

FIGURES



FIGURE 1

SITE LOCATION PLAN
SMALL SCALE

6 NORFOLK ROAD
READING
RG30 2EE



FIGURE 2

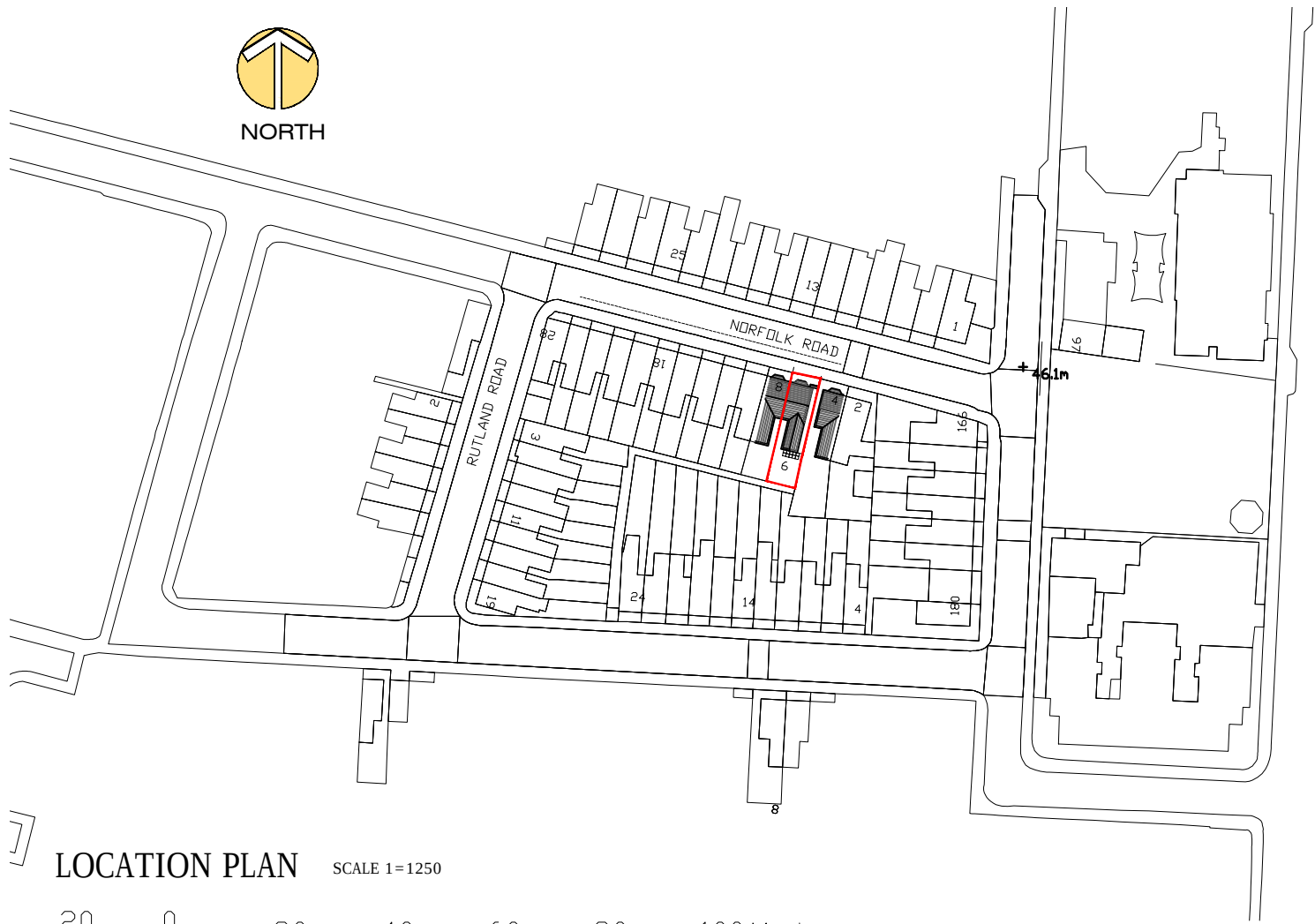
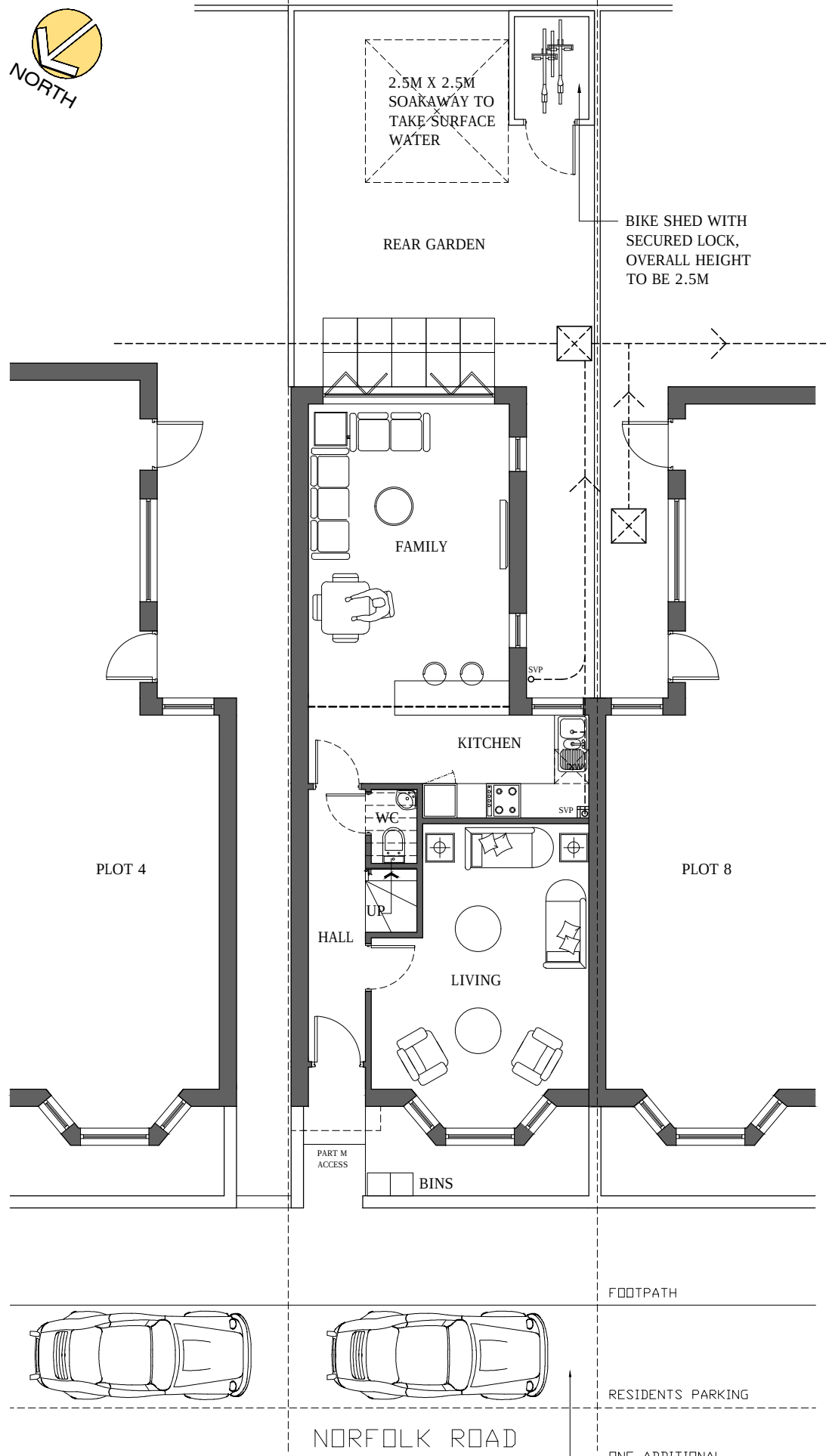
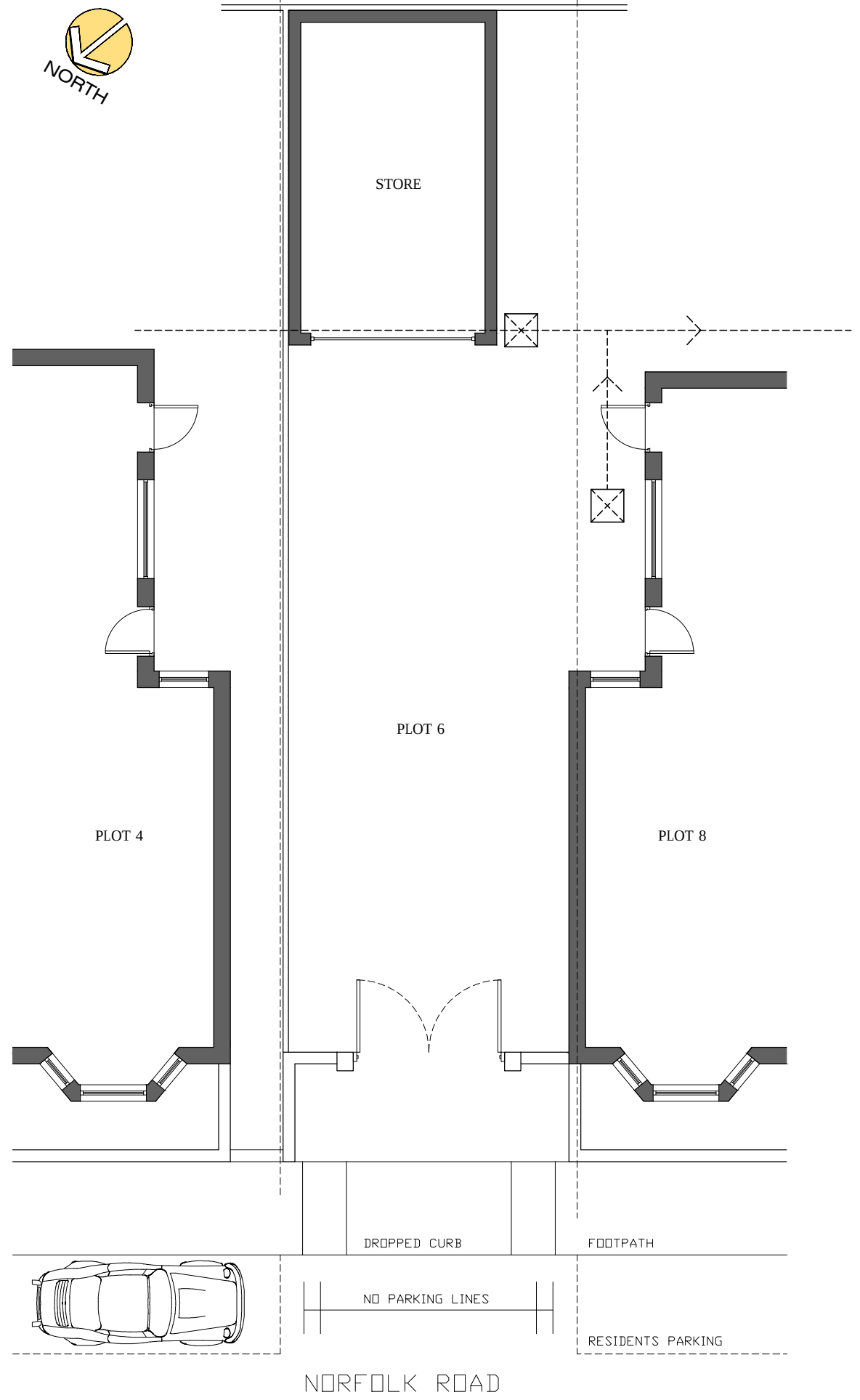
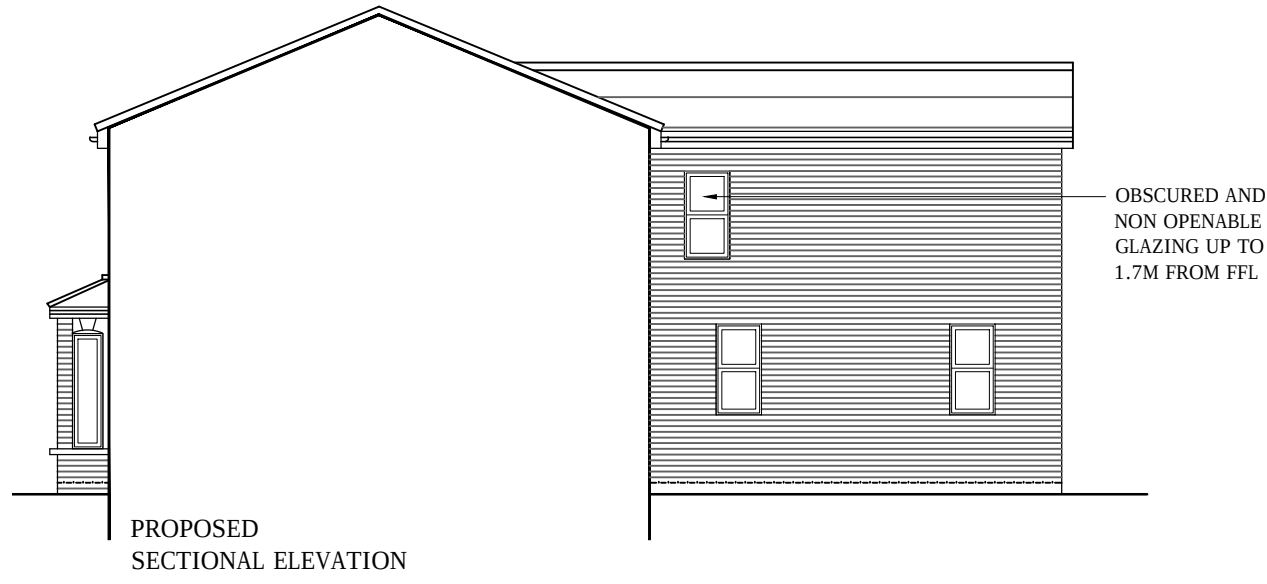
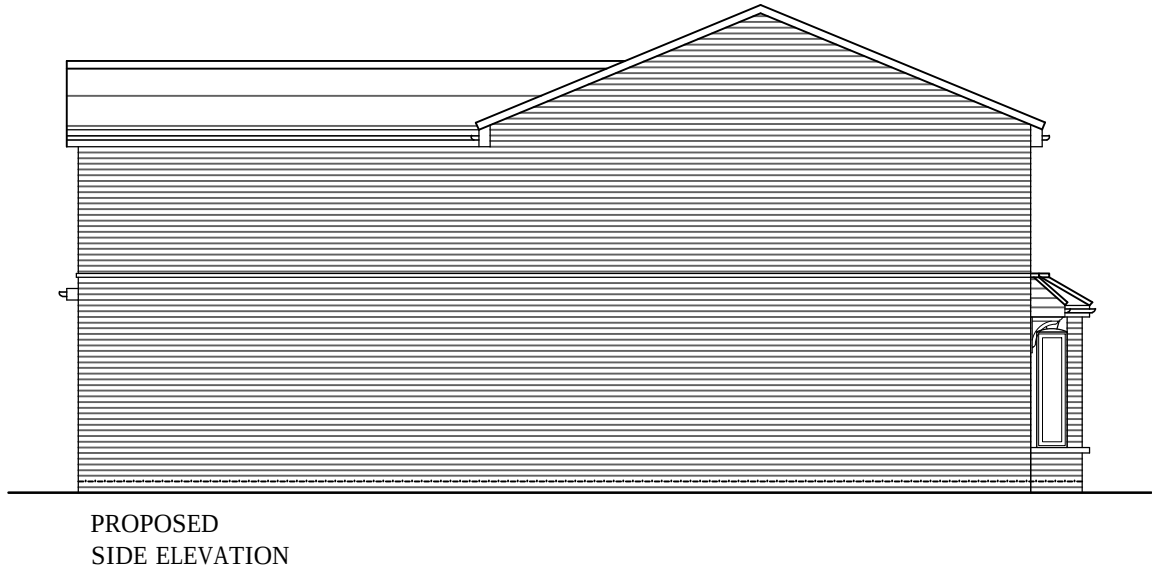
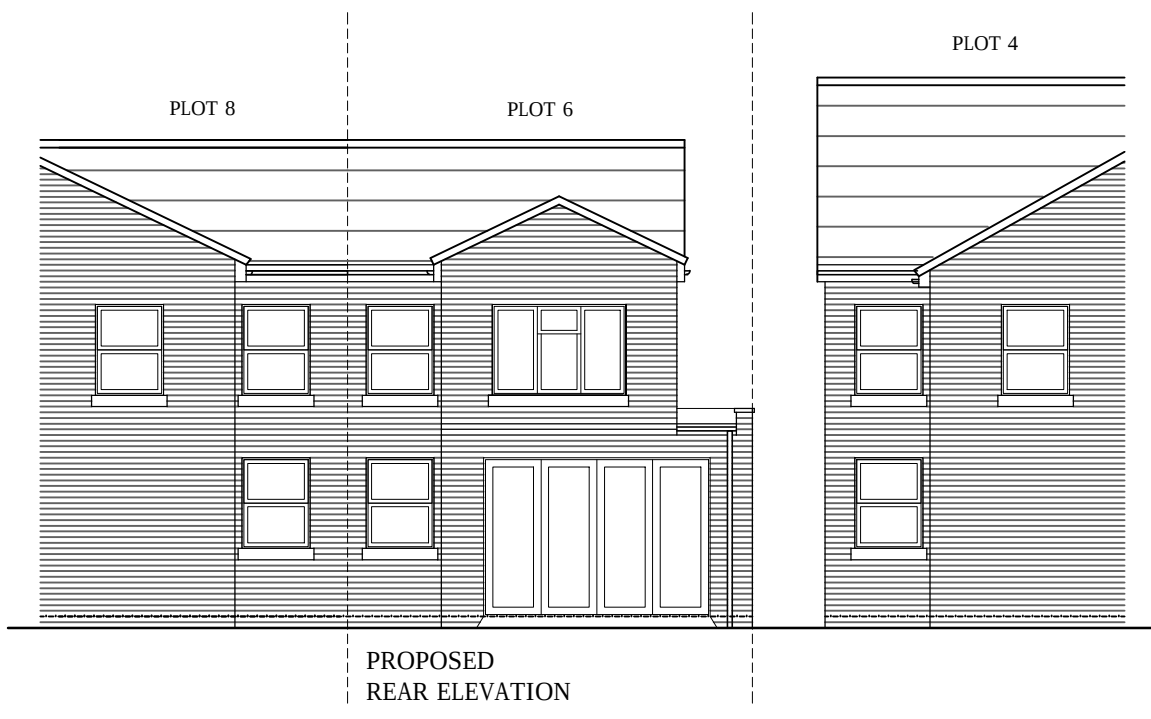
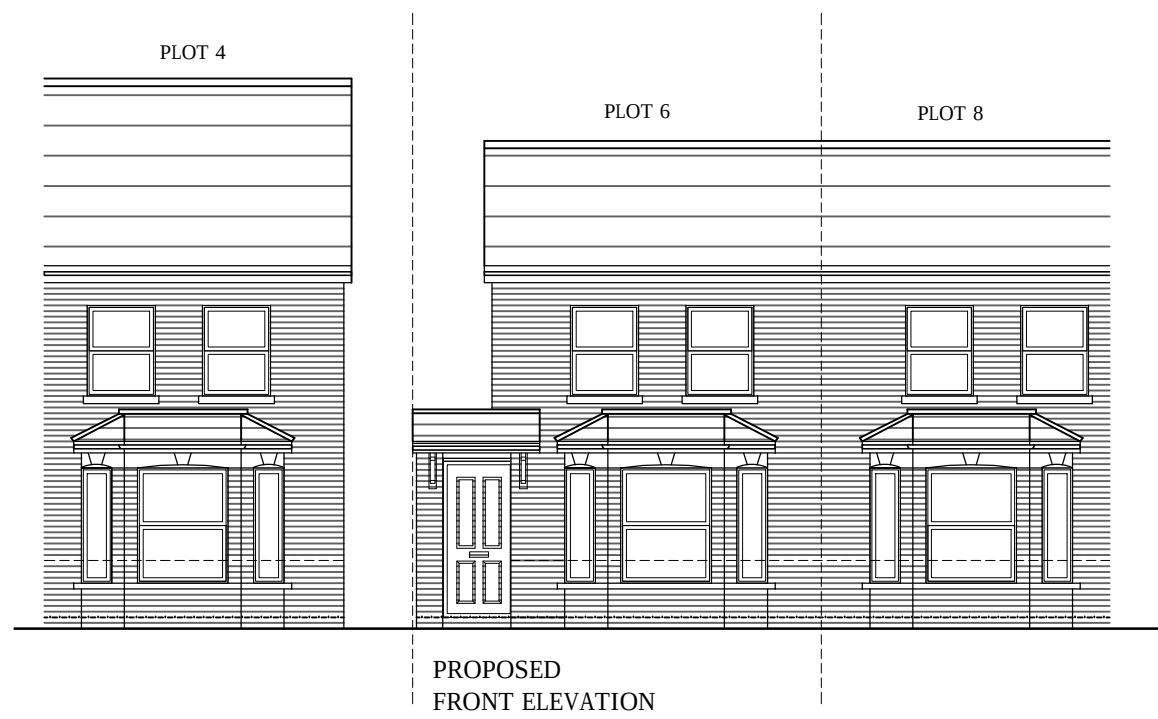
SITE AERIAL PHOTOGRAPH

6 NORFOLK ROAD
READING
RG30 2EE

FIGURE 3

PROPOSED SITE LAYOUT PLAN

6 NORFOLK ROAD
READING
RG30 2EE



The scaling of this drawing cannot be assured

Revision		Date	Initial
P1	PRELIMINARY ISSUE FOR COMMENTS	11.07.17	EH
P2	DRAWING REVISED	22.09.17	EH
P3	DRAWING REVISED	27.09.17	EH

HATCH KEY

BOUNDARY OUTLINE

Status PLANNING DRAWINGS

Project

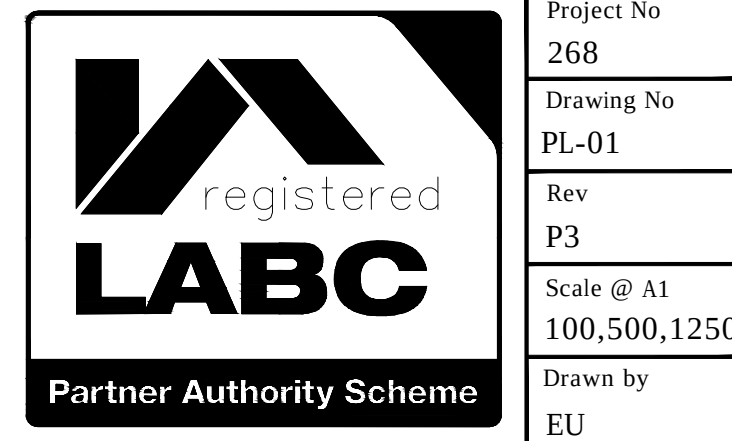
DEMOLITION OF AN EXISTING STORE AND CONSTRUCTION OF A NEW 3 BEDROOMS DWELLING AT THE SIDE OF 6 NORFOLK ROAD, READING, RG30 2EE

Client MR MANISH PARMER

ARCHIGRACE

Architectural Design, Planning & Building Regulations
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Registered LABC Partner with
SLOUGH BOROUGH COUNCIL



APPENDICES

APPENDIX A

SITE PHOTOGRAPHS



Photograph 1: A view of No.6 Norfolk Road, Reading as taken from across the road



Photograph 2: A closer view of the land outside the site showing general pavement condition.



Photograph 3: A closer view of the concrete located at the front of the site.
Note drainage covers indicating surface or foul water systems.



Photograph 4: A view of the driveway showing the location of the proposed new dwelling.



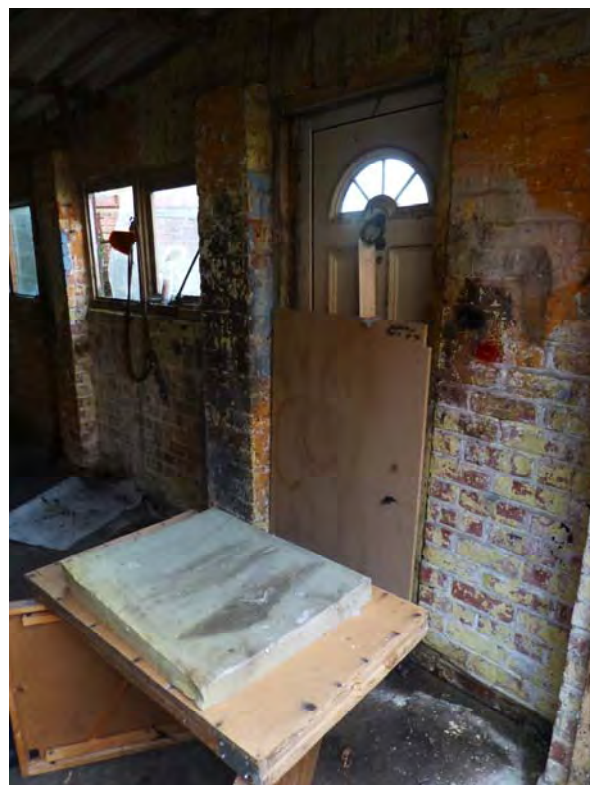
Photograph 5: A view of the driveway located further back into the site



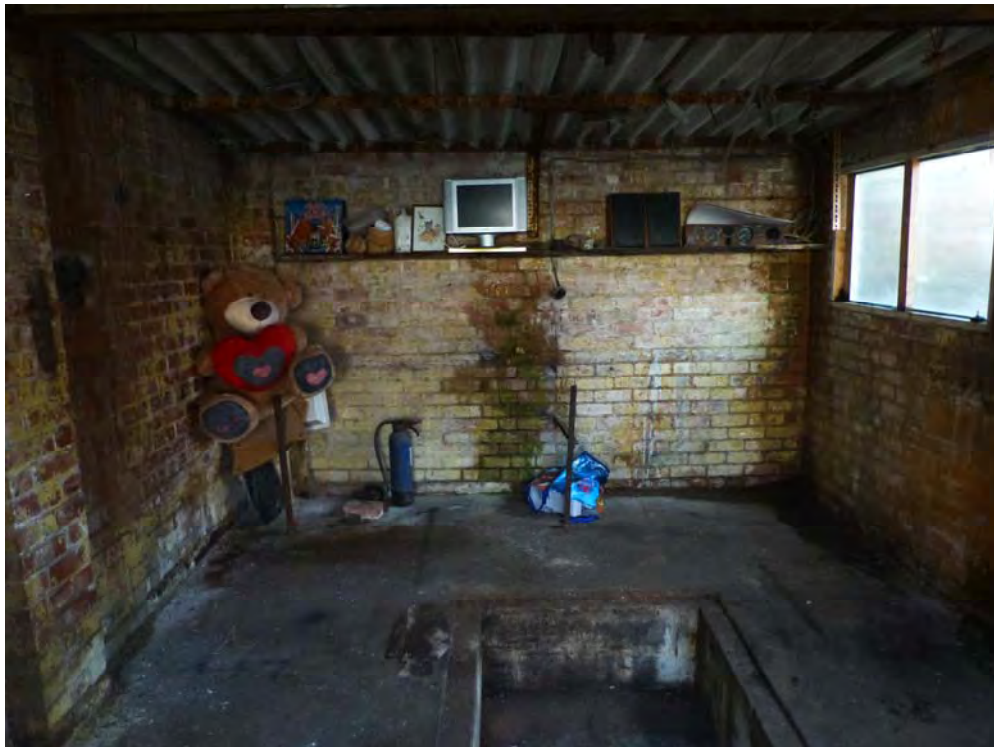
Photograph 6: A side view of the garage unit.



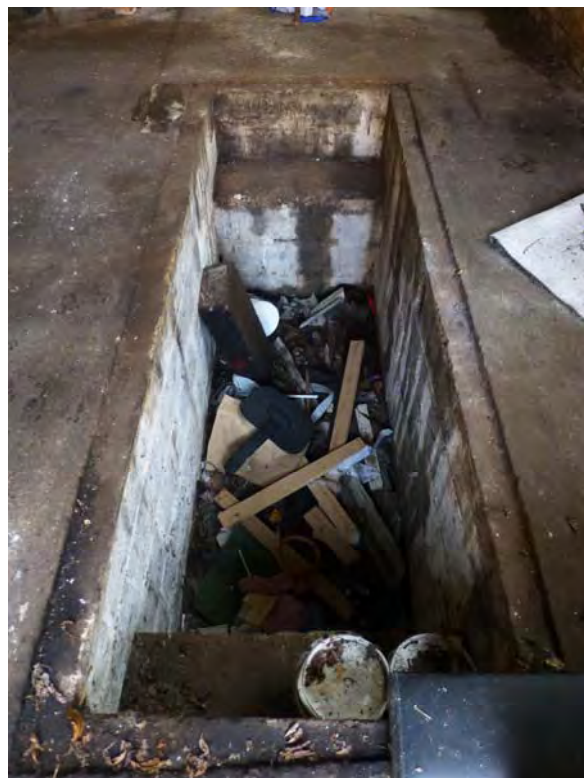
Photograph 7: An internal view of the garage unit.



Photograph 8: A view of the doorway located internally.



Photograph 9: A view of the rear wall of the garage unit also showing concrete slab located around inspection pit.



Photograph 10: A view of the inspection pit



Photograph 11: A view of the roofing fabric showing corrugated cement bonded sheets – possibly containing asbestos fibre.

APPENDIX B

DATA REPORT



Brown Fisher Environmental LLP
BARLEY HOUSE, CEDAR DRIVE,
STRATFORD-UPON-AVON, CV37 0LJ

Groundsure Reference: GS-6461637

Your Reference: CLR4615

Report Date 14 Nov 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: 6, NORFOLK ROAD, READING, RG30 2EE

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: 6, NORFOLK ROAD, READING, RG30 2EE

Date: 14 Nov 2019

Reference: GS-6461637

Client: Brown Fisher Environmental LLP

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 20-Apr-2015

Grid Reference: 469620,173177

Site Size: 0.0121ha

Report Reference: GS-6461637

Client Reference: CLR4615

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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	2	16	50
1.2 Additional Information – Historical Tank Database	0	0	2	7
1.3 Additional Information – Historical Energy Features Database	0	0	9	39
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	2
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	2	11	23
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	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	1
2.1.8 Records of Licensed Discharge Consents	0	0	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	3
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	1
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	6	5

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	6	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	None 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	1	18
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	5
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	2	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

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

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	None identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	None identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential below 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	5
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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

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

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

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

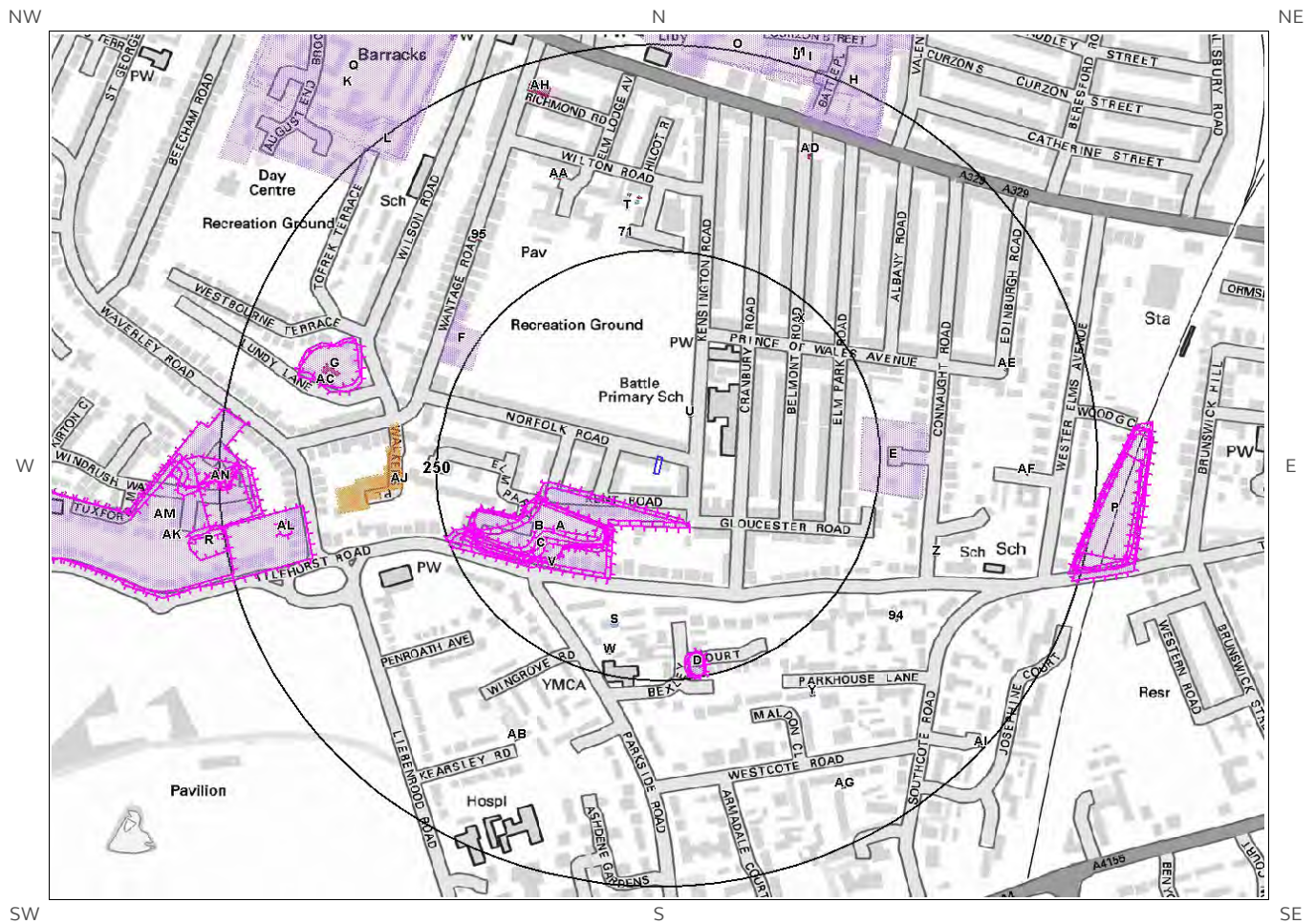
Note: Maps

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

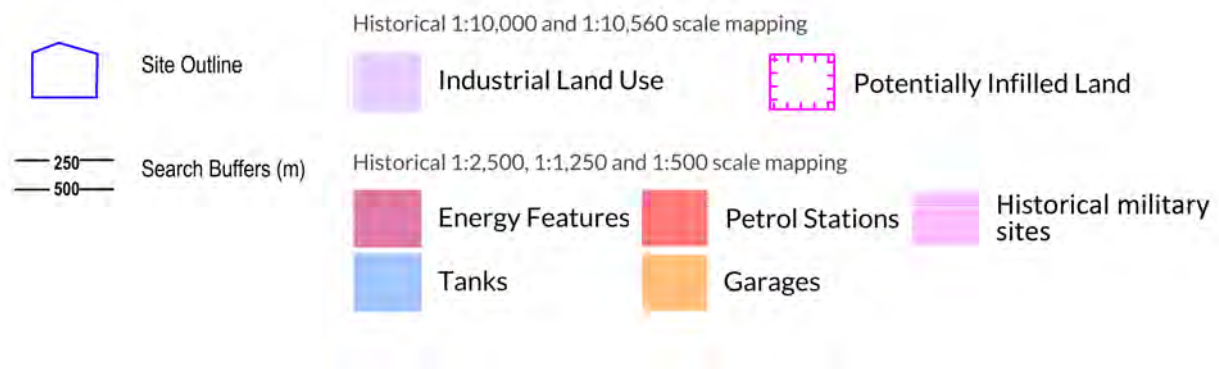
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



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1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 68

ID	Distance [m]	Direction	Use	Date
1A	44	S	Brick Works	1898
2A	49	S	Brick Works	1898
3B	82	SW	Unspecified Pit	1932
4B	82	SW	Unspecified Pit	1932
5B	83	SW	Unspecified Ground Workings	1898
6B	84	SW	Unspecified Pit	1960
7C	85	SW	Unspecified Ground Workings	1898
8C	87	SW	Unspecified Pit	1938
9C	87	SW	Unspecified Pit	1910
10D	219	S	Unspecified Pit	1932
11D	219	S	Unspecified Pit	1932
12D	220	S	Unspecified Pit	1938
13D	221	S	Unspecified Pit	1960
14E	228	E	Vine Yard	1960
15E	228	E	Vine Yard	1932
16F	239	NW	Unspecified Works	1974
17F	239	NW	Unspecified Works	1982
18F	239	NW	Unspecified Works	1991
19G	353	W	Old Chalk Pit	1898
20G	357	W	Old Chalk Pit	1910
21G	357	W	Old Chalk Pit	1898
22AK	404	W	Brick Works	1898
23AL	422	W	Gravel Pit	1898
24H	440	N	Workhouse	1898
25H	445	N	Unspecified Workhouse	1910
26H	445	N	Unspecified Workhouse	1898
27AM	452	W	Old Brick Works	1910
28I	455	NE	Hospital	1938
29I	456	NE	Hospital	1960
30I	456	NE	Hospital	1932
31J	458	NE	Hospital	1982
32J	458	NE	Hospital	1974
33J	458	NE	Hospital	1991

34N	459	W	Unspecified Ground Workings	1910
35L	462	NW	Hospital	1898
36K	463	NW	Barracks	1974
37K	463	NW	Barracks	1991
38K	467	NW	Barracks	1932
39L	467	NW	Hospital	1932
40L	469	NW	Hospital	1910
41L	469	NW	Hospital	1898
42L	469	NW	Hospital	1938
43M	474	N	Hospital	1898
44M	476	N	Hospital	1898
45M	476	N	Hospital	1910
46N	476	W	Unspecified Ground Workings	1932
47N	476	W	Unspecified Ground Workings	1932
48K	477	NW	Barracks	1960
49O	480	N	Isolation Hospital	1910
50O	480	N	Infectious Hospital	1898
51AN	481	W	Unspecified Ground Workings	1938
52K	484	NW	Barracks	1898
53P	486	E	Cuttings	1938
54P	486	E	Cuttings	1898
55P	486	E	Cuttings	1910
56P	489	E	Cuttings	1971
57P	489	E	Cuttings	1977
58P	489	E	Cuttings	1994
59P	489	E	Cuttings	1989
60P	489	E	Cuttings	1932
61Q	489	NW	Barracks	1938
62Q	489	NW	Barracks	1898
63Q	489	NW	Barracks	1910
64P	491	E	Cuttings	1962
65P	493	E	Cuttings	1898
66R	497	W	Unspecified Heap	1910
67R	498	W	Unspecified Heap	1932
68R	498	W	Unspecified Heap	1932

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:

9

ID	Distance (m)	Direction	Use	Date
69S	183	S	Unspecified Tank	1899
70S	183	S	Unspecified Tank	1911
71	268	N	Unspecified Tank	1989
72T	302	N	Unspecified Tank	1959
73T	302	N	Unspecified Tank	1960
74T	307	N	Unspecified Tank	1989
75T	307	N	Unspecified Tank	1960
76T	308	N	Unspecified Tank	1974
77T	308	N	Unspecified Tank	1959

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:

48

ID	Distance (m)	Direction	Use	Date
78U	57	NE	Electricity Substation	1989
79U	58	NE	Electricity Substation	1974
80V	157	SW	Electricity Substation	1985
81V	157	SW	Electricity Substation	1973
82V	157	SW	Electricity Substation	1986
83W	220	S	Electricity Substation	1989
84W	220	S	Electricity Substation	1974
85X	226	NE	Electricity Substation	1973
86X	227	NE	Electricity Substation	1969
87T	315	N	Electricity Substation	1996
88T	315	N	Electricity Substation	1993
89T	315	N	Electricity Substation	1986
90T	315	N	Electricity Substation	1990
91Y	316	SE	Electricity Substation	1970
92Y	316	SE	Electricity Substation	1986
93T	318	N	Electricity Substation	1989
94	322	SE	Electricity Substation	1974
95	331	NW	Electricity Substation	1971
96Z	331	E	Electricity Substation	1990
97Z	332	E	Electricity Substation	1996
98AB	355	SW	Electricity Substation	1993
99AA	355	N	Electricity Substation	1973

100AA	355	N	Electricity Substation	1995
101AA	355	N	Electricity Substation	1973
102AA	355	N	Electricity Substation	1985
103AB	356	SW	Electricity Substation	1996
104G	380	W	Electricity Substation	1990
105AC	390	W	Electricity Substation	1993
106AC	390	W	Electricity Substation	1993
107AD	400	NE	Electricity Substation	1978
108AD	400	NE	Electricity Substation	1971
109AD	401	NE	Electricity Substation	1993
110AE	407	E	Electricity Substation	1978
111AE	407	E	Electricity Substation	1986
112AE	407	E	Electricity Substation	1970
113AF	416	E	Electricity Substation	1971
114AF	416	E	Electricity Substation	1968
115AG	432	SE	Electricity Substation	1988
116AG	432	SE	Electricity Substation	1988
117AG	432	SE	Electricity Substation	1986
118AH	454	N	Electricity Substation	1993
119AH	454	N	Electricity Substation	1986
120AH	454	N	Electricity Substation	
121AH	454	N	Electricity Substation	
122AH	454	N	Electricity Substation	
123AH	455	N	Electricity Substation	
124AI	492	SE	Electricity Substation	
125AI	492	SE	Electricity Substation	

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: 0

Database searched and no data found.

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: 2

ID	Distance (m)	Direction	Use	Date
----	--------------	-----------	-----	------

126AJ	289	W	Garage	1973
127AJ	290	W	Garage	1985

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

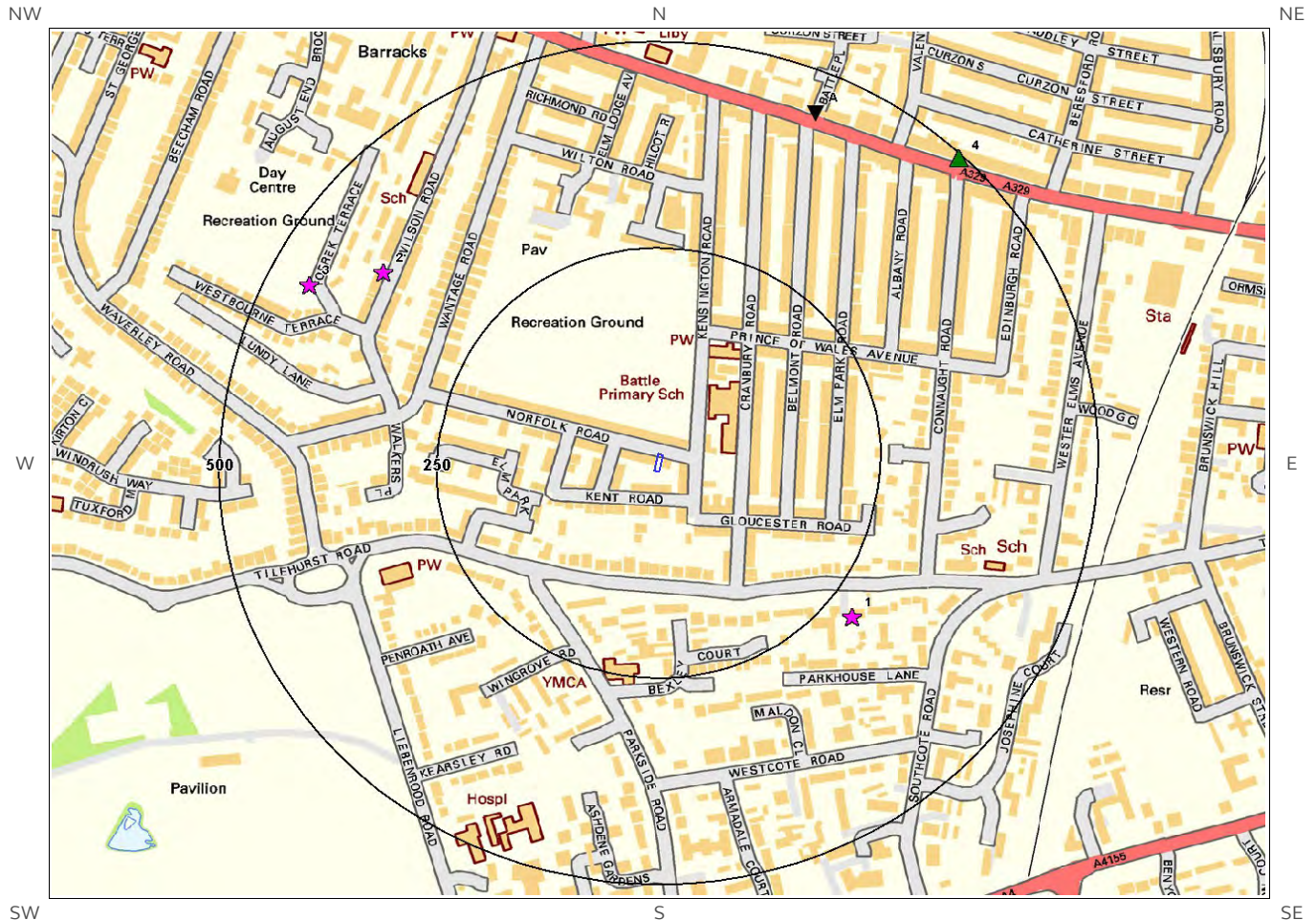
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 36

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

ID	Distance(m)	Direction	Use	Date
128A	44	S	Brick Works	1898
129A	49	S	Brick Works	1898
130A	82	SW	Unspecified Pit	1932
131A	82	SW	Unspecified Pit	1932
132C	83	SW	Unspecified Ground Workings	1898
133B	84	SW	Unspecified Pit	1960
134C	85	SW	Unspecified Ground Workings	1898
135C	87	SW	Unspecified Pit	1938
136C	87	SW	Unspecified Pit	1910
137D	219	S	Unspecified Pit	1932
138D	219	S	Unspecified Pit	1932
139D	220	S	Unspecified Pit	1938
140D	221	S	Unspecified Pit	1960
141G	353	W	Old Chalk Pit	1898
142G	357	W	Old Chalk Pit	1910
143G	357	W	Old Chalk Pit	1898
144AK	404	W	Brick Works	1898
145AL	422	W	Gravel Pit	1898
146AM	452	W	Old Brick Works	1910
147AN	459	W	Unspecified Ground Workings	1910
148AN	476	W	Unspecified Ground Workings	1932
149AN	476	W	Unspecified Ground Workings	1932

150AN	481	W	Unspecified Ground Workings	1938
151P	486	E	Cuttings	1910
152P	486	E	Cuttings	1898
153P	486	E	Cuttings	1938
154P	489	E	Cuttings	1977
155P	489	E	Cuttings	1994
156P	489	E	Cuttings	1971
157P	489	E	Cuttings	1989
158P	489	E	Cuttings	1932
159P	491	E	Cuttings	1962
160P	493	E	Cuttings	1898
161R	497	W	Unspecified Heap	1910
162R	498	W	Unspecified Heap	1932
163R	498	W	Unspecified Heap	1932

2. Environmental Permits, Incidents and Registers Map



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- | | | |
|---|---|--|
|  Site Outline |  Recorded Pollution Incident |  RAS 3 & 4 Authorisations |
|  250 |  Dangerous Substances (List 1) |  Part A(1) Authorised Processes and Historic IPC Authorisations |
|  500 Search Buffers (m) |  Dangerous Substances (List 2) |  Part A(2) and Part B Authorised Processes |
|  Licenced Discharge Consents |  Water Industry Referrals |  COMAH / NIHHS Sites |
|  Red List Discharge Consents |  Sites Determined as Contaminated Land |  Hazardous Substance Consents and Enforcements |

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:

1

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

ID	Distance (m)	Direction	NGR	Details
4	493	NE	469964 173543	Address: Bobbys 2Hr Dry Cleaning, 296 Oxford Road, Reading, RG30 1AD Process: Dry Cleaning Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

1

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

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
6A	451	NE	469800 173600	Royal Berkshire Nhs Foundation Trust, Battle Hospital, Oxford Road, Reading, Berkshire, RG30 1AG	Royal Berkshire Nhs Foundation Trust	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	AI9176	Date of Approval: 27/7/1993 Effective from: 27/7/1993 Last date of update: 2015-01-01	Revoked/cancelled

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

0

Database searched and no data found.

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:

3

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

ID	Distance (m)	Direction	NGR	Details
1	282	SE	469841.0 172989.0	Incident Date: 16-May-2002 Incident Identification: 79032.0 Pollutant: Oils and Fuel Pollutant Description: Other Oil or Fuel Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	386	NW	469302.0 173406.0	Incident Date: 28-Apr-2003 Incident Identification: 154397.0 Pollutant: Contaminated Water Pollutant Description: Vehicle and Plant Washings Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	452	NW	469217.0 173391.0	Incident Date: 28-Aug-2001 Incident Identification: 27172.0 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Vegetable Cuttings and Deposits Water Impact: Category 4 (No Impact) 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

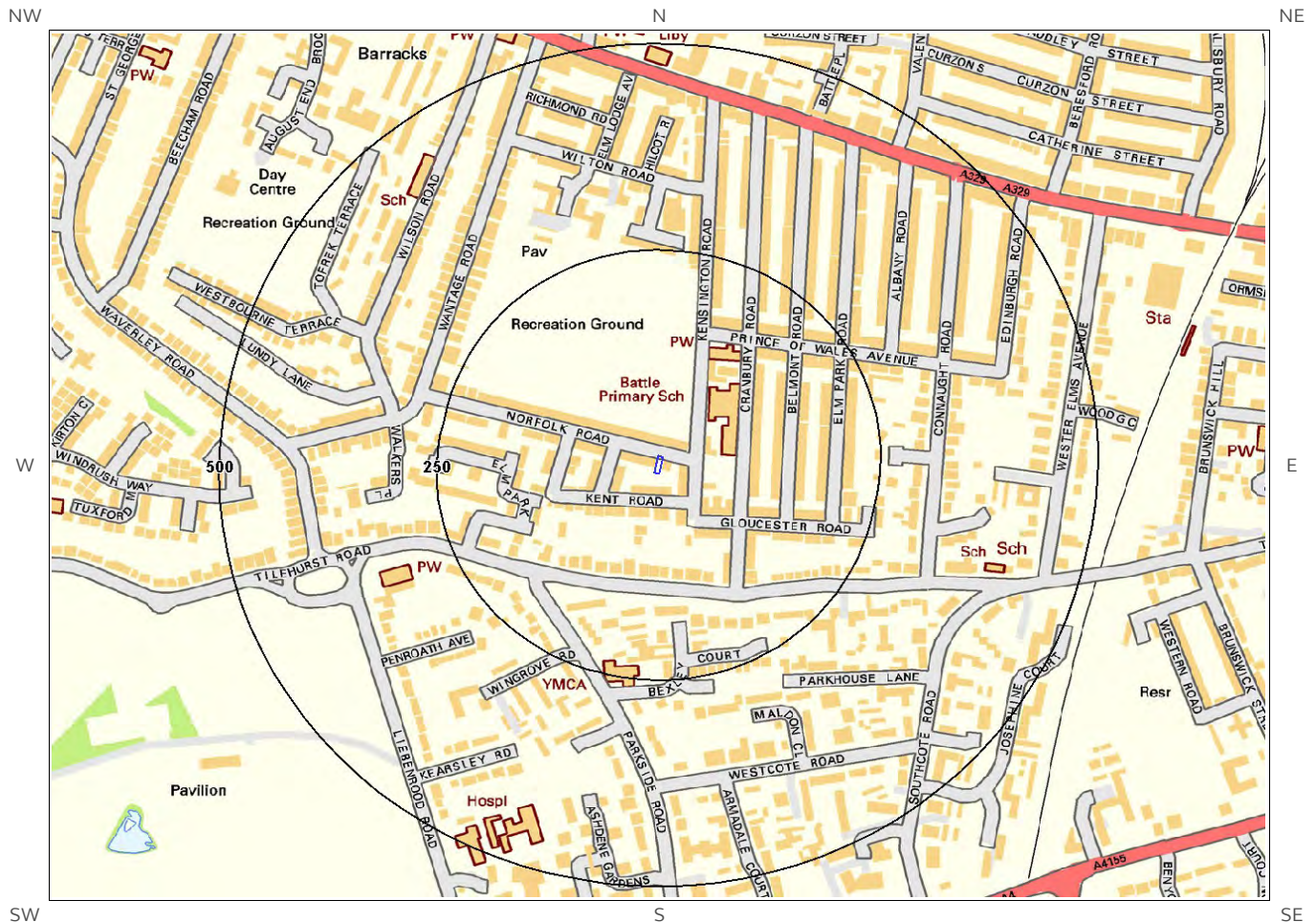
Database searched and no data found.

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

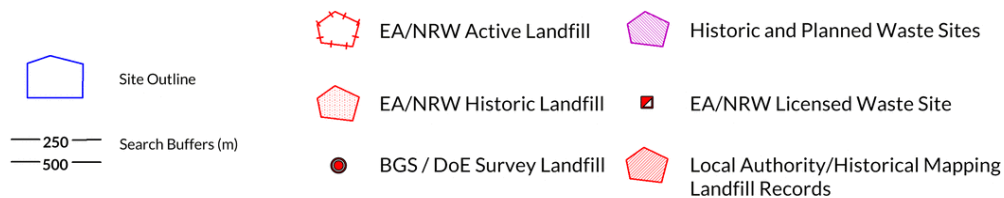
Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details
Not shown	944	NE		Site Address: Cow Lane, Reading, Berkshire Waste Licence: - Site Reference: TP0340, RDG4 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1959
Not shown	1384	NE		Site Address: Richfield Avenue, Reading, Berkshire Waste Licence: - Site Reference: RDG11, TP0122 Waste Type: Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1970 Last Recorded: 31-Dec-1979

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

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:

11

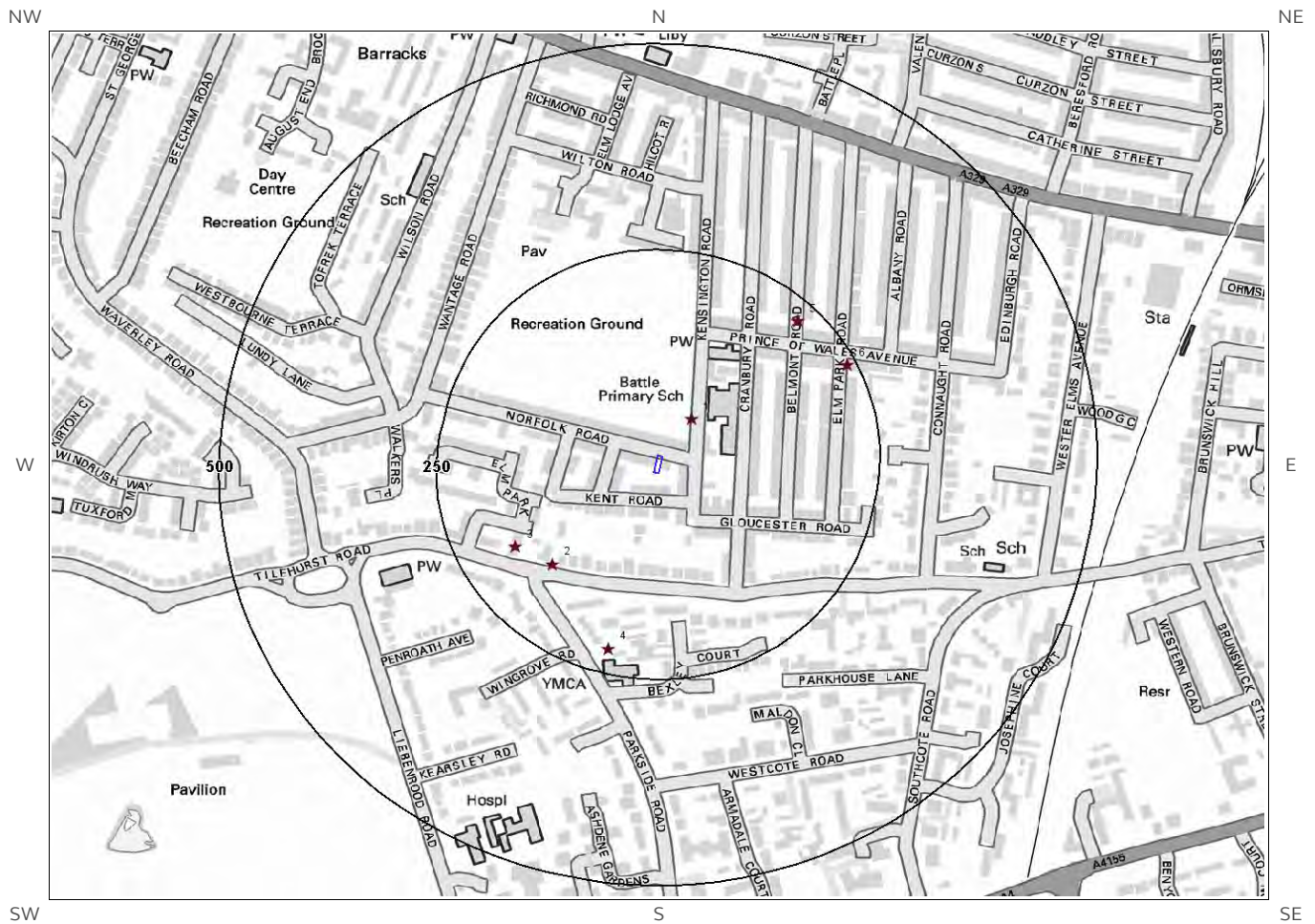
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	842	NE	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: - Operator: Simsmetal Uk Limited Waste Management licence No: 86002 Annual Tonnage: 4999.0 Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 26/04/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Simsmetal U K Limited Correspondence Address: 4, The Uplands, Nailsea, Somerset, BS48 4RR
Not shown	842	NE	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: EA/EPR/LP3199EB/V006 Operator: Sims Group U K Ltd Waste Management licence No: 86002 Annual Tonnage: 74999.0 Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 27/08/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Sims Group U K Ltd Correspondence Address: -
Not shown	842	NE	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIM001 EPR reference: EA/EPR/LP3199EB/V005 Operator: Sims Group Uk Limited Waste Management licence No: 86002 Annual Tonnage: 74999.0 Issue Date: 06/04/1993 Effective Date: 27/04/2002 Modified: 20/04/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Sims Group U K Ltd Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details
Not shown	842	NE	470200 173800	Site Address: Elliot Metal Company Ltd, 3, Loverock Road, Battle Farm Indus Est, Reading, Berkshire, RG3 1NL Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR197 EPR reference: EA/EPR/CB3909KB/S002 Operator: Parsons Metal Recycling Limited Waste Management licence No: 86002 Annual Tonnage: 0.0 Issue Date: 06/04/1993 Effective Date: 26/06/2015 Modified: 27/08/2014 Surrendered Date: Mar 8 2016 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Parsons Metal Recycling Limited Correspondence Address: -
Not shown	879	NE	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: -
Not shown	915	N	469718 174096	Site Address: Part A, Unit B, 75, Loverock Road, Tilehurst, Reading, Berkshire, RG30 1DZ Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: OAK056 EPR reference: EA/EPR/EP3993VE/A001 Operator: Oakford U K Ltd Waste Management licence No: 101222 Annual Tonnage: 74999.0 Issue Date: 18/11/2009 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Loverock Road Waste Transfer Station Correspondence Address: -
Not shown	1188	N	469251 174315	Site Address: Unit 3, 40, Wigmore Lane, Reading, Berkshire, RG30 1NP Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REY002 EPR reference: EA/EPR/MP3195EA/A001 Operator: 1st Reynolds Skip Hire Ltd Waste Management licence No: 86373 Annual Tonnage: 4999.0 Issue Date: 11/08/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Reynolds Skip Hire Correspondence Address: -
Not shown	1205	N	469219 174322	Site Address: Fleetwood Grab Services Ltd, 1& 1a 40, Wigmore Lane, Reading, Berkshire, RG30 1NP Type: Treatment of waste to produce soil Size: < 75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FLE026 EPR reference: EA/EPR/JB3534RP/A001 Operator: Fleetwood Grab Services Ltd Waste Management licence No: 104488 Annual Tonnage: 74999.0 Issue Date: 03/12/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fleetwood Grab Services Ltd Correspondence Address: -
Not shown	1313	NE	470497 174166	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte Materials Recycling Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCO003 EPR reference: EP3893VZ/A001 Operator: M Collard Waste Management Services Ltd Waste Management licence No: 101199 Annual Tonnage: 0.0 Issue Date: 11/02/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: M Collard Waste Management Services Ltd Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1321	NE	470500 174174	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte HCI Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCO003 EPR reference: EA/EPR/EP3893VZ/V002 Operator: M Collard Waste Management Services Ltd Waste Management licence No: 101199 Annual Tonnage: 74999.0	Issue Date: 11/02/2010 Effective Date: - Modified: 09/07/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: M Collard Waste Management Services Ltd Correspondence Address: -
Not shown	1321	NE	470500 174174	Site Address: 128, Cardiff Road, Reading, Berkshire, RG1 8PQ Type: 75kte HCI Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RCO001 EPR reference: EA/EPR/EB3500KB/V002 Operator: R Collard Limited Waste Management licence No: 101199 Annual Tonnage: 74999.0	Issue Date: 11/02/2010 Effective Date: 11/10/2016 Modified: 16/10/2018 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: R Collard Limited Correspondence Address: -

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:

6

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	57	NE	Electricity Sub Station	469658 173231	Berkshire, RG30	Electrical Features	Infrastructure and Facilities
2	161	SW	Electricity Sub Station	469498 173055	Berkshire, RG30	Electrical Features	Infrastructure and Facilities
3	183	SW	Poppyscakes	469455 173076	24, Elm Park, Reading, Berkshire, RG30 2HX	Baking and Confectionery	Foodstuffs
4	220	S	Electricity Sub Station	469562 172952	Berkshire, RG30	Electrical Features	Infrastructure and Facilities
5	227	NE	Electricity Sub Station	469780 173350	Berkshire, RG30	Electrical Features	Infrastructure and Facilities
6	239	NE	T S D Motors	469836 173296	33a, Prince of Wales Avenue, Reading, Berkshire, RG30 2UH	Vehicle Repair, Testing and Servicing	Repair and Servicing

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

Database searched and no data found.

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

5.3 Bedrock and Solid Geology

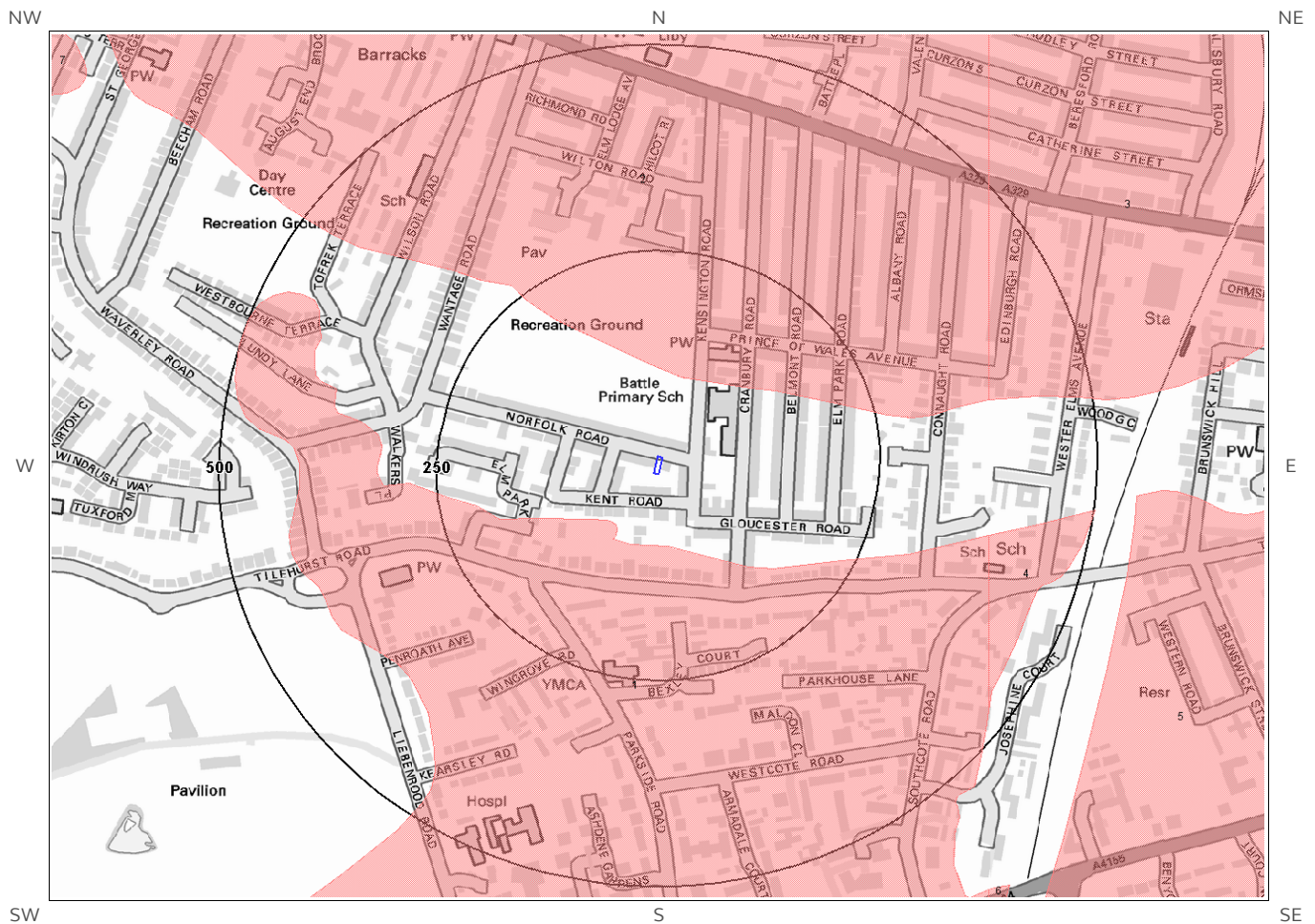
The database has been searched on site, including a 50m buffer.

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

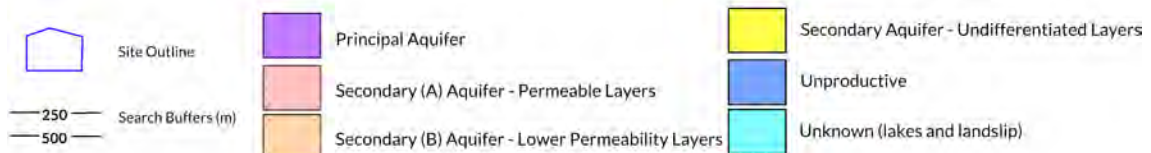
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

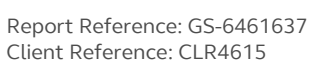
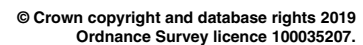
6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology

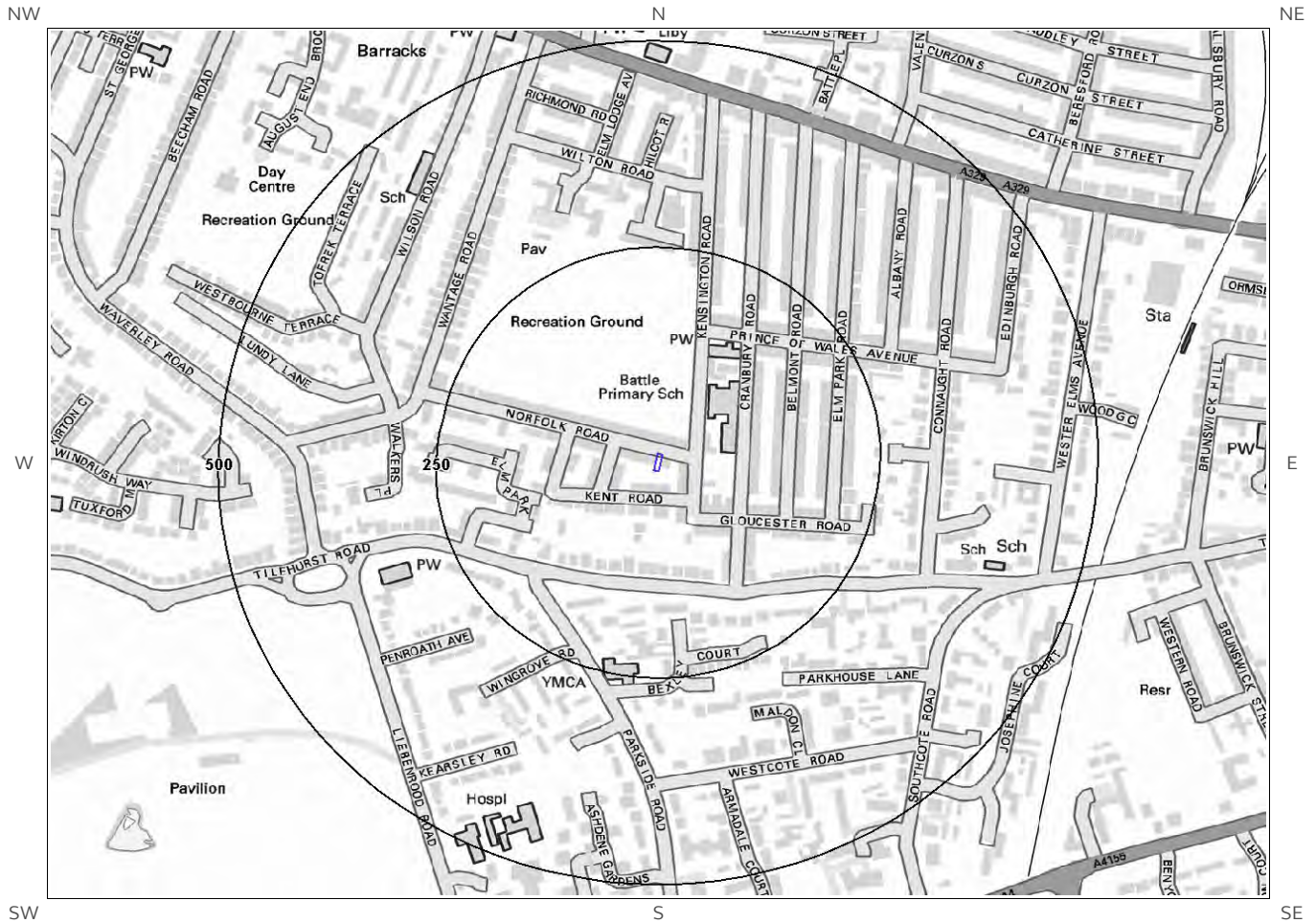


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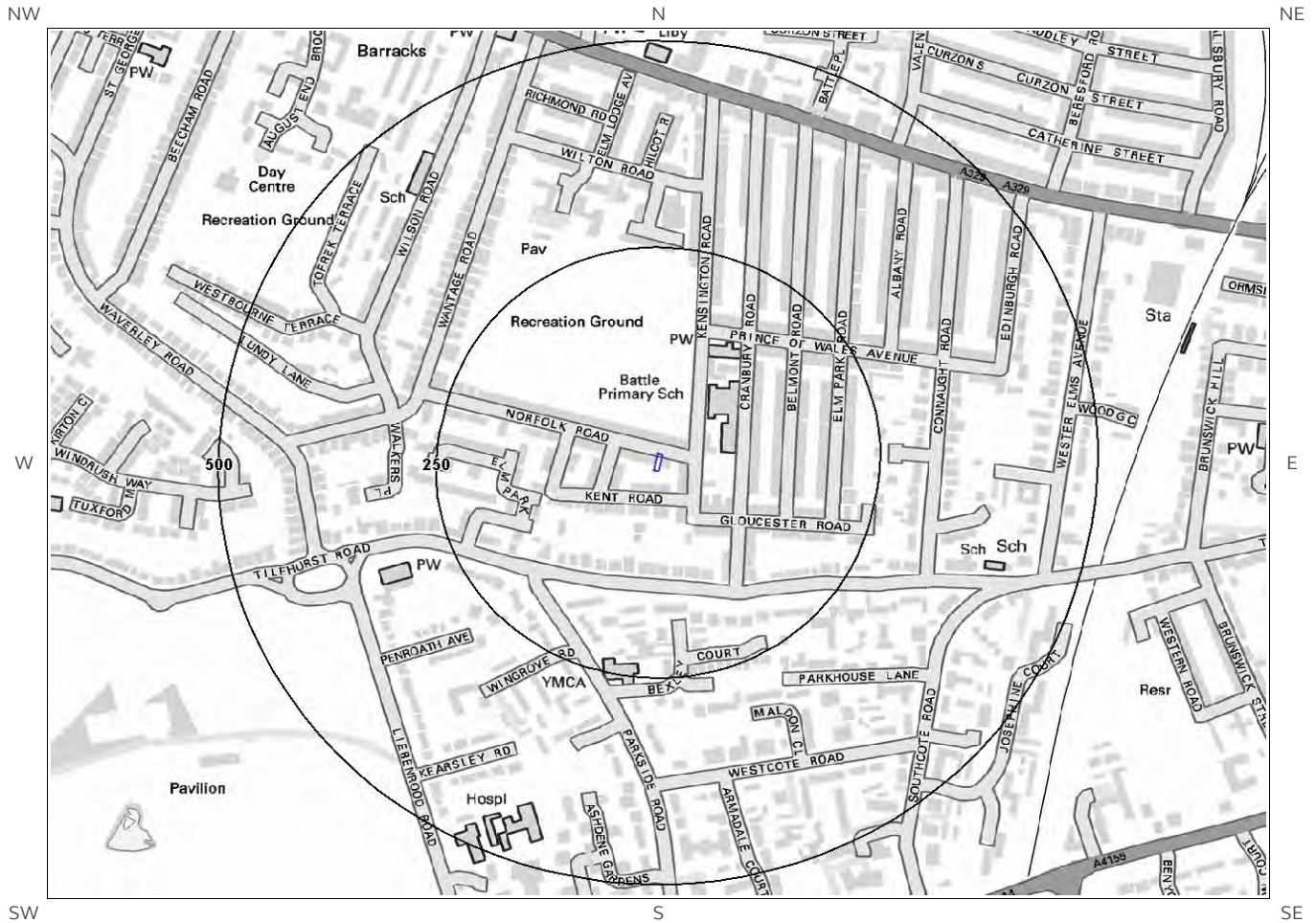


6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences

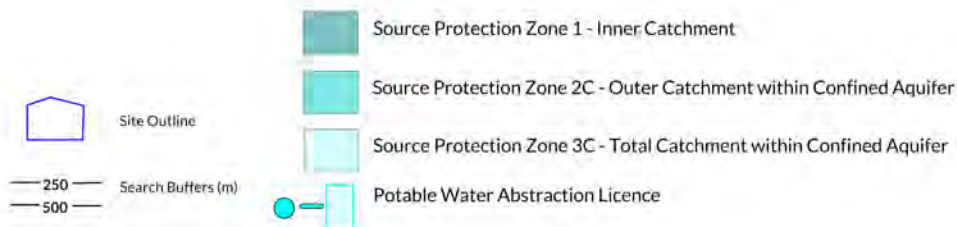


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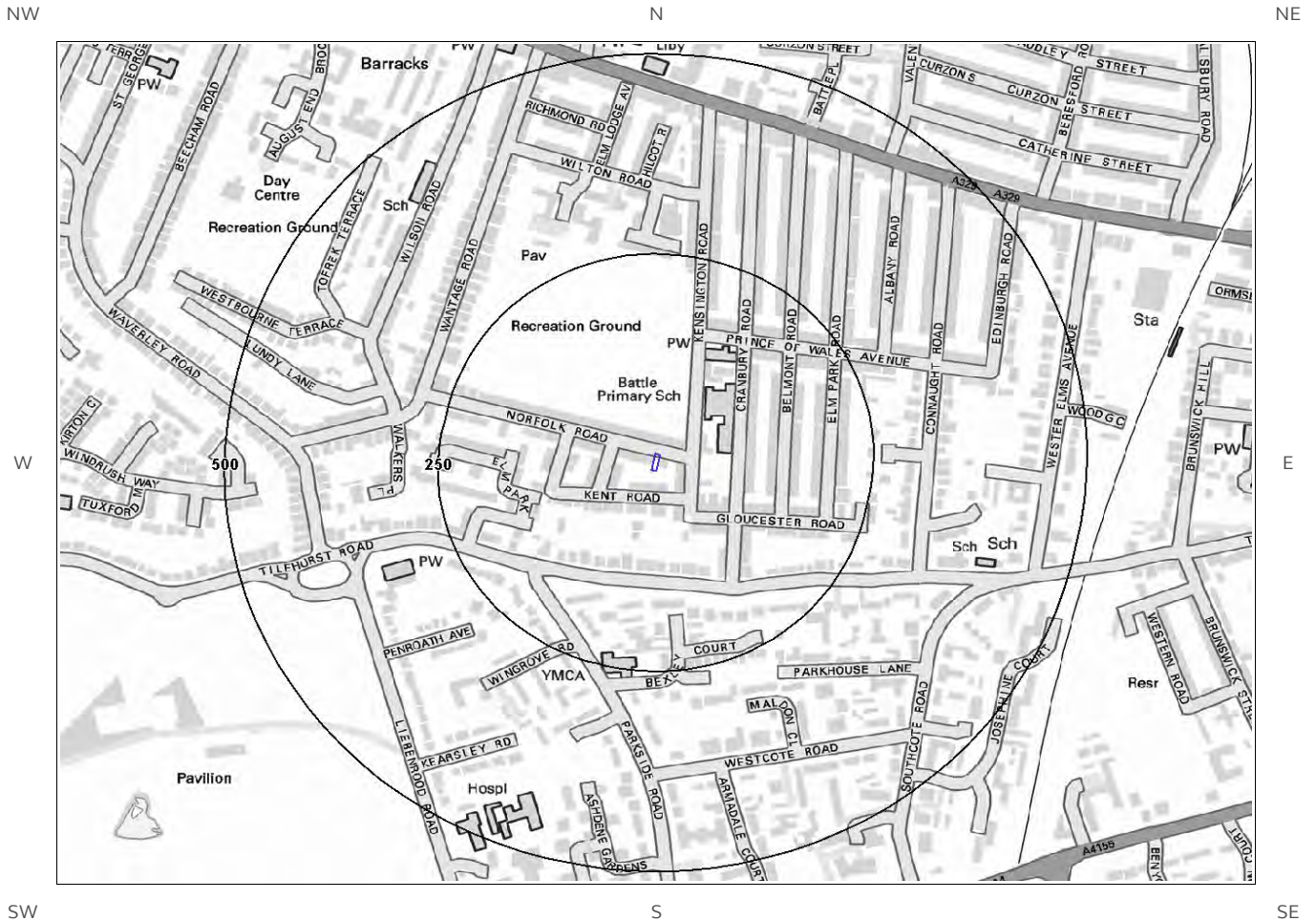
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	75	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	100	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	382	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	387	E	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
3	31	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	375	E	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	378	E	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	736	N	469800 173900	Status: Historical Licence No: 28/39/23/0181 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTLE HOSPITAL, OXFORD ROAD, READING Data Type: Point Name: WEST BERKSHIRE HEALTH AUTHORITY Annual Volume (m³): 136,875 Max Daily Volume (m³): 400 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 07/01/1999 Version End Date:
Not shown	1021	N	469500 174200	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (A) Data Type: Point Name: DRAYTON Annual Volume (m³): 9,819 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 09/01/1967 Version End Date:
Not shown	1199	NE	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): 6,682 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/04/2008 Version End Date:
Not shown	1212	NE	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): 9,819 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 09/01/1967 Version End Date:
Not shown	1217	N	469700 174400	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (C) Data Type: Point Name: DRAYTON Annual Volume (m³): 9,819 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 09/01/1967 Version End Date:
Not shown	1217	N	469700 174400	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (B) Data Type: Point Name: DRAYTON Annual Volume (m³): 9,819 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 09/01/1967 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1271	NE	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): 6,682 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/04/2008 Version End Date:
Not shown	1464	S	469600 171700	Status: Historical Licence No: 28/39/22/0266 Details: General use relating to Secondary Category (Medium Loss) Direct Source: THAMES GROUNDWATER Point: RAILTRACK PROPERTY, SOUTHCOTE, READING Data Type: Point Name: NETWORK RAIL INFRASTR LTD	Annual Volume (m³): 250,035 Max Daily Volume (m³): 909 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 03/02/2003 Version End Date:
Not shown	1493	N	470100 174600	Status: Active Licence No: 28/39/23/0070 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: LITTLE JOHN'S FARM, READING (D) Data Type: Point Name: DRAYTON	Annual Volume (m³): 9,819 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 09/01/1967 Version End Date:
Not shown	1498	NW	468900 174500	Status: Historical Licence No: 28/39/23/0131 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/05/1992 Version End Date:
Not shown	1498	NW	468900 174500	Status: Historical Licence No: 28/39/23/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/05/1992 Version End Date:
Not shown	1506	N	469100 174600	Status: Historical Licence No: 28/39/23/0137 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING (A - R) Data Type: Point Name: READING BOROUGH COUNCIL	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 17/11/1976 Version End Date:
Not shown	1570	NE	470900 174100	Status: Active Licence No: 28/39/23/0167 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD	Annual Volume (m³): 90,920 Max Daily Volume (m³): 727 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 30/06/2006 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1570	NE	470900 174100	Status: Historical Licence No: 28/39/23/0041 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 11/07/1966 Version End Date:
Not shown	1570	NE	470900 174100	Status: Historical Licence No: 28/39/23/0041 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 11/07/1966 Version End Date:
Not shown	1570	NE	470900 174100	Status: Active Licence No: 28/39/23/0167 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD	Annual Volume (m³): 90,920 Max Daily Volume (m³): 727 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 30/06/2006 Version End Date:
Not shown	1604	NW	468700 174500	Status: Historical Licence No: 28/39/23/0176 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING TOWN F.C, READING Data Type: Point Name: READING TOWN FOOTBALL CLUB	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 30/09/1994 Version End Date:
Not shown	1604	NW	468700 174500	Status: Historical Licence No: 28/39/23/0176 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING TOWN F.C, READING Data Type: Point Name: READING TOWN FOOTBALL CLUB	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 30/09/1994 Version End Date:
Not shown	1606	E	471200 173500	Status: Active Licence No: 28/39/23/0042 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHEAPSIDE, READING, BERKSHIRE Data Type: Point Name: PRIMARK STORES LIMITED	Annual Volume (m³): 14,933 Max Daily Volume (m³): 41 Original Application No: - Original Start Date: Expiry Date: Issue No: Version Start Date: 01/04/2008 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1965	E	471590 173150	Status: Active Licence No: 28/39/22/0594 Details: Lake & Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: ST.GILES STREAM AT THE ORACLE CENTRE, READING Data Type: Point Name: ORACLE SHOPPING CENTRE LTD Annual Volume (m³): 737,856 Max Daily Volume (m³): 2,016 Application No: - Original Start Date: 16/02/2000 Expiry Date: - Issue No: 1 Version Start Date: 16/02/2000 Version End Date:
Not shown	1965	E	471590 173150	Status: Historical Licence No: 28/39/22/0594 Details: Lake & Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: THE ORACLE CENTRE, READING Data Type: Point Name: ORACLE SHOPPING CENTRE LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 16/02/2000 Expiry Date: - Issue No: 1 Version Start Date: 16/02/2000 Version End Date:

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	736	N	469800 173900	Status: Historical Licence No: 28/39/23/0181 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTLE HOSPITAL, OXFORD ROAD, READING Data Type: Point Name: WEST BERKSHIRE HEALTH AUTHORITY Annual Volume (m³): 136,875 Max Daily Volume (m³): 400 Original Application No: - Original Start Date: 17/01/1992 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date:
Not shown	1498	NW	468900 174500	Status: Historical Licence No: 28/39/23/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING Data Type: Point Name: PRUDENTIAL IBIS CLUB Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/01/1967 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date:
Not shown	1570	NE	470900 174100	Status: Historical Licence No: 28/39/23/0041 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/07/1966 Expiry Date: -

ID	Distance (m)	Direction	NGR	Details
				Direct Source: THAMES GROUNDWATER Point: CARDIFF ROAD, READING, BERKSHIRE Data Type: Point Name: COX & WYMAN LTD Issue No: 100 Version Start Date: Version End Date:
Not shown	1570	NE	470900 174100	Status: Active Licence No: 28/39/23/0167 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: MEADOW ROAD, READING, BERKSHIRE Data Type: Point Name: MANROSE MANUFACTURING LTD Annual Volume (m³): 90,920 Max Daily Volume (m³): 727 Original Application No: - Original Start Date: 23/01/1990 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1604	NW	468700 174500	Status: Historical Licence No: 28/39/23/0176 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: SCOURS LANE, READING TOWN F.C, READING Data Type: Point Name: READING TOWN FOOTBALL CLUB Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 30/09/1994 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1606	E	471200 173500	Status: Active Licence No: 28/39/23/0042 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHEAPSIDE, READING, BERKSHIRE Data Type: Point Name: PRIMARK STORES LIMITED Annual Volume (m³): 14,933 Max Daily Volume (m³): 41 Original Application No: - Original Start Date: 11/07/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

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

None identified

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
42	S	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
375	E	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.
375	E	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 None identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

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

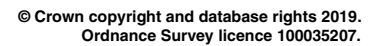
Database searched and no data found.

6.11 Surface Water Features

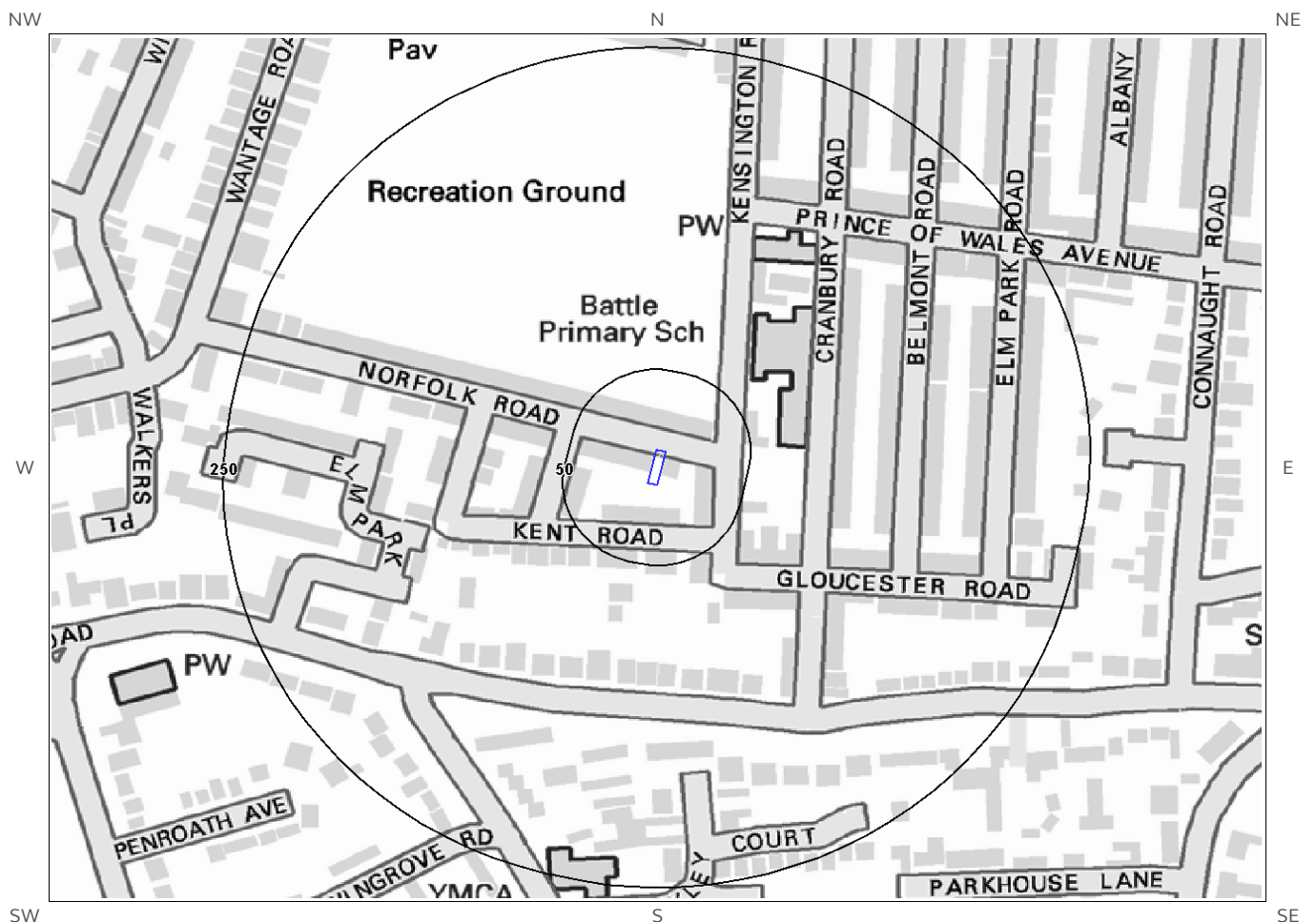
Surface water features within 250m of the study site

None identified

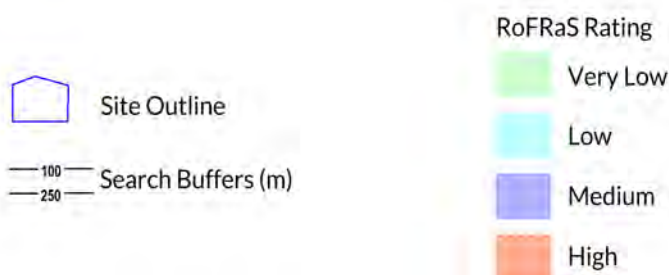
Database searched and no data found.



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



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

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

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

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

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

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

Database searched and no data found.

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

Highest risk of flooding onsite Very Low

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

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

7.4 Flood Defences

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

7.5 Areas benefiting from Flood Defences

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

7.6 Areas benefiting from Flood Storage

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

None identified

7.7 Groundwater Flooding Susceptibility Areas

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

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

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

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

Potential below Surface

Where potential for groundwater flooding of property situated below ground level is indicated, this means that given the geological conditions there may be a groundwater flooding hazard to basements and other below surface infrastructure. Unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area you need take no further action in relation to groundwater flooding hazard. If there are records of previous incidences of groundwater flooding, then is recommended that other information e.g. rainfall history, property type, and land drainage information in addition to previous records of flooding be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

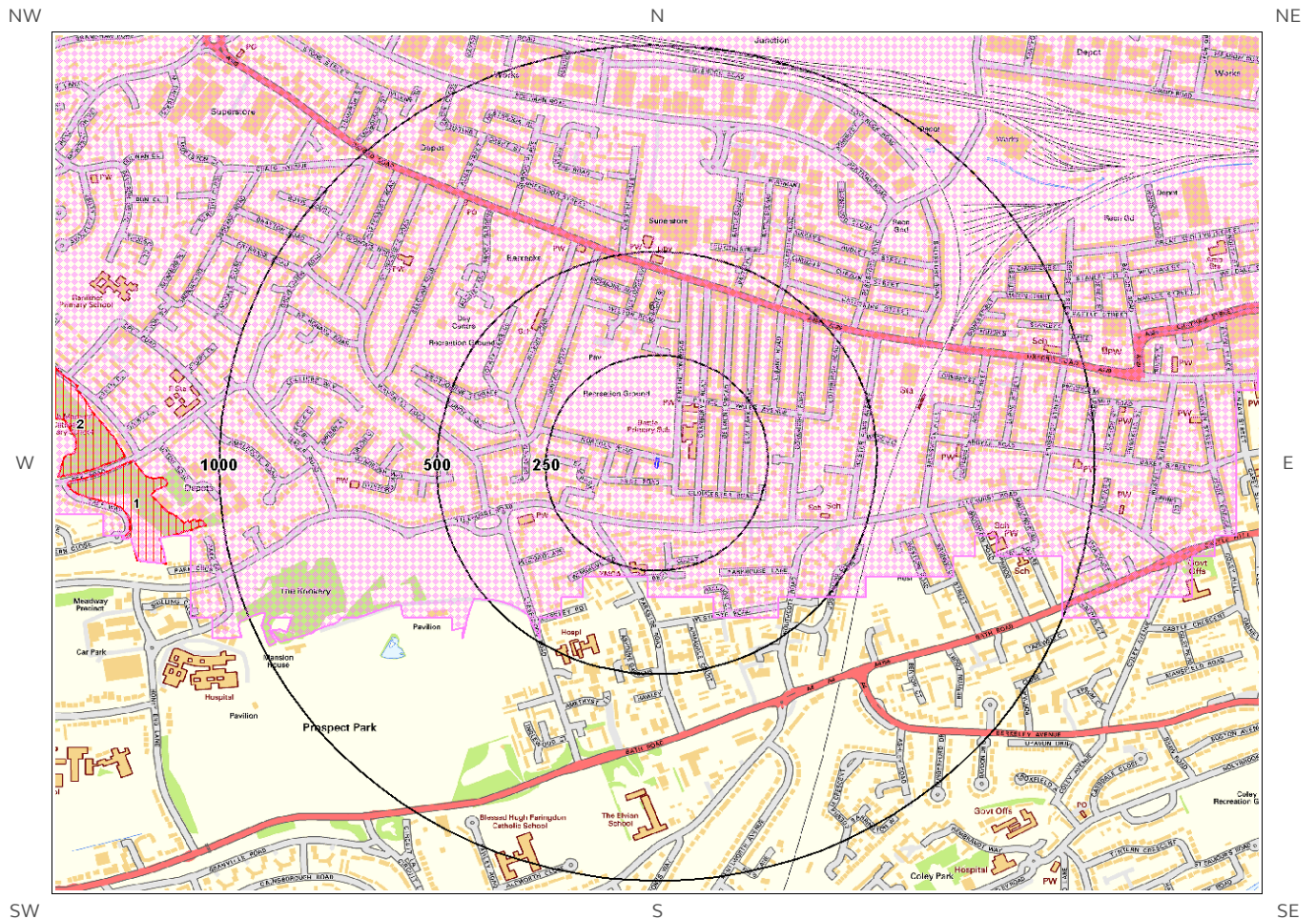
British Geological Survey confidence rating in this result

High

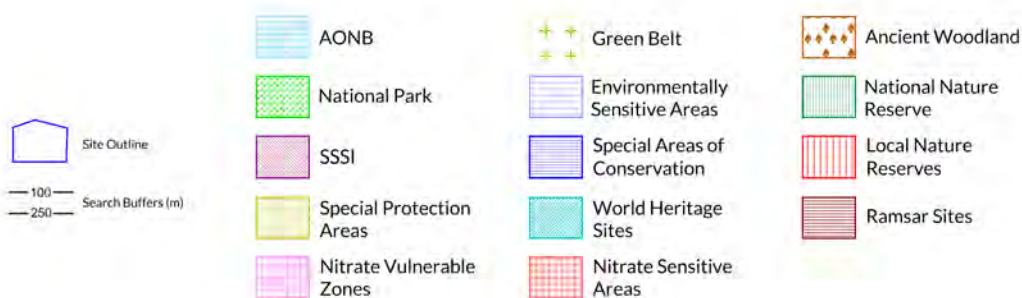
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

5

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

ID	Distance (m)	Direction	LNR Name	Data Source
1	1039	W	Lousehill Copse	Natural England
2	1216	W	Lousehill Copse	Natural England
Not shown	1782	NW	McIlroy Park	Natural England
Not shown	1823	W	Lousehill Copse	Natural England
Not shown	1878	NW	Round Copse	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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
6	0	On Site	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site Negligible

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site Very Low

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

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

9.1.6 Running Sand

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

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

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

Identified

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

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

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

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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

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

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

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

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

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

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

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

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



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

Brown Fisher Environmental LLP
BARLEY HOUSE, CEDAR DRIVE,
STRATFORD-UPON-AVON, CV37 0LJ

Groundsure Reference: GS-6461638

Your Reference: CLR4615

Report Date 14 Nov 2019

Report Delivery Method: Email - pdf

Geo Insight

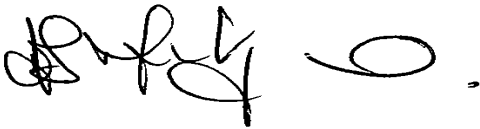
Address: 6, NORFOLK ROAD, READING, RG30 2EE

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: 6, NORFOLK ROAD, READING, RG30 2EE

Date: 14 Nov 2019

Reference: GS-6461638

Client: Brown Fisher Environmental LLP



Aerial Photograph Capture date: 20-Apr-2015

Grid Reference: 469620,173177

Site Size: 0.0121ha

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Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale

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

Section 2: Geology 1:50,000 Scale

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

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

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

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

Yes

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

No

Section 3: Radon

3. Radon

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

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

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	2	11	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	1
4.3 Current Ground Workings	0	0	5	7	18

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	1
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	2	1
5.4 Non-Coal Mining*	1	0	0	3	2
5.5 Non-Coal Mining Cavities	0	0	1	0	9
5.5 Natural Cavities	0	0	0	4	14

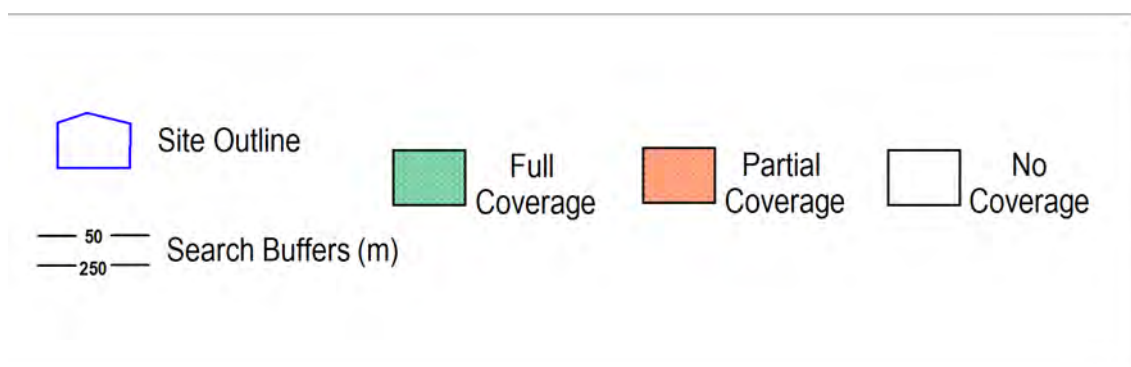
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Moderate				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Moderate				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	0		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	1	1	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	375.0	Some deposits are mapped	Full	Full	No coverage
N3	1814.0	Some deposits are mapped	Full	Full	No coverage
N4	1854.0	Some deposits are mapped	Full	Full	No coverage

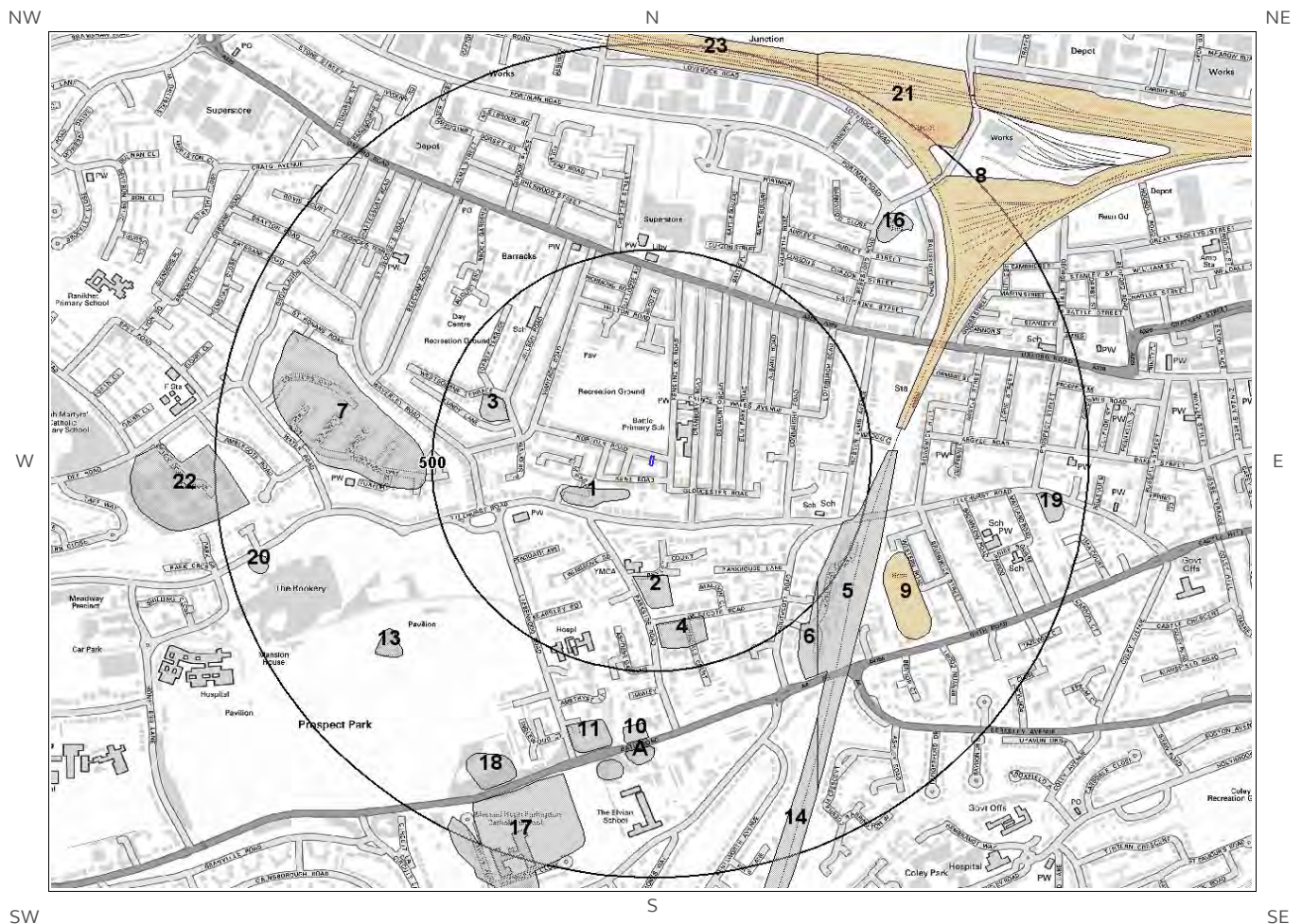
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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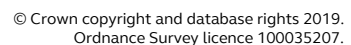
1. Geology 1:10,000 scale

1.1 Artificial Ground

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

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	78.0	SW	WGR-VOID	Worked Ground (Undivided)	Void
2	267.0	S	WGR-VOID	Worked Ground (Undivided)	Void
3	342.0	W	WGR-VOID	Worked Ground (Undivided)	Void
4	381.0	S	WGR-VOID	Worked Ground (Undivided)	Void
5	458.0	E	WGR-VOID	Worked Ground (Undivided)	Void
6	469.0	SE	WGR-VOID	Worked Ground (Undivided)	Void



1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	87.0	S	LHGR-XSV	Lynch Hill Gravel Member - Sand And Gravel	Sand And Gravel
2	99.0	N	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel
3	271.0	NW	HEAD-XVSZC	Head - Gravel, Sand, Silt And Clay	Gravel, Sand, Silt And Clay
4	315.0	W	HEAD-XVSZC	Head - Gravel, Sand, Silt And Clay	Gravel, Sand, Silt And Clay
5	381.0	E	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel
6	389.0	E	LHGR-XSV	Lynch Hill Gravel Member - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

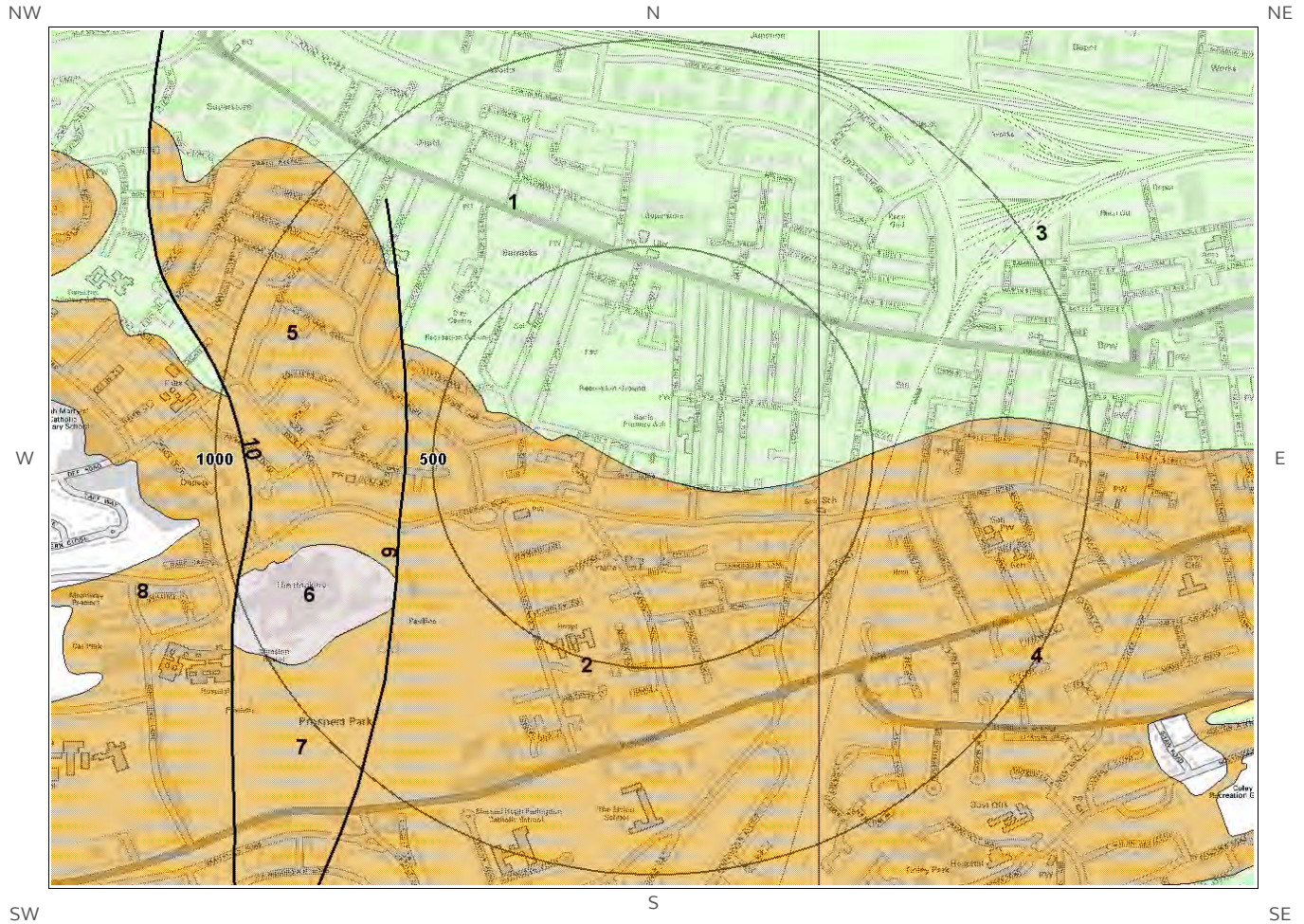
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

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

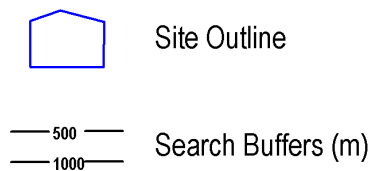
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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



Bedrock and linear features Legend

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1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age
2	31.0	S	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	Paleocene Epoch
3	375.0	E	LSNCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age
4	378.0	E	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	Paleocene Epoch

1.3.2 Linear features

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

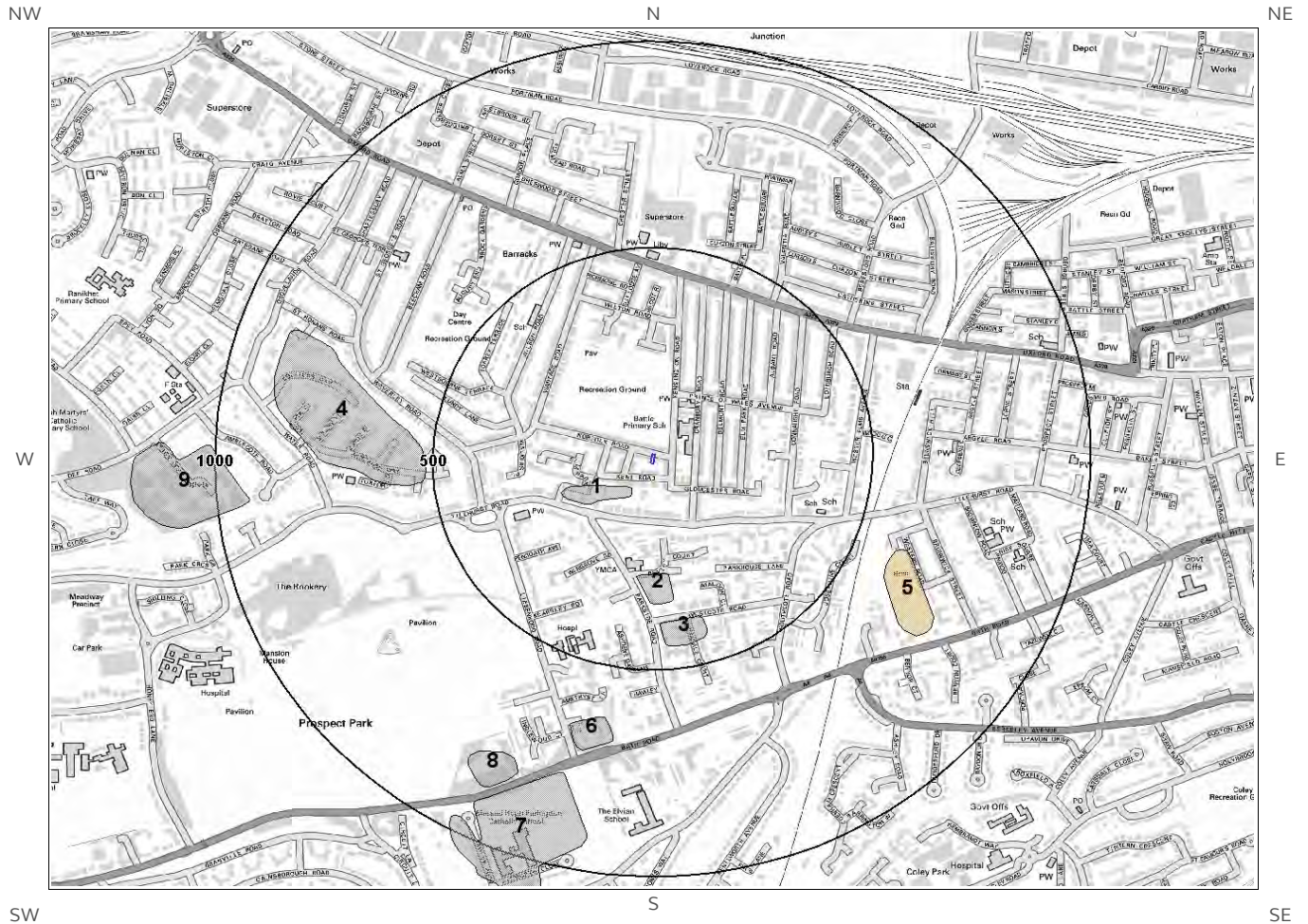
Database searched and no data found at this scale.

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

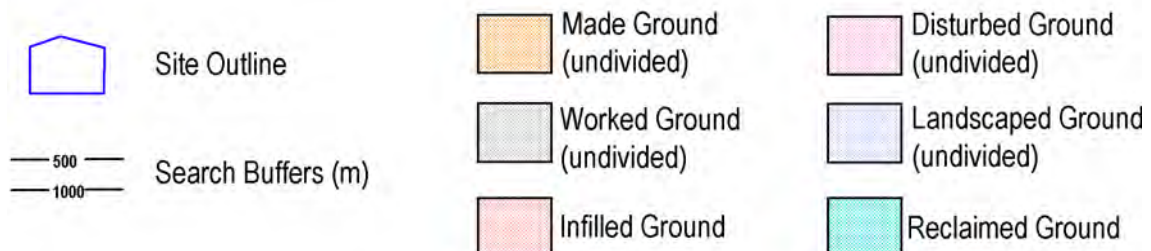
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

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

2.1.1 Artificial/ Made Ground

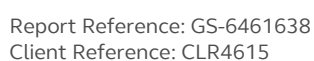
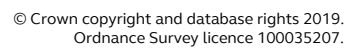
Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	75.0	SW	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
2	267.0	S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	381.0	S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.



2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	75.0	SW	LHGR-XSV	LYNCH HILL GRAVEL MEMBER	SAND AND GRAVEL
2	100.0	N	TPGR-XSV	TAPLOW GRAVEL MEMBER	SAND AND GRAVEL
3	268.0	NW	HEAD-XVSZC	HEAD	GRAVEL, SAND, SILT AND CLAY
4	311.0	W	HEAD-XVSZC	HEAD	GRAVEL, SAND, SILT AND CLAY

2.2.2 Permeability of Superficial Ground

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

Database searched and no data found.

2.2.3 Landslip

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

Database searched and no data found.

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

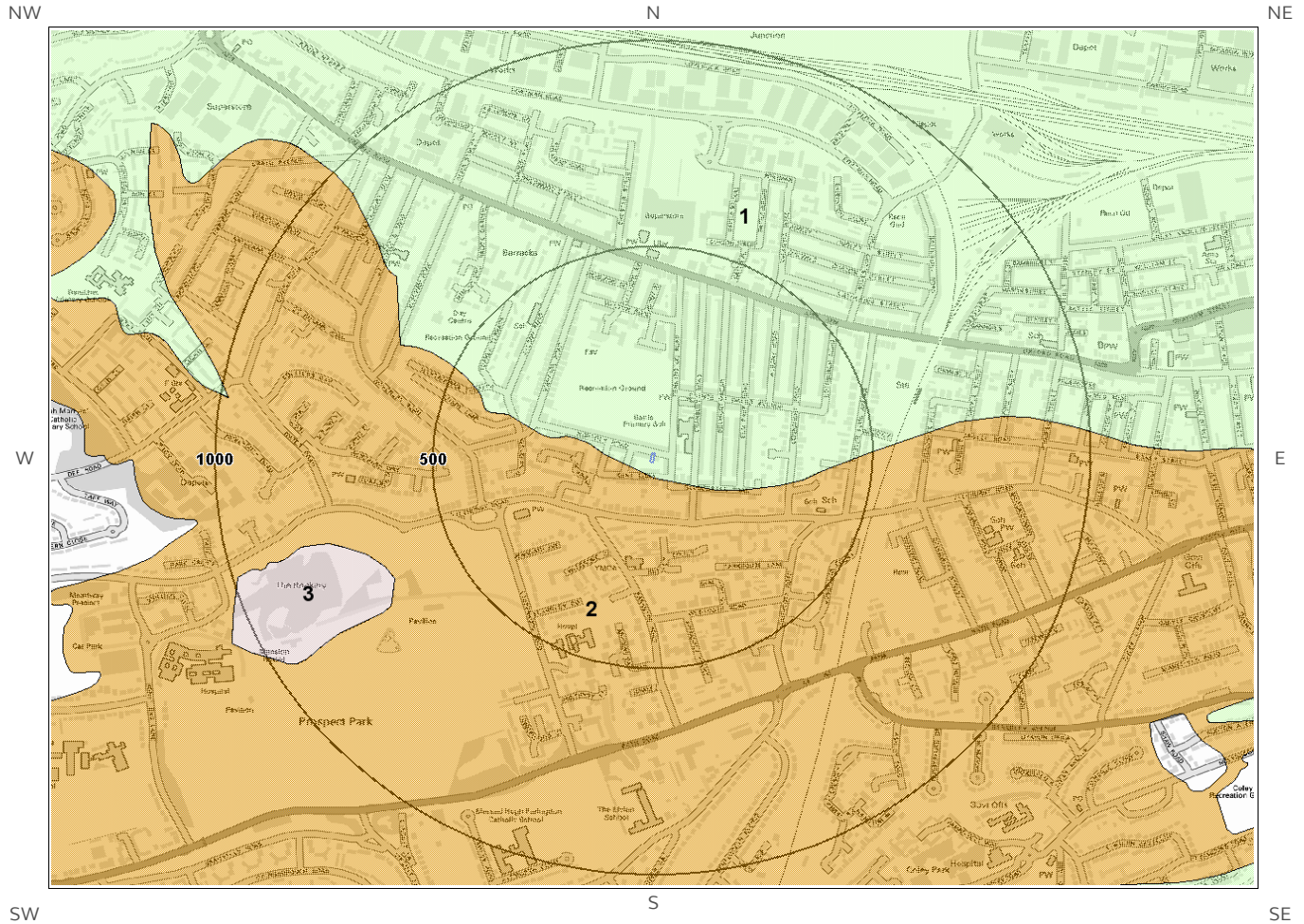
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

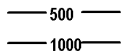
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

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

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	CONIACIAN
2	31.0	SW	LMBE-XCZS	LAMBETH GROUP - CLAY, SILT AND SAND	THANETIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Very High	Very High
31.0	SW	Mixed	Moderate	Very Low

2.3.3 Linear features

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

Database searched and no data found.

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

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

3 Radon Data

3.1 Radon Affected Areas

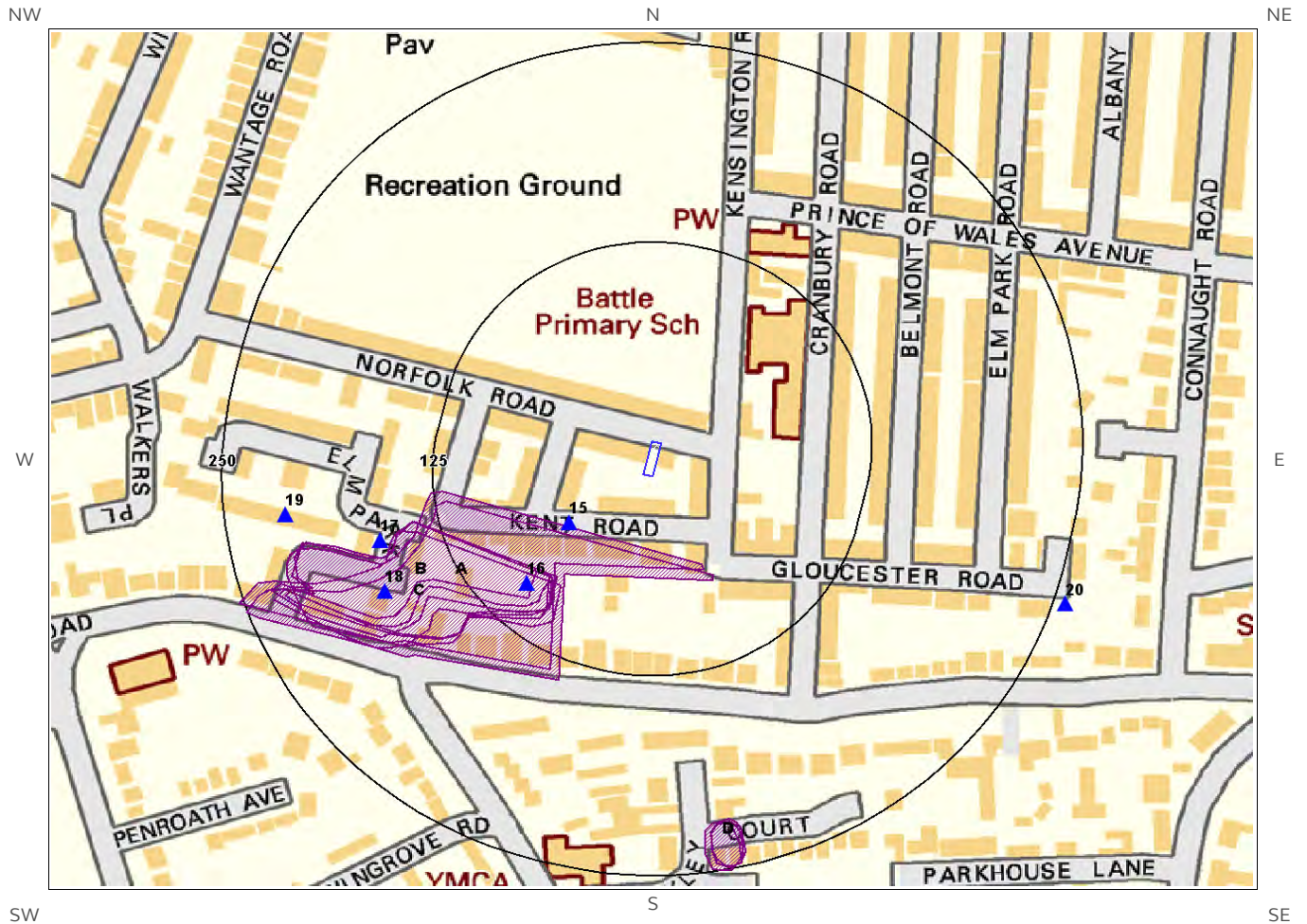
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

3.2 Radon Protection

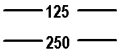
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1A	44.0	S	469512 173099	Brick Works	1898
2A	49.0	S	469518 173093	Brick Works	1898
3B	82.0	SW	469484 173099	Unspecified Pit	1932
4B	82.0	SW	469484 173099	Unspecified Pit	1932
5C	83.0	SW	469477 173084	Unspecified Ground Workings	1898
6B	84.0	SW	469481 173099	Unspecified Pit	1960
7C	85.0	SW	469480 173077	Unspecified Ground Workings	1898
8C	87.0	SW	469409 173094	Unspecified Pit	1938
9C	87.0	SW	469409 173094	Unspecified Pit	1910
10D	219.0	S	469665 172935	Unspecified Pit	1932
11D	219.0	S	469665 172935	Unspecified Pit	1932
12D	220.0	S	469662 172932	Unspecified Pit	1938
13D	221.0	S	469664 172933	Unspecified Pit	1960

4.2 Historical Underground Working Features derived from Historical Mapping

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

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	910.0	W	468621 173128	Unspecified Workings	1991

4.3 Current Ground Workings

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

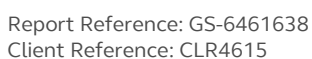
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

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

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
15	54.0	SW	469570 173135	Clay & Shale	Prospect Park Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
16	98.0	SW	469545 173097	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
17	162.0	W	469458 173124	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
18	170.0	SW	469461 173092	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
19	214.0	W	469402 173140	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
20	257.0	E	469864 173084	Sand	Tilehurst Road Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	302.0	S	469628 172862	Sand & Gravel	Parkside Road Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	368.0	W	469248 173137	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	384.0	W	469254 173304	Chalk	Grovelands Chalk Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	398.0	W	469230 173269	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	410.0	S	469690 172760	Sand & Gravel	Wilton House Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	421.0	W	469199 173098	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	519.0	W	469097 173121	Clay & Shale	Prospect Park Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	584.0	W	469037 173078	Clay & Shale	Prospect Park Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	593.0	W	469021 173167	Clay & Shale	Grovelands Brick Tile & Pottery Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	645.0	W	468975 173253	Clay & Shale	Grovelands Brick Tile & Pottery Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	655.0	S	469574 172511	Sand & Gravel	Westfield Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	669.0	S	469478 172510	Sand & Gravel	Lodge Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	696.0	S	469589 172469	Sand & Gravel	Oaklands Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	703.0	W	468932 173334	Clay & Shale	Grovelands Brick Tile & Pottery Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	775.0	W	468856 173004	Clay & Shale	Prospect Park Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	779.0	W	468849 173311	Clay & Shale	Grovelands Brick, Tile & Pottery Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	808.0	NE	470178 173774	Sand & Gravel	Battle Farm Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	821.0	SW	469235 172438	Sand & Gravel	Prospect Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	865.0	W	468778 173386	Clay & Shale	Grovelands Brick Tile & Pottery Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	890.0	S	469324 172324	Sand & Gravel	Southcote Lane Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	923.0	S	469393 172270	Sand & Gravel	Southcote Lane Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	927.0	SE	470134 172393	Sand & Gravel	Coley Park Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	930.0	W	468719 172916	Clay & Shale	Prospect Park Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	945.0	W	468669 173154	Clay & Shale	Westwood Kiln	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
Not shown	910.0	W	468621 173128	Unspecified Workings	1991

5.2 Coal Mining

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

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

Database searched and no data found.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

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

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Chalk	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
2	375.0	E	Not available	Chalk	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
3	448.0	N	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
4	492.0	N	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
Not shown	535.0	N	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
6	619.0	NE	Not available	Chalk	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

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

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

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

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
7	224.0	W	469400 173100	Elm Lodge/Jesses Brick Field, Tilehurst, Berkshire	Lynch Hill Gravels	Lambeth Group, Upper Chalk Formation	Chalk
8	580.0	E	470170 172980	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk
9	618.0	W	469000 173100	Reading/Berks Brick Co, Tilehurst, Berkshire	-	Lambeth Group, Upper Chalk Formation	Chalk
10	635.0	SE	470110 172760	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
11	675.0	E	470300 173200	Coopers Brick & Lime Manufactory, Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	727.0	W	468900 173300	Grovelands-Works Complex, Tilehurst, Berkshire	Worked Ground	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	743.0	E	470350 173020	Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	831.0	W	468800 173000	Grovelands-Excavations (1), Tilehurst, Berkshire	Worked Ground	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	894.0	E	470500 173000	Reading (West), Berkshire	Lynch Hill Gravel	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	925.0	E	470540 173050	Reading, Berkshire	Lynch Hill Gravel	Lambeth Group, Chalk Group	Chalk

5.6 Natural Cavities

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

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

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
17	405.0	S	469650 172760	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
18	410.0	E	470000 173010	-	Chalk Group, Lambeth Group	Solution Widened Joint or Fissure x 1
19	459.0	SE	469900 172800	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe
20	477.0	SE	469950 172820	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
21	519.0	W	469100 173100	-	Chalk Group, Lambeth Group	Solution Pipe x 10
22	600.0	SE	470000 172700	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
23A	615.0	E	470240 173160	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
24A	616.0	E	470240 173150	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
25A	625.0	E	470250 173160	-	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	630.0	SE	469900 172600	Lynch Hill Gravel	Chalk Group, Lambeth Group	Unknown x 3

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
Not shown	661.0	SE	469980 172610	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	768.0	E	470370 173000	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 2
Not shown	780.0	E	470380 172990	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	806.0	SE	470130 172540	Lynch Hill Gravel	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	861.0	W	468800 173450	Worked Ground	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	917.0	W	468700 173100	-	Chalk Group, Lambeth Group	Sinkhole x 1, Solution Pipe x 1
Not shown	985.0	S	469250 172250	Lynch Hill Gravel, Worked Ground	Chalk Group, Lambeth Group	Solution Pipe x 1
Not shown	991.0	SE	470490 172690	Lynch Hill Gravel	Chalk Group, Lambeth Group	Solution Pipe x 1

5.7 Brine Extraction

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

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

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

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

Database searched and no data found.

5.10 Clay Mining

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

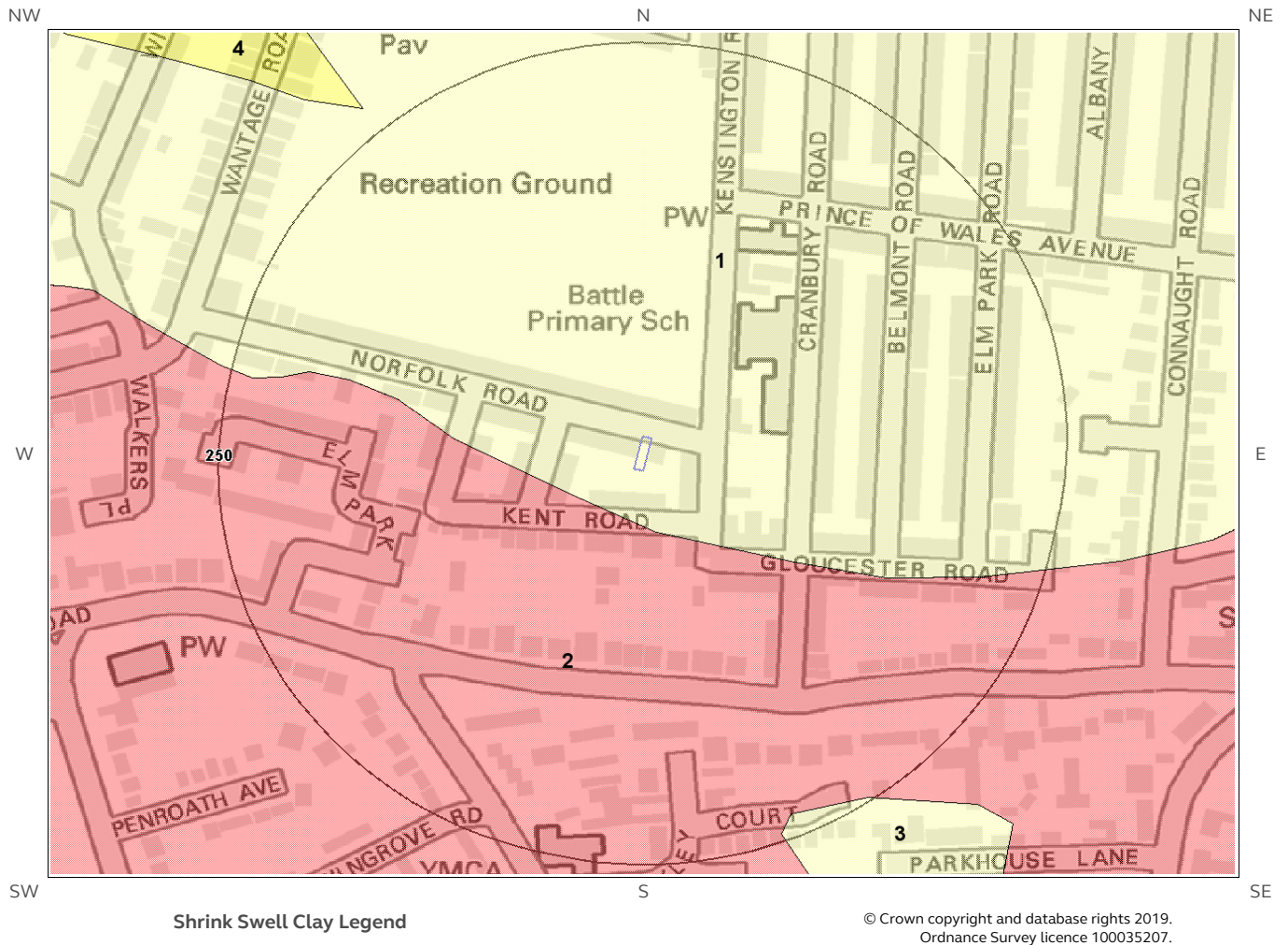
Are there any Clay Mining areas within 1000m of the study site boundary?

No

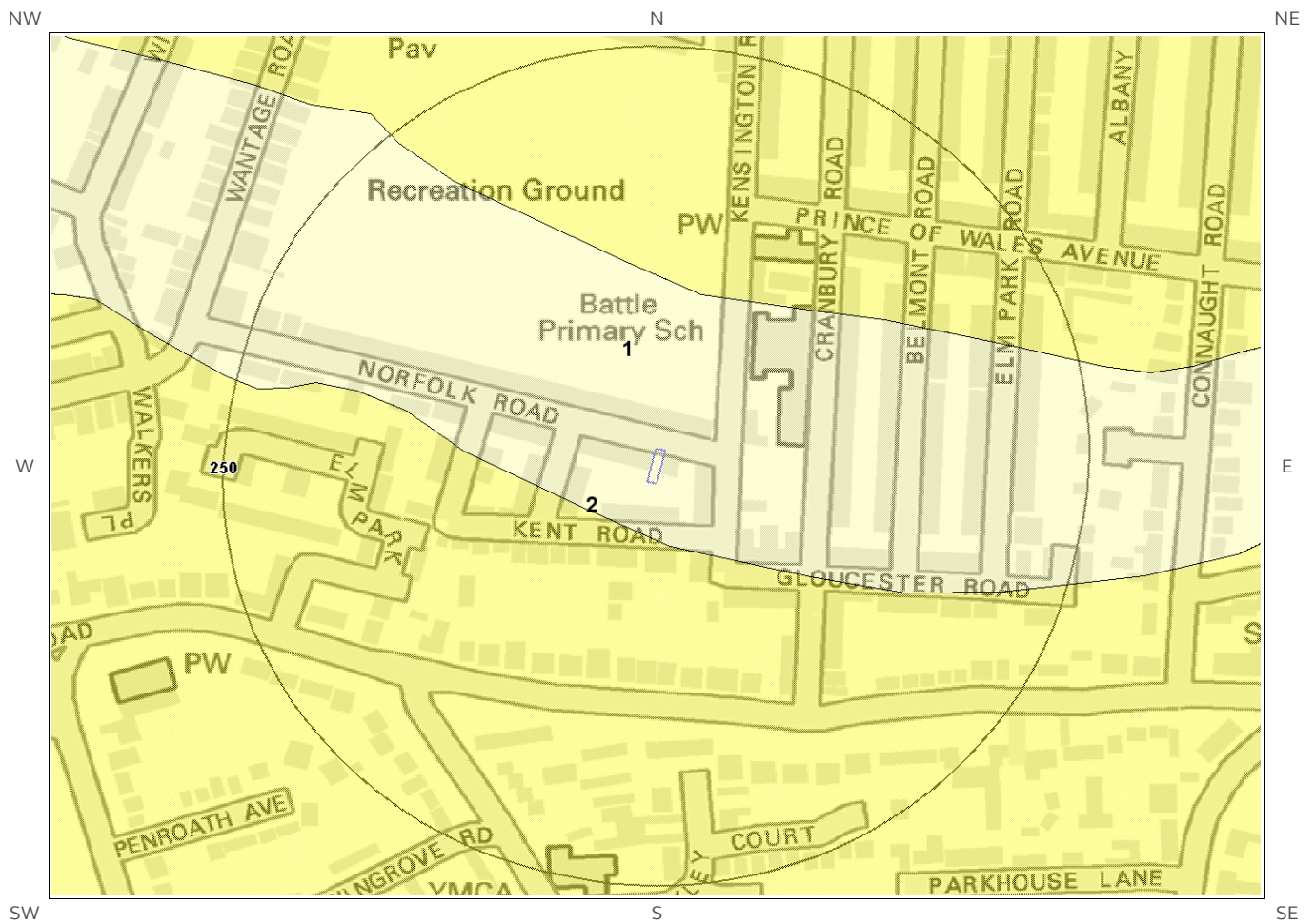
Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map



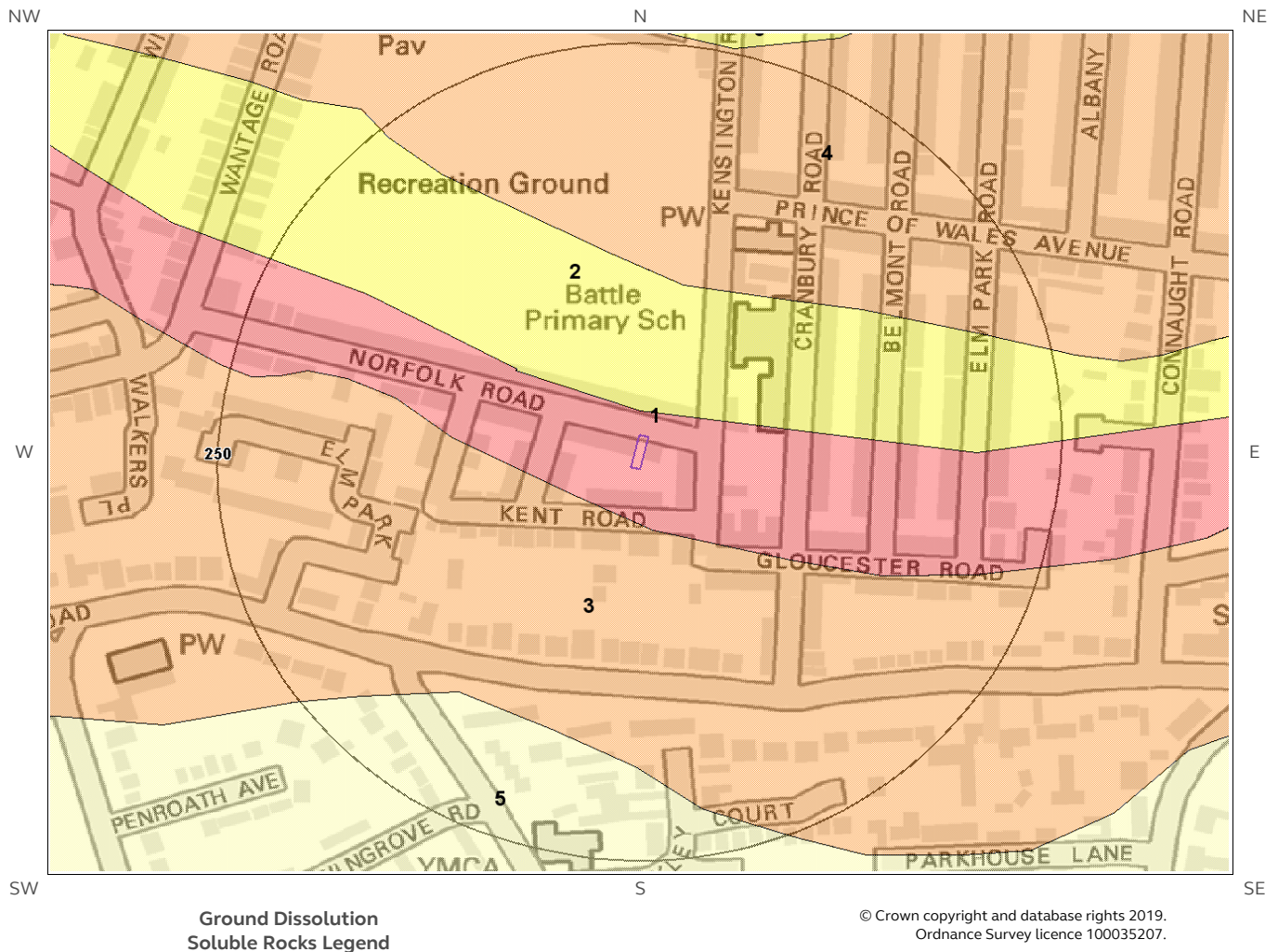
6.2 Landslides map



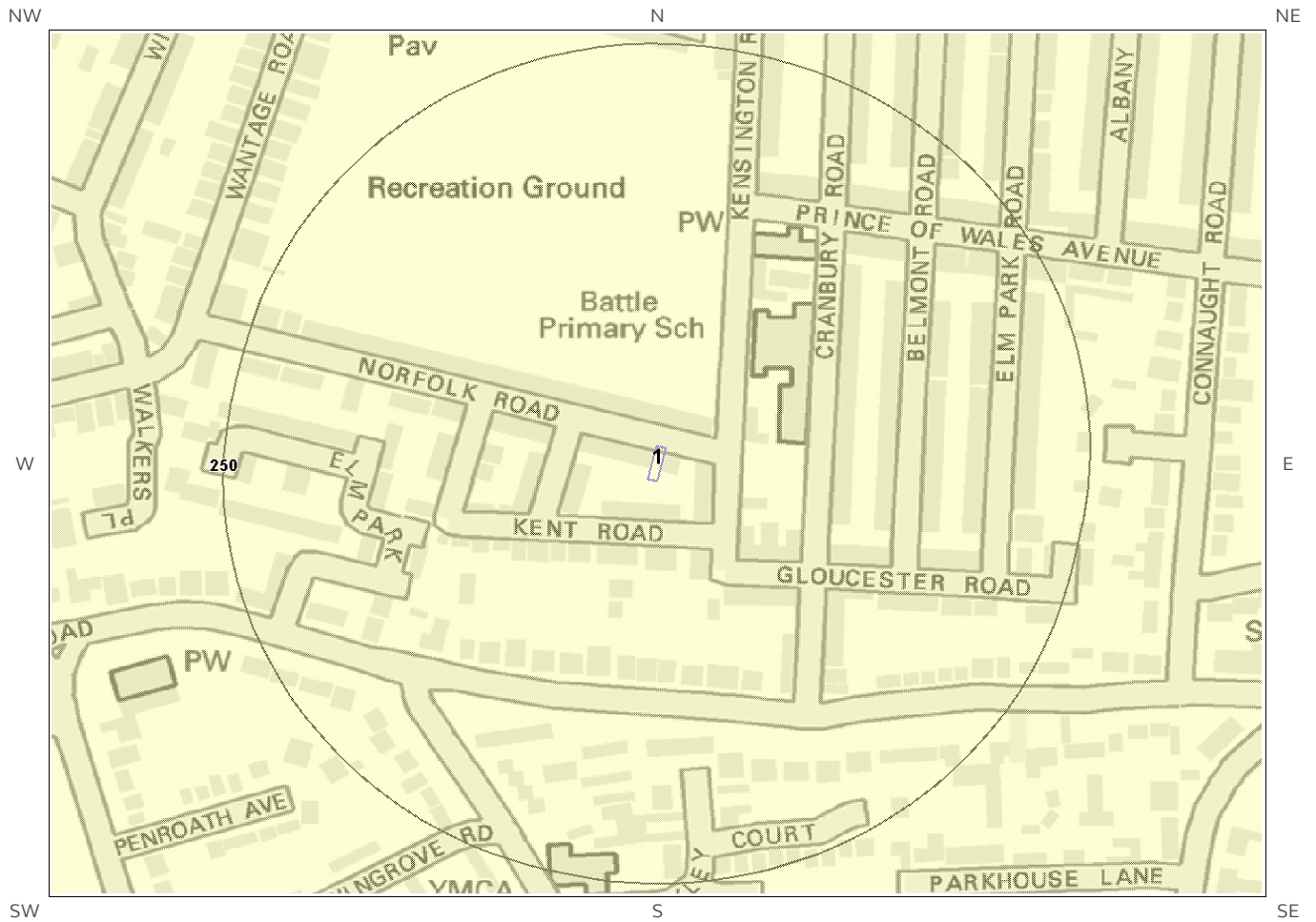
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6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map

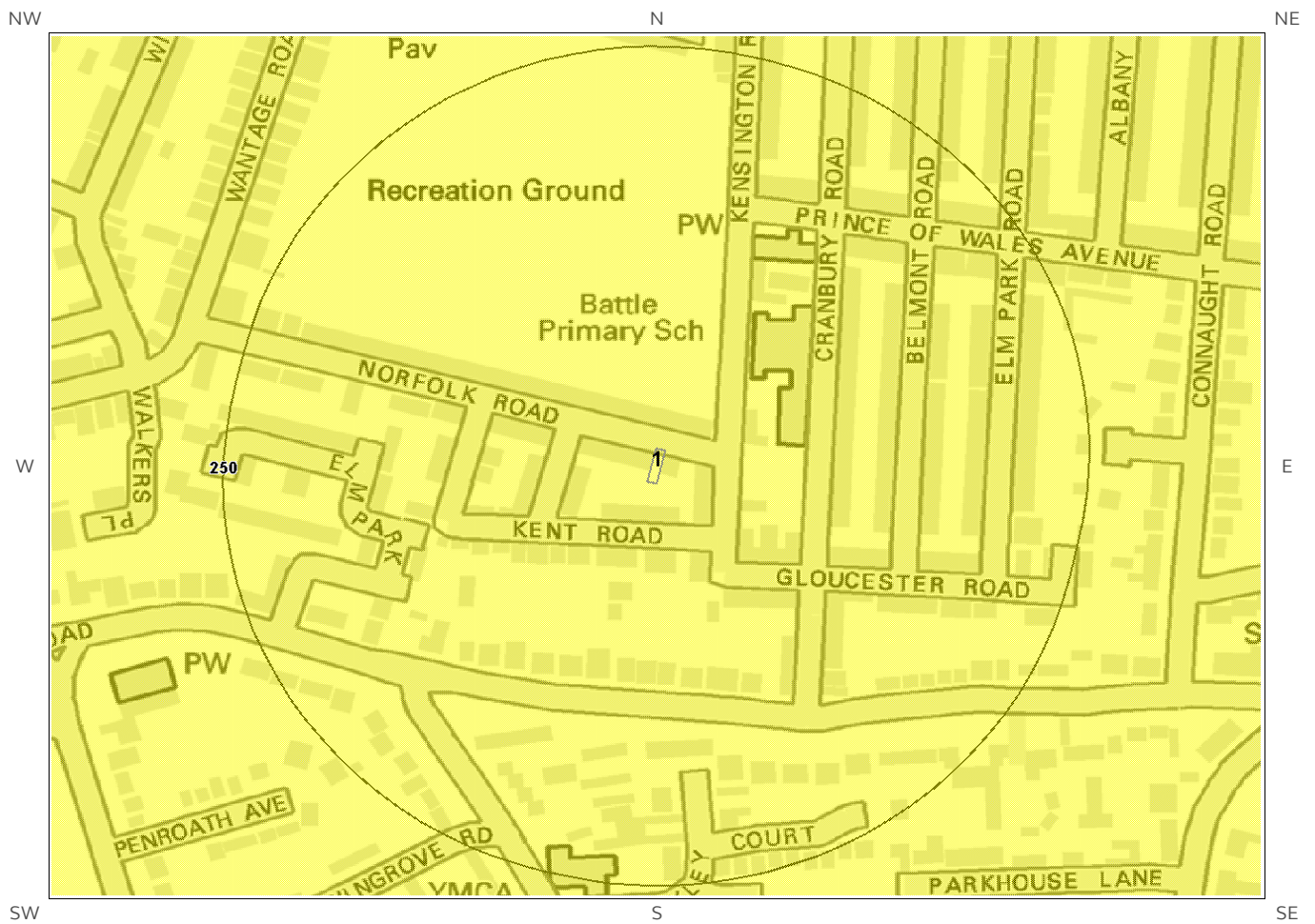


Compressible Deposits Legend

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6.5 Collapsible Deposits map

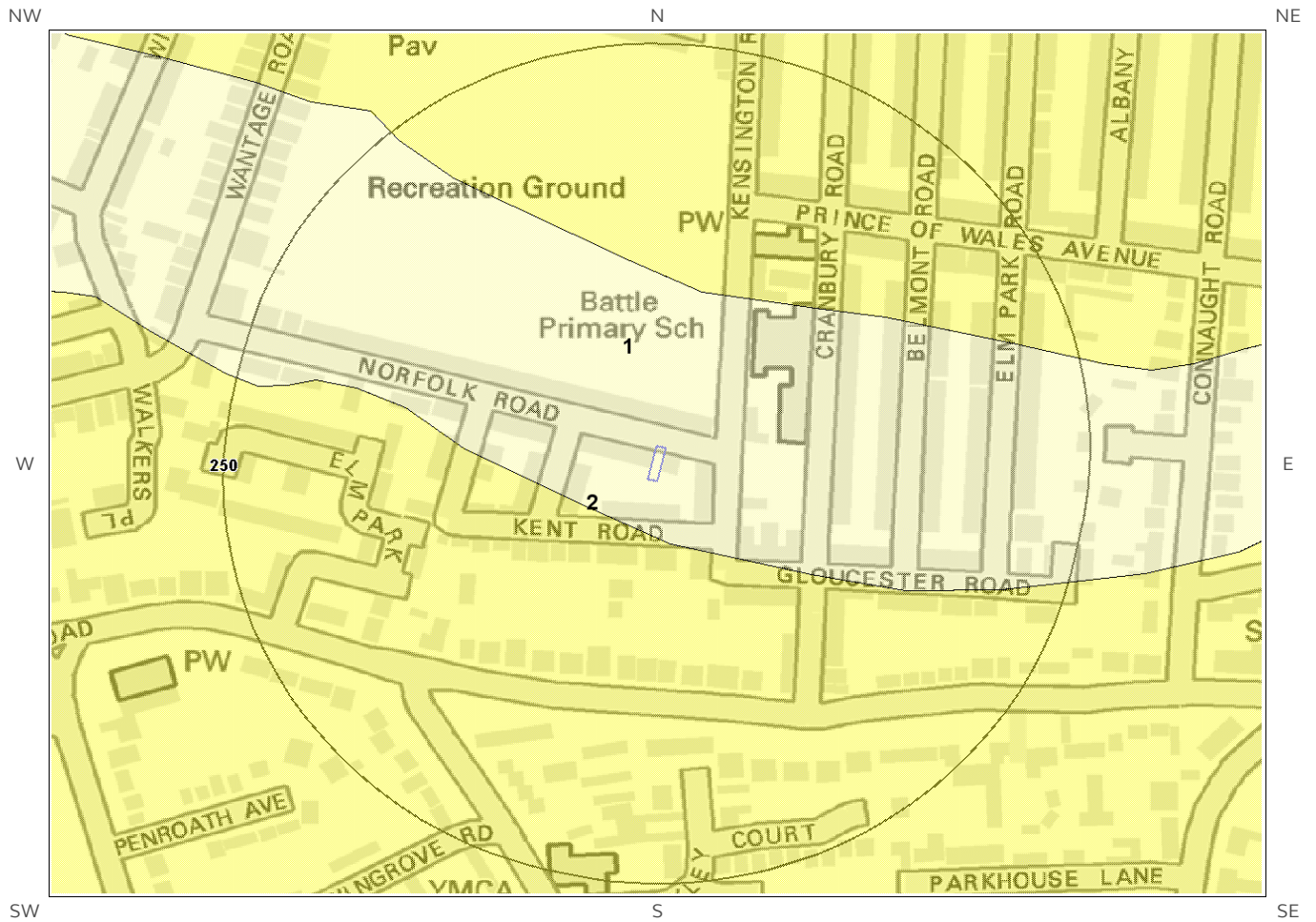


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	31.0	SW	Moderate	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.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

ID	Distance (m)	Direction	Hazard Rating	Details
2	31.0	SW	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Moderate	Very significant soluble rocks are present, with a moderate possibility of local natural subsidence due to high surface or subsurface water flow. Do not load the land or undertake building work before obtaining specialist advice. Do not dispose of drainage to the ground. Some possibility groundwater pollution. Maintain drainage infrastructure. For new build - specialist site investigation and stability assessment may be necessary before construction. Construction work may cause subsidence. Increased construction costs are likely. For existing property - probable increase in insurance risk due to soluble rocks.
2	15.0	N	Very Low	Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.
3	31.0	SW	Low	Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build - site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property - possible increase in insurance risk due to soluble rocks.

6.4 Compressible Deposits

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

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

6.5 Collapsible Deposits

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

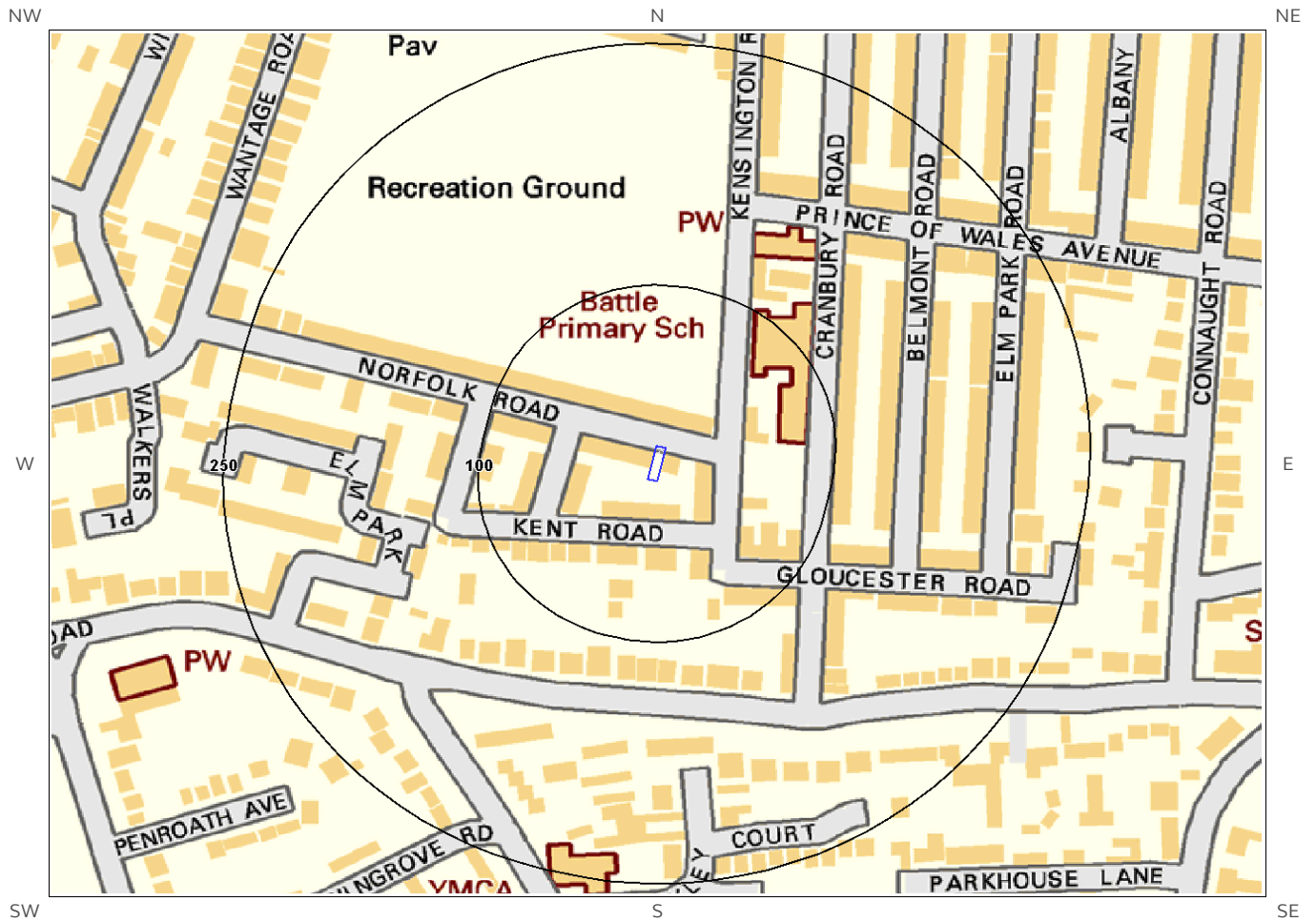
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

6.6 Running Sands

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

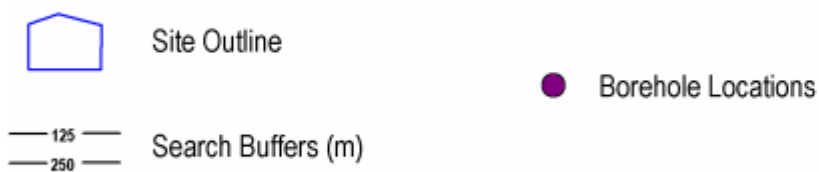
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	31.0	SW	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

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

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

0

Database searched and no data found.

8 Estimated Background Soil Chemistry

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

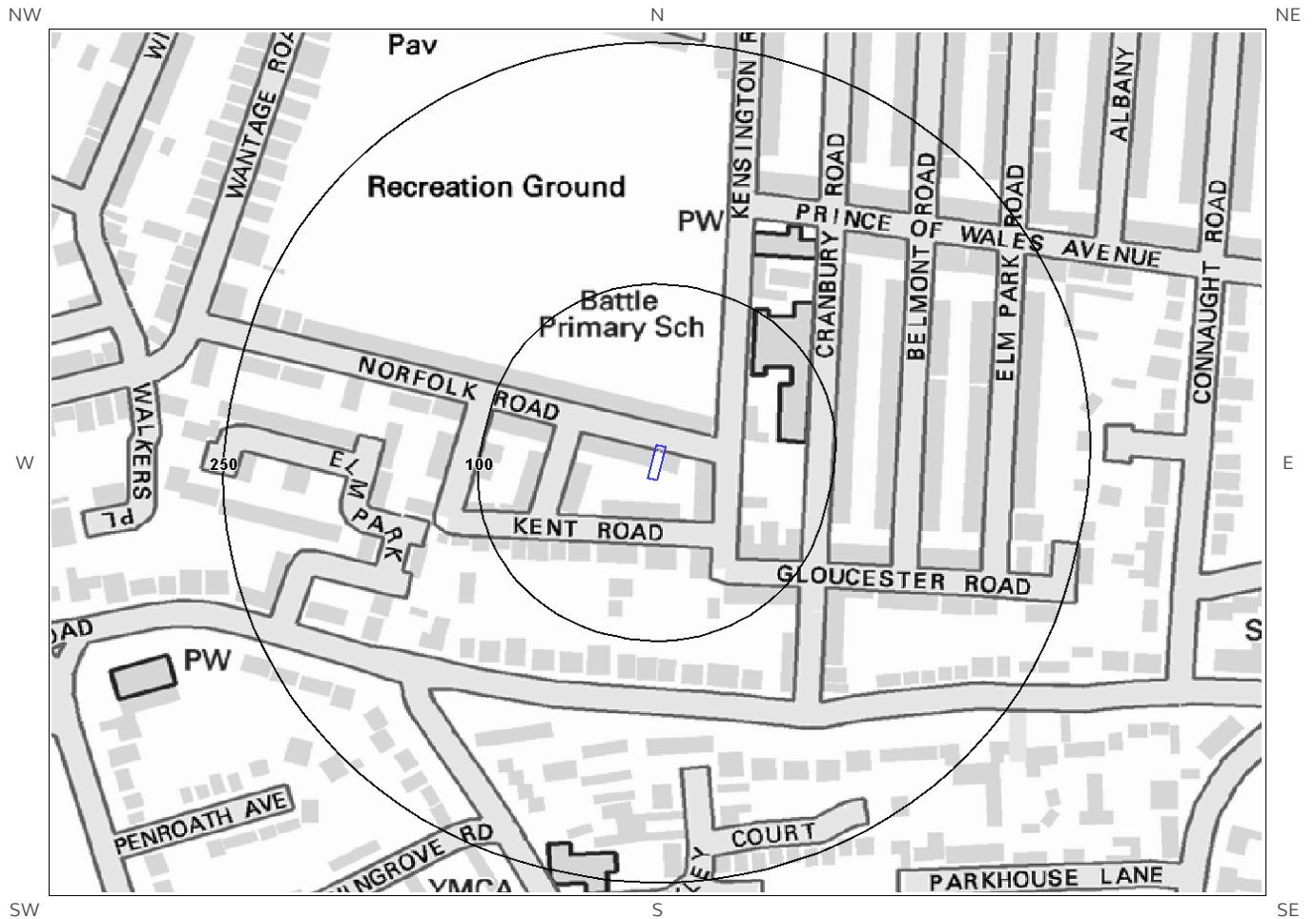
2

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

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

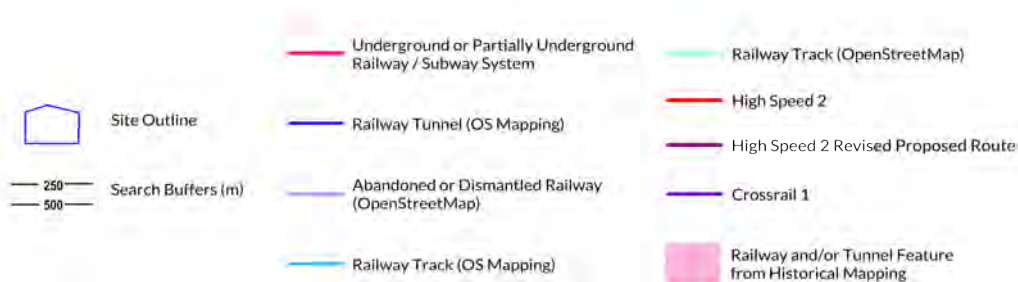
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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

9.3 Historical Railways

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

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

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

Database searched and no data found.

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

9.4 Active Railways

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

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

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

Database searched and no data found.

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

9.5 Railway Projects

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

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

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

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

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

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

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