located within 500 m of the Site. There are no Local Authority listed historical landfills located within 500 m of the Site. The following other waste sites are registered within 500 m of the Site: 0 Records of registered waste transfer sites. 0 Records of registered waste treatment or disposal sites. 0 Records of licensed waste management facilities.		No contamination hazards have been identified in relation to known landfill sites. Given the absence of any waste treatment, transfer or disposal sites within close proximity of the Site no associated contamination hazards have been identified.	NEGLIGIBLE
 Rn Radon	According to current UK radon mapping the Site lies in an area where <1% of homes are at or above the UK radon action level (200 Bq/m3).		<1% of homes are at or above the UK radon action level (200 Bq/m3).	UNLIKELY

2. Land quality assessment

2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)

 Geology and Groundwater (see the environmental data report in Section 3.3 for full details)	British Geological Survey (BGS) mapping indicates the presence of the Taplow Gravel Member directly beneath the Site which comprises sand and gravel. These deposits are classified as a Secondary A Aquifer. BGS mapping indicates that the bedrock geology consists of the Seaford Chalk Formation and Newhaven Chalk Formation, which are collectively classified as a Principal Aquifer. The Chalk is mapped at outcrop c. 30 m to the north of the Site. BGS groundwater susceptibility mapping suggests that the Site is in an area of possible 'clearwater flooding' which could occur at ground surface. The nearest BGS borehole record is associated with a borehole situated c. 25 m to the north-east of the Site. The Site does not lie within a Source Protection Zone (SPZ). There are no groundwater abstraction licences within 500 m of the Site.	POTENTIAL RECEPTORS	A Secondary (A) Aquifer comprises permeable layers capable of supporting water supply at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. A Principal Aquifer comprises rock or drift deposits that have high permeability - meaning they usually provide a high level of water storage. They may support strategic water supply and/or river base flow. Borehole ref SU77SW55 was drilled to a depth of 18 m in 1978. The geological sequence was recorded as follows: - 1.5 m of Made Ground (sandy clay with ash and brick) - 1.5 m of soft brown silty sandy clay with gravel - 15m+ white chalk with occasional flint A groundwater strike was recorded at a depth of 3.5 m bgl. There are no mapped SPZs within 500 m of the Site. The nearest licensed abstraction is situated c. 660 m to the north-west of the Site. This abstraction is licensed to Primark Stores Ltd for commercial/industrial/public services use.	MEDIUM	POTENTIAL SEVERITY OF IMPACT
 Geohazards	There are no documented coal mining areas within 75m of the Site. There are no brine affected areas within 75 m of the Site. Given the history of Site development some Made Ground is anticipated to be present beneath the ground surface. The following natural hazards (with a hazard rating of moderate or above) are recorded by the BGS at or within 50 m of the Site. Shrink-swell - moderate risk Soluble rocks (associated with the underlying Chalk) - high risk			MEDIUM	

2. Land quality assessment

2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)					
 Surface water (see the environmental data report in Section 3.3 for full details)	The nearest surface water feature is an inland river situated c. 90m to the north-west of the Site. The River Kennet is located c. 140 m to the north-west. The Site is not located within Flood Zones 2 or 3. The Risk of Flooding from Rivers and Sea (RoFRaS) rating is 'low'. There is a single surface water abstraction licence within 1 km of the Site. This relates to a licence held by Oracle Shopping Centre at a distance of c. 180 m to the north of the Site.	POTENTIAL RECEPTORS	The identified surface water features are unlikely to be at risk from ground conditions at the Site not least given the reasonable separation distances.	MINOR	POTENTIAL SEVERITY OF IMPACT
 Environmental designations (see the environmental data report in Section 3.3 for full details)	There are no environmentally sensitive land use designations located within 2 km of the Site.		No environmental receptors have been identified.	NEGLIGIBLE	
 Human receptors	Proposed residents/users of the Site.		Human receptors are proposed to be present on Site.	SEVERE	

2.4 Regulator perspective		
Consultation date	27/03/19	Reading Borough Council
Ground First consultant	Andy Singleton	Environmental Protection Team
Consultation outcome	The Council was unable to respond within the timescale of the Phase 1 reporting.	

2. Land quality assessment

2.5 Site inspection (see photographs in section 3.2)			
Inspection date	2nd April 2019	General site condition	Derelict site in poor state of repair; some fly tipped wastes evident
Ground First consultant	Andy Singleton	Site contact (position)	N/A
Topography	The ground level across the Site area is variable. A raised wooden deck is present in the north-west corner of the Site; this structure is elevated c. 0.7 m above the land present in the south and south-west of the Site. The deck level is c. 1.2 m above the parking area associated with the commercial premises directly to the north of the Site. The land in the east of the Site is also raised above the neighbouring topography as a result of the accumulation of vegetation (including both former tree stumps and debris resulting from recent tree/shrub clearance works) and miscellaneous wastes.	Ground cover	The former pedestrian access to the Site (via a narrow alleyway along the southern Site boundary) is covered by weathered tarmac. The area in the south-west of the Site is occupied by paving slabs (partly obscured by vegetation remains). The north-west of the Site is occupied by a raised wooden deck; former vegetation growth was observed between the decking slats at a number of locations, suggesting that the land beneath the deck may include some soft standing. The eastern part of the Site (behind the advertising hoarding) is covered by numerous tree/shrub stumps plus some miscellaneous waste materials (including occasional brick rubble, wooden planks, assorted plastics, etc.). The area to the front of the Site (i.e., in front of the advertising hoarding) is covered by grassed soft standing.
Current site land use	The Site is currently derelict. Access to the Site is restricted by wooden fencing on three sides and the built structures which run along the south-eastern Site boundary.	On-Site structures	No buildings are present on-Site. The only current structure is the raised wooden deck in the north-west of the Site which is understood to have been previously associated with the neighbouring public house. There is no obvious evidence of any structures associated with the electricity sub-station shown to be present on available historical land use mapping.
Visual / olfactory evidence of contamination	Given the presence of paving, tarmac and wooden decking in the south and west of the Site, no observations regarding prevailing ground conditions were possible in these areas. The raised former vegetated area in the east of the Site was of the order 0.5 m higher than the level along the southern Site boundary. The composition of this raised area is uncertain although is assumed to comprise a significant amount of soil and vegetation remains (given the long standing presence of vegetation cover and the occurrence of many tree/shrub stumps at surface); it is noted that the southern edge of the raised land mass also contained localised brick and concrete remains, various plastics and some metals. A number of hypodermic needles were observed on the ground surface, notably along the south-eastern Site boundary.	On site drainage	Drainage downpipes were observed along the side of the former public house which forms the south-eastern Site boundary. A suspected drainage man hole cover was also located along this boundary. No other drainage infrastructure was observed on-Site although reliable observations were difficult due to the presence of the decking area and the former vegetated area in the east of the Site.

2. Land quality assessment

2.5 Site inspection (see photographs in section 3.2)				
Bulk storage tanks (fuel and chemical storage)	No bulk fuel or chemical storage was observed on Site or in the immediate vicinity.		Invasive species	No direct evidence of any invasive species was observed during the site walkover.
Neighbouring land uses	NW	Commercial office accommodation and hard standing vehicle parking to the rear	Off-site contaminant sources	No obvious contamination sources were identified in relation to the neighbouring land uses; it is noted however that close inspection of the adjacent premises was not undertaken.
	NE	Southampton street		
	SE	Derelict public house (The Red Lion)		
	SW	Residential flats (St Giles Court)		
Local water features	No surface water features were observed within the immediate Site surroundings.		Distance to nearest residential property	The nearest residential accommodation is positioned directly to the west of the Site (St Giles Court).
Comments	No significant contaminant sources were observed during the Site walkover although some suspected Made Ground and fly tipped materials were present in the eastern half of the Site. Full Site clearance will be required (including the decking area, paved surfaces and the residual stumps and associated wastes in the east of the Site) before a more meaningful assessment of prevailing ground conditions can be made.			

2. Land quality assessment

2.6 Preliminary Risk Assessment								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
On-Site sources								
1	Potential for inorganic and low volatility organic contaminants to be present within the subsurface (potentially associated with any Made Ground or contaminants associated with the former electricity sub station and/or garage facility)	Dermal contact, soil & soil dust ingestion, inhalation of soil dust	HH	Future residential occupants & construction workers	MEDIUM	UNLIKELY	LOW RISK	Risk rating reflects the potential for localised ground contamination beneath the Site but also the proposed presence of hard standing across the entire Site which will significantly constrain any future exposure to sub surface soils.
2		Consumption of home grown produce	HH	Future residential occupants	MEDIUM	UNLIKELY	LOW RISK	Risk rating reflects the proposed absence of any areas of soft standing; no home grown produce is therefore anticipated.
3		Ingress into water supply pipework and subsequent water ingestion	HH	Future residential occupants	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Risk rating reflects the potential for localised ground contamination beneath the Site including possible organics associated with former garage uses and the previous electricity sub station.
4		Building materials in direct contact with aggressive ground	PROP	Future site buildings	MEDIUM	UNLIKELY	LOW RISK	Aggressive ground conditions are not anticipated at the Site.
5		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Taplow Gravel Member (Secondary A Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	The risk ratings reflect the potential for localised ground contamination beneath the Site (based on historical land use information) as well as the sensitive nature of the underlying groundwater. It is noted however that there are no licensed groundwater abstractions or SPZs within the locality. The proposed presence of hard standing across the entire Site will also limit any future leachate generation and hence the mobility of any sub surface contaminants.
6		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Seaford and Newhaven Chalk (Principal Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	
7		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Surface water course (90m to NW of Site)	MEDIUM	UNLIKELY	LOW RISK	The risk rating reflects the potential for localised ground contamination beneath the Site but also the appreciable distance to the nearest surface water feature. The proposed presence of hard standing across the entire Site will also limit the future mobility of any sub surface contaminants.

2. Land quality assessment

2.6 Preliminary Risk Assessment								
Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
8	Limited potential for volatile organic contaminants to be present within the subsurface soils (potentially associated with any localised Made Ground or contaminants associated with the former garage facility)	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Future residential occupants & construction workers	MEDIUM	UNLIKELY	LOW RISK	Risk rating reflects the limited potential for any significant volatile contamination (based on the known land use history) plus the proposed presence of hard standing across the entire Site which will significantly constrain any future exposure to sub surface soils.
9		Consumption of home grown produce	HH	Future residential occupants	MEDIUM	UNLIKELY	LOW RISK	Risk rating reflects the proposed absence of any areas of soft standing; no home grown produce is therefore anticipated.
10		Ingress into water supply pipework and subsequent water ingestion	HH	Future residential occupants	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Risk rating reflects the limited potential for volatile ground contamination beneath the Site although the localised presence of organics associated with the former garage and electricity sub station uses remain plausible.
11		Migration of vapours to surface; inhalation indoors	HH	Future residential occupants & construction workers	MEDIUM	UNLIKELY	LOW RISK	The risk ratings reflect the likely absence of any significant vapour phase ground contamination beneath the Site as well as the presence of hard standing across the entire Site.
12		Migration of vapours to surface; inhalation outdoors	HH	Future residential occupants & construction workers	MEDIUM	UNLIKELY	LOW RISK	
13		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Taplow Gravel Member (Secondary A Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Risk ratings reflect the limited potential for any significant volatile contamination but also the sensitive nature of the underlying groundwater. It is noted that there are no licensed groundwater abstractions or SPZs within the locality. The proposed presence of hard standing across the entire Site will also limit any future leachate generation and hence the mobility of any sub surface contaminants.
14		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Seaford and Newhaven Chalk (Principal Aquifer)	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	
15		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Surface water course (90m to NW of Site)	MEDIUM	UNLIKELY	LOW RISK	Risk rating reflects the limited potential for any significant volatile contamination beneath the Site and also the appreciable distance to the nearest surface water feature. The proposed presence of hard standing across the entire Site will also limit the future mobility of any sub surface contaminants.

2. Land quality assessment

2.6 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
16	Very modest potential for methane to be present locally within the subsurface soils (potentially associated with any Made Ground)	Lateral and vertical migration into on site buildings; potential to cause an explosion	HH	On site properties and their occupants	MEDIUM	UNLIKELY	LOW RISK	No appreciable ground gas concentrations or gas pressures are anticipated within the sub surface given the likely absence of extensive volumes of Made Ground and also the appreciable age of any Made Ground that is present on-Site.
17	Very modest potential for carbon dioxide to be present within the subsurface soils (potentially associated with any Made Ground)	Lateral and vertical migration into on site buildings; potential to cause asphyxiation/toxic effects	HH	Occupants of on-site buildings	MEDIUM	UNLIKELY	LOW RISK	
18	Potential for radon within the subsurface	Lateral/vertical migration into on site buildings; potential to cause long term health effects	HH	Occupants of on-site buildings	MEDIUM	UNLIKELY	LOW RISK	No elevated radon gas concentrations are anticipated within the local area based on available data sets.
	RISK RATING						MODERATE/LOW RISK	

2. Land quality assessment

2.7 Next steps		
✓	Undertake a proportionate Phase 2 ground investigation in order to clarify the presence and significance of any ground contamination	Based on the known history of the Site it is considered possible that localised ground contamination may be present within the sub-surface. This reflects the long history of development activity at the Site including various phases of building demolition, the former presence of an electricity sub station (between the c. 1970s and 1990s) and the possible association with a former garage (present largely to the south-west of the Site from the 1940/1950s to the 1980s). The proposed presence of hard standing across the entire Site will limit the exposure risks to future occupants. However, moderate to low contamination risks have been identified both to future Site users (as a result of possible ingress of organic contaminants to water supply pipework) and also to the underlying groundwater environment. In order to quantify the extent and significance of these risks a proportionate programme of ground investigation is recommended. Given the presence of both the decking structure and an area of raised ground at the Site it would be prudent (if permissible) to undertake the ground investigations during future Site clearance/enabling works (note: it is assumed that the material forming the raised area of land in the east of the Site will be removed as part of any ground preparation works). The scope of any future ground investigation should be agreed with the Local Planning Authority in advance.

3. Supporting information

The following supporting information is contained in this section:

Section	Content
3.1	Referenced materials used in the Phase 1 reporting
3.2	Site photographs
3.3	Published environmental data records (Groundsure Enviro Insight report for Land adjacent to 28 Southampton Street, Reading, RG1 2QL. REF: 5898623) including: • Aerial photographs and site map • Environmental permits, incidents and registers • Landfill and other waste sites • Current land use information • Geology • Hydrogeology and hydrology • Flooding • Designated environmentally sensitive sites • Other environmental factors
3.4	Risk assessment methodology
3.5	Historical land use mapping

Disclaimer

This report has been prepared by Ground First in its professional capacity as a contaminated land consultancy, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client, and is provided by Ground First solely for the internal use of its client.

The advice and opinions in this report should be read and relied on only in the context of the report as a whole, taking account of the terms of reference agreed with the client. The findings are based on the information made available to Ground First at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

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3. Supporting information

3.1 References

The following references were used to inform the conceptual site model and preliminary risk assessment:

British Geological Survey, 2018. Geology of Britain viewer (<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>)

British Standards Institute, 2011. Investigation of potentially contaminated sites – code of practice. BS10175:2011+A1:2013.

CIRIA, 2001. Contaminated land risk assessment. A guide to good practice. Publication C552. CIRIA London. ISBN 0-86017-552 9.

Environment Agency, 2004. Publication CLR 11. Model Procedures for the Management of Land Contamination.

Health Protection Agency, 2000. Spring 2000 Newsletter featuring; Radon: Guidance on Protective Measures for New Dwellings (BR 211).

Groundsure, 2018. Groundsure Enviro Insight report for Land adjacent to 28 Southampton Street, Reading, RG1 2QL. REF: 5898623

3. Supporting information

3.2 Site photographs

Photograph 1: View of Site frontage - looking from Southampton Street to the west



Photograph 2: View of neighbouring commercial premises to the north of the Site



Photograph 3: View of neighbouring public house (derelict) to the south of the Site



Photograph 4: Side elevation of neighbouring derelict public house positioned directly south of the Site



Photograph 5: Rear elevation of neighbouring commercial premises to the north of the Site



Photograph 6: Residential development located directly to the rear (south-west) of the Site



Photograph 7: Site entrance - former alleyway along southern Site boundary leading from Southampton Street



Photograph 8: Panoramic view of the Site from south-western corner



Photograph 9: View of western part of the Site including former raised decking structure



Photograph 10: View of decking area and former vegetated area in the east of the Site



Photograph 11: View along southern Site boundary - looking north-east towards Southampton Street



Photograph 12: View of paved area in the south-west corner of the Site



Photograph 13: Former vegetated area in the east of the Site - looking towards the north



Photograph 14: Former vegetated area in the east of the Site - looking towards the east



Photograph 15: Decking area present in the north-west corner of the Site - looking to the west



Photograph 16: Decking area present in the north-west corner of the Site - looking to the east



Photograph 17: Drainage infrastructure located along southern Site boundary (associated with neighbouring public house)



Photograph 18: Assumed drainage manhole located along southern Site boundary



3. Supporting information

3.3 Environmental data report

Readily available environmental information relating to the Site and its surrounding area has been provided by Groundsure.

Address: Land adjacent to 28 Southampton Street, Reading, RG1 2QL
Date: 24 Mar 2019
Reference: GS-5898623
Client: Ground First

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 20-Apr-2015
Grid Reference: 471582,172957
Site Size: 0.0168ha

Report Reference: GS-5898623
Client Reference: 4097

Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information – Historical Tank Database	14
1.3 Additional Information – Historical Energy Features Database	16
1.4 Additional Information – Historical Petrol and Fuel Site Database	19
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	19
1.6 Historical military sites	21
1.7 Potentially Infilled Land	21
2. Environmental Permits, Incidents and Registers Map	22
2. Environmental Permits, Incidents and Registers	23
2.1 Industrial Sites Holding Licences and/or Authorisations	23
2.1.1 Records of historic IPC Authorisations within 500m of the study site	23
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	23
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	23
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	23
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	23
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	24
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	24
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	24
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	25
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	25
2.2 Dangerous or Hazardous Sites	25
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents	26
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	26
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	27
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	27
3. Landfill and Other Waste Sites Map	28
3. Landfill and Other Waste Sites	29
3.1 Landfill Sites	29
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site	29
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site	29
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	30
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	30
3.2 Other Waste Sites	30
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	30
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site	30
4. Current Land Use Map	32
4. Current Land Uses	33
4.1 Current Industrial Data	33
4.2 Petrol and Fuel Sites	34
4.3 National Grid High Voltage Underground Electricity Transmission Cables	34
4.4 National Grid High Pressure Gas Transmission Pipelines	34

5. Geology	35
5.1 Artificial Ground and Made Ground.....	35
5.2 Superficial Ground and Drift Geology	35
5.3 Bedrock and Solid Geology	35
6 Hydrogeology and Hydrology	36
6a. Aquifer Within Superficial Geology	36
6b. Aquifer Within Bedrock Geology and Abstraction Licences	37
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences	38
6d. Hydrogeology – Source Protection Zones within confined aquifer	39
6e. Hydrology – Watercourse Network and River Quality	40
6.Hydrogeology and Hydrology	41
6.1 Aquifer within Superficial Deposits.....	41
6.2 Aquifer within Bedrock Deposits.....	41
6.3 Groundwater Abstraction Licences.....	42
6.4 Surface Water Abstraction Licences.....	45
6.5 Potable Water Abstraction Licences.....	46
6.6 Source Protection Zones.....	48
6.7 Source Protection Zones within Confined Aquifer.....	48
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	49
6.9 River Quality.....	49
6.9.1 Biological Quality:.....	49
6.9.2 Chemical Quality:.....	50
6.10 Ordnance Survey MasterMap Water Network.....	50
6.11 Surface Water Features.....	56
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)	57
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS)	58
Map	58
7 Flooding	59
7.1 River and Coastal Zone 2 Flooding.....	59
7.2 River and Coastal Zone 3 Flooding.....	60
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	60
7.4 Flood Defences.....	60
7.5 Areas benefiting from Flood Defences.....	60
7.6 Areas benefiting from Flood Storage.....	61
7.7 Groundwater Flooding Susceptibility Areas.....	61
7.8 Groundwater Flooding Confidence Areas.....	61
8. Designated Environmentally Sensitive Sites Map	62
8. Designated Environmentally Sensitive Sites	63
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	63
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	63
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	63
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	63
8.5 Records of Ramsar sites within 2000m of the study site:.....	63
8.6 Records of Ancient Woodland within 2000m of the study site:	64
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	64
8.8 Records of World Heritage Sites within 2000m of the study site:.....	64
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:	64
8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	64
8.11 Records of National Parks (NP) within 2000m of the study site:	64
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	64
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	65

8.14 Records of Green Belt land within 2000m of the study site:.....	65
9. Natural Hazards Findings.....	66
9.1 Detailed BGS GeoSure Data.....	66
9.1.1 Shrink Swell.....	66
9.1.2 Landslides.....	66
9.1.3 Soluble Rocks.....	66
9.1.4 Compressible Ground.....	67
9.1.5 Collapsible Rocks.....	67
9.1.6 Running Sand.....	67
9.2 Radon.....	68
9.2.1 Radon Affected Areas.....	68
9.2.2 Radon Protection.....	68
10. Mining.....	69
10.1 Coal Mining.....	69
10.2 Non-Coal Mining.....	69
10.3 Brine Affected Areas	69
Contact Details.....	70
Standard Terms and Conditions.....	72

Overview of Findings

For further details on each dataset, please refer to each individual section in the main 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: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	0	45	48
1.2 Additional Information – Historical Tank Database	0	0	41	54
1.3 Additional Information – Historical Energy Features Database	3	2	30	60
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	2	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	2	1	16	42
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	0	1	13
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	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	1	7
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	7	5
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	0

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	1	2
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	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	1	3

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	0	14	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
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	2	21
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	2	0	0	4
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	13
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	1	0	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	Yes	Yes	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	20	46	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	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	0
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	0	0	0	0	1	3
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	High
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Moderate
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	High
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	None 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.

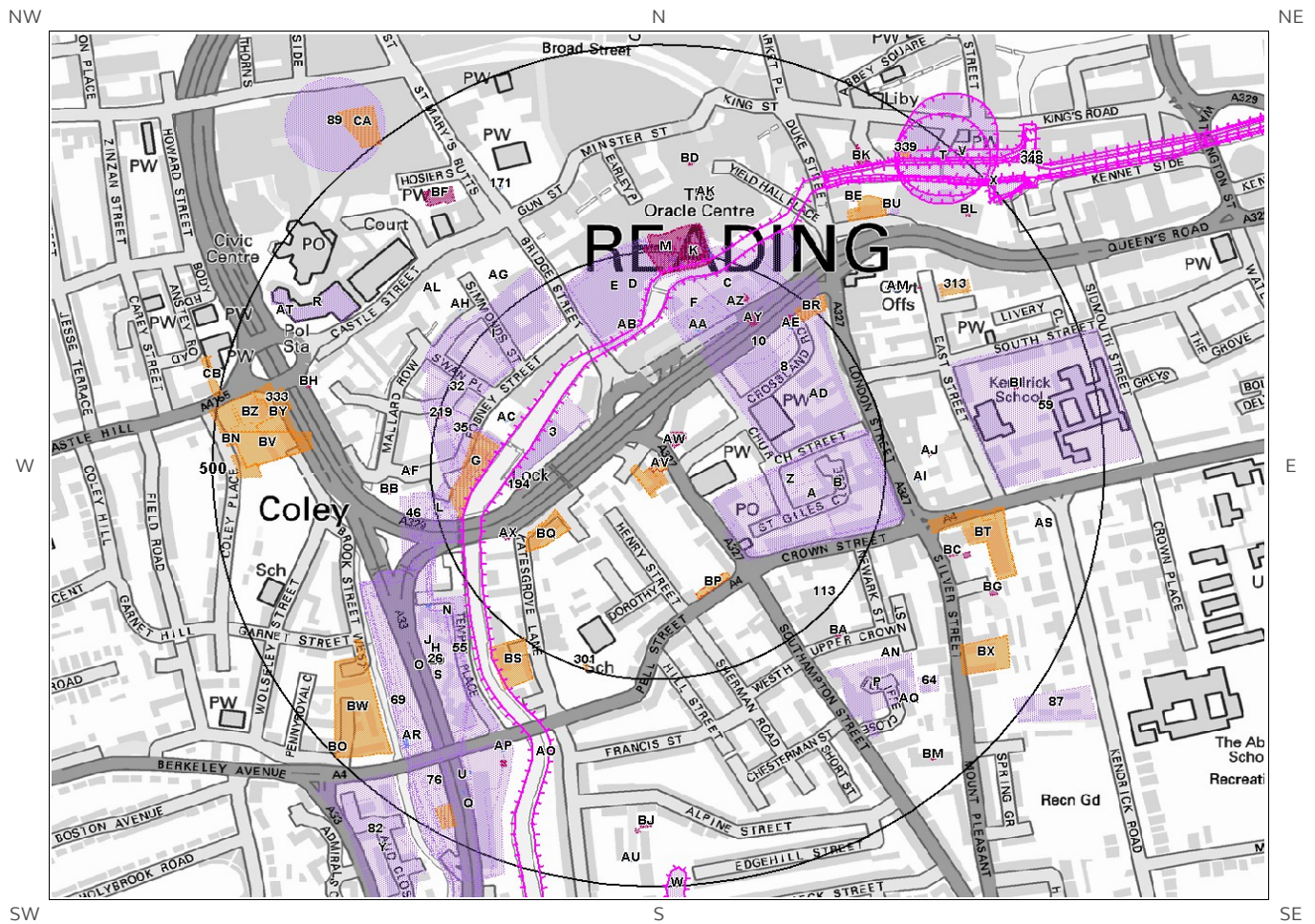
Note: Maps

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).

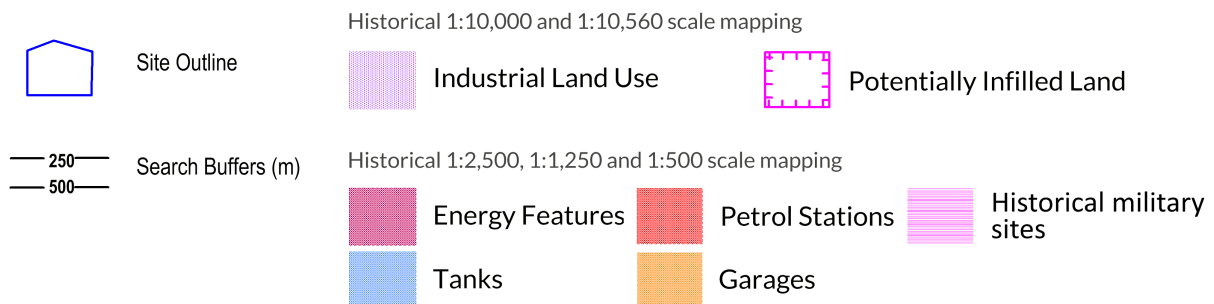
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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: 93

ID	Distance [m]	Direction	Use	Date
1A	65	SE	Tin Works	1938
2A	65	SE	Tin Works	1913
3	91	NW	Hospitals	1898
4A	95	E	Unspecified Commercial/Industrial	1989
5A	95	E	Unspecified Works	1962
6A	95	E	Unspecified Commercial/Industrial	1971
7A	95	E	Unspecified Commercial/Industrial	1977
8	108	NE	Unspecified Factory	1977
9B	115	E	Tin Works	1938
10	125	NE	Unspecified Factory	1971
11B	132	E	Tin Works	1933
12AZ	139	NE	Unspecified Mill	1898
13C	141	N	Unspecified Depot	1989
14C	141	N	Unspecified Depot	1977
15C	141	N	Unspecified Depot	1994
16D	146	NW	Brewery	1913
17D	146	NW	Brewery	1938
18D	146	NW	Unspecified Commercial/Industrial	1898
19F	147	N	Unspecified Commercial/Industrial	1933
20D	152	NW	Brewery	1938
21D	154	NW	Brewery	1933
22E	157	NW	Brewery	1971
23E	157	NW	Brewery	1977
24F	165	N	Railway Sidings	1933
25G	169	W	Unspecified Commercial/Industrial	1933
26	170	W	Railway Sidings	1913
27H	170	W	Railway Sidings	1938
28S	175	W	Railway Sidings	1938
29	175	W	Railway Sidings	1933
30G	182	W	Railway Building	1938

31H	188	W	Railway Sidings	1962
32	196	NW	Unspecified Commercial/Industrial	1933
33I	197	NW	Brewery	1977
34I	197	NW	Brewery	1971
35	217	W	Railway Building	1913
36J	233	W	Goods Depot	1938
37J	234	W	Goods Depot	1933
38K	236	N	Unspecified Tank	1913
39K	236	N	Unspecified Tank	1898
40L	238	W	Railway Buildings	1938
41L	238	W	Railway Buildings	1913
42M	238	N	Unspecified Tanks	1971
43M	238	N	Unspecified Tanks	1977
44L	243	W	Railway Building	1962
45M	243	N	Unspecified Tank	1898
46	265	W	Railway Building	1962
47N	277	SW	Railway Building	1962
48N	283	SW	Railway Building	1913
49O	284	SW	Railway Sidings	1977
50J	284	SW	Unspecified Depot	1971
51J	284	SW	Unspecified Depot	1977
52O	284	SW	Railway Sidings	1971
53N	295	SW	Goods Depot	1913
54N	295	SW	Goods Depot	1938
55	302	SW	Railway Building	1938
56P	307	SE	Unspecified Works	1977
57P	307	SE	Unspecified Works	1989
58P	307	SE	Unspecified Works	1994
59	346	E	Biscuit Factory	1913
60Q	360	SW	Unspecified Commercial/Industrial	1933
61Q	368	SW	Unspecified Works	1994
62Q	368	SW	Unspecified Works	1989
63Q	368	SW	Unspecified Works	1977
64	383	SE	Smithy	1913
65R	385	NW	Police Station	1989
66R	385	NW	Police Station	1977
67R	385	NW	Police Station	1994
68BU	391	NE	Smithy	1913
69	396	SW	Railway Building	1938
70AR	413	SW	Railway Building	1938
71U	421	SW	Railway Building	1913
72S	423	SW	Unspecified Commercial/Industrial	1938
73T	430	NE	Unspecified Wharf	1938
74T	436	NE	Unspecified Wharf	1994

75U	437	SW	Unspecified Tank	1913
76	445	SW	Railway Building	1938
77V	449	NE	Unspecified Wharf	1938
78V	449	NE	Unspecified Wharf	1938
79S	451	SW	Railway Building	1938
80S	464	SW	Railway Building	1962
81X	467	NE	Unspecified Disused Wharf	1933
82	469	SW	Unspecified Works	1971
83	469	SW	Unspecified Depot	1977
84W	477	S	Unspecified Ground Workings	1977
85W	477	S	Unspecified Ground Workings	1962
86W	477	S	Unspecified Ground Workings	1971
87	485	SE	Nursery	1898
88X	491	NE	Unspecified Wharf	1938
89	492	NW	Smithy	1913
90Y	494	SW	Unspecified Depot	1994
91Y	494	SW	Unspecified Depot	1989
92X	497	NE	Unspecified Wharf	1938
93X	497	NE	Unspecified Wharf	1938

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:

95

ID	Distance (m)	Direction	Use	Date
94Z	139	E	Unspecified Tank	1912
95Z	139	E	Unspecified Tank	1900
96AA	160	N	Unspecified Tank	1900
97AA	160	N	Unspecified Tank	1879
98AB	162	N	Tank or Trough	1879
99AB	164	N	Tank or Trough	1879
100AB	164	N	Tank or Trough	1879
101AC	172	W	Unspecified Tank	1970
102AC	172	W	Unspecified Tank	1980
103AC	173	W	Unspecified Tank	1988
104AD	190	NE	Tanks	1968
105AD	190	NE	Tanks	1962
106AE	214	NE	Unspecified Tank	1968

107AE	215	NE	Unspecified Tank	1979
108K	222	N	Gas Works	1879
109K	222	N	Gas Works	1879
110K	222	N	Gas Works	1879
111K	223	N	Gas Works	1912
112K	223	N	Gas Works	1900
113	236	SE	Unspecified Tank	1969
114K	236	N	Unspecified Tank	1957
115K	236	N	Unspecified Tank	1958
116K	236	N	Unspecified Tank	1956
117M	238	N	Tanks	1957
118M	238	N	Tanks	1958
119M	238	N	Tanks	1962
120M	238	N	Tanks	1956
121M	238	N	Tanks	1968
122K	238	N	Gasometer	1912
123K	238	N	Gasometer	1900
124M	239	N	Tanks	1979
125K	240	N	Gasometer	1879
126K	240	N	Gasometer	1879
127K	240	N	Gasometer	1879
128M	245	N	Gasometer	1900
129M	246	N	Gasometer	1879
130M	246	N	Gasometer	1879
131M	246	N	Gasometer	1879
132K	247	N	Tanks	1968
133K	247	N	Tanks	1962
134K	247	N	Tanks	1979
135K	255	N	Tanks	1957
136K	255	N	Tanks	1958
137K	255	N	Tanks	1962
138K	255	N	Tanks	1956
139K	255	N	Tanks	1968
140K	256	N	Tanks	1979
141AF	273	W	Unspecified Tank	1879
142AF	273	W	Unspecified Tank	1879
143AG	285	NW	Unspecified Tank	1980
144AG	286	NW	Unspecified Tank	1970
145AH	287	NW	Unspecified Tank	1980
146AH	287	NW	Unspecified Tank	1970
147AI	288	E	Unspecified Tank	1968
148AI	288	E	Unspecified Tank	1969
149AI	288	E	Unspecified Tank	1982
150AI	288	E	Unspecified Tank	1982
151AI	288	E	Unspecified Tank	1979
152AJ	298	E	Unspecified Tank	1968

153AJ	298	E	Unspecified Tank	1982
154AJ	298	E	Unspecified Tank	1969
155N	299	SW	Tanks	1879
156N	299	SW	Tanks	1879
157AK	321	N	Tanks	1879
158AK	321	N	Tanks	1879
159AL	327	NW	Unspecified Tank	1970
160AL	327	NW	Unspecified Tank	1980
161AM	333	NE	Unspecified Tank	1956
162AM	333	NE	Unspecified Tank	1957
163AM	333	NE	Unspecified Tank	1958
164AN	340	SE	Unspecified Tank	1968
165AN	340	SE	Unspecified Tank	1982
166AN	340	SE	Unspecified Tank	1969
167AN	341	SE	Unspecified Tank	1982
168AN	341	SE	Unspecified Tank	1979
169AO	363	S	Tank or Trough	1879
170AO	363	S	Tank or Trough	1879
171	374	NW	Unspecified Tank	1931
172AP	374	SW	Unspecified Tank	1996
173AP	374	SW	Unspecified Tank	1995
174AP	375	SW	Unspecified Tank	1972
175AP	376	SW	Unspecified Tank	1991
176AP	376	SW	Unspecified Tank	1986
177AQ	394	SE	Unspecified Tank	1982
178AQ	394	SE	Unspecified Tank	1982
179U	416	SW	Unspecified Tank	1972
180AR	427	SW	Tanks	1931
181AS	436	E	Unspecified Tank	1879
182AS	436	E	Unspecified Tank	1879
183U	441	SW	Unspecified Tank	1912
184AT	457	NW	Unspecified Tank	1879
185AT	457	NW	Unspecified Tank	1879
186AU	468	S	Unspecified Tank	1981
187AU	468	S	Unspecified Tank	1987
188BN	478	W	Unspecified Tank	1972

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:

95

ID	Distance (m)	Direction	Use	Date
189AV	0	On Site	Electricity Substation	1982
190AV	0	On Site	Electricity Substation	1982
191AV	0	On Site	Electricity Substation	1979
192AW	19	NE	Electricity Substation	1982
193AW	19	NE	Electricity Substation	1982
194	148	W	Electricity Substation	1969
195AX	179	SW	Electricity Substation	1996
196AX	179	SW	Electricity Substation	1995
197AX	179	SW	Electricity Substation	1972
198AX	181	SW	Electricity Substation	1991
199AX	181	SW	Electricity Substation	1986
200AY	190	NE	Electricity Substation	1968
201AY	191	NE	Electricity Substation	1979
202AZ	213	NE	Electricity Substation	1997
203AZ	213	NE	Electricity Substation	1988
204AZ	213	NE	Electricity Substation	1988
205AZ	214	NE	Electricity Substation	1979
206AE	215	NE	Electricity Substation	1997
207AE	215	NE	Electricity Substation	1988
208AE	216	NE	Electricity Substation	1988
209K	222	N	Gas Works	1879
210K	222	N	Gas Works	1879
211K	222	N	Gas Works	1879
212K	223	N	Gas Works	1912
213K	223	N	Gas Works	1900
214K	238	N	Gasometer	1912
215K	238	N	Gasometer	1900
216K	240	N	Gasometer	1879
217K	240	N	Gasometer	1879
218K	240	N	Gasometer	1879
219	244	W	Electricity Substation	1988
220M	245	N	Gasometer	1900
221M	246	N	Gasometer	1879
222M	246	N	Gasometer	1879
223M	246	N	Gasometer	1879
224M	263	N	Electricity Substation	1968
225M	264	N	Electricity Substation	1979
226BA	276	SE	Electricity Substation	1968
227BA	277	SE	Electricity Substation	1969
228BB	297	W	Electricity Substation	1996
229BB	297	W	Electricity Substation	1995
230AJ	299	E	Electricity Substation	1979
231BC	338	E	Electricity Substation	1968
232BC	338	E	Electricity Substation	1969

233BC	354	E	Electricity Substation	1982
234BC	355	E	Electricity Substation	1982
235BC	355	E	Electricity Substation	1979
236BD	356	N	Electricity Substation	1968
237BD	356	N	Electricity Substation	1988
238BD	356	N	Electricity Substation	1997
239BD	356	N	Electricity Substation	1988
240BD	356	N	Electricity Substation	1979
241AM	357	NE	Electricity Substation	1997
242BE	379	NE	Electricity Substation	1988
243BE	381	NE	Electricity Substation	1997
244AP	386	SW	Electricity Substation	1995
245AP	386	SW	Electricity Substation	1996
246AP	387	SW	Electricity Substation	1968
247AP	387	SW	Electricity Substation	1972
248AP	387	SW	Electricity Substation	1969
249AP	388	SW	Electricity Substation	1986
250AP	388	SW	Electricity Substation	1991
251BF	392	NW	Electricity Substation	1980
252BF	393	NW	Electricity Substation	1988
253BG	395	E	Electricity Substation	1968
254BG	395	E	Electricity Substation	1982
255BG	395	E	Electricity Substation	1969
256BG	396	E	Electricity Substation	1979
257BG	396	E	Electricity Substation	1982
258BH	399	W	Electricity Substation	1980
259BH	400	W	Electricity Substation	1988
260BF	407	NW	Electricity Substation	1970
261BI	408	E	Electricity Substation	1988
262BI	409	E	Electricity Substation	1997
263BK	419	NE	Electricity Substation	1988
264BJ	421	S	Electricity Substation	1968
265BJ	421	S	Electricity Substation	1969
266BK	421	NE	Electricity Substation	1988
267BK	421	NE	Electricity Substation	1997
268BJ	421	S	Electricity Substation	1979
269BJ	421	S	Electricity Substation	1982
270BJ	430	S	Electricity Substation	1982
271BL	455	NE	Electricity Substation	1968
272BL	455	NE	Electricity Substation	1988
273BL	456	NE	Electricity Substation	1979
274BM	461	SE	Electricity Substation	1969
275BM	461	SE	Electricity Substation	1982
276BM	461	SE	Electricity Substation	1968
277BM	462	SE	Electricity Substation	1979
278BM	462	SE	Electricity Substation	1982

279BN	487	W	Electricity Substation	1988
280BO	490	SW	Electricity Substation	1995
281BO	490	SW	Electricity Substation	1996
282BO	492	SW	Electricity Substation	1986
283BO	492	SW	Electricity Substation	1991

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:

2

ID	Distance (m)	Direction	Use	Date
284BP	142	SE	Filling Station	1968
285BP	142	SE	Filling Station	1969

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:

61

ID	Distance (m)	Direction	Use	Date
286AV	0	On Site	Garage	1957
287AV	0	On Site	Garage	1959
288AV	1	SW	Garage	1957
289BQ	116	SW	Garage	1957
290BQ	116	SW	Garage	1968
291BQ	116	SW	Garage	1959
292BQ	116	SW	Garage	1957
293BQ	117	SW	Garage	1969
294BQ	117	SW	Garage	1972
295BP	142	SE	Garage	1959
296BP	142	SE	Garage	1957
297BP	144	SE	Garage	1957
298G	174	W	Depot and Destructor Works	1957
299BR	231	NE	Police Garage	1968
300BR	232	NE	Police Garage	1979
301	235	S	Garage	1972
302BS	248	SW	Garage	1968

303BS	248	SW	Garage	1969
304BS	248	SW	Garage	1972
305BT	305	E	Garage	1957
306BT	348	E	Garage	1957
307BT	349	E	Garage	1959
308BU	357	NE	Garage	1957
309BU	357	NE	Garage	1958
310BU	360	NE	Garage	1968
311BU	360	NE	Garage	1956
312BU	360	NE	Garage	1962
313	376	NE	Garage	1988
314BV	386	W	Garage	1959
315BV	386	W	Garage	1957
316BV	387	W	Garage	1957
317BV	387	W	Garage	1969
318BW	389	SW	Garage	1968
319BW	389	SW	Garage	1957
320BW	389	SW	Garage	1959
321BW	390	SW	Garage	1957
322BW	390	SW	Garage	1972
323BW	390	SW	Garage	1969
324BX	397	SE	Garage	1957
325BX	398	SE	Garage	1957
326BX	398	SE	Garage	1959
327BV	398	W	Garage	1968
328BV	399	W	Garage	1972
329BY	407	W	Garage	1957
330BY	407	W	Garage	1962
331BZ	413	W	Garage	1980
332BZ	416	W	Garage	1957
333	416	W	Garage	1958
334BY	435	W	Garage	1957
335BY	435	W	Garage	1962
336BY	435	W	Garage	1970
337BZ	435	W	Garage	1958
338BZ	435	W	Garage	1957
339	455	NE	Garage	1968
340S	463	SW	Depot and Destructor Works	1957
341CA	497	NW	Garage	1958
342CA	497	NW	Garage	1957
343CB	497	W	Garage	1962
344CB	497	W	Garage	1957
345CB	498	W	Garage	1958
346CB	498	W	Garage	1957

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.

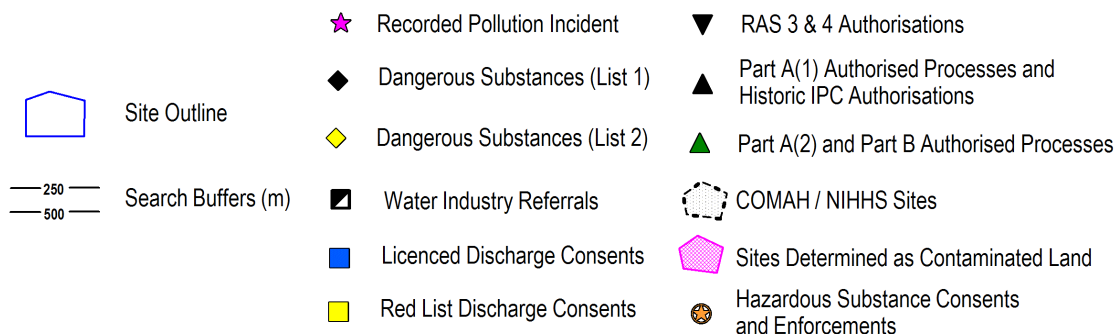
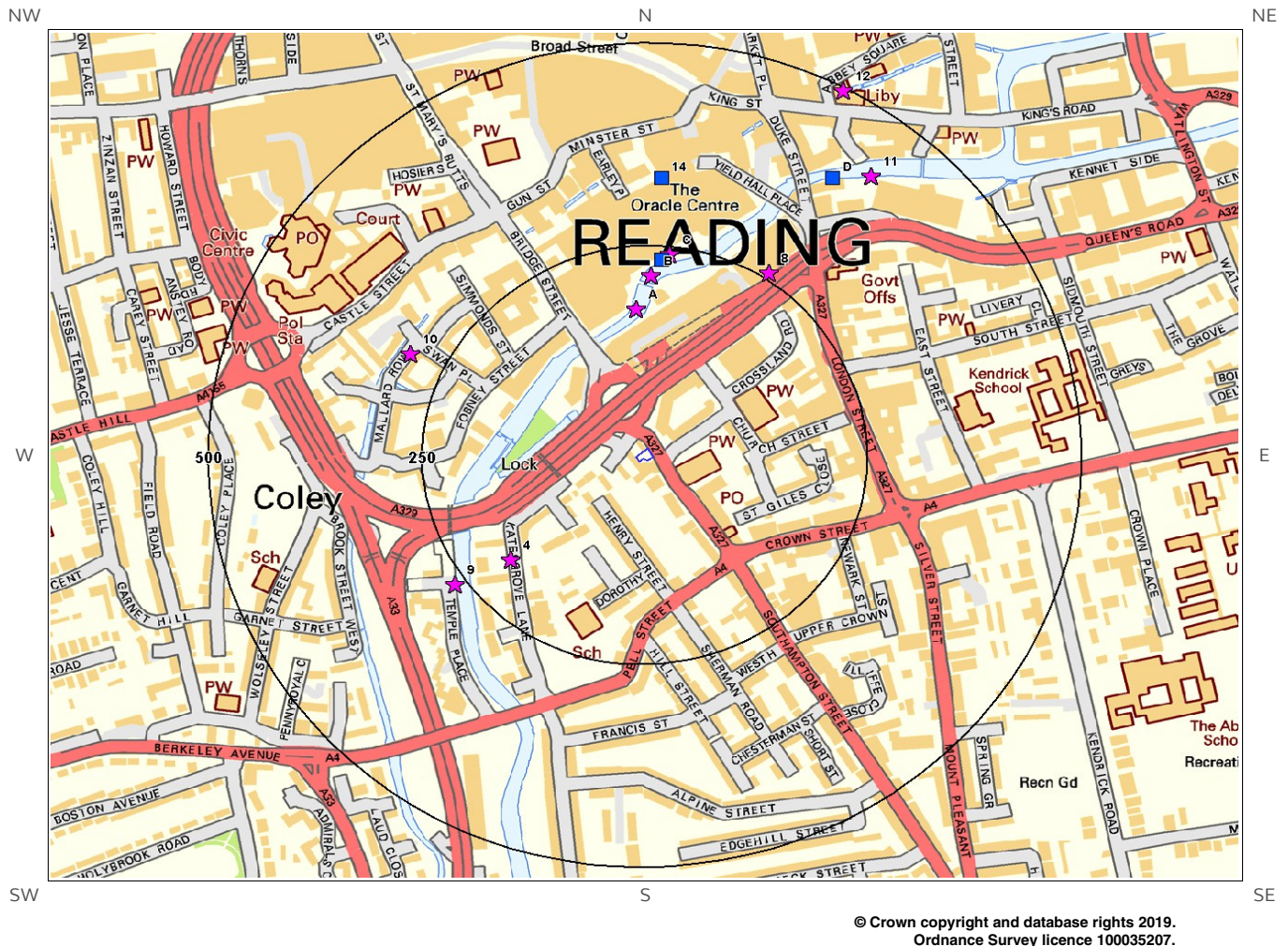
1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 14

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

ID	Distance(m)	Direction	Use	Date
347	130	NW	Canal	1938
348	377	NE	Canal	1938
349	384	NE	Canal	1933
350T	430	NE	Unspecified Wharf	1938
351T	436	NE	Unspecified Wharf	1994
352T	449	NE	Unspecified Wharf	1938
353T	449	NE	Unspecified Wharf	1938
354X	467	NE	Unspecified Disused Wharf	1933
355W	477	S	Unspecified Ground Workings	1962
356W	477	S	Unspecified Ground Workings	1977
357W	477	S	Unspecified Ground Workings	1971
358X	491	NE	Unspecified Wharf	1938
359X	497	NE	Unspecified Wharf	1938
360X	497	NE	Unspecified Wharf	1938

2. Environmental Permits, Incidents and Registers Map



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:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

8

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

ID	Distance (m)	Direction	NGR	Details
13C	233	N	471600 173200	Address: THE BREWERY, READING, BERKS, THE BREWERY, READING, BERKS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTRC.0211 Permit Version: 1 Receiving Water: KENNET Status: REVOKED - UNSPECIFIED Issue date: 19/12/1955 Effective Date: 19-Dec-1955 Revocation Date: 12/06/1990
14	333	N	471600 173300	Address: 17/23 KING STREET, READING, BERKSHIRE, 17/23 KING STREET, READING, BERK, SHIRE Effluent Type: MISCELLANEOUS DISCHARGES - UNSPECIFIED Permit Number: CTWC.3315 Permit Version: 1 Receiving Water: HOLY BROOK Status: REVOKED - UNSPECIFIED Issue date: 12/06/1989 Effective Date: 12-Jun-1989 Revocation Date: 27/06/1991
15D	396	NE	471800 173300	Address: PREMISES, KINGS RD, READING, BERKS, PREMISES, KINGS RD, READING, BER, KS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTRC.0296 Permit Version: 1 Receiving Water: R KENNET Status: REVOKED - UNSPECIFIED Issue date: 12/02/1964 Effective Date: 12-Feb-1964 Revocation Date: 04/02/1986
16D	396	NE	471800 173300	Address: PREMISES, KINGS RD, READING, BERKS, PREMISES, KINGS RD, READING, BER, KS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTRC.0295 Permit Version: 1 Receiving Water: R KENNET Status: REVOKED - UNSPECIFIED Issue date: 12/02/1964 Effective Date: 12-Feb-1964 Revocation Date: 04/02/1986
17D	396	NE	471800 173300	Address: FACTORY AT READING, BERKS, FACTORY AT READING, BERKS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTRC.0508 Permit Version: 1 Receiving Water: KENNET Status: REVOKED - UNSPECIFIED Issue date: 22/03/1962 Effective Date: 22-Mar-1962 Revocation Date: 03/04/1987
18D	396	NE	471800 173300	Address: PREMISES, KINGS RD, READING, BERKS, PREMISES, KINGS RD, READING, BER, KS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTRC.0508 Permit Version: 1 Receiving Water: R KENNET Status: REVOKED - UNSPECIFIED Issue date: 12/02/1964 Effective Date: 12-Feb-1964

ID	Distance (m)	Direction	NGR	Details
19D	396	NE	471800 173300	COOLING WATER Permit Number: CTCP.0298 Permit Version: 1
				Revocation Date: 04/02/1986
19D	396	NE	471800 173300	Address: PREMISES, KINGS RD, READING, BERKS, PREMISES, KINGS RD, READING, BER, KS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTCP.0299 Permit Version: 1
				Receiving Water: R KENNET Status: REVOKED - UNSPECIFIED Issue date: 12/02/1964 Effective Date: 12-Feb-1964 Revocation Date: 04/02/1986
20D	396	NE	471800 173300	Address: PREMISES, KINGS RD, READING, BERKS, PREMISES, KINGS RD, READING, BER, KS Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CTCP.0297 Permit Version: 1
				Receiving Water: R KENNET Status: REVOKED - UNSPECIFIED Issue date: 12/02/1964 Effective Date: 12-Feb-1964 Revocation Date: 04/02/1986

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:

12

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

ID	Distance (m)	Direction	NGR	Details
1A	172	N	471570.0 173139.0	Incident Date: 17-Aug-2001 Incident Identification: 24937.0 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	172	N	471570.0 173139.0	Incident Date: 17-Aug-2001 Incident Identification: 24937.0 Pollutant: Organic Chemicals/Products Pollutant Description: Solvents Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3A	172	N	471570.0 173139.0	Incident Date: 17-Aug-2001 Incident Identification: 24937.0 Pollutant: Organic Chemicals/Products:Pollutant Not Identified Pollutant Description: Solvents:Not Identified Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	194	SW	471423.0 172830.0	Incident Date: 13-Aug-2003 Incident Identification: 181888.0 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5B	214	N	471587.0 173181.0	Incident Date: 04-Oct-2001 Incident Identification: 34522.0 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6B	214	N	471587.0 173181.0	Incident Date: 04-Oct-2001 Incident Identification: 34522.0 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7C	241	N	471609.0 173207.0	Incident Date: 19-Aug-2001 Incident Identification: 25215.0 Pollutant: Organic Chemicals/Products Pollutant Description: Hydrocarbons Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
8	258	NE	471725.0 173184.0	Incident Date: 11-Oct-2003 Incident Identification: 195650.0 Pollutant: Sewage Materials Pollutant Description: Crude Sewage Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
9	264	SW	471358.0 172800.0	Incident Date: 14-Nov-2001 Incident Identification: 42787.0 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10	294	NW	471306.0 173084.0	Incident Date: 11-Oct-2001 Incident Identification: 35859.0 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
11	424	NE	471845.0 173303.0	Incident Date: 18-Jun-2003 Incident Identification: 166999.0 Pollutant: Sewage Materials Pollutant Description: Crude Sewage Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
12	496	NE	471812.0	Incident Date: 28-Jun-2005 Water Impact: Category 2 (Significant)

ID	Distance (m)	Direction	NGR	Details
			173408.0	Incident Identification: 324802.0 Pollutant: Oils and Fuel Pollutant Description: Diesel Land Impact: Category 4 (No Impact) 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.

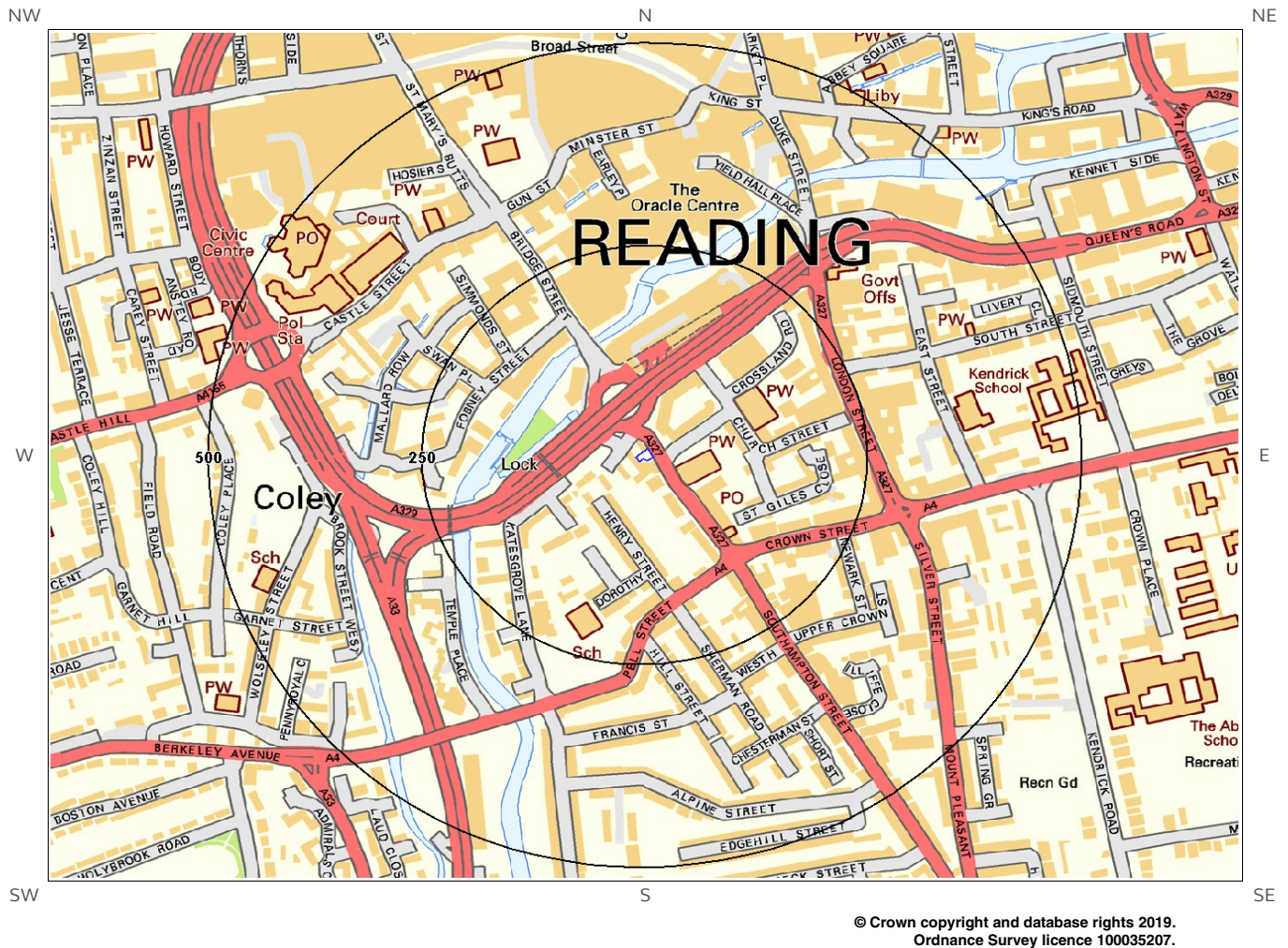
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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

0

Database searched and no data found.

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:

3

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
Not shown	857	S		Site Address: Waterloo Meadows, Reading, Berkshire Waste Licence: - Site Reference: TP0154, RDG8 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1374	S		Site Address: Craddock Road, Reading, Berkshire Waste Licence: - Site Reference: RDG17, TP0107 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1430	NE		Site Address: Napier Road, Reading, Berkshire Waste Licence: - Site Reference: TP0266, RDG3 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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:

0

Database searched and no data found.

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

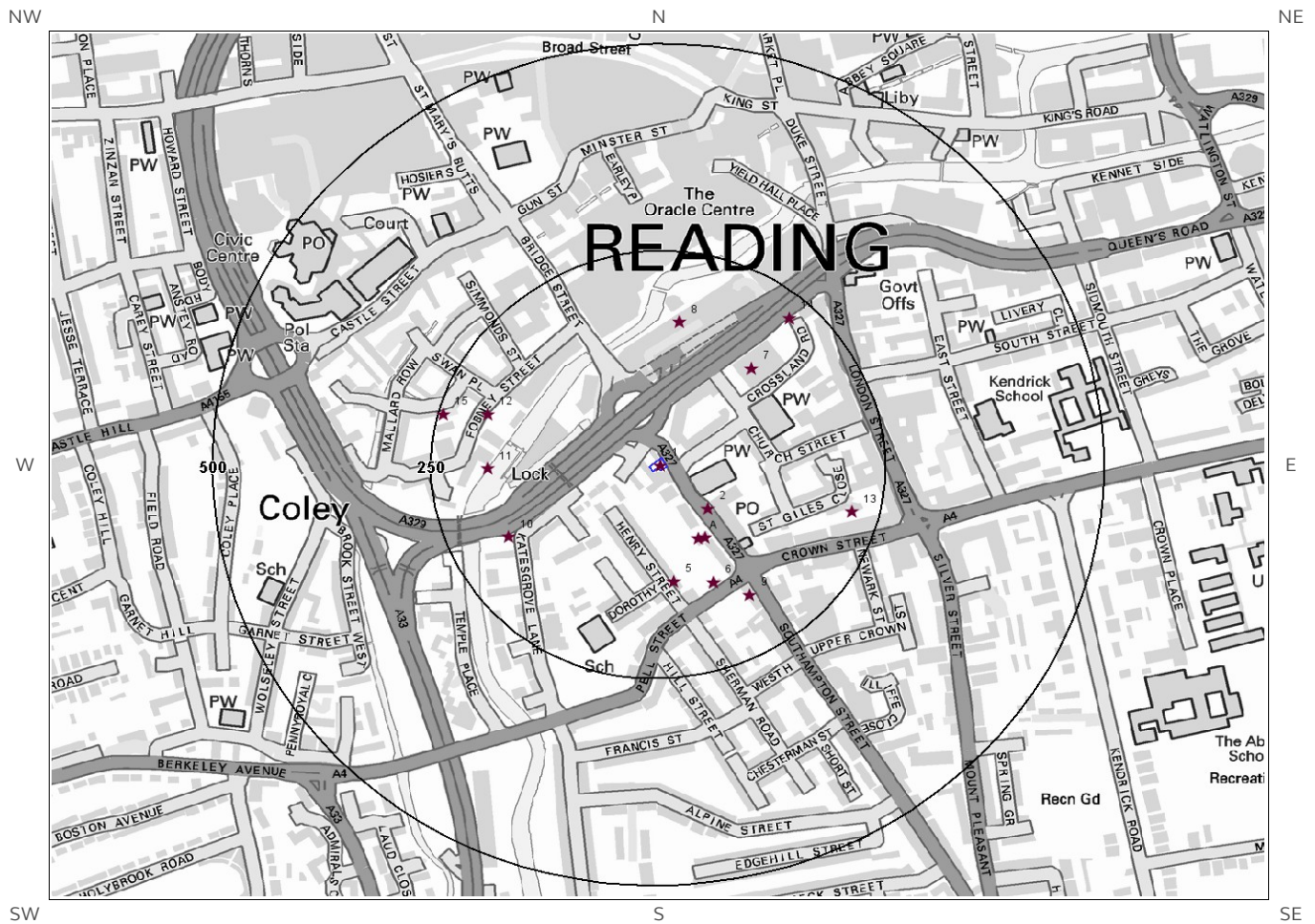
4

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
Not shown	909	NE	472390 173390	Site Address: Omega Park, Alton, Hampshire, GU34 2QE Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HOP003 EPR reference: - Operator: Hopkins Recycling Ltd Waste Management licence No: 83406 Annual Tonnage: 4910.0 Issue Date: 15/10/2002 Effective Date: - Modified: 17/12/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Alton House Waste Recycling Centre Correspondence Address: Hopkins Recycling Limited, Unit 10, Bridge Farm, Curbridge, Botley, Southampton, Hampshire, SO30 2HB
Not shown	1336	NW	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
Not shown	1451	S	471600 171500	Site Address: Units D & E, Reading Approach, Cradock Road, Reading, Berkshire, RG2 0JT Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN003 EPR reference: EA/EPR/GP3495EA/S004 Operator: Rentokil Initial Services Ltd Waste Management licence No: 86428 Annual Tonnage: 0.0 Issue Date: 26/07/2007 Effective Date: - Modified: 09/08/2011 Surrendered Date: Jun 1 2012 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Rentokil Initial Services Ltd Correspondence Address: -
Not shown	1451	S	471600 171500	Site Address: Units D & E, Reading Approach, Cradock Road, Reading, Berkshire, RG2 0JT Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN003 EPR reference: EA/EPR/GP3495EA/V003 Operator: Rentokil Initial Services Ltd Waste Management licence No: 86428 Annual Tonnage: 4999.0 Issue Date: 26/07/2007 Effective Date: - Modified: 09/08/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Rentokil Initial Services Ltd 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:

15

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Electricity Sub Station	471583 172959	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
2	68	SE	Gantry	471637 172907	Berkshire, RG1	Travelling Cranes and Gantries	Industrial Features
3A	91	SE	Kevin Trayhorne	471626 172871	70, Southampton Street, Reading, Berkshire, RG1 2QR	Vehicle Repair, Testing and Servicing	Repair and Servicing
4A	94	SE	Southampton Street Garage	471634 172872	72a, Southampton Street, Reading, Berkshire, RG1 2QR	Secondhand Vehicles	Motoring
5	134	S	24-7 Car Keys	471598 172819	59, Henry Street, Reading, Berkshire, RG1 2NW	Vehicle Repair, Testing and Servicing	Repair and Servicing
6	147	SE	Architectural Salvage Yard	471644 172818	85, Pell Street, Reading, Berkshire, RG1 2NP	Clearance and Salvage Dealers	Recycling Services
7	149	NE	Depot	471687 173076	Berkshire, RG1	Container and Storage	Transport, Storage and Delivery
8	166	N	Shopmobility	471605 173132	Unit 4 Riverside Level, The Oracle Centre, Reading, Berkshire, RG1 2AG	Disability and Mobility Equipment	Consumer Products
9	180	SE	Rose Carpets	471685 172803	96, Southampton Street, Reading, Berkshire, RG1 2QX	Construction Completion Services	Construction Services
10	182	SW	Electricity Sub Station	471409 172873	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
11	185	W	Bear Wharf	471386 172955	Berkshire, RG1	Moorings and Unloading Facilities	Water
12	197	W	Electricity Sub Station	471385 173021	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
13	218	E	Electricity Sub Station	471802 172903	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
14	223	NE	Electricity Sub Station	471730 173137	Berkshire, RG1	Electrical Features	Infrastructure and Facilities
15	245	W	Electricity Sub Station	471334 173021	Berkshire, RG1	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

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

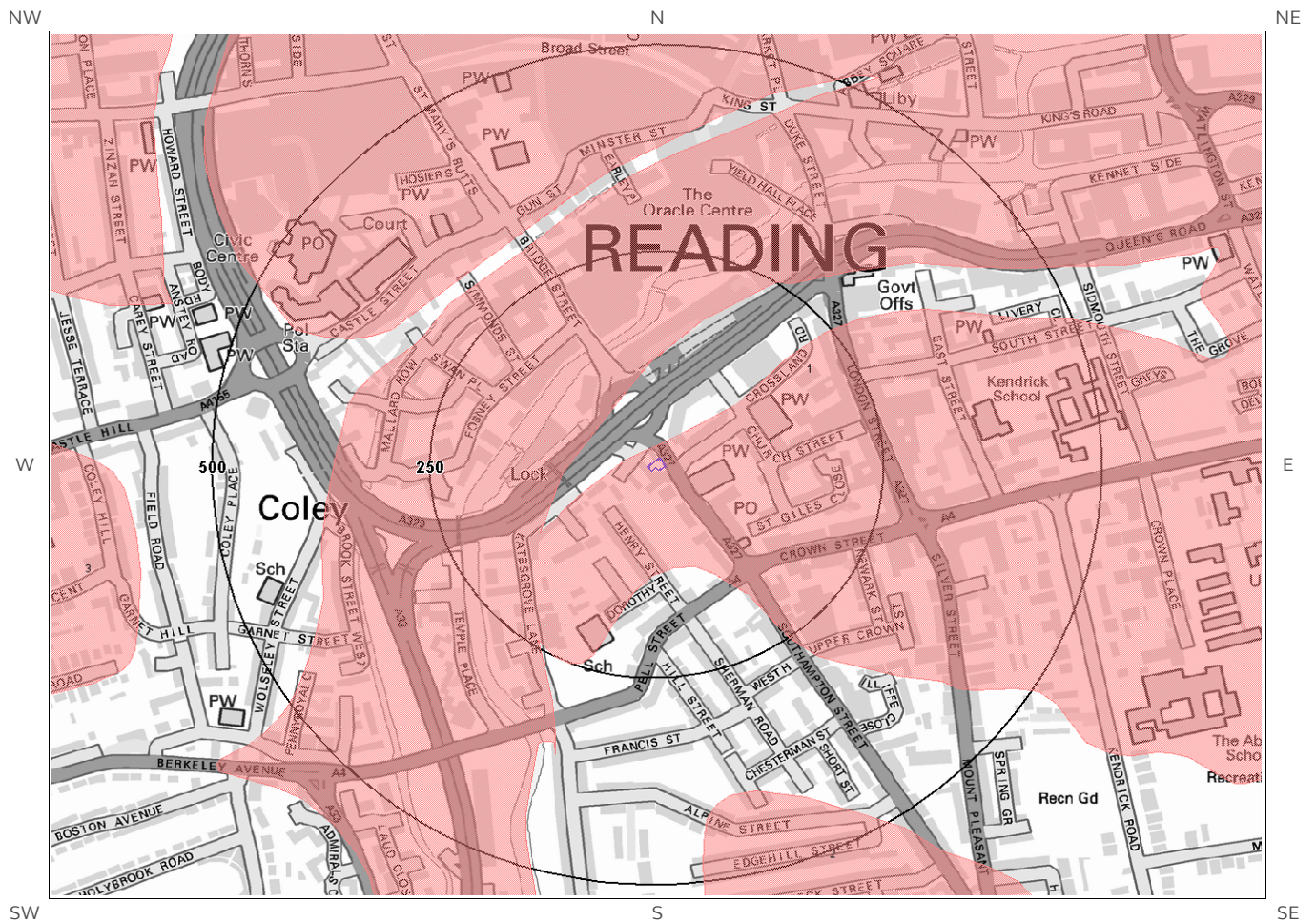
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED)	CHALK
LMBE-XCZS	LAMBETH GROUP	CLAY, SILT AND SAND

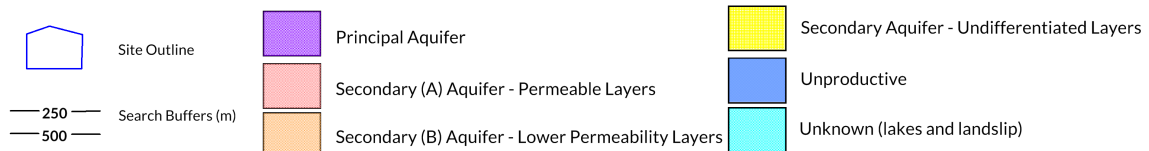
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

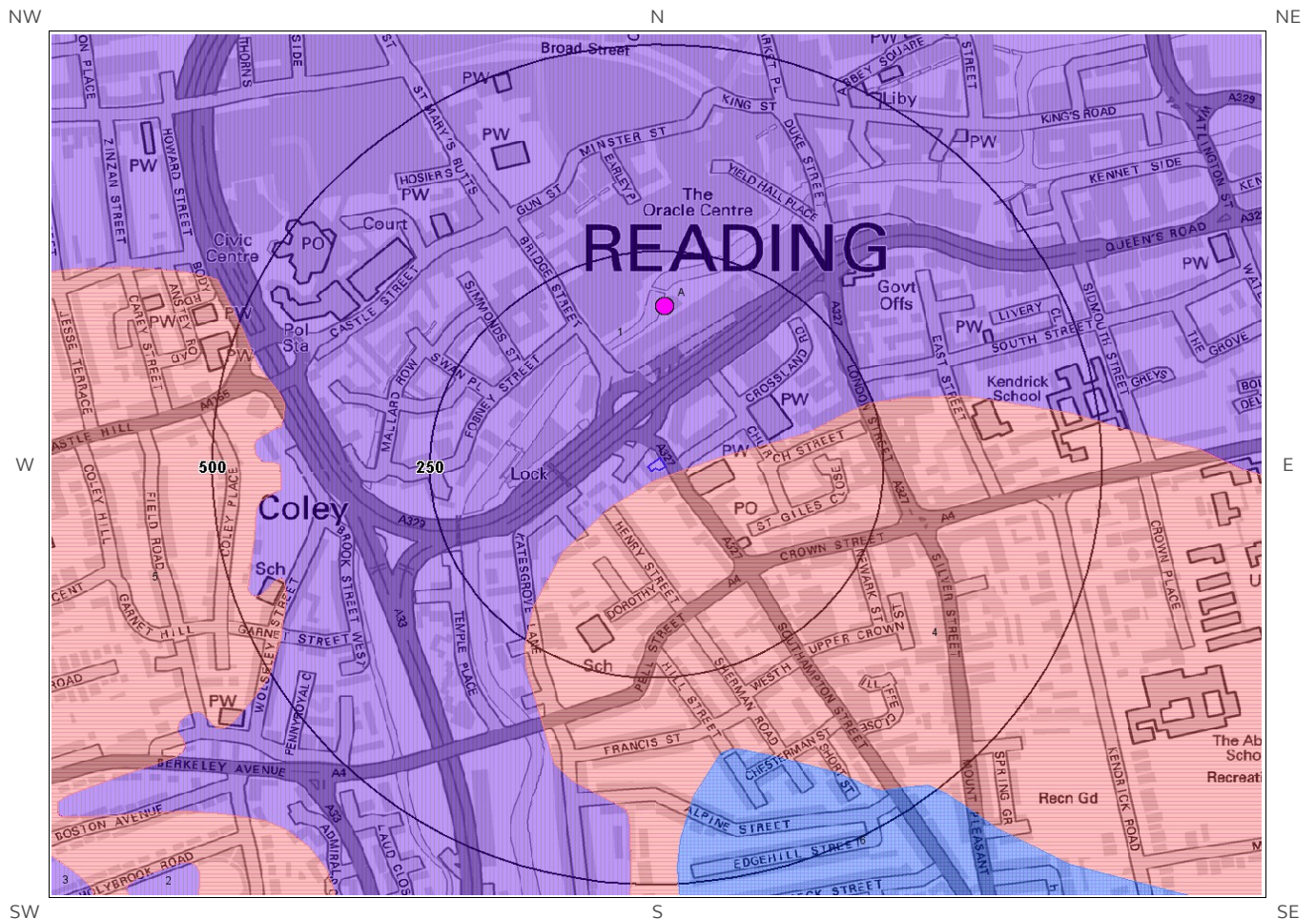
6a. Aquifer Within Superficial Geology



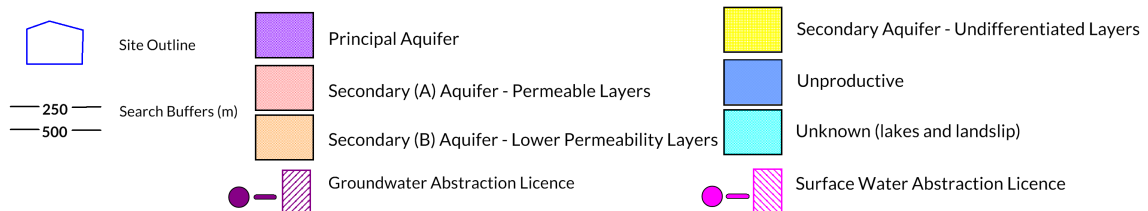
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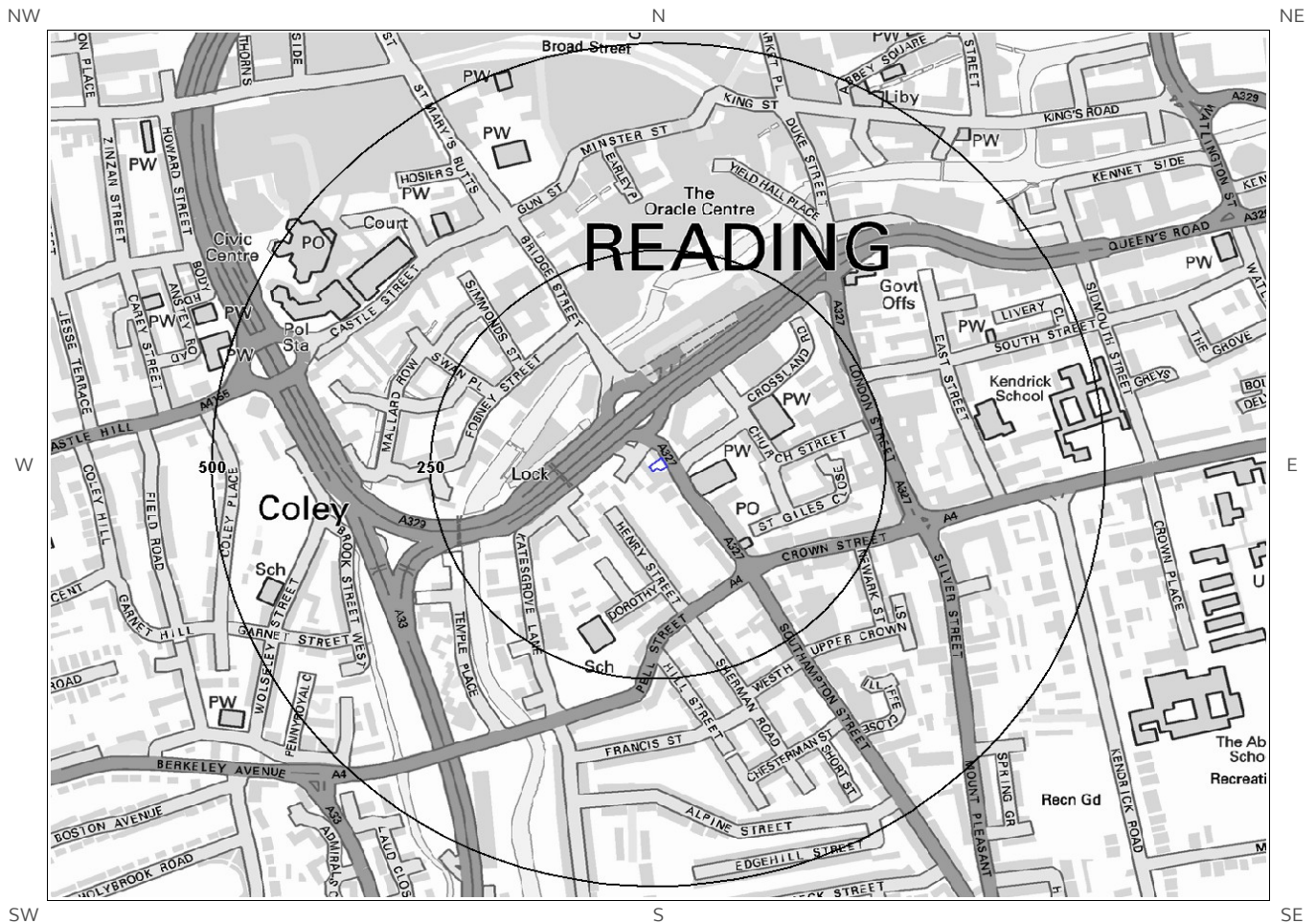
6b. Aquifer Within Bedrock Geology and Abstraction Licences



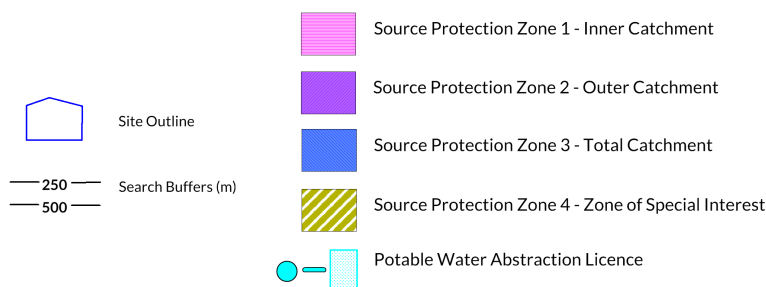
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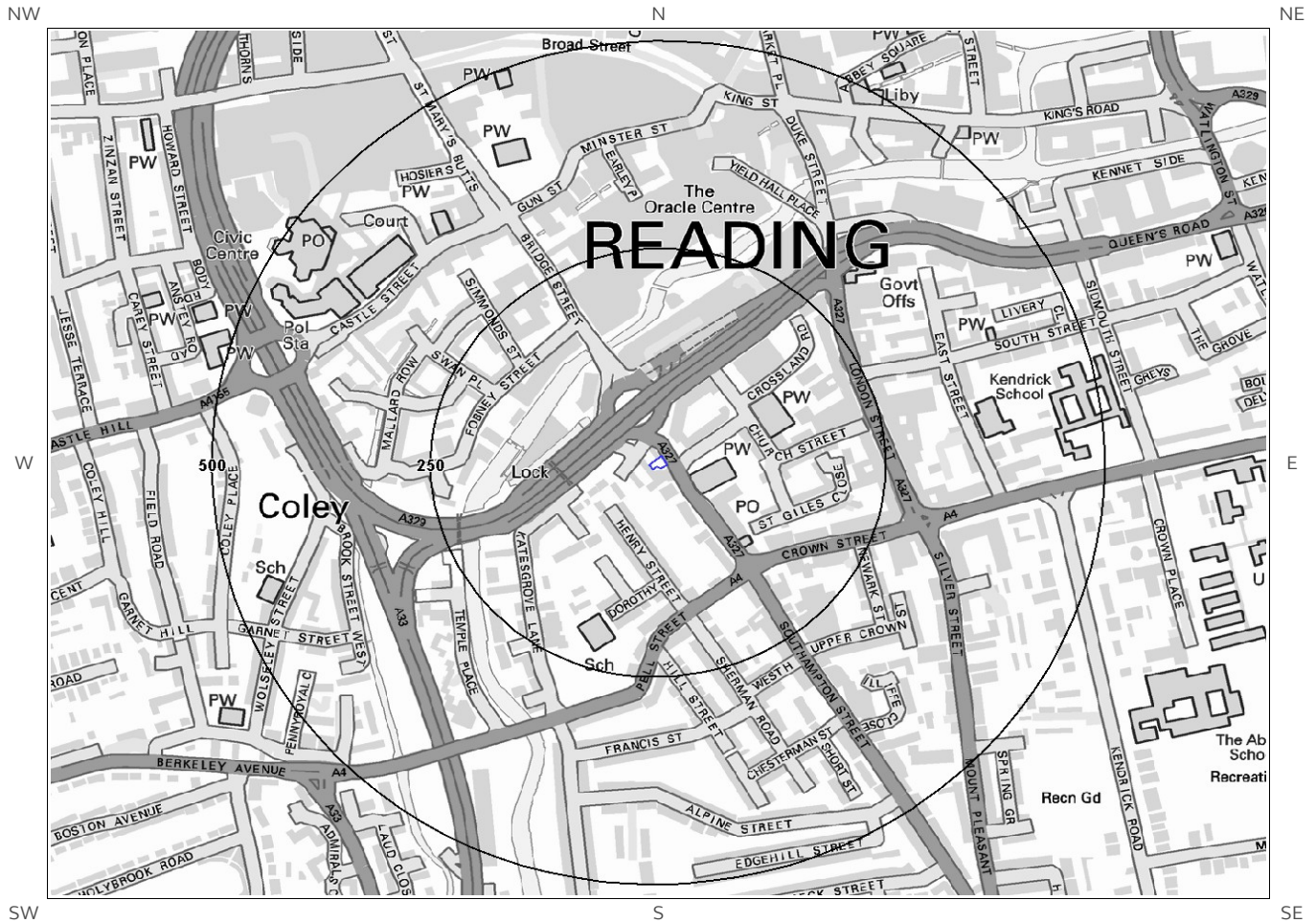
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



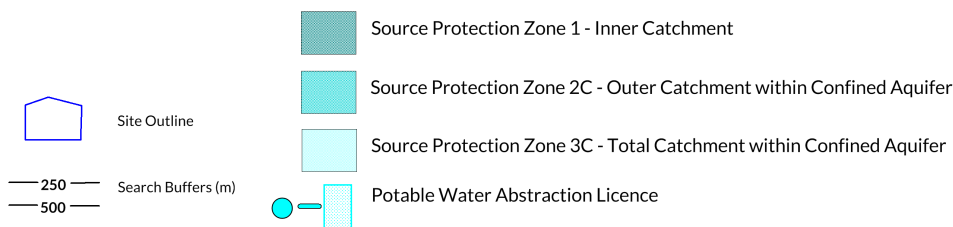
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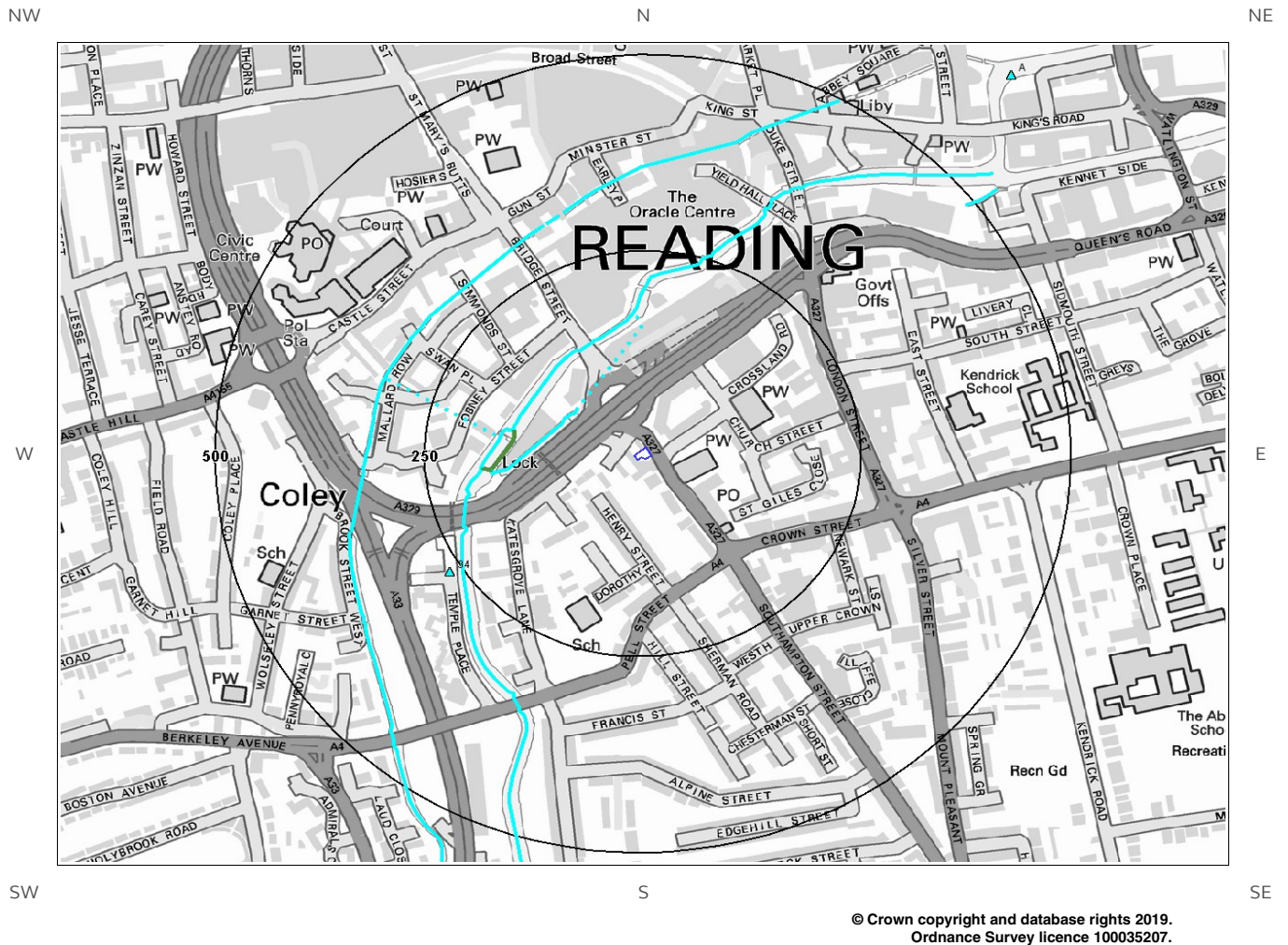
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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	400	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

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	9	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
6	347	S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	422	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

6.3 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	657	NW	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	824	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:
Not shown	1282	NE	472700 173600	Status: Historical Licence No: 28/39/22/0600 Details: Pollution Remediation Direct Source: THAMES GROUNDWATER Point: FORMER GASWORKS, KENAVON DRIVE, READING (5 BOREHOLES) Data Type: Point Name: M J GLEESON GROUP PLC Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 31/07/2000 Expiry Date: 31/08/2001 Issue No: 1 Version Start Date: 31/07/2000 Version End Date:
Not shown	1324	NW	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:
Not shown	1324	NW	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	1324	NW	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:

ID	Distance (m)	Direction	NGR	Details
Not shown	1324	NW	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	1425	NW	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	1467	N	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	1636	NW	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	1888	SE	473000 171700	Status: Historical Licence No: 28/39/22/0077 Details: General use relating to Secondary Category (Medium Loss) Direct Source: THAMES GROUNDWATER Point: WHITEKNIGHTS PARK, READING Data Type: Point Name: UNIVERSITY OF READING Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/04/1993 Version End Date:
Not shown	1891	S	470970 171160	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH D' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: 01/01/2013 Version End Date:
Not shown	1891	S	470970 171160	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'D' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/06/1998 Version End Date:
Not shown	1895	S	470850 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'A' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/06/1998 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1918	SW	470840 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH A' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: 01/01/2013 Version End Date:
Not shown	1918	SE	473040 171700	Status: Historical Licence No: 28/39/22/0077 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: WHITEKNIGHTS PARK - READING - BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Annual Volume (m³): 240000 Max Daily Volume (m³): 1032 Original Application No: - Original Start Date: 14/03/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2011 Version End Date:
Not shown	1927	SW	470770 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'B' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/06/1998 Version End Date:
Not shown	1940	SW	470680 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'C' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/06/1998 Version End Date:
Not shown	1940	SW	470680 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH C' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: 01/01/2013 Version End Date:
Not shown	1945	SW	470770 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH B' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: 01/01/2013 Version End Date:
Not shown	1973	SW	470610 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH G' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: 01/01/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1973	SW	470610 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'G' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/06/1998 Version End Date:
Not shown	1992	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:

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
30A	183	N	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:
31A	183	N	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	1311	N	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: 1 Version Start Date: 19/02/2016 Version End Date:
Not shown	1490	N	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:

ID	Distance (m)	Direction	NGR	Details
Not shown	1490	N	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	1490	N	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): 1.752e+006 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:

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
Not shown	657	NW	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	824	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:
Not shown	1324	NW	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	1324	NW	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 Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 100

ID	Distance (m)	Direction	NGR	Details
				Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD Version Start Date: Version End Date:
Not shown	1891	S	470970 171160	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'D' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1891	S	470970 171160	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH D' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1895	S	470850 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'A' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1918	SW	470840 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH A' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1918	SE	473040 171700	Status: Historical Licence No: 28/39/22/0077 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: WHITEKNIGHTS PARK - READING - BOREHOLE Data Type: Point Name: UNIVERSITY OF READING Annual Volume (m³): 240000 Max Daily Volume (m³): 1032 Original Application No: - Original Start Date: 14/03/1966 Expiry Date: - Issue No: 103 Version Start Date: Version End Date:
Not shown	1927	SW	470770 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'B' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1940	SW	470680 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH C' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1940	SW	470680 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct

ID	Distance (m)	Direction	NGR	Details
				Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'C' Data Type: Point Name: THAMES WATER UTILITIES LTD Original Start Date: 05/09/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1945	SW	470770 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH B' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1973	SW	470610 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION 'BH G' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 Expiry Date: 31/03/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1973	SW	470610 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: FOBNEY PUMPING STATION BH 'G' Data Type: Point Name: THAMES WATER UTILITIES LTD Annual Volume (m³): 1.5e+006 Max Daily Volume (m³): 30000 Original Application No: - Original Start Date: 05/09/1966 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	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.
29	NW	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.
324	W	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.

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
34	266	SW	471351 172807	River Name: Kennet Reach: Foudry Brook - Holy Brook End/Start of Stretch: Sample Point NGR	B	A	A	A	A
35A	642	NE	472020 173440	River Name: Kennet Reach: Holy Brook - Thames End/Start of Stretch: Start of Stretch NGR	B	A	A	A	A
36A	642	NE	472020 173440	River Name: Kennet Reach: Foudry Brook - Holy Brook End/Start of Stretch: End of Stretch NGR	B	A	A	A	A
Not shown	1217	NE	472135 174053	River Name: Thames Reach: Whitchurch Stw - Kennet End/Start of Stretch: Sample Point NGR	A	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	90 NW	-	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): 6.9
2	90 NW	-	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
48	90 NW	-	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
				conditions) Average Width in Watercourse Section (m): 6.9
49	90 NW	-	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	141 NW	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.0
50	141 NW	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.0
4	145 W	River Kennet	Canal. A manmade watercourse for inland navigation.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
51	145 W	River Kennet	Canal. A manmade watercourse for inland navigation.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
5	148 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.2
52	148 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.2
6	161 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 18.6
7	161 W	-	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
53	161 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 18.6
54	161 W	-	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
8	170 N	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.9

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
55	170 N	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.9
9	171 W	River Kennet	Canal. A manmade watercourse for inland navigation.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.2
56	171 W	River Kennet	Canal. A manmade watercourse for inland navigation.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.2
10	183 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 17.3
57	183 W	River Kennet	Inland river not influenced by normal tidal action.	Catchment Area: Avon Hampshire Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 17.3
11	294 NW	Holy Brook	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
58	294 NW	Holy Brook	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
12	302 NW	Holy Brook	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): 2.4
59	302 NW	Holy Brook	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): 2.4
13	303 NW	Holy Brook	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): 2.0
Not shown	303 NW	Holy Brook	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): 2.0
14	304 NW	Holy Brook	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
61	304	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	305 NW	Holy Brook	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): 2.9
16	305 NW	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
62	305 NW	Holy Brook	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): 2.9
Not shown	305 NW	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	308 NW	Holy Brook	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): 1.7
Not shown	308 NW	Holy Brook	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): 1.7
18	309 N	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	309 N	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	310 W	-	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): 1.8
66	310 W	-	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): 1.8
20	314 W	Holy Brook	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): 5.1
21	314 W	Holy Brook	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): 6.9
67	314 W	Holy Brook	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): 5.1
68	314 W	Holy Brook	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): 6.9
22	315 W	Holy Brook	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
23	315 N	Holy Brook	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): 3.3
69	315 W	Holy Brook	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	315 N	Holy Brook	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): 3.3
24	324 W	Holy Brook	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
71	324 W	Holy Brook	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
25	325 N	Holy Brook	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	325 N	Holy Brook	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
26	327 N	Holy Brook	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): 2.3
Not shown	327 N	Holy Brook	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): 2.3

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
27	333 N	Holy Brook	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	333 N	Holy Brook	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
28	351 W	Holy Brook	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): 8.4
75	351 W	Holy Brook	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): 8.4
29	403 N	Holy Brook	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	403 N	Holy Brook	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
30	424 N	Holy Brook	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	424 N	Holy Brook	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
31	483 NE	Holy Brook	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): 1.4
Not shown	483 NE	Holy Brook	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): 1.4
32	485 NE	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	485 NE	Holy Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	490	Gunter's Brook	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NE			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
Not shown	490 NE	Gunter's Brook	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): 2.2

6.11 Surface Water Features

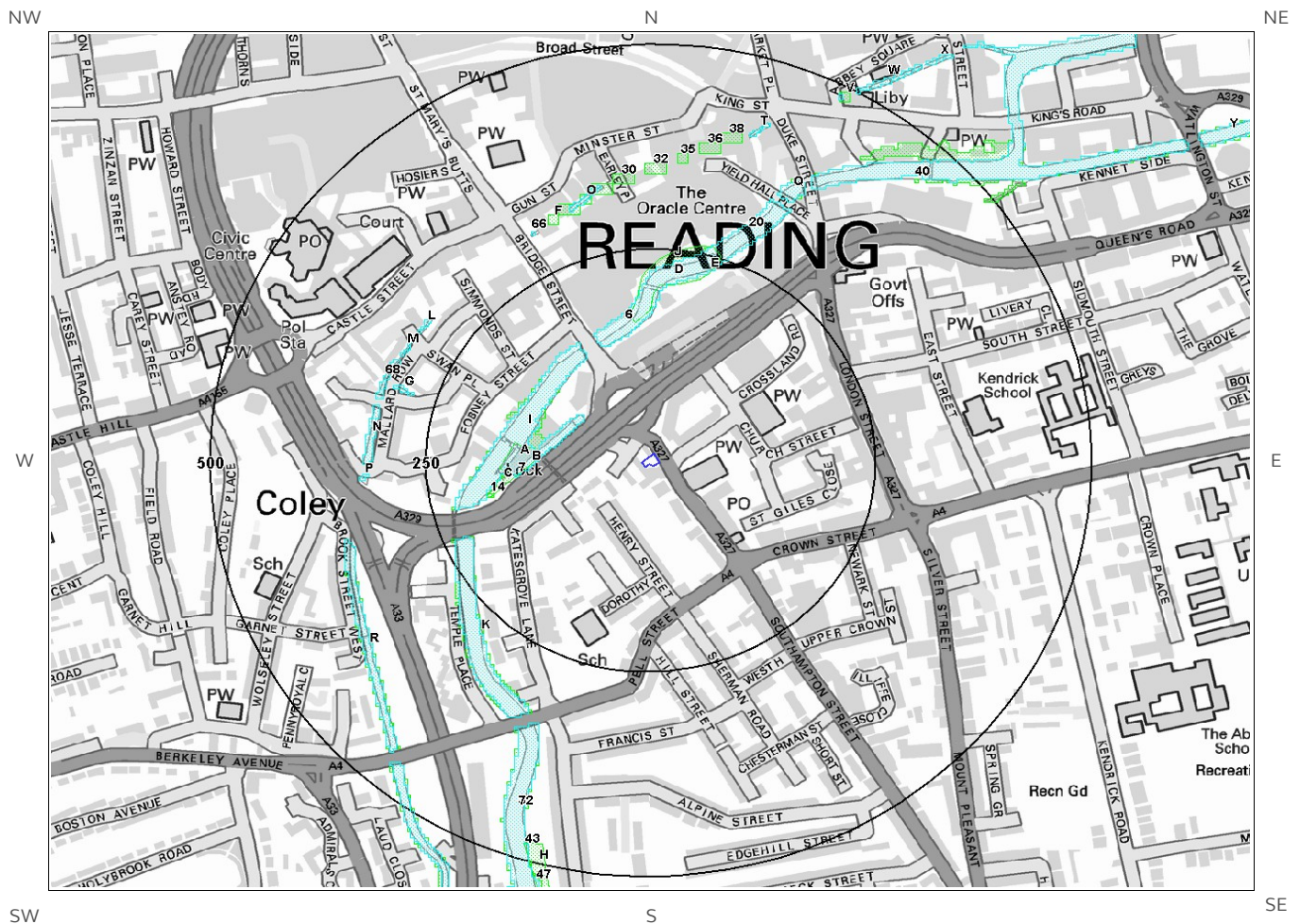
Surface water features within 250m of the study site

Identified

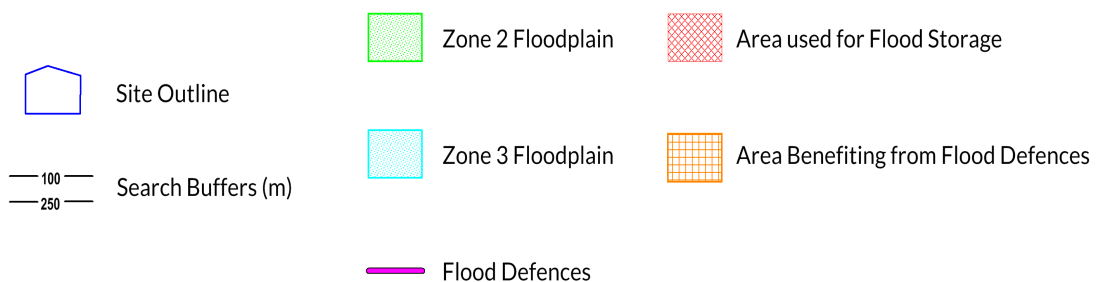
The following surface water records are not represented on mapping:

Distance (m)	Direction
86	NW
88	NW
129	NW
143	NW
215	SW

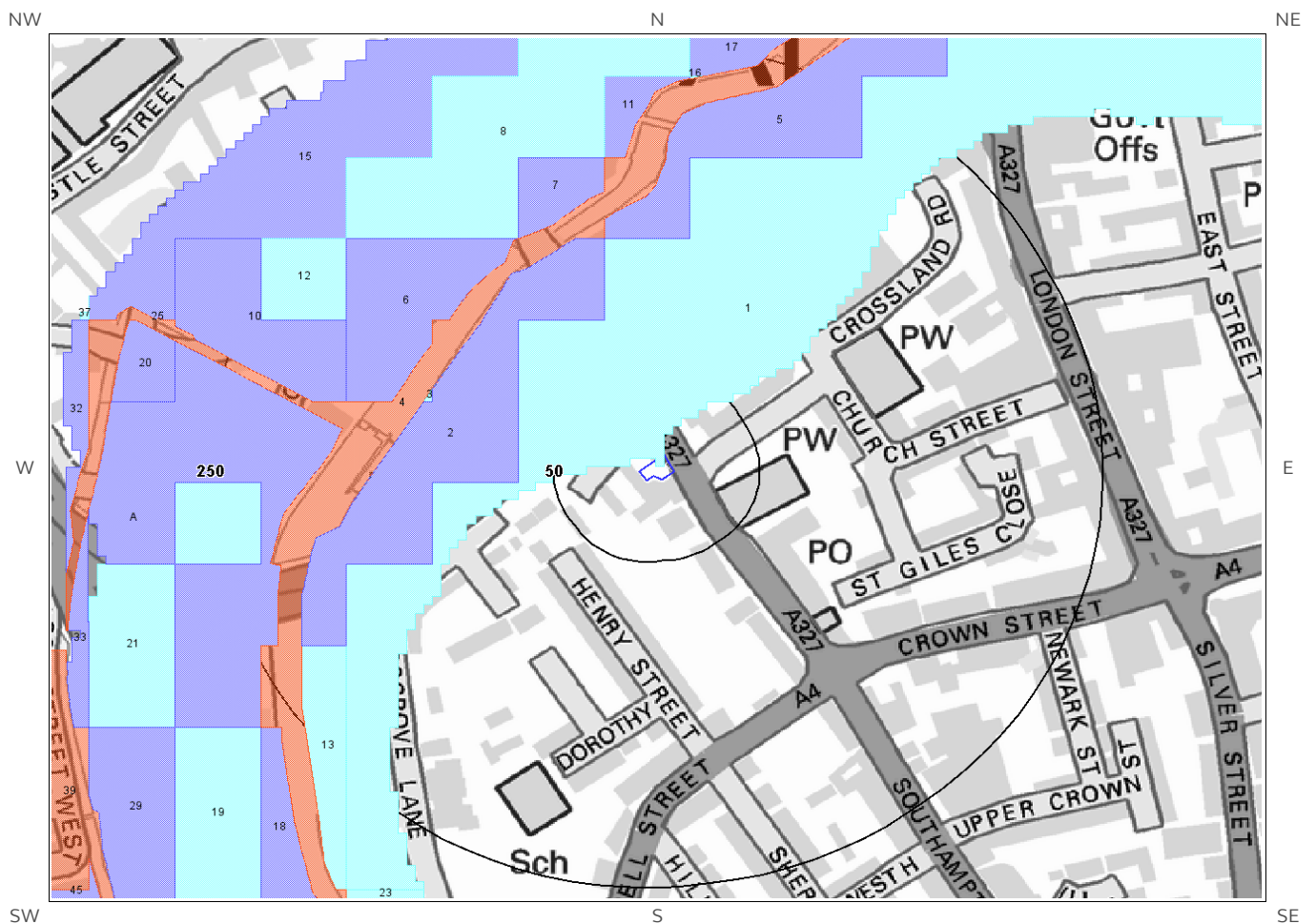
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



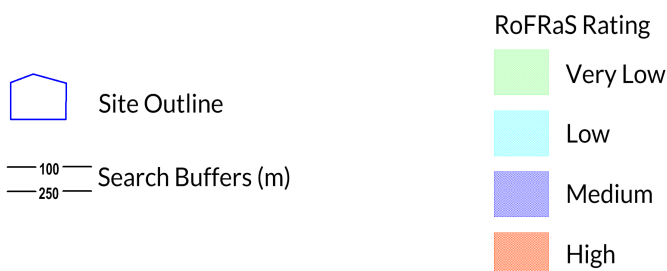
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

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:

ID	Distance (m)	Direction	Update	Type
1I	84	NW	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
2A	117	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
3B	120	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
4A	139	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
5B	140	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
6	141	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
7	145	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
8C	149	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
9C	161	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
10D	162	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
11C	165	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
12C	170	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
13C	176	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
14	176	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
15J	192	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
16D	207	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
17K	216	SW	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
18E	228	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
19E	233	N	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m 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.

ID	Distance (m)	Direction	Update	Type
1I	84	NW	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
2A	141	N	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
3B	217	SW	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)

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

Highest risk of flooding onsite 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 Low (greater than 1 in 1000 but less than 1 in 100) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Low

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

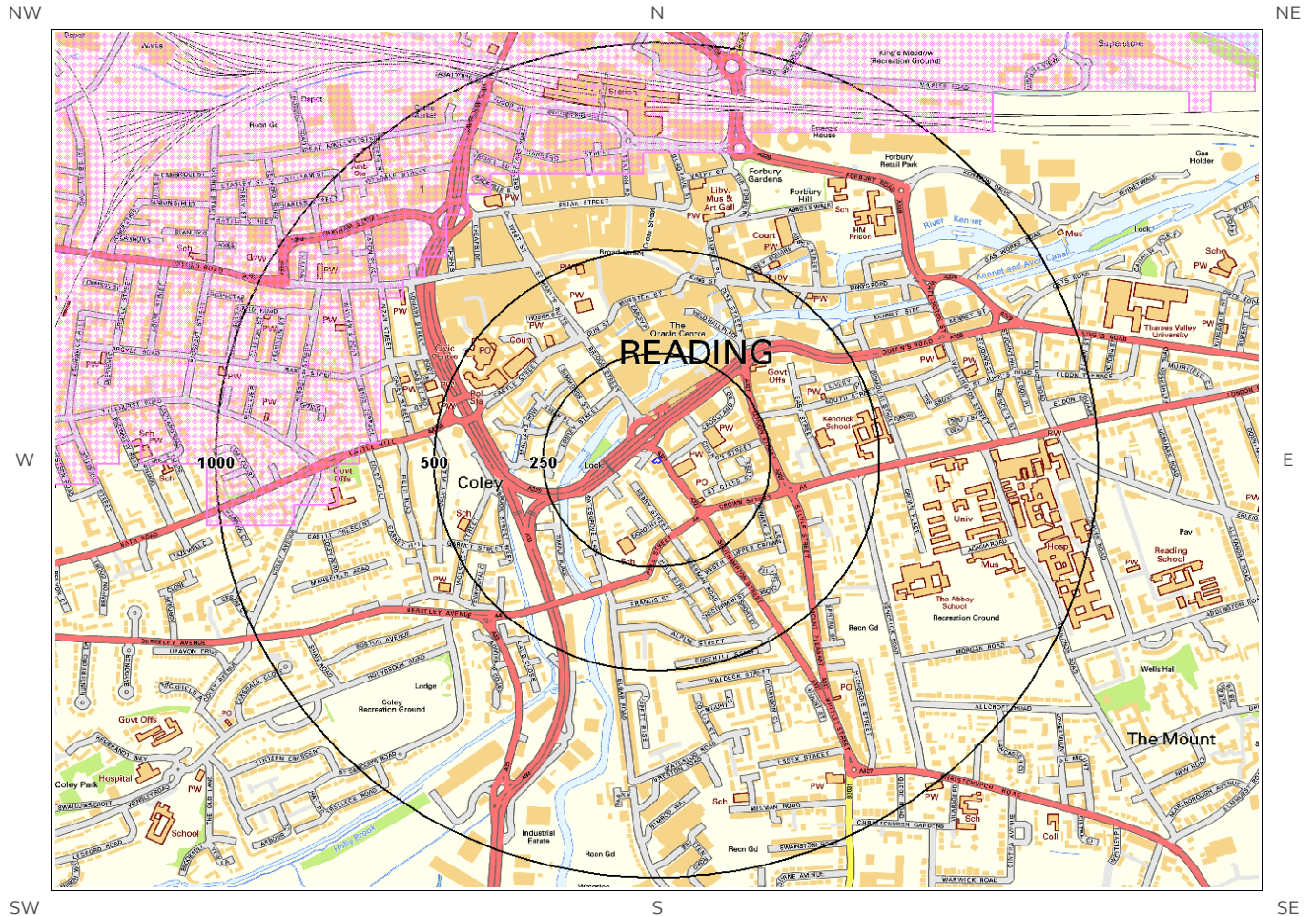
British Geological Survey confidence rating in this result

High

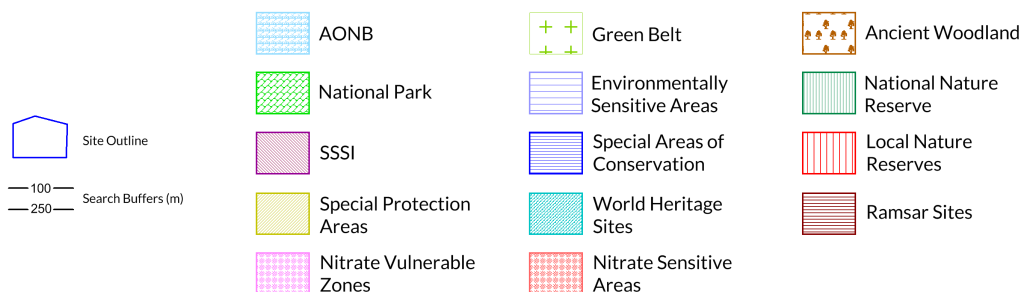
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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
---	------------

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:

0

Database searched and no data found.

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:

4

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
1	622	W	Existing	DEFRA
Not shown	1571	W	Existing	DEFRA
Not shown	1806	NE	Existing	DEFRA
Not shown	1834	S	Modified	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 Moderate

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

Hazard
Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

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 High

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 high possibility of localised subsidence occurring naturally or in adverse conditions such as high surface or subsurface water flow. Obtain specialist advice to advise on need for stabilisation work and/or land management plan to maintain stability. Do not dispose of drainage into the ground. For new build a specialist land stability assessment is necessary. Investigation, remediation and/or mitigation works may be necessary to stabilise the area. Construction work may cause subsidence. Surface drainage must not affect the karst system or groundwater. Increased construction costs are likely. For existing property increase

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

Hazard

in insurance risk due to potential soluble rocks hazards. Potential of groundwater pollution.

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

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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

Environment Agency
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Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



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SO16 0AS
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Local Authority
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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



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

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3. Supporting information

3.4 Risk assessment methodology

The method of risk evaluation adopted in this document is consistent with CIRIA C552 (2001). Hence, risk is considered to be a function of both the probability (likelihood) of contamination occurring at the study site and also the potential severity (consequence) of the environmental impacts associated with this contamination.

The classification system used to define contaminant probability, consequence and risk is described in the following tables.

Table A: Classification of probability

Classification	Definition
High likelihood	There is a contaminant linkage and an event that appears either very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a contaminant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term, and likely over the long term.
Low likelihood	There is a contaminant linkage and circumstances are possible under which 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.
Unlikely	There is contaminant linkage but circumstances are such that it is improbable that an event would occur even in the long term.

Table B: Classification of consequence

Classification	Receptor	Definition	Examples
Severe (acute risks)	Humans	Short-term (acute) risk to human health likely to result in "significant harm" as defined in the CTL Statutory Guidance	High concentrations of cyanide on the surface of an informal recreation area
	Controlled waters	Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource	Major spillage of contaminants from site into controlled water
	Property	Catastrophic damage to buildings/property	Explosion resulting from methane accumulation, causing building collapse (can also equate to an acute human health risk if buildings are occupied)
	Ecology	A short-term risk to a particular ecosystem, or organism forming part of such eco-system	Potentially long term derogation of a designated site or protected species
Medium (long-term)	Humans	Chronic damage to human health ("significant harm" as defined in the CTL Statutory Guidance)	Concentrations of a contaminant from site exceed the GAC or SSAC
	Controlled waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution)	Leaching of contaminants from a site to a Principal or Secondary Aquifer
	Property	Significant damage to crops, buildings, structures and services	Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability)
	Ecology	A significant change in a particular ecosystem, or organism forming part of such ecosystem	Death of a species within a designated nature reserve

3. Supporting information

Table B: Classification of consequence (continued)

Classification	Receptor	Definition	Examples
Mild (long-term; less sensitive receptors)	Humans	Contamination present although unlikely to constitute a significant chronic health risk to sensitive receptors	Concentrations of chemical species that exceed the GAC or SSAC for a low sensitive land-use e.g. public open space
	Controlled waters	Pollution of non-sensitive water resources	Pollution of non-classified groundwater
	Property	Damage to sensitive buildings/structures/services	Aggressive ground conditions leading to potential for long term degradation of buried concrete
	Ecology	Damage to the environment	Localised damage to aquatic habitat causing temporary relocation of certain species
Minor (long-term; less significant receptors)	Humans	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc.)	The presence of contaminants at such concentrations that protective equipment is required during site works
	Controlled waters	Potential minor release of contamination to local water features	Short term or low volume release of potentially polluting material to a secondary surface water course of low existing quality
	Property	Easily reparable effects of damage to buildings, structures and services. Harm which may result in a financial loss, or expenditure to resolve	The loss of plants in a landscaping scheme. Discolouration of concrete
	Ecology	Short term, localised damage may occur; consequences are spatially and temporally limited	Short term or localised disruption to in situ flora or fauna; no lasting effects

Table C: Risk classification (comparison of consequence and probability)

		Consequence (severity)			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

3. Supporting information

3.5 Historical land use mapping

Available large-scale historical land use maps relating to the Site and its surrounding area have been provided by Groundsure.

Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1879

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1879
Revised 1879
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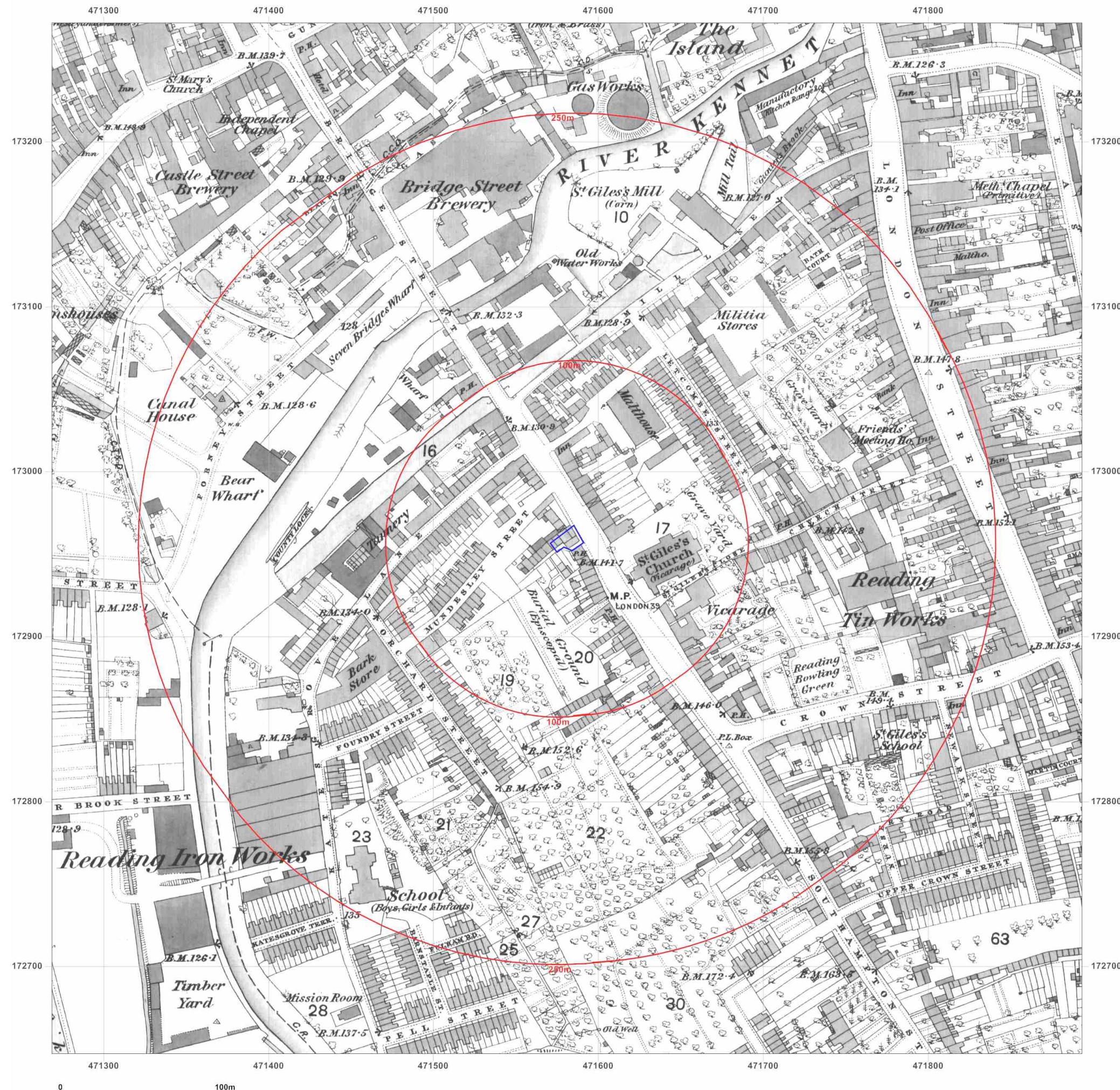


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Map Name: County Series Town Plan

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Map Name: County Series

Map date: 1900

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Map Name: County Series

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Map Name: County Series

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Map Name: National Grid

Map date: 1956-1957

Scale: 1:1,250

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Map Name: National Grid

Map date: 1957-1958

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Client Ref: 4097
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Grid Ref: 471581, 172959

Map Name: National Grid

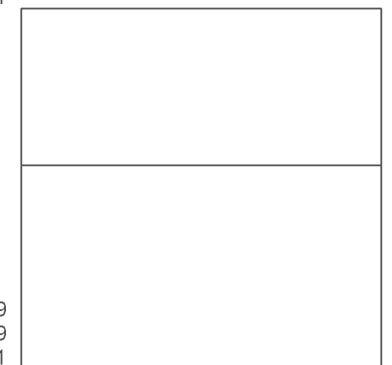
Map date: 1959-1961

Scale: 1:2,500

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Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1957-1962

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Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

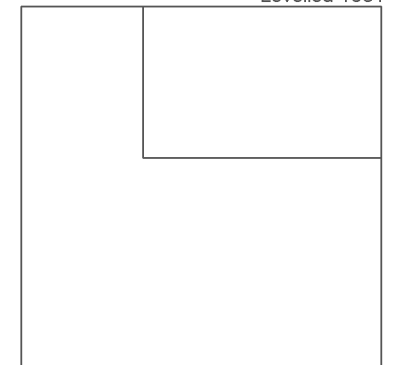
Map date: 1962

Scale: 1:1,250

Printed at: 1:2,000



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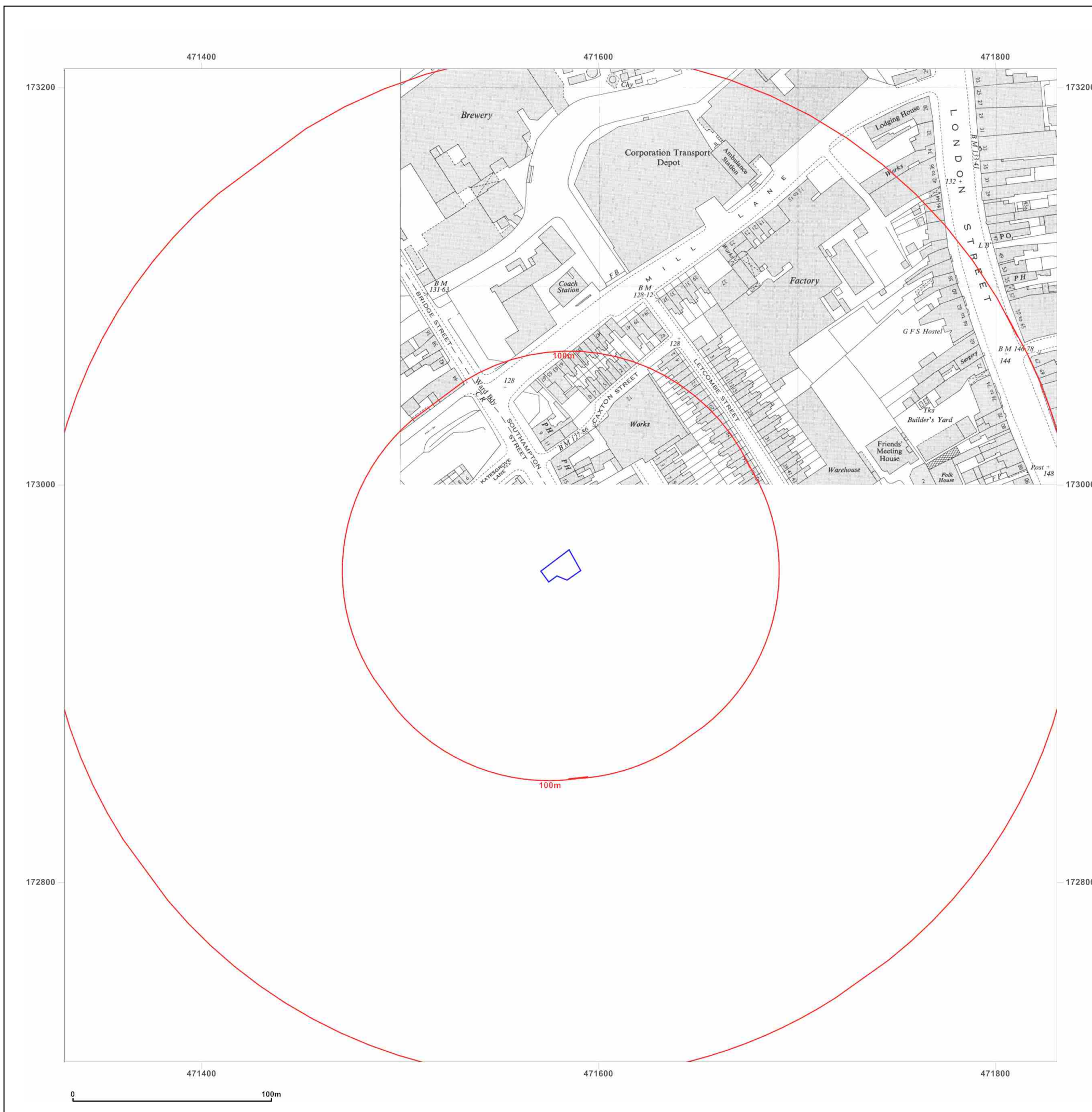


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Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

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Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1968-1970

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1967
Edition N/A
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Levelled 1951

Surveyed 1968
Revised 1968
Edition N/A
Copyright 1969
Levelled 1951

Surveyed 1957
Revised 1968
Edition N/A
Copyright 1969
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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1972-1973

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed 1957
Revised 1971
Edition N/A
Copyright 1972
Levelled 1951

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

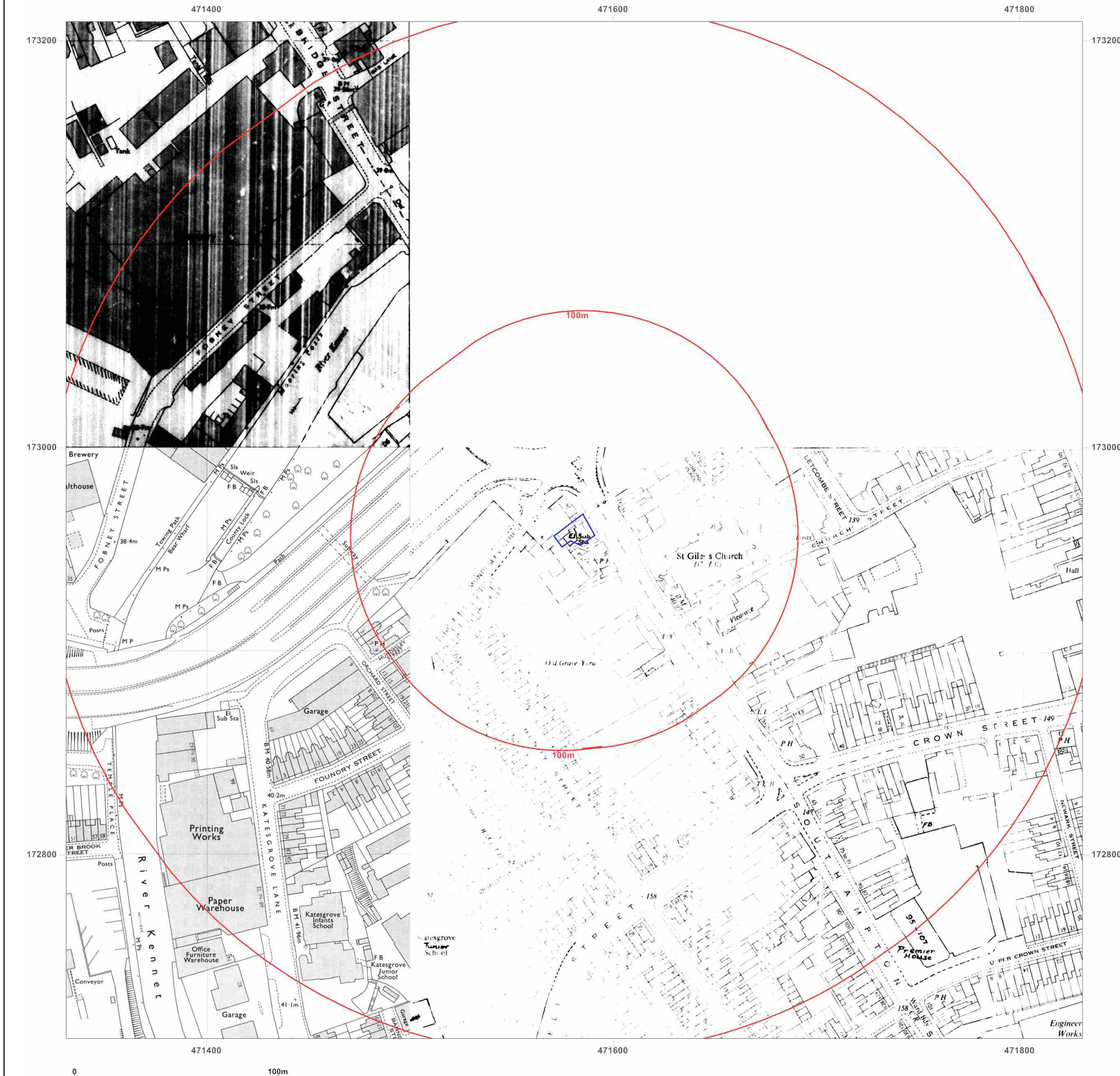


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1978-1979

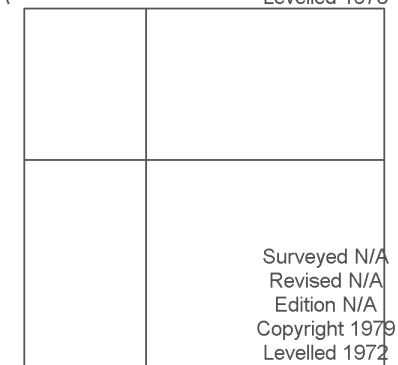
Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1978
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1979
Levelled 1973



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1979
Levelled 1972

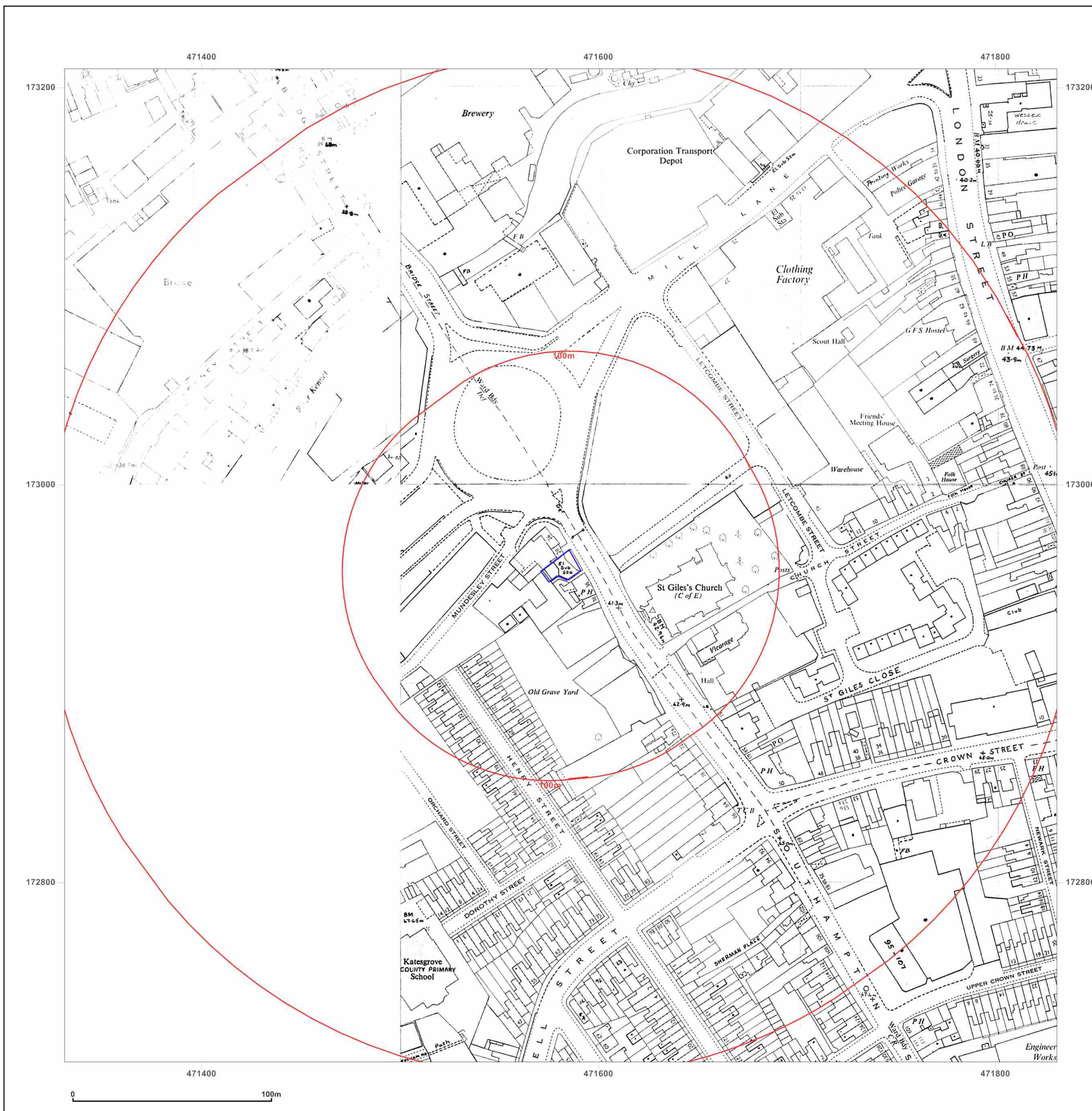


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

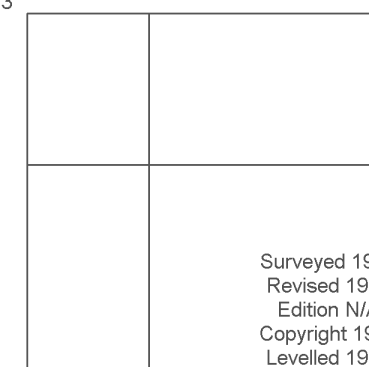
Map date: 1980-1982

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1957
Revised 1979
Edition N/A
Copyright 1980
Levelled 1973



Surveyed 1957
Revised 1982
Edition N/A
Copyright 1982
Levelled 1972

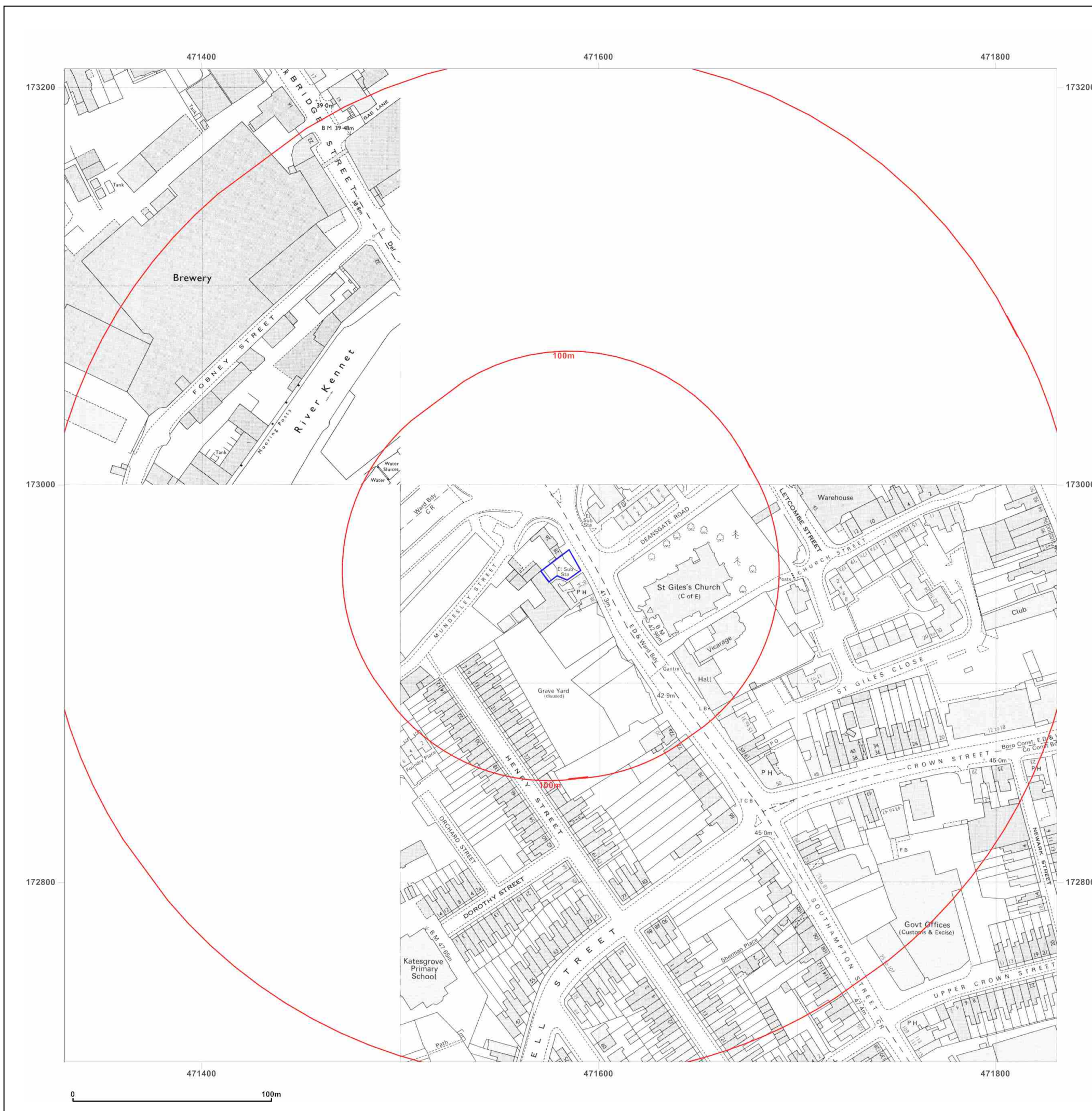


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1982-1986

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1972
Revised 1986
Edition N/A
Copyright 1986
Levelled 1972

Surveyed 1957
Revised 1982
Edition N/A
Copyright 1982
Levelled 1972

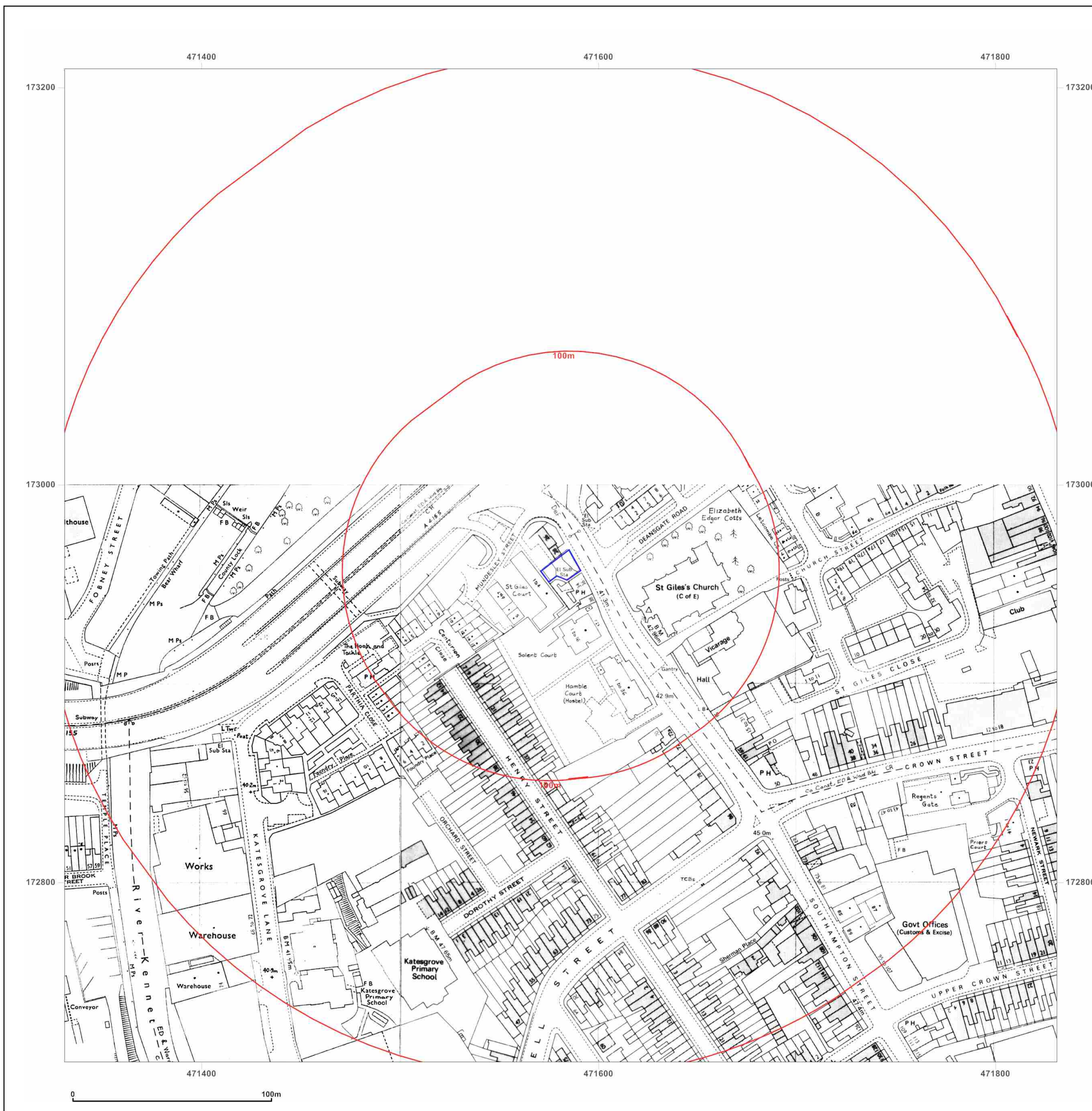


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Site Details:

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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1988-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1973
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Surveyed 1958
Revised 1987
Edition N/A
Copyright 1988
Levelled 1973

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1991
Levelled 1972

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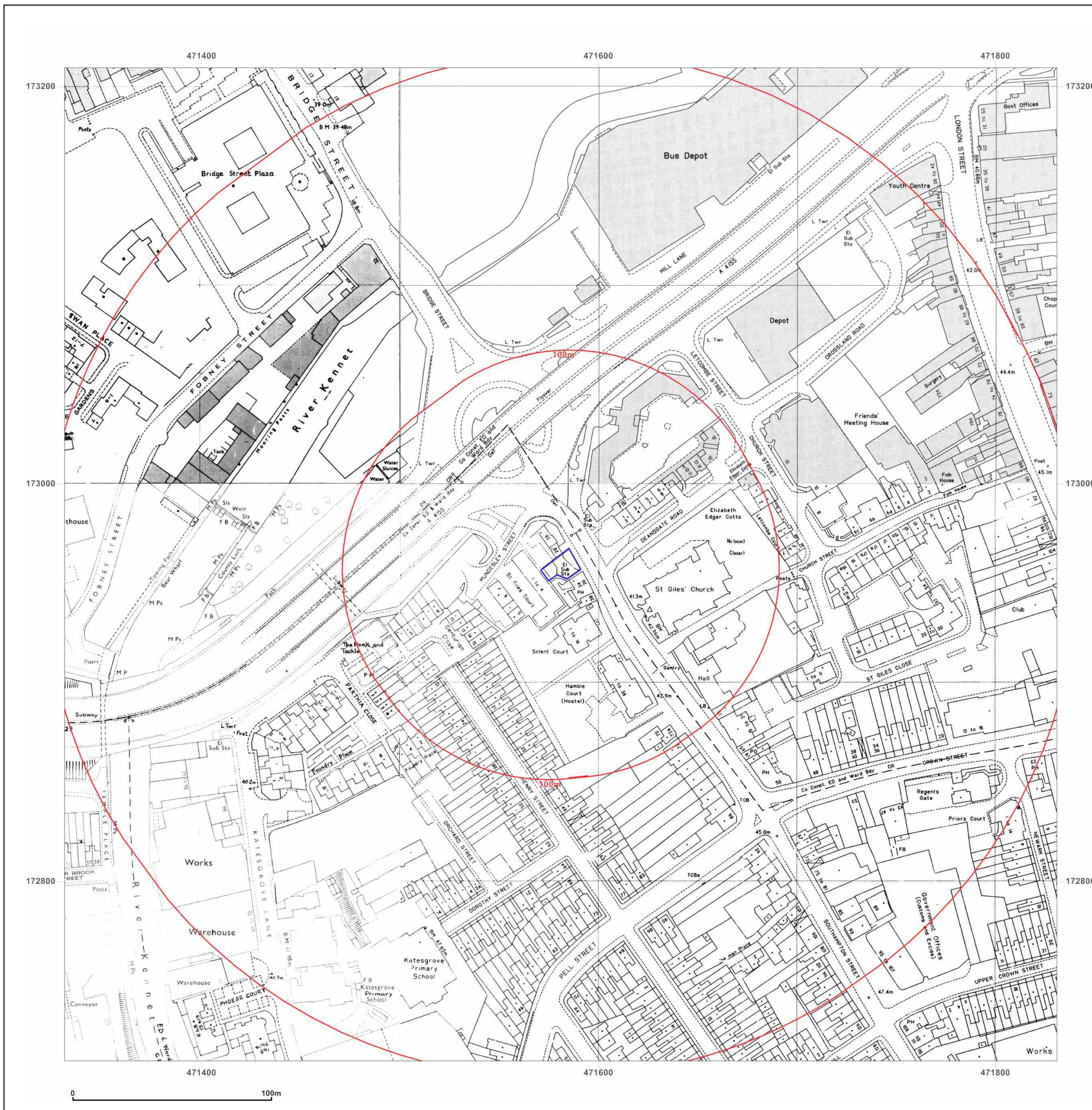


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1988-1993

Scale: 1:1,250

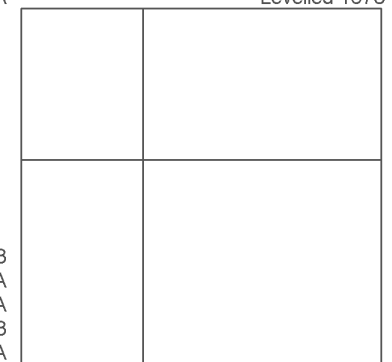
Printed at: 1:2,000



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Surveyed 1973
Revised 1988
Edition N/A
Copyright 1988
Levelled 1973

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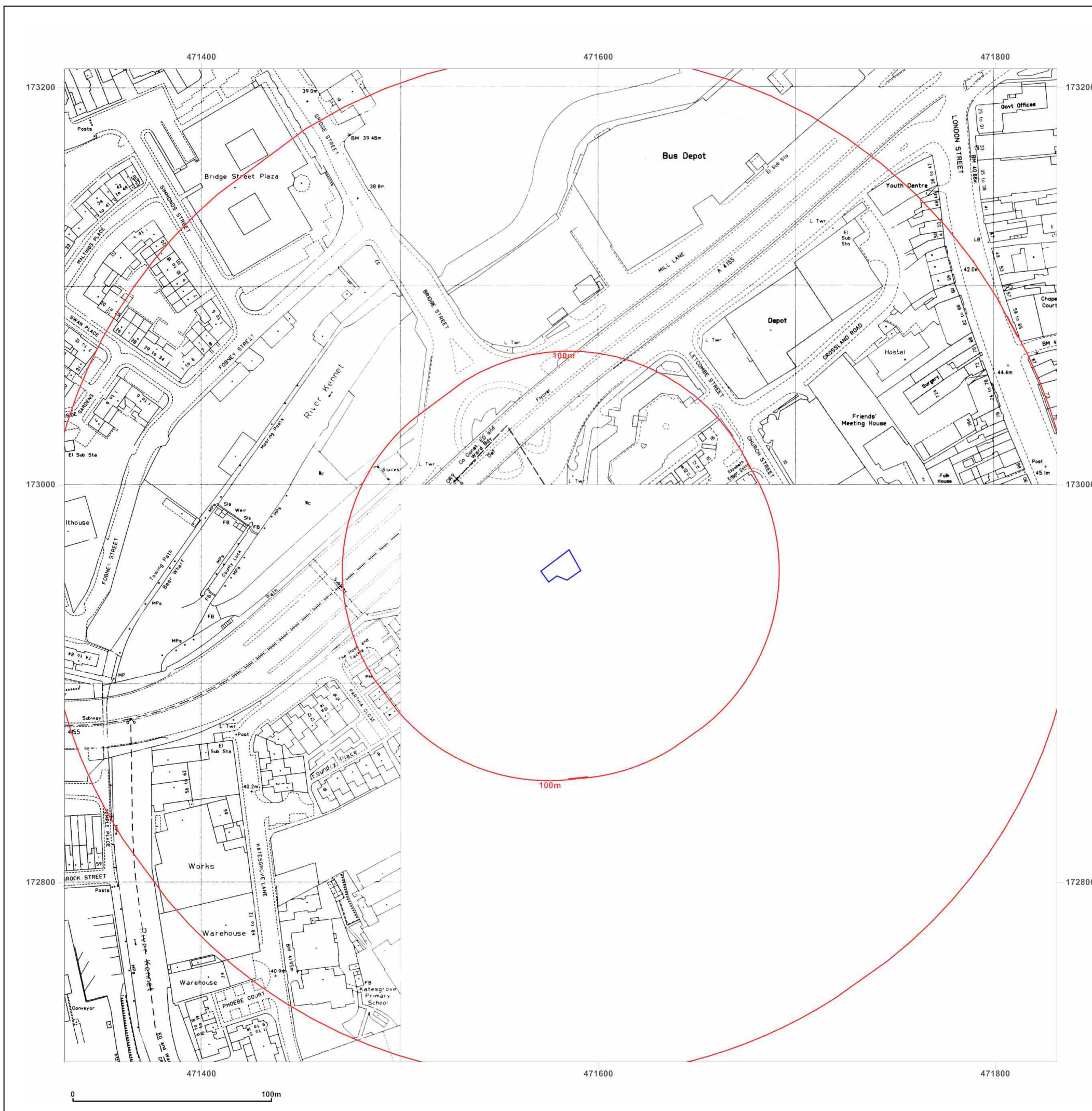


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

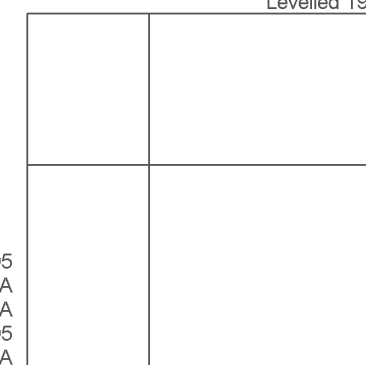
Map date: 1991-1995

Scale: 1:1,250

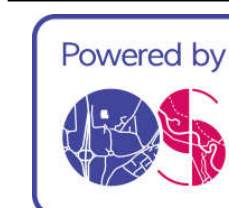
Printed at: 1:2,000



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Revised 1991
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Site Details:

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Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

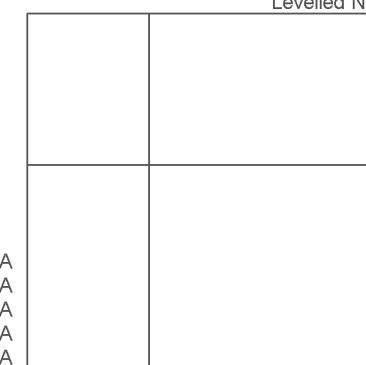
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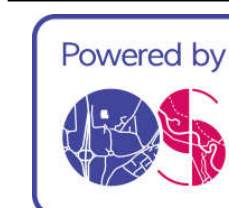
Printed at: 1:2,000



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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1897-1900

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1877
Revised 1898
Edition 1900
Copyright N/A
Levelled N/A

Surveyed 1877
Revised 1898
Edition N/A
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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
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Edition N/A
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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1910-1913

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1877
Revised 1910
Edition N/A
Copyright N/A
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Surveyed 1877
Revised 1910
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Site Details:

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Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1914

Scale: 1:10,560

Printed at: 1:10,560



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

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

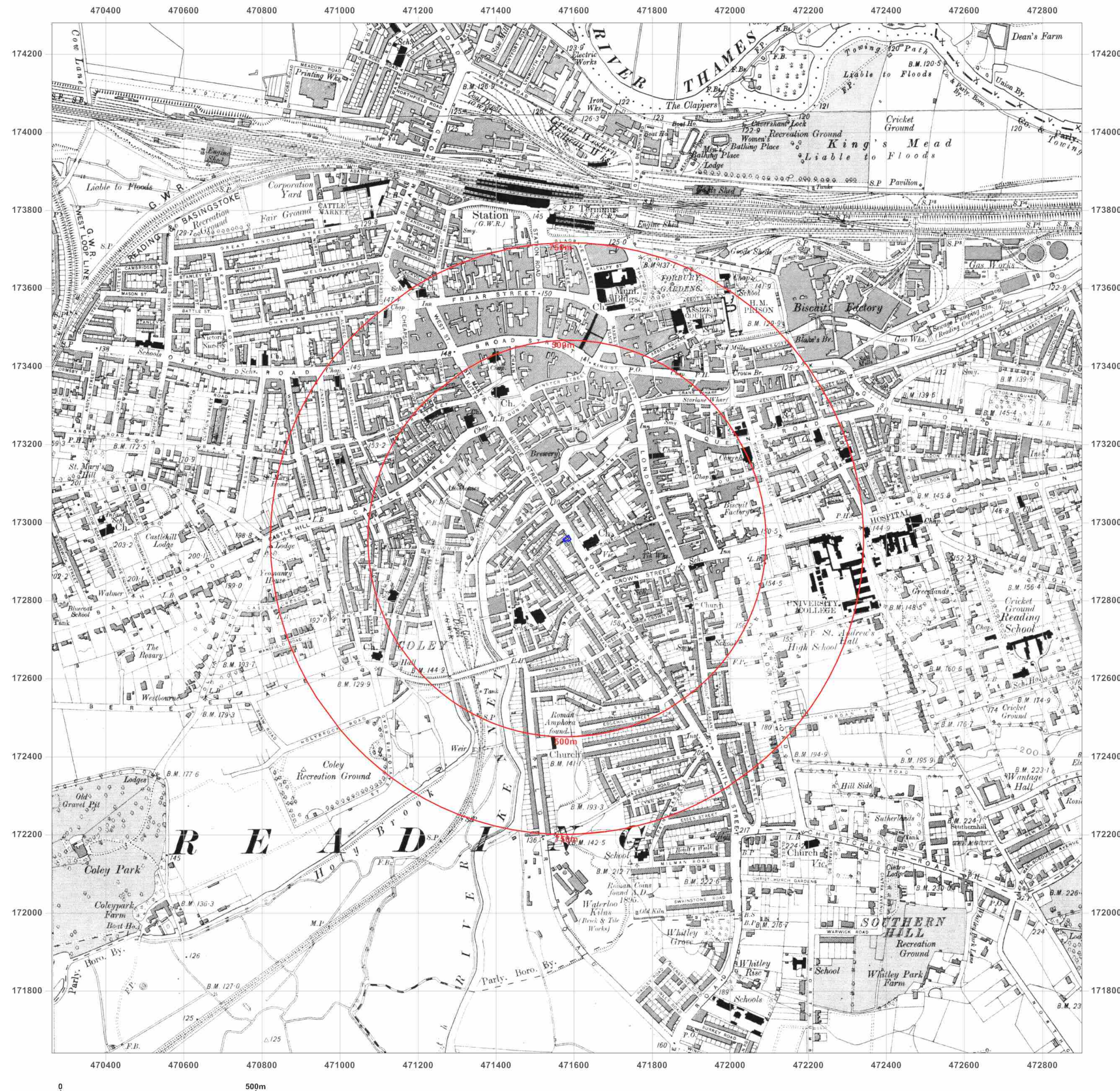


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Site Details:

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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1932-1933

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1932
Edition N/A
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Surveyed 1877
Revised 1933
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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1877
Revised 1938
Edition N/A
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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

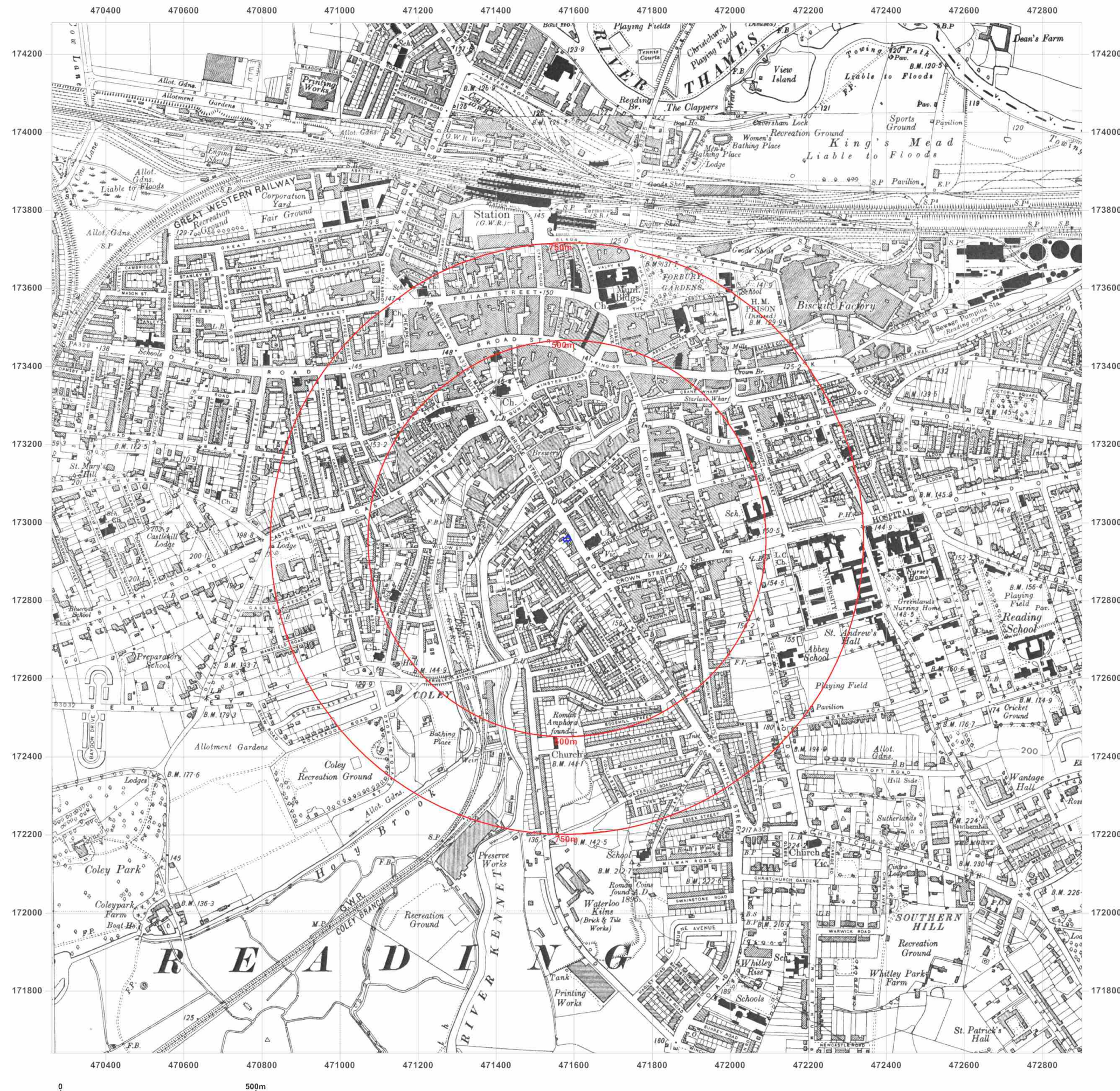


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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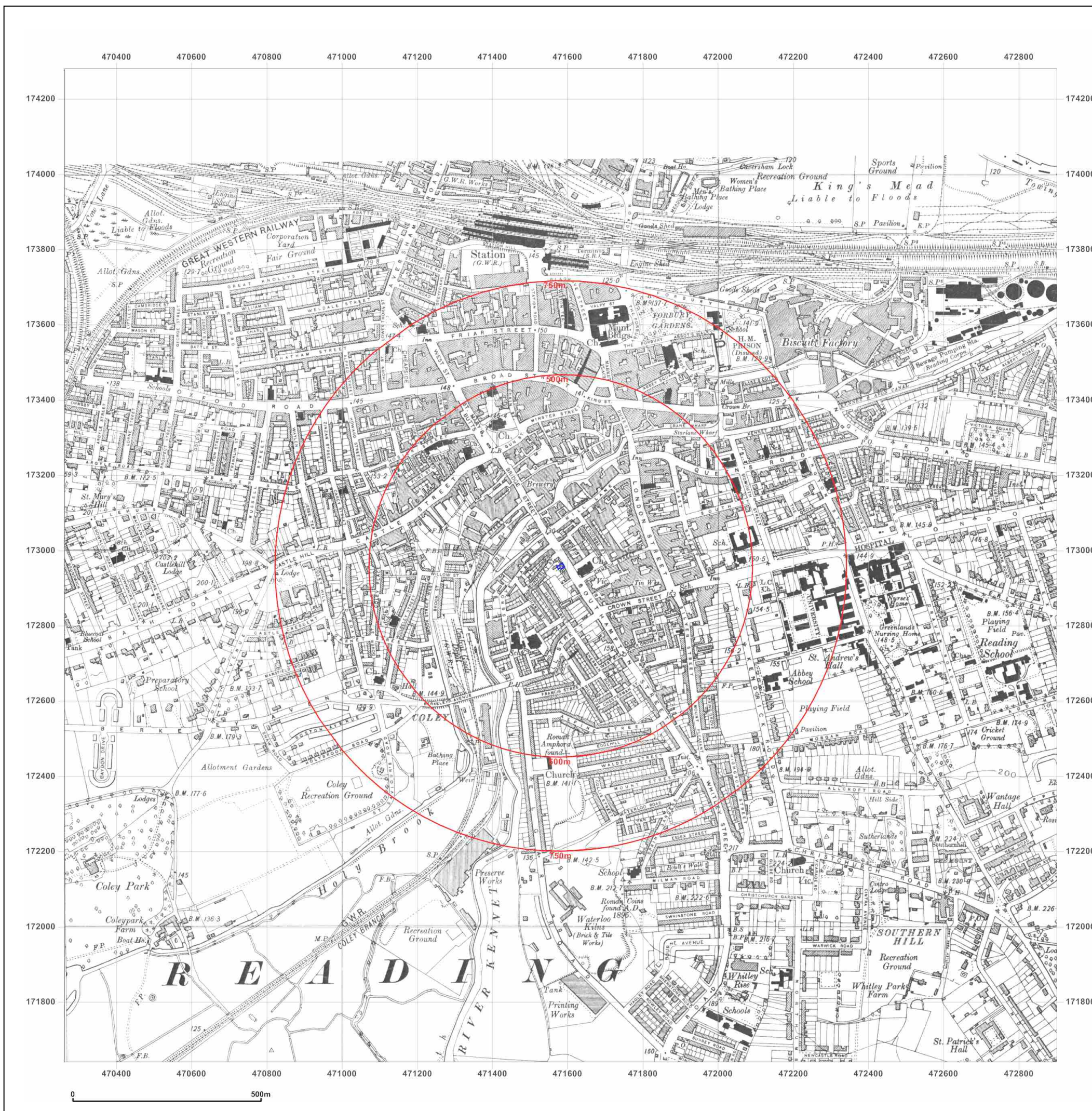


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1973

Scale: 1:10,000

Printed at: 1:10,000



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

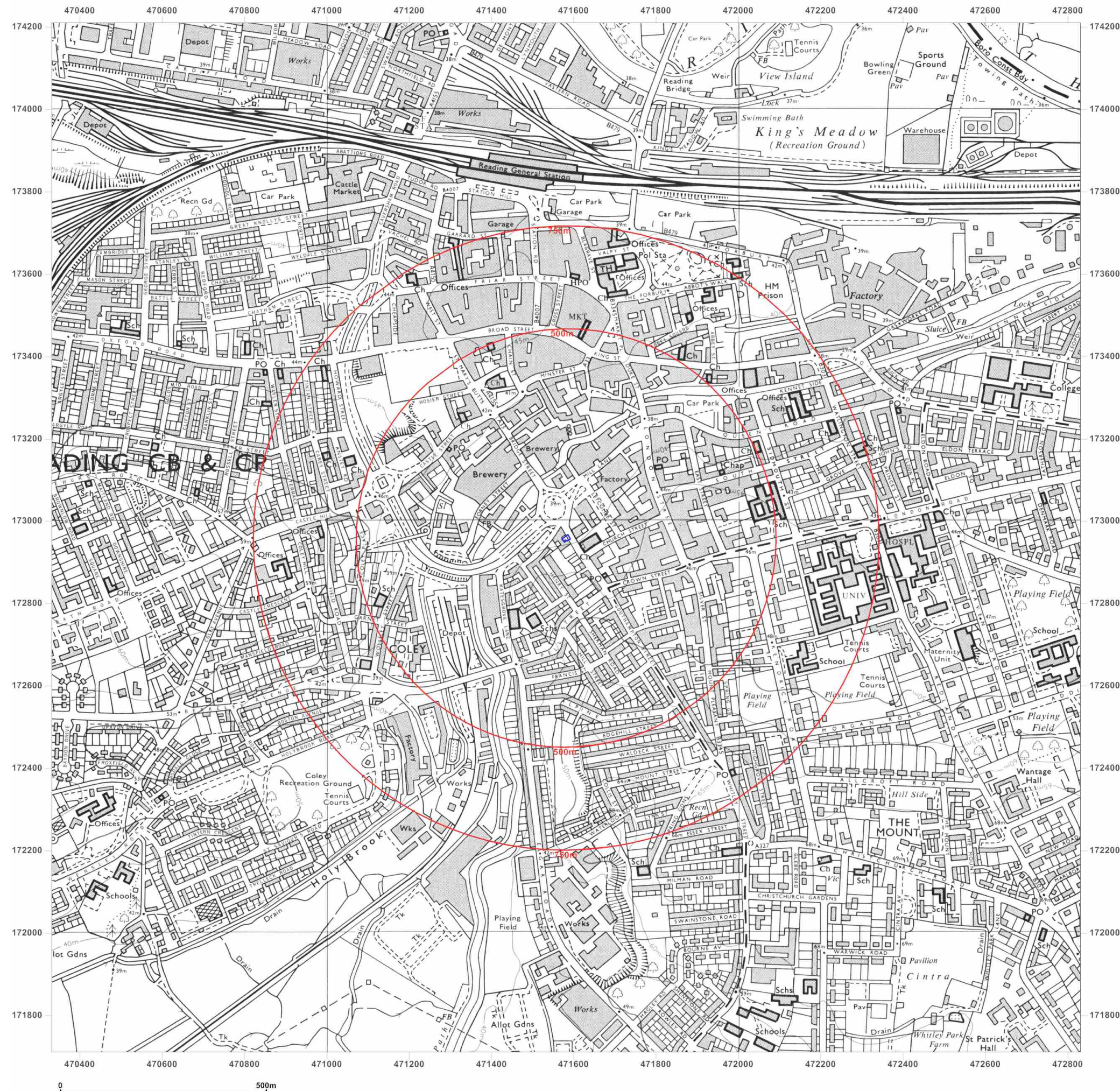


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1979

Scale: 1:10,000

Printed at: 1:10,000



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

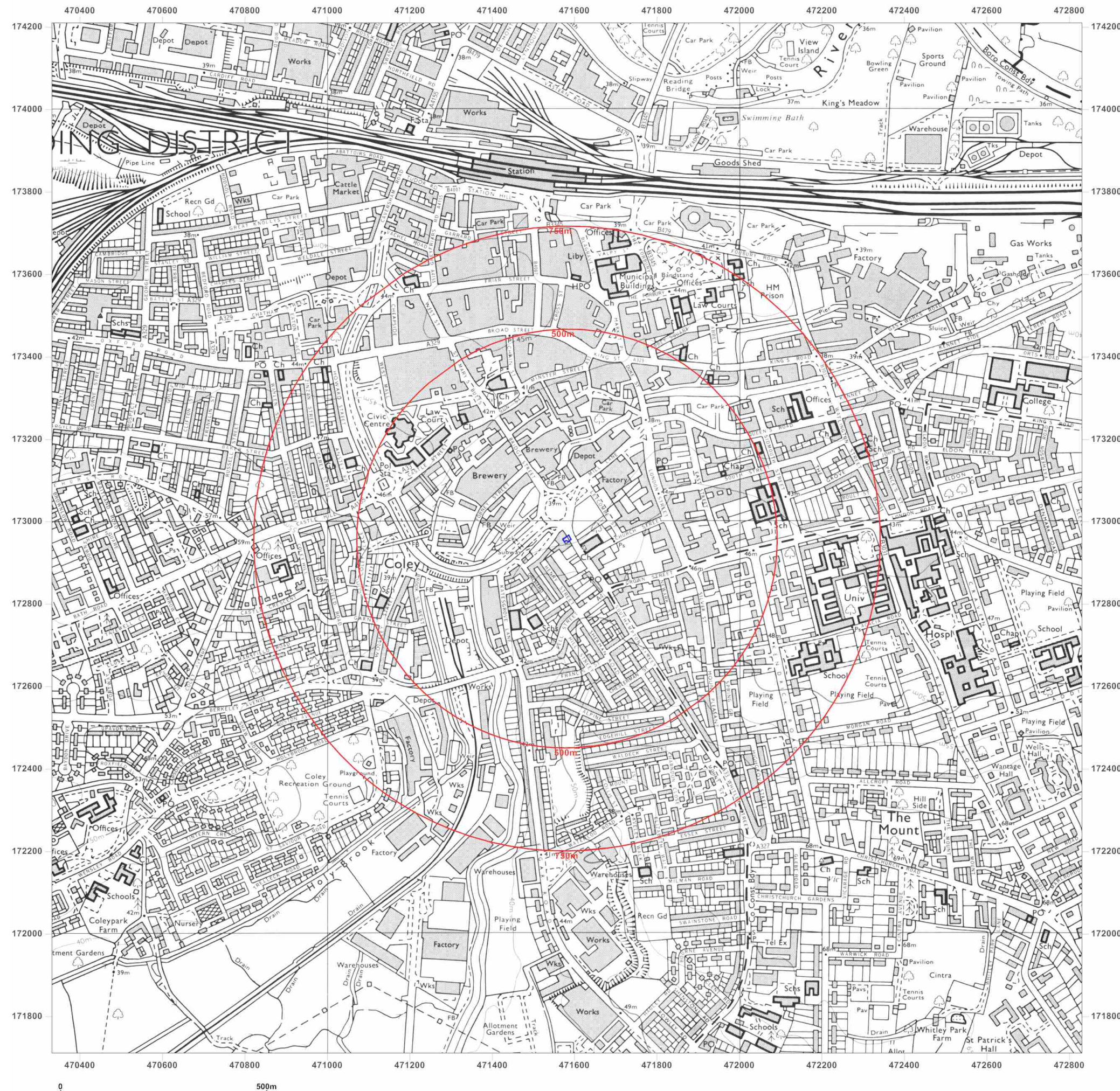


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Site Details:

Land adjacent to 28
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RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 1989

Scale: 1:10,000

Printed at: 1:10,000



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

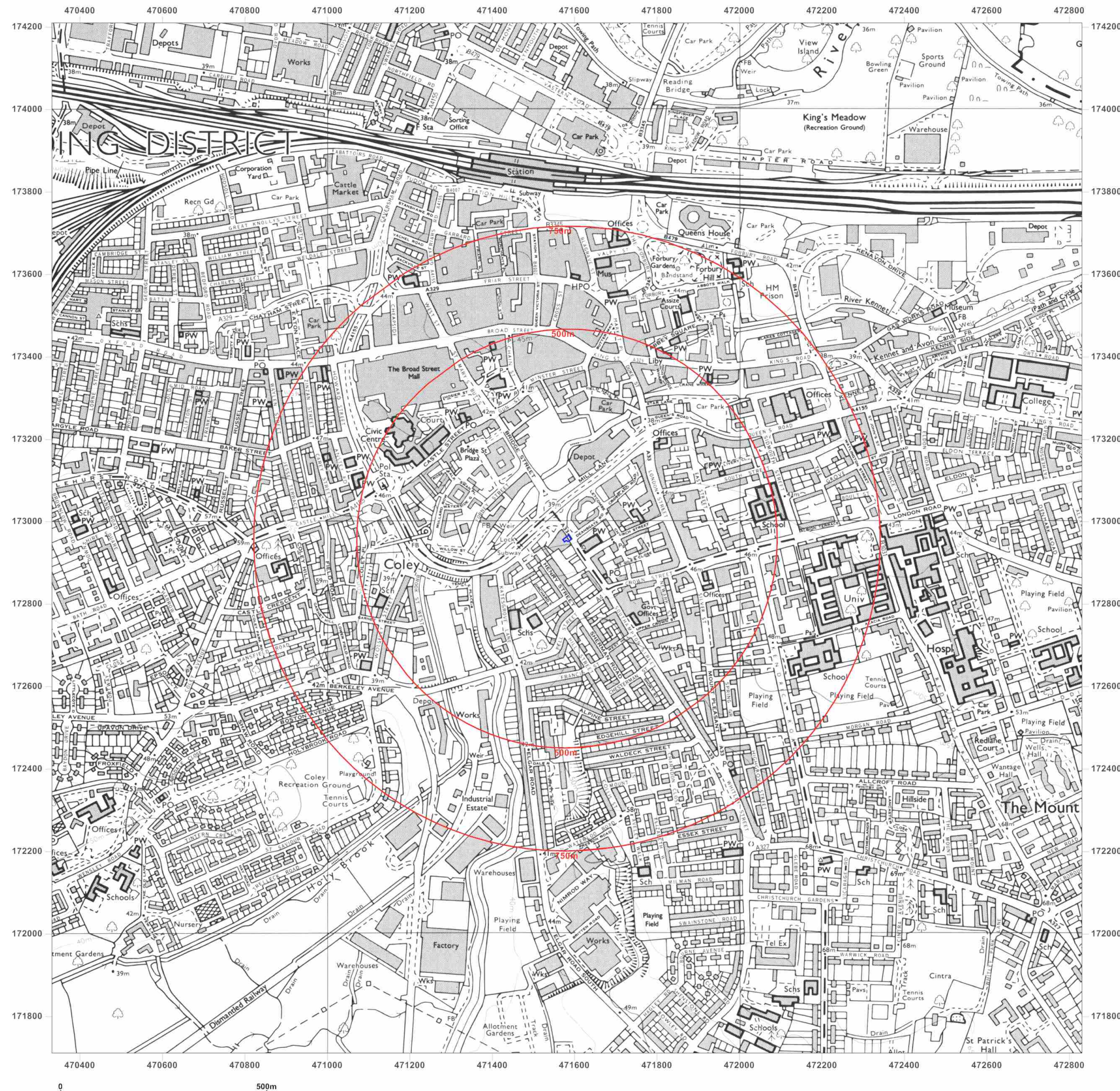


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

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

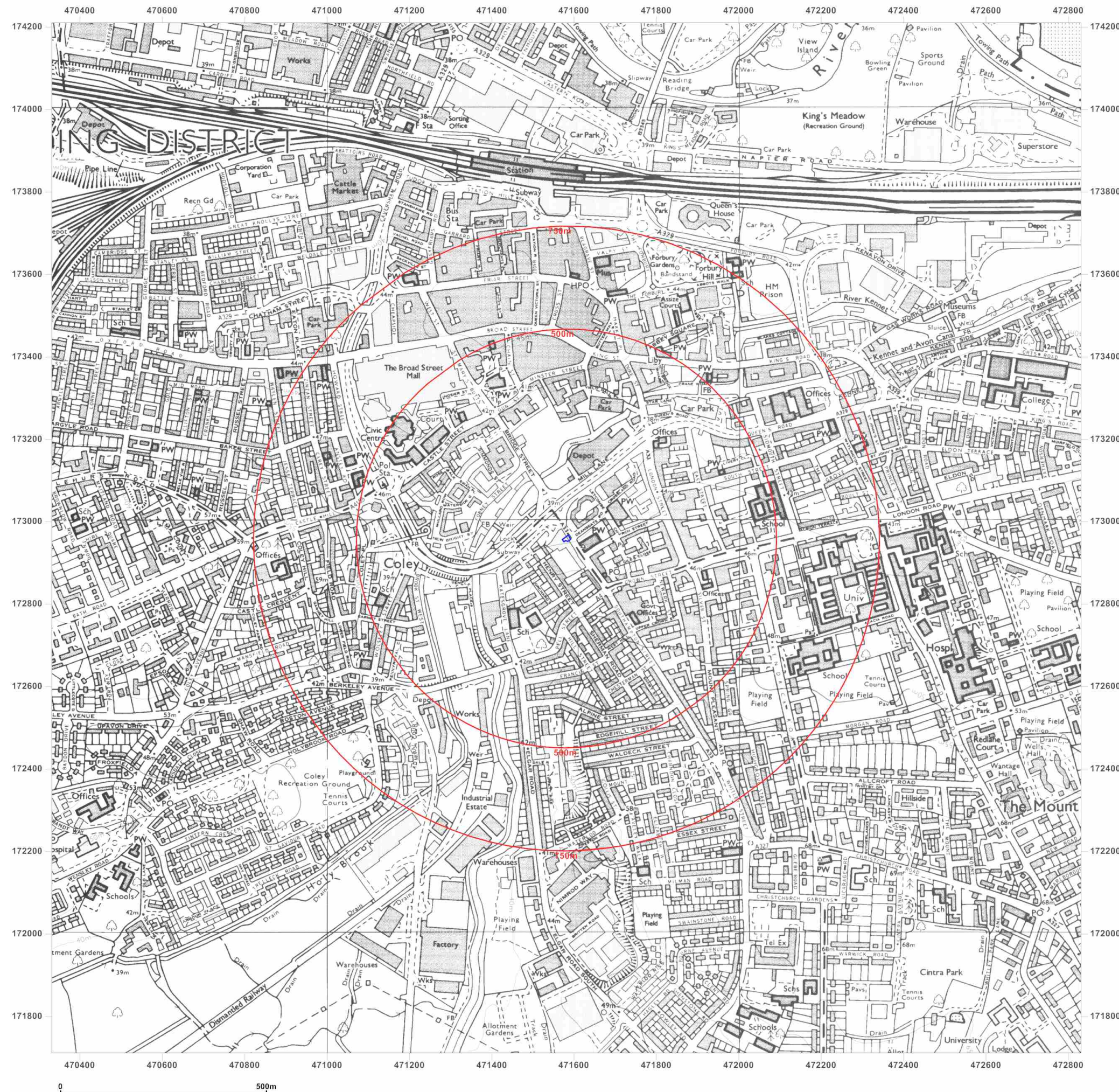


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



2002

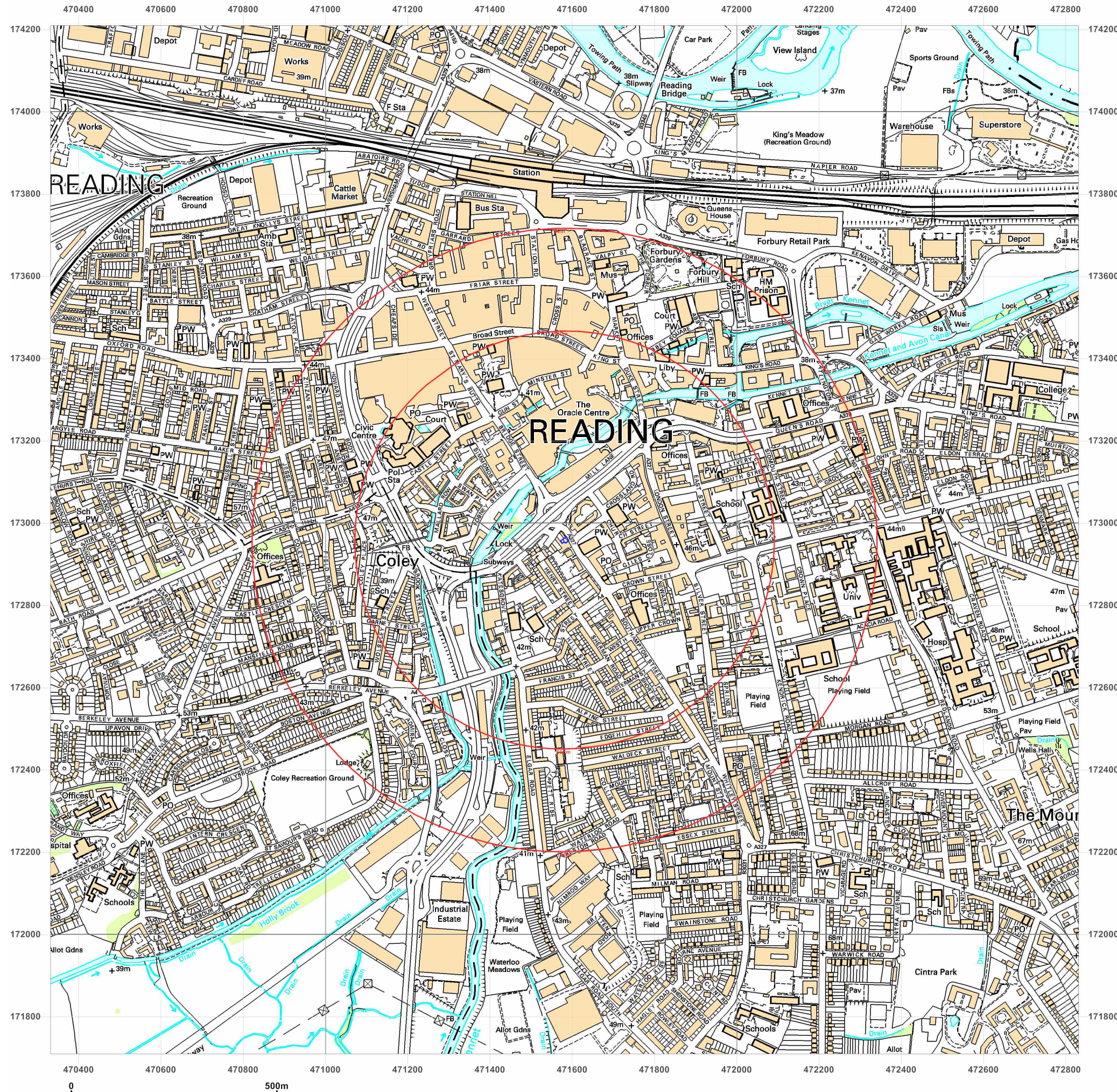


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

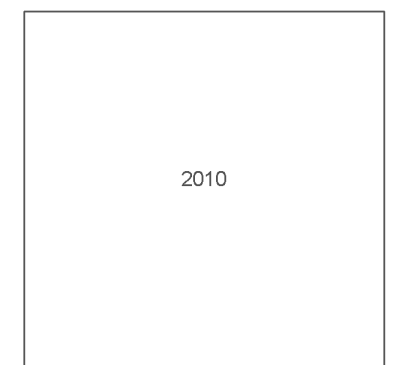
Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

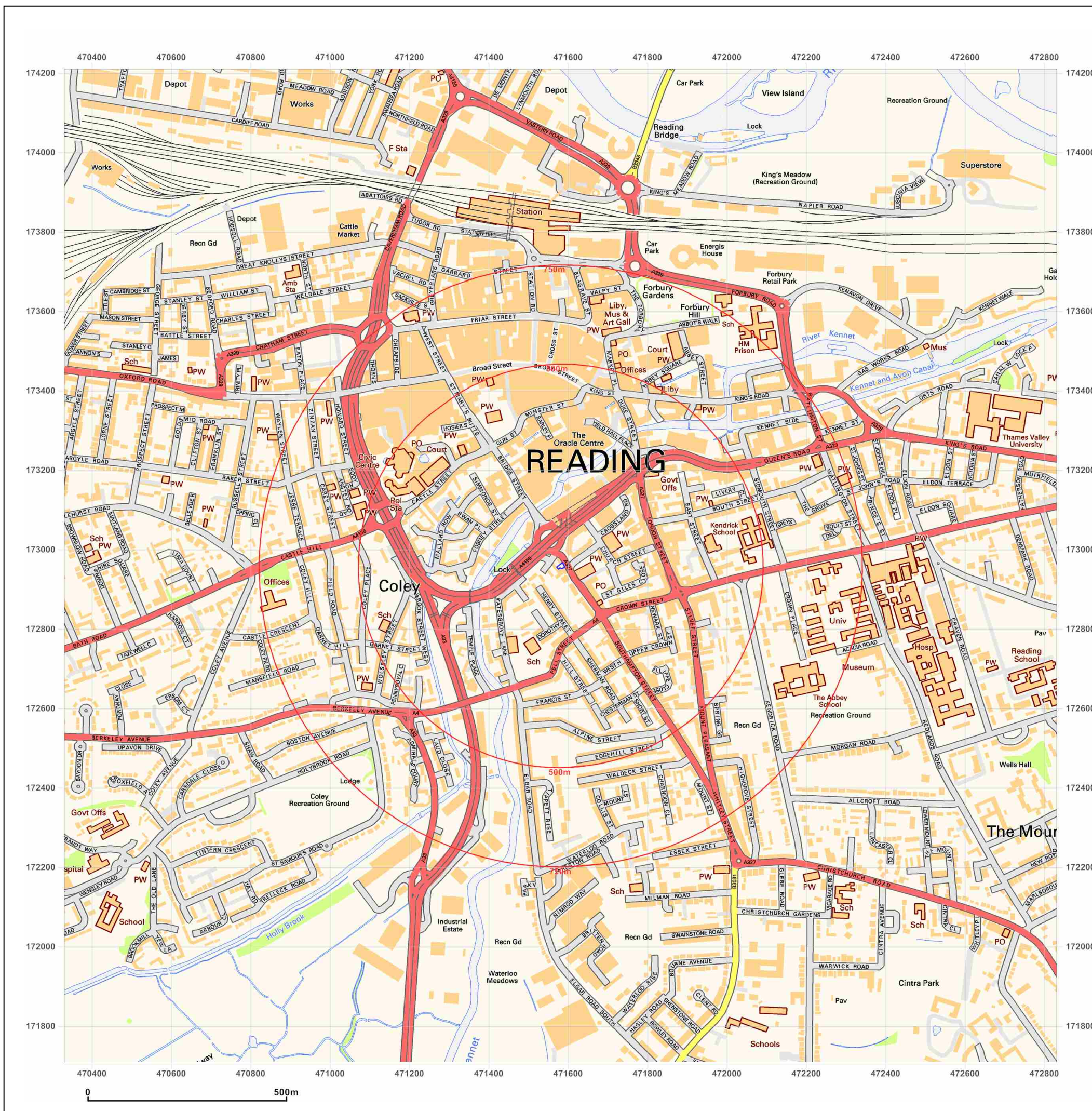


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Site Details:

Land adjacent to 28
Southampton Street, Reading,
RG1 2QL

Client Ref: 4097
Report Ref: GS-5898624
Grid Ref: 471581, 172959

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



2014



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