



Appendix D

Desk Study Research Information

This appendix may not be included in the printed report to reduce the document size, but is included in the digital version.



Hydrock Consultants Ltd
HYDROCK,2-4 HAWTHORN PARK, HOLDENBY
ROAD,
NORTHAMPTON, NN6 8LD

Groundsure Reference: GS-3401438
Your Reference: POP000713_-_C-04583-C_Main_site
Report Date: 26 Oct 2016
Report Delivery Method: Email - pdf

Groundsure Enviro Insight

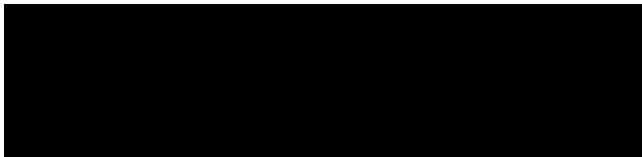
Address: 450525 , 225579,

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

Groundsure Enviro Insight

Address: 450525 , 225579,
Date: 26 Oct 2016
Reference: GS-3401438
Client: Hydrock Consultants Ltd



Aerial Photograph Capture date: 19-Aug-2009
Grid Reference: 450547,225584
Site Size: 36.73ha

Report Reference: GS-3401438
Client Reference: POP000713_-_C-04583-C_Main_site

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Overview of Findings

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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	3	5	1	8
1.2 Additional Information – Historical Tank Database	4	6	3	6
1.3 Additional Information – Historical Energy Features Database	4	3	5	19
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 Potentially Infilled Land	2	3	1	6

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	1	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	2	0	0	2
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	2
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
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 Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	0	0	1	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	0	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	6	7	3	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 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
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 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	No					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	2
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	0
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)	2	0	2	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology 0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	Yes
6.10 Detailed River Network entries within 500m of the site	2	0	0	4	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

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

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 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	1	0	0	2
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Negligible
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Negligible
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Very Low
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Negligible
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 property 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 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

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 licenses, 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.

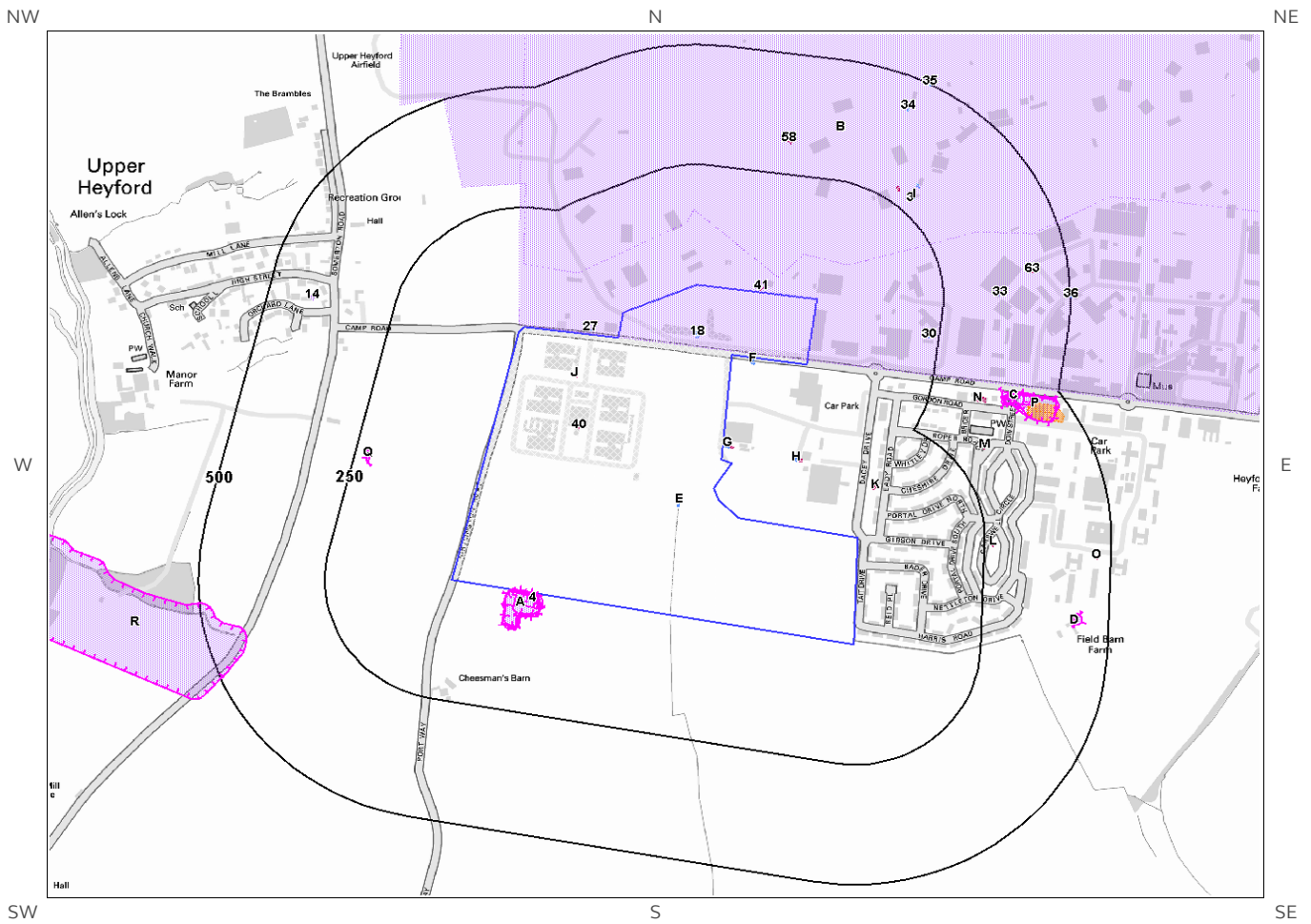
Note: Maps

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).

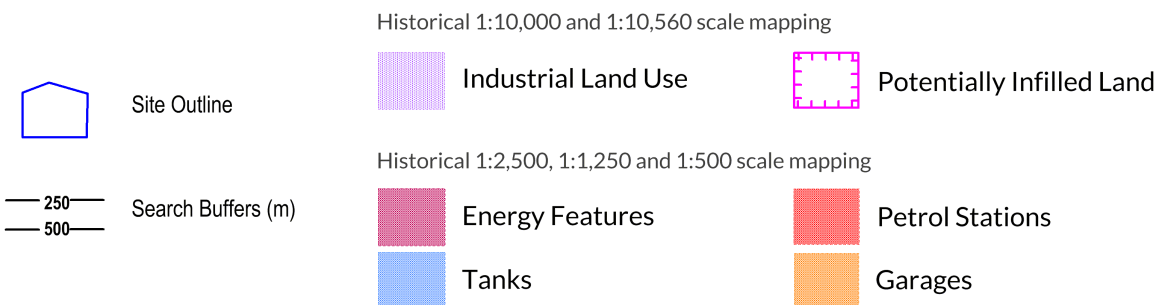
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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: 17

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Unspecified Quarry	1954
2A	0	On Site	Unspecified Quarry	1898
3	0	On Site	Airfield	1954
4	1	S	Unspecified Pit	1880
5A	2	S	Unspecified Quarry	1923
6A	5	S	Unspecified Quarry	1923
7B	36	N	Airfield	1980
8B	36	N	Airfield	1992
9Q	220	W	Refuse Heap	1880
10C	390	E	Unspecified Pit	1880
11C	391	E	Unspecified Old Quarry	1923
12C	395	E	Unspecified Quarry	1898
13P	395	E	Unspecified Old Quarry	1923
14	409	W	Smithy	1898
15R	422	W	Sewage Works	1977
16D	430	E	Unspecified Tank	1923
17D	431	E	Unspecified Pit	1880

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: 19

ID	Distance (m)	Direction	Use	Date
18	0	On Site	Tanks	1975
19E	0	On Site	Tanks	1975
20E	0	On Site	Tanks	1994
21E	0	On Site	Tanks	1982
22F	1	S	Tanks	1975
23F	1	S	Tanks	1982

24F	2	S	Tanks	1994
25G	2	E	Unspecified Tank	1982
26G	2	E	Unspecified Tank	1994
27	8	N	Unspecified Tank	1975
28H	124	E	Unspecified Tank	1982
29H	125	E	Unspecified Tank	1994
30	229	E	Unspecified Tank	1975
31I	282	NE	Unspecified Tank	1998
32I	305	NE	Tanks	1998
33	359	E	Unspecified Tank	1975
34	431	NE	Unspecified Tank	1998
35	496	NE	Unspecified Tank	1998
36	499	E	Unspecified Tank	1975

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:

31

ID	Distance (m)	Direction	Use	Date
37J	0	On Site	Electricity Substation	1994
38J	0	On Site	Electricity Substation	1982
39J	0	On Site	Electricity Substation	1975
40	0	On Site	Electricity Substation	1975
41	5	N	Electricity Substation	1998
42G	15	E	Electricity Substation	1982
43G	16	E	Electricity Substation	1994
44K	106	N	Electricity Substation	1982
45K	107	N	Electricity Substation	1975
46K	108	N	Electricity Substation	1994
47H	132	E	Electricity Substation	1994
48H	132	E	Electricity Substation	1982
49L	263	E	Electricity Substation	1995
50L	263	E	Electricity Substation	1994
51L	263	E	Electricity Substation	1995
52L	264	E	Electricity Substation	1975
53I	276	NE	Electricity Substation	1998
54M	308	NE	Electricity Substation	1995
55M	308	NE	Electricity Substation	1994
56M	308	NE	Electricity Substation	1995
57M	310	NE	Electricity Substation	1975
58	315	N	Electricity Substation	1998

59N	341	E	Electricity Substation	1994
60N	342	E	Electricity Substation	1975
61N	352	E	Electricity Substation	1995
62N	352	E	Electricity Substation	1995
63	426	E	Electricity Substation	1998
64O	470	E	Electricity Substation	1994
65O	470	E	Electricity Substation	1995
66O	470	E	Electricity Substation	1995
67O	471	E	Electricity Substation	1975

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
68P	421	NE	Garage	1994
69P	424	NE	Garage	1975

1.6 Potentially Infilled Land

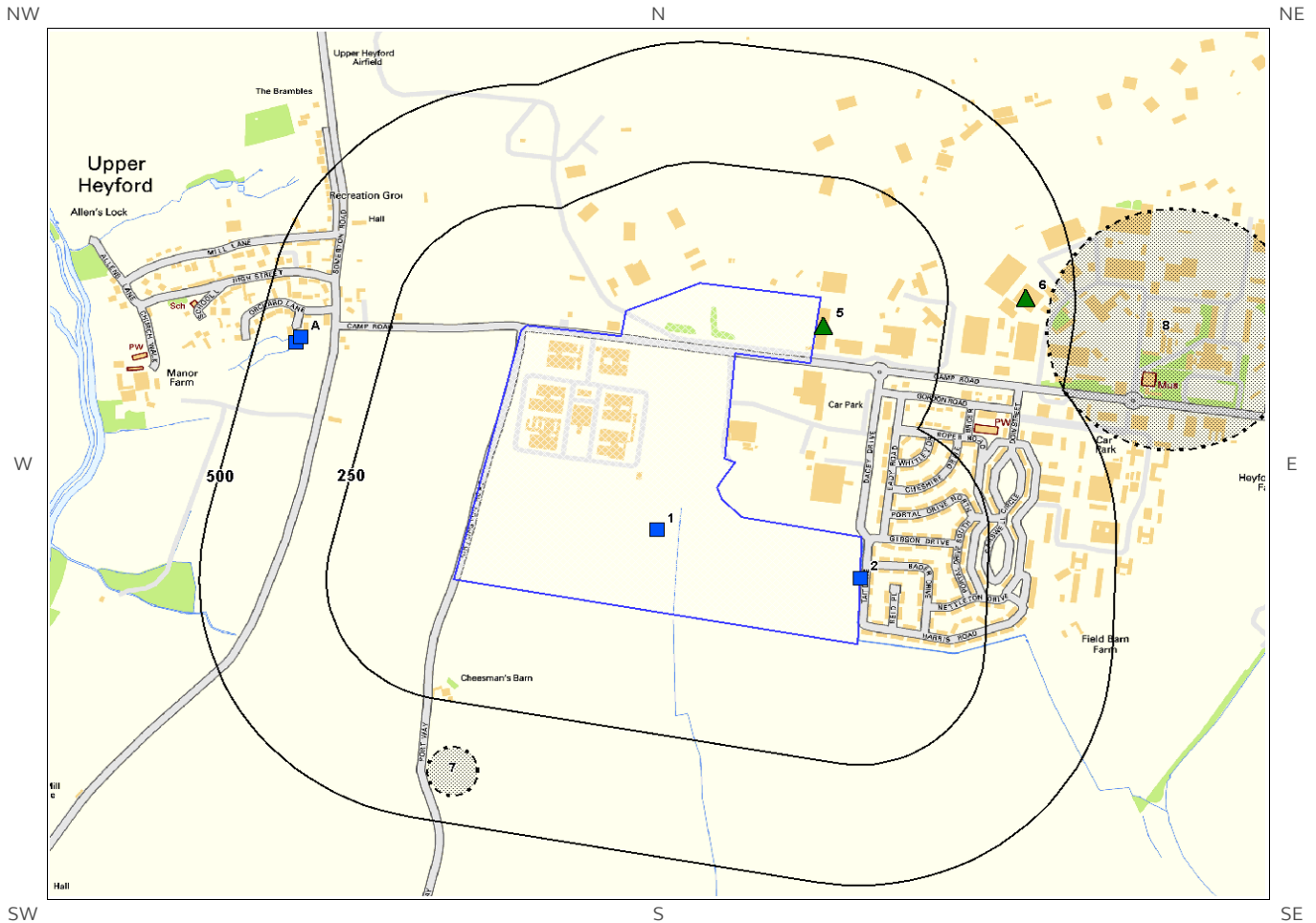
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 12

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














ID	Distance(m)	Direction	Use	Date
70A	0	On Site	Unspecified Quarry	1898
71A	0	On Site	Unspecified Quarry	1954
72A	1	S	Unspecified Pit	1880
73A	2	S	Unspecified Quarry	1923
74A	5	S	Unspecified Quarry	1923
75Q	220	W	Refuse Heap	1880
76C	390	E	Unspecified Pit	1880

77P	391	E	Unspecified Old Quarry	1923
78C	395	E	Unspecified Quarry	1898
79P	395	E	Unspecified Old Quarry	1923
80R	422	W	Sewage Works	1977
81D	431	E	Unspecified Pit	1880

2. Environmental Permits, Incidents and Registers Map



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

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details
5	14	E	450828 225920	Address: Walon Limited, 342 Heyford Park, Camp Road, Upper Heyford, Bicester, Oxon, OX6 5HB Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	403	E	451226 225978	Address: Paragon Fleet Solutions, 125 Heyford Park, Upper Heyford, Bicester, Oxfordshire, OX25 5HA Process: Respraying of Road Vehicles 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:

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NGR	Details
1	0	On Site	450500 225500	Address: HEYFORD PARK, UPPER HEYFORD, NEAR B, HEYFORD PARK, UPPER HEYFORD, NEA, R BICESTER, OXFORDSHIRE, -, - Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CATM.2847 Permit Version: 1 Receiving Water: GALLO'S BROOK Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 27/03/1997 Effective Date: 27-Mar-1997 Revocation Date: -
2	0	On Site	450900 225400	Address: HEYFORD PARK, UPPER HEYFORD, NEAR B, HEYFORD PARK, UPPER HEYFORD, NEA, R BICESTER, OXFORDSHIRE, -, - Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CATM.2846 Permit Version: 1 Receiving Water: TRIBUTARY OF THE UPPER HEYFORD Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 27/03/1997 Effective Date: 27-Mar-1997 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
3A	416	W	449800 225900	Address: UPPER HEYFORD DEPOT, UPPER HEYFORD,, UPPER HEYFORD DEPOT, UPPER HEYFO, RD, OXON, -, - Effluent Type: MISCELLANEOUS DISCHARGES - UNSPECIFIED Permit Number: CTCR.1489 Permit Version: 1	Receiving Water: TRIB OXFORDCANAL Status: REVOKED - UNSPECIFIED Issue date: 28/07/1976 Effective Date: 28-Jul-1976 Revocation Date: 29/10/1992
4A	424	W	449790 225890	Address: ORCHARD LANE, UPPER HEYFORD, OXON, ORCHARD LANE, UPPER HEYFORD, OXO, N, -, - Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.1297 Permit Version: 1	Receiving Water: TRIB OF OXFORD CANL:MIDDLE SEC Status: REVOKED - UNSPECIFIED Issue date: 14/11/1986 Effective Date: 14-Nov-1986 Revocation Date: 29/10/1992

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:

2

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
7	343	S	Black Cat Fireworks Ltd	Black Cat Fireworks Ltd, Raf Upper Heyford, Heyford Park, OX6 3HE	Historical COMAH Site	-
8	448	E	Heyford Park Management Company Limited	Heyford Park Management Company Limited, Southern Bomb Store/site, Heyford Park, Camp Road, Upper Heyford, Oxfordshire, OX25 5HD	Current COMAH Site	COMAH Upper Tier Operator

2.3 Environment Agency Recorded Pollution Incidents

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

0

Database searched and no data found.

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

0

Database searched and no data found.

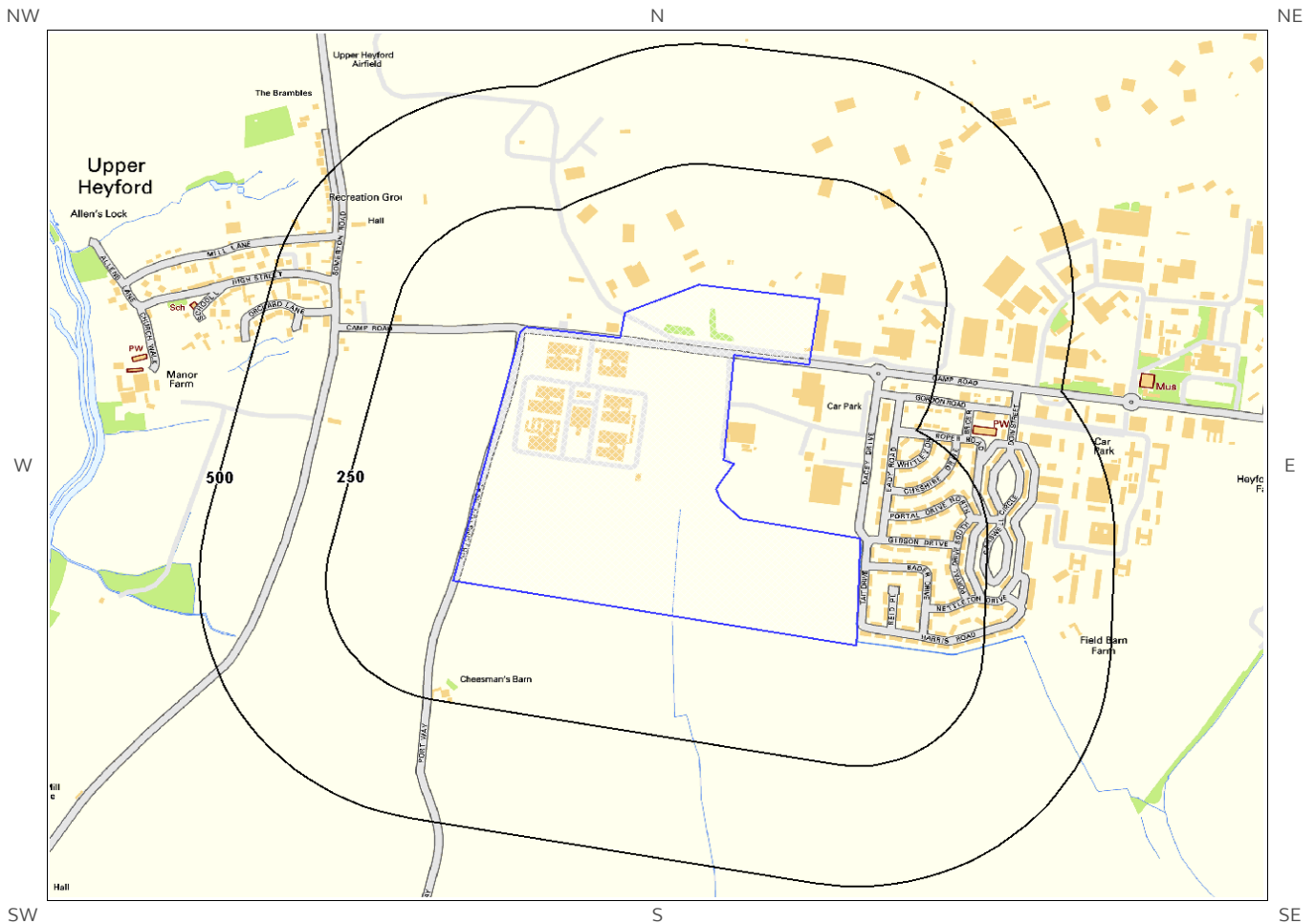
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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

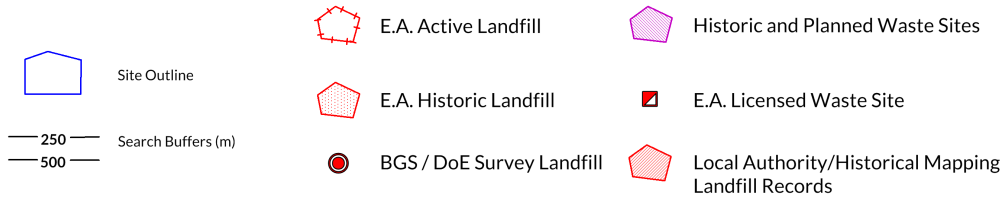
0

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 landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

1

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	839	S	450000 224400	Site Address: Land off Port Way, Lower Heyford, Oxfordshire Waste Licence: - Site Reference: TP0449, 13.6.5024 Waste Type: Inert, Industrial, Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

0

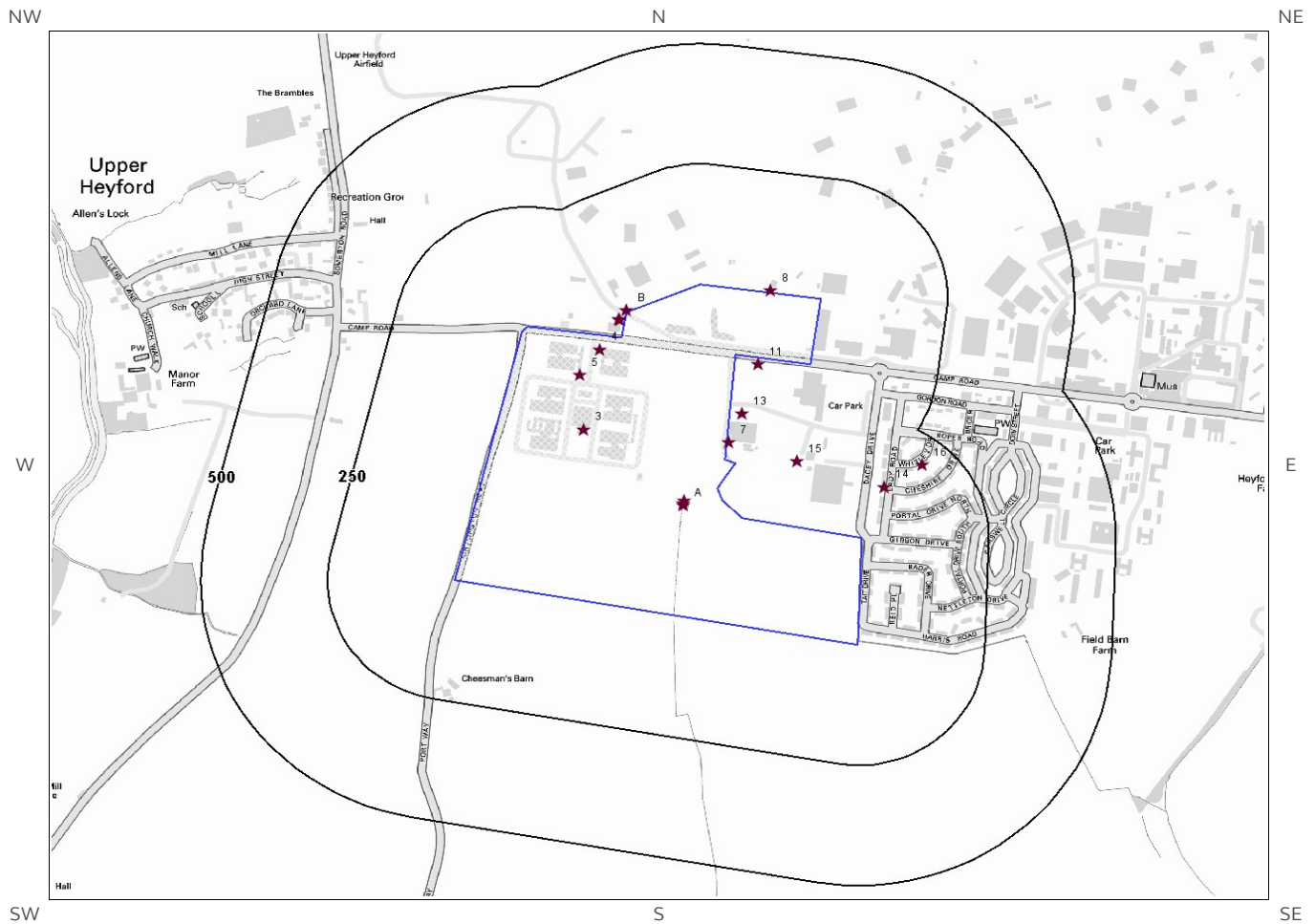
Database searched and no data found.

3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

0

Database searched and no data found.

4. Current Land Use Map



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- | | | | | | |
|---|--------------------|---|--------------------------|--|---------------------------------|
|  | Site Outline |  | Current Industrial Sites |  | Electricity Transmission Cables |
|  | Search Buffers (m) |  | 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:

16

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1A	0	On Site	Tank	450551 225554	OX25	Tanks (Generic)	Industrial Features
2A	0	On Site	Tank	450551 225559	OX25	Tanks (Generic)	Industrial Features
3	0	On Site	Chimney	450354 225712	OX25	Chimneys	Industrial Features
4	0	On Site	Water Tower	450386 225879	OX25	Water Pumping Stations	Industrial Features
5	0	On Site	Electricity Sub Station	450348 225825	OX25	Electrical Features	Infrastructure and Facilities
6A	0	On Site	Tank	450552 225564	OX25	Tanks (Generic)	Industrial Features
7	4	E	Tank	450641 225685	OX25	Tanks (Generic)	Industrial Features
8	5	N	Electricity Sub Station	450722 226001	OX25	Electrical Features	Infrastructure and Facilities
9B	6	N	Electricity Sub Station	450438 225960	OX25	Electrical Features	Infrastructure and Facilities
10B	11	W	Pylon	450426 225940	OX25	Electrical Features	Infrastructure and Facilities
11	12	S	Tank	450698 225848	OX25	Tanks (Generic)	Industrial Features
12B	13	W	Mast	450424 225942	OX25	Telecommunications Features	Infrastructure and Facilities
13	24	E	Electricity Sub Station	450667 225745	OX25	Electrical Features	Infrastructure and Facilities
14	116	N	Electricity Sub Station	450947 225593	OX25	Electrical Features	Infrastructure and Facilities
15	121	E	Tank	450775 225646	OX25	Tanks (Generic)	Industrial Features
16	194	NE	Jayden Transport UK Ltd	451022 225638	7, Whitley Drive, Upper Heyford, Bicester, OX25 5TG	Distribution and Haulage	Transport, Storage and Delivery

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

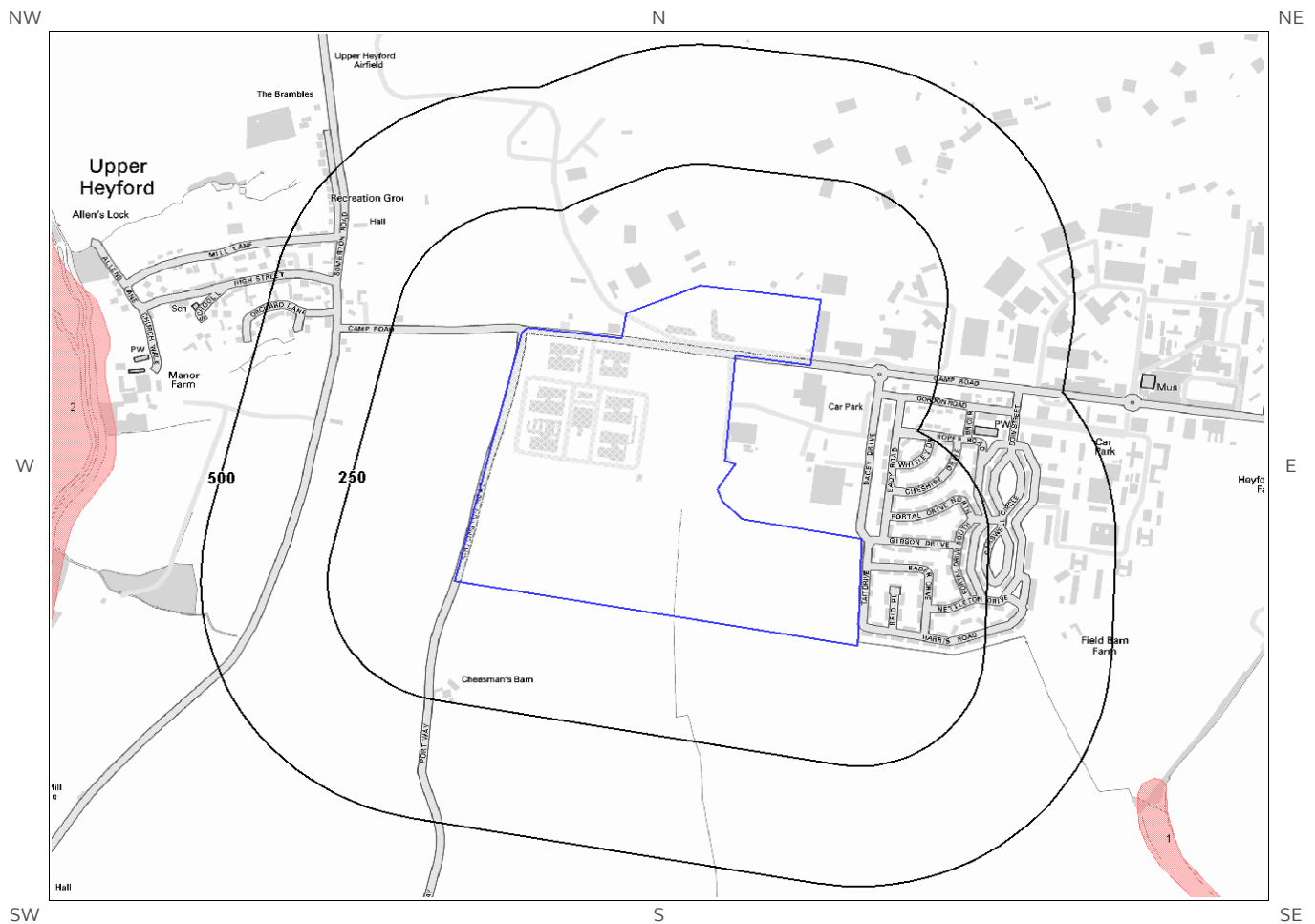
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
GOG-LMAR	GREAT OOLITE GROUP	LIMESTONE AND [SUBEQUAL/SUBORDINATE] ARGILLACEOUS ROCKS, INTERBEDDED

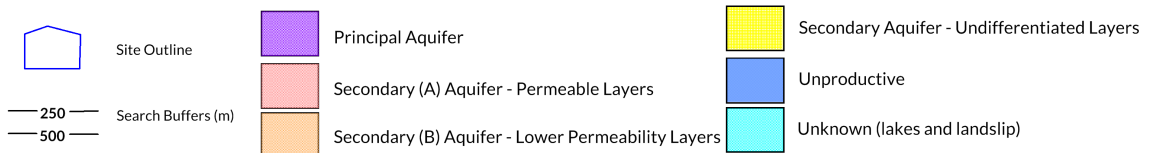
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

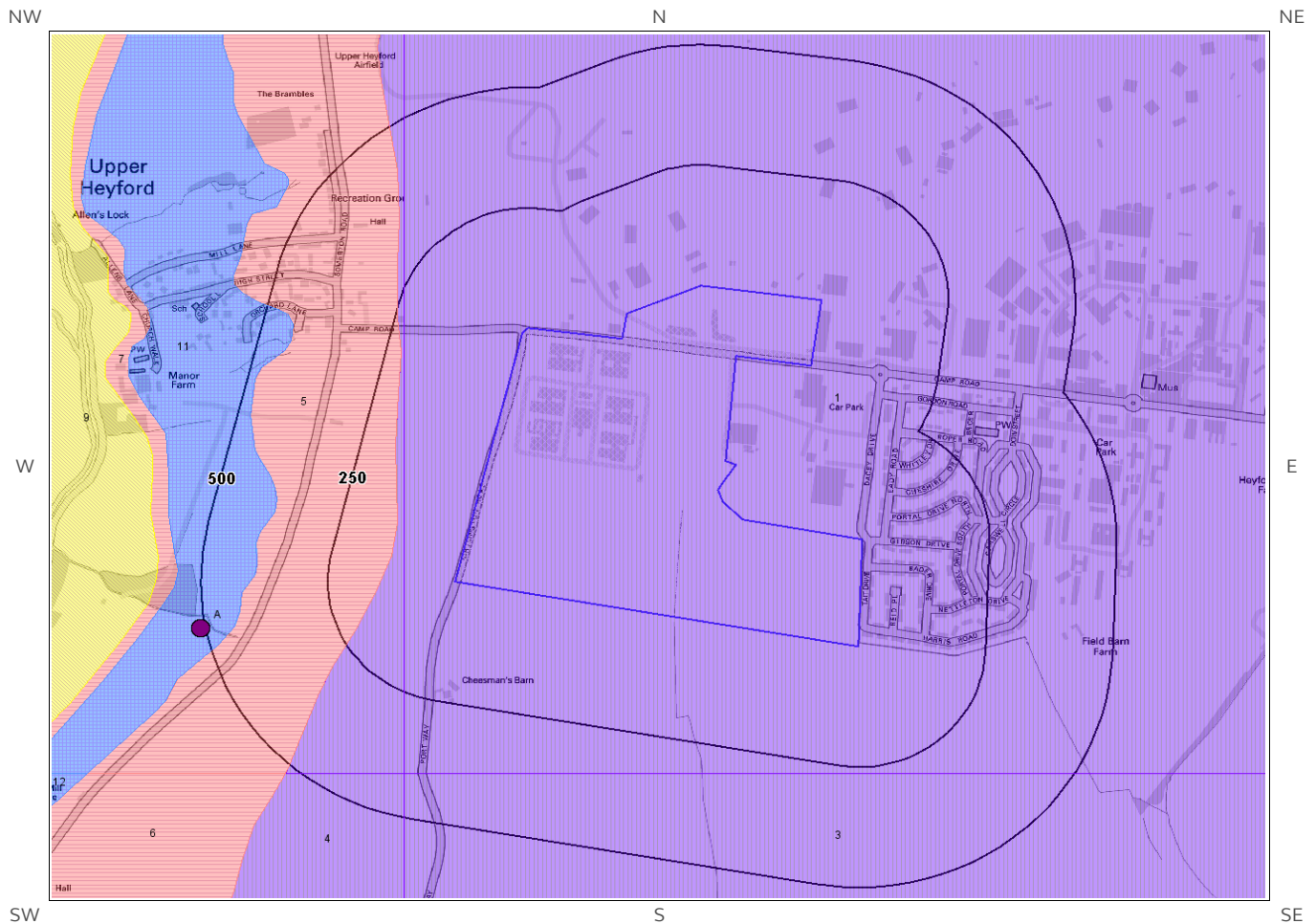
6a. Aquifer Within Superficial Geology



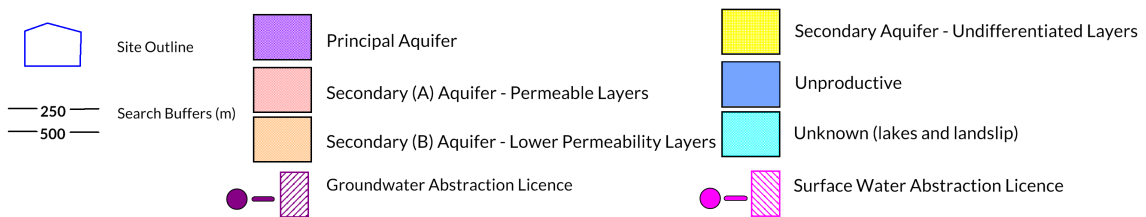
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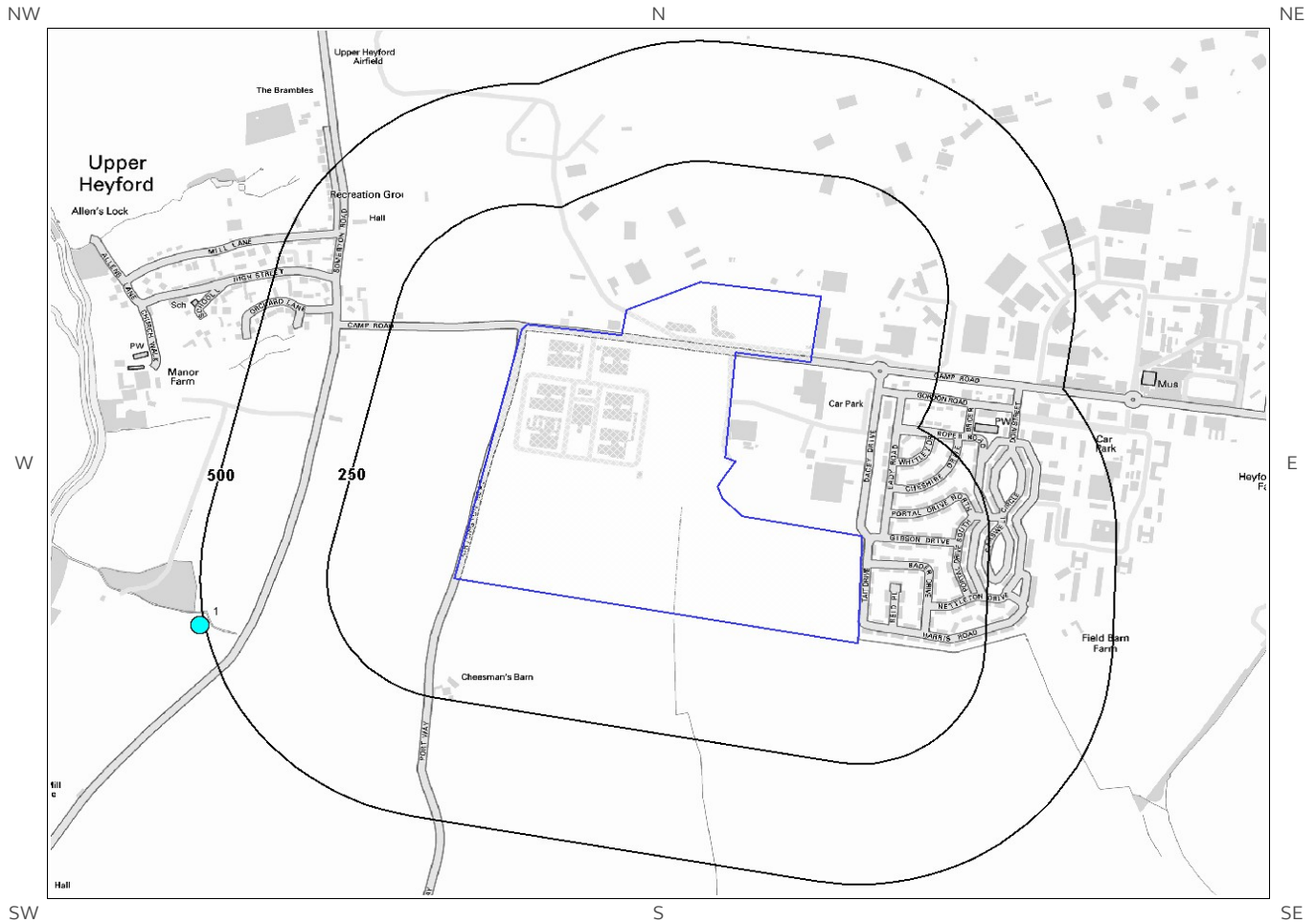
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



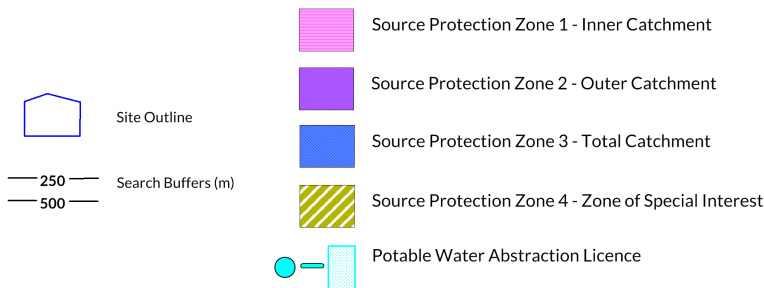
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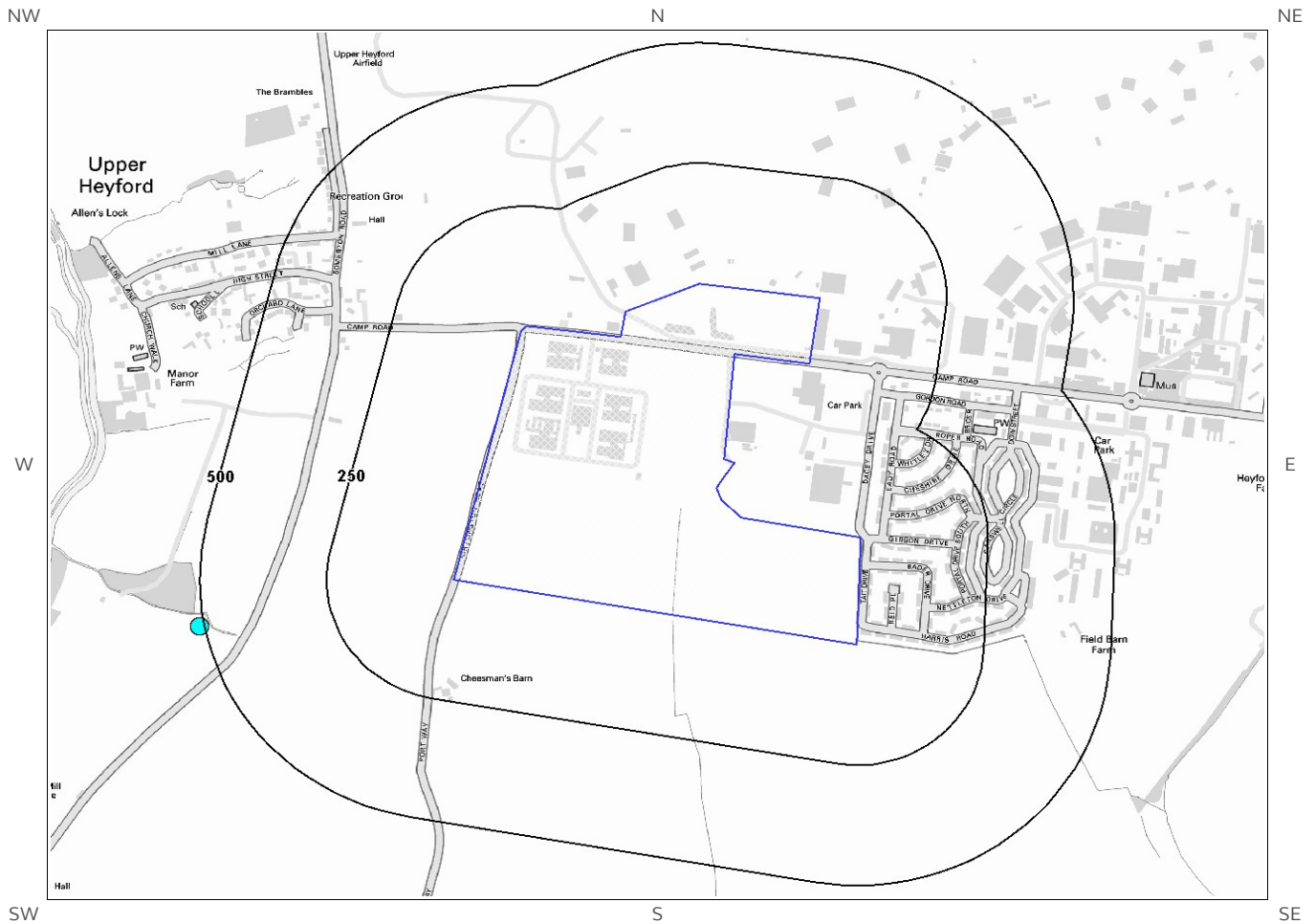
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



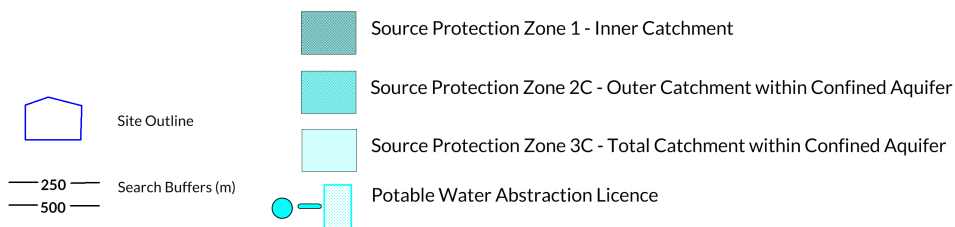
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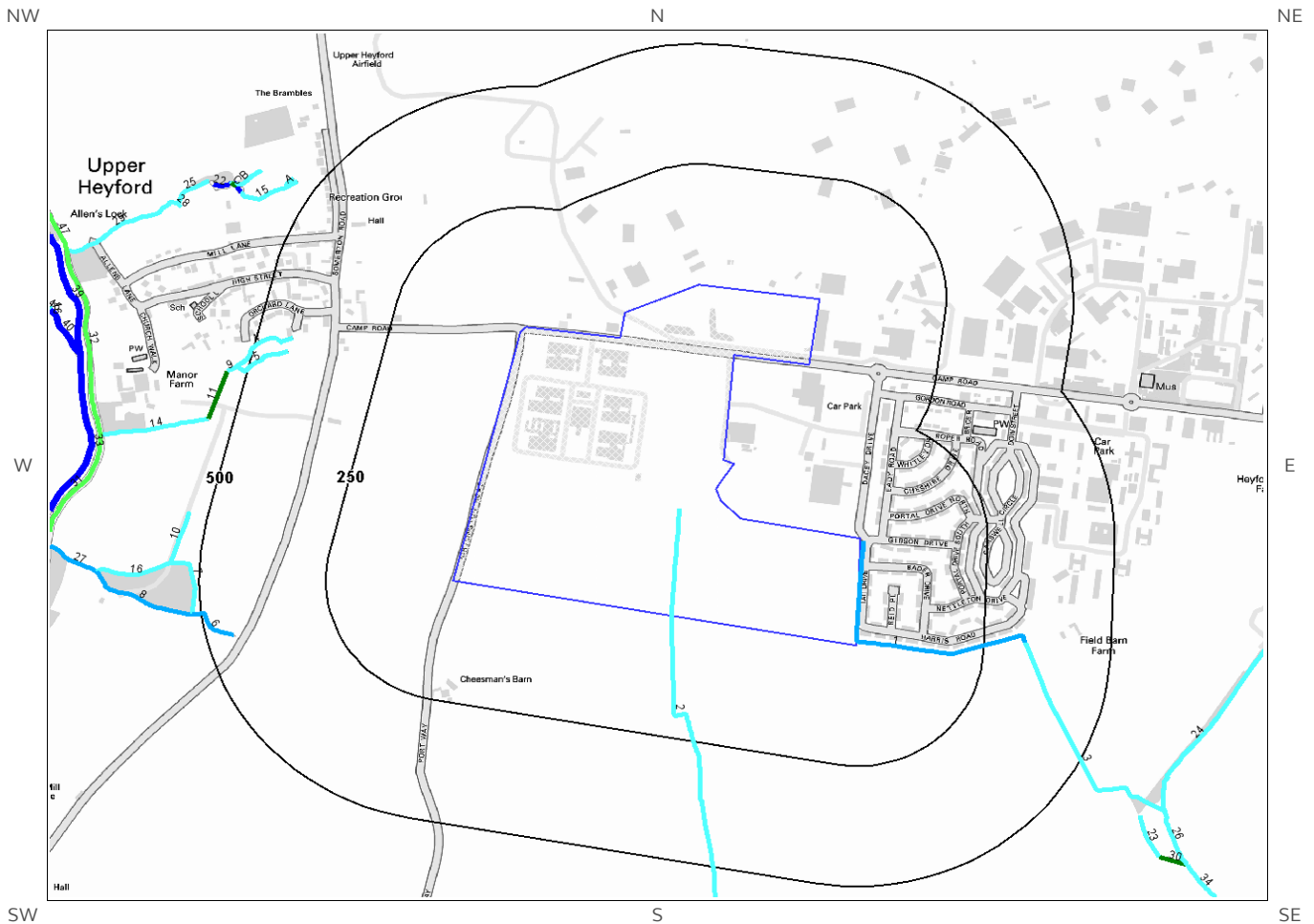
6d. Hydrogeology – Source Protection Zones within confined aquifer



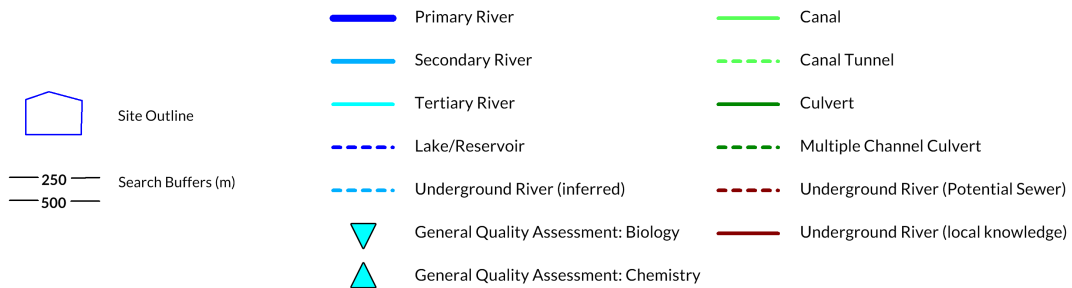
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6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? No

Database searched and no data found.

From 1 April 2010, the Environment Agency'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.

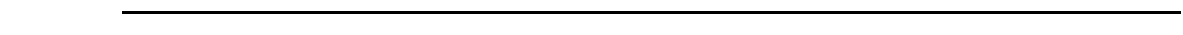
6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency'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
2	101	W	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
5	134	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	263	S	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
11	380	W	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	411	S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers



6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

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
13A	510	W	449600 225300	Status: Historical Licence No: 28/39/14/0116 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Lower Heyford Estate, Oxon (catchpit - A) Data Type: Point Name: THE PRESIDENT & SCHOLARS CORPUS CHRISTI COLLEGE Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.A/2278/1 Original Start Date: 9/1/1967 Expiry Date: - Issue No: 100 Version Start Date: 9/1/1967 Version End Date:
14A	510	W	449600 225300	Status: Historical Licence No: 28/39/14/0116 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Lower Heyford Estate, Oxon (catchpit - A) Data Type: Point Name: THE PRESIDENT & SCHOLARS CORPUS CHRISTI COLLEGE Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.A/2278/1 Original Start Date: 9/1/1967 Expiry Date: - Issue No: 100 Version Start Date: 9/1/1967 Version End Date:
Not shown	1564	SE	452200 224400	Status: Historical Licence No: 28/39/14/0304 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Park Farm, Middleton Stoney (a) Data Type: Point Name: J H NORMAN & SONS Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.A/5743 Original Start Date: 9/11/1989 Expiry Date: - Issue No: 100 Version Start Date: 9/11/1989 Version End Date:
Not shown	1805	E	452700 225200	Status: Historical Licence No: 28/39/14/0102 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Manor Farm, Middleton Stoney (a) Data Type: Point Name: HILSDON Annual Volume (m ³): 7319 Max Daily Volume (m ³): 20.23 Original Application No: WR.A/3468 Original Start Date: 12/12/1996 Expiry Date: - Issue No: 100 Version Start Date: 1/9/1998 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

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

ID	Distance (m)	Direction	NGR	Details
1	510	W	449600 225300	Status: Historical Licence No: 28/39/14/0116 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Lower Heyford Estate, Oxon (catchpit - A) Data Type: Point Name: THE PRESIDENT & SCHOLARS CORPUS CHRISTI COLLEGE Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.A/2278/1 Original Start Date: 9/1/1967 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

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

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major 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.
0	On Site	Major Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
101	W	Major Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
205	W	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1217	E	452010 226250	River Name: Leys Farm Ditch Reach: Upper Heyford - Gallos Brook End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details
1	0	On Site	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
2	0	On Site	River Name: Gallos Brook Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
3	332	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
4	432	W	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
5	434	W	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
6	445	W	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined

6.11 Surface Water Features

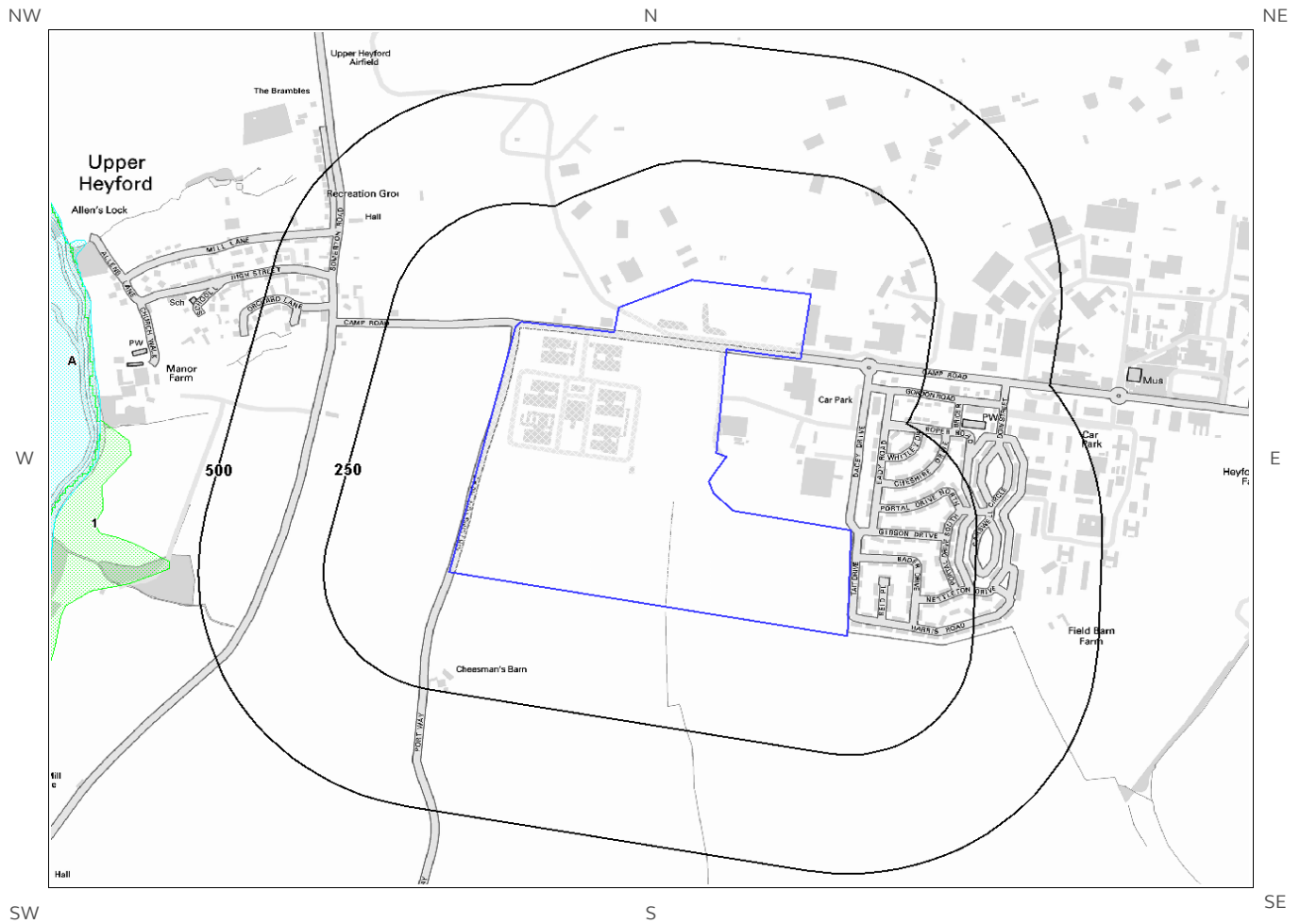
Are there any surface water features within 250m of the study site?

Yes

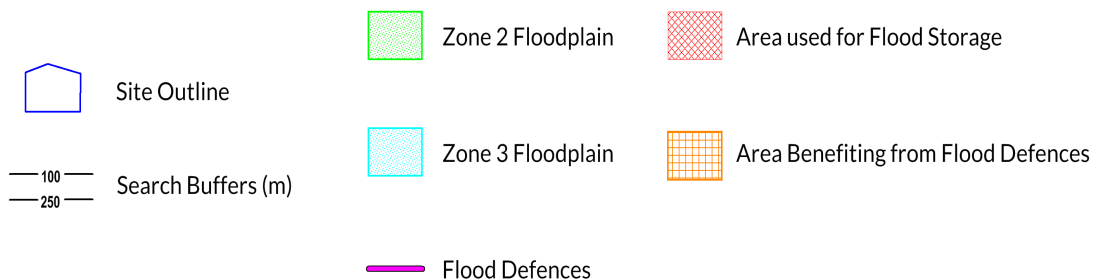
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
9	S

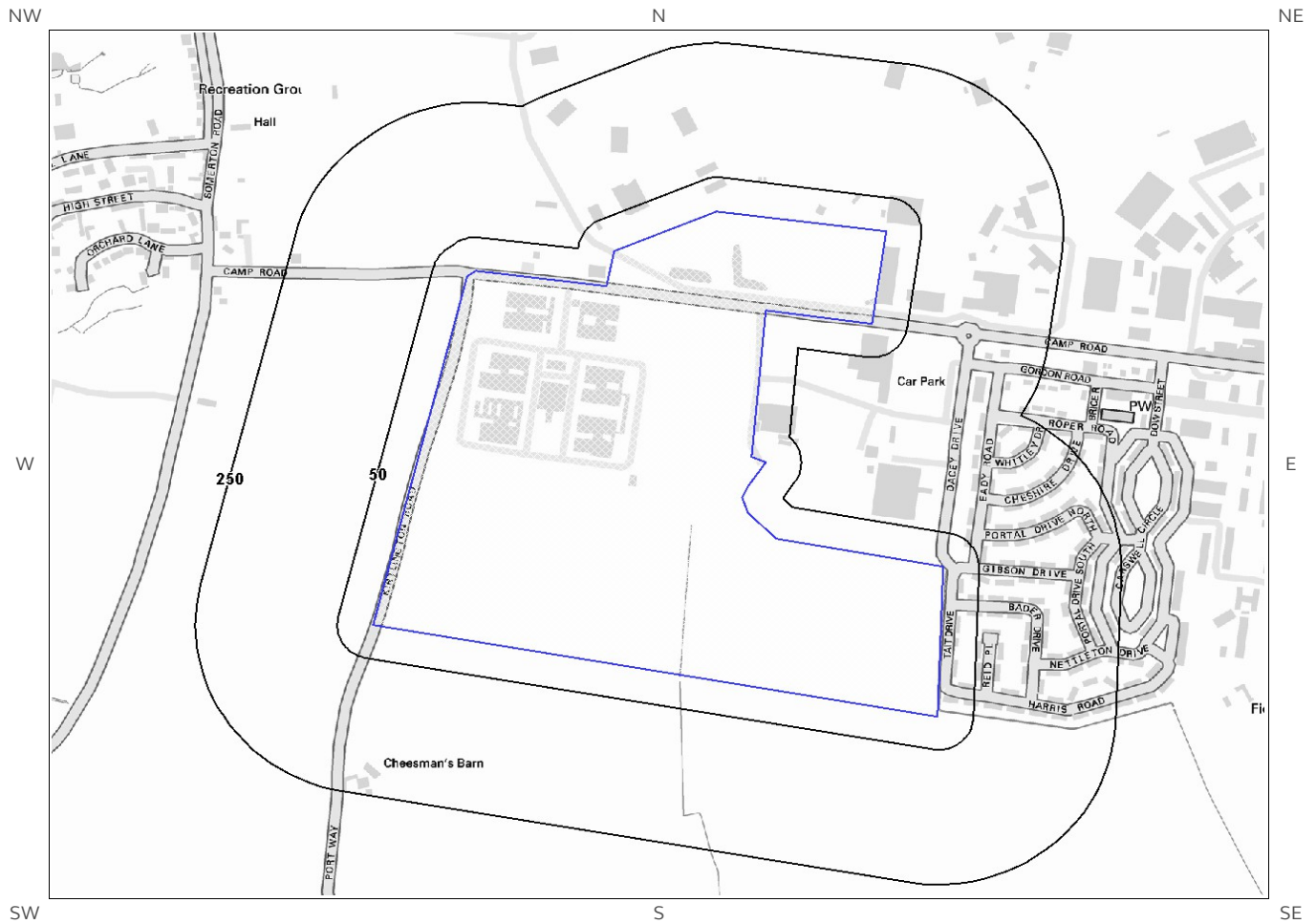
7a. Environment Agency Flood Map for Planning (from rivers and the sea)



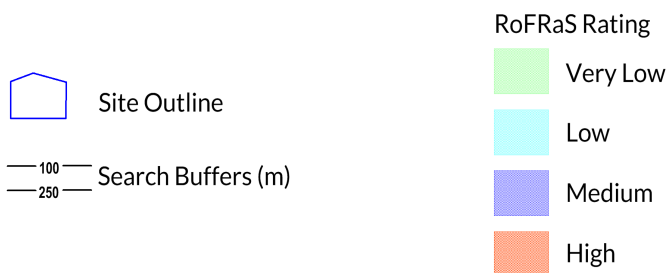
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7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? No

Environment Agency 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

Is the site within 250m of an Environment Agency Zone 3 floodplain? No

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

What is the highest risk of flooding onsite? Very Low

The Environment Agency 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

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to 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 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, 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.

7.8 Groundwater Flooding Confidence Areas

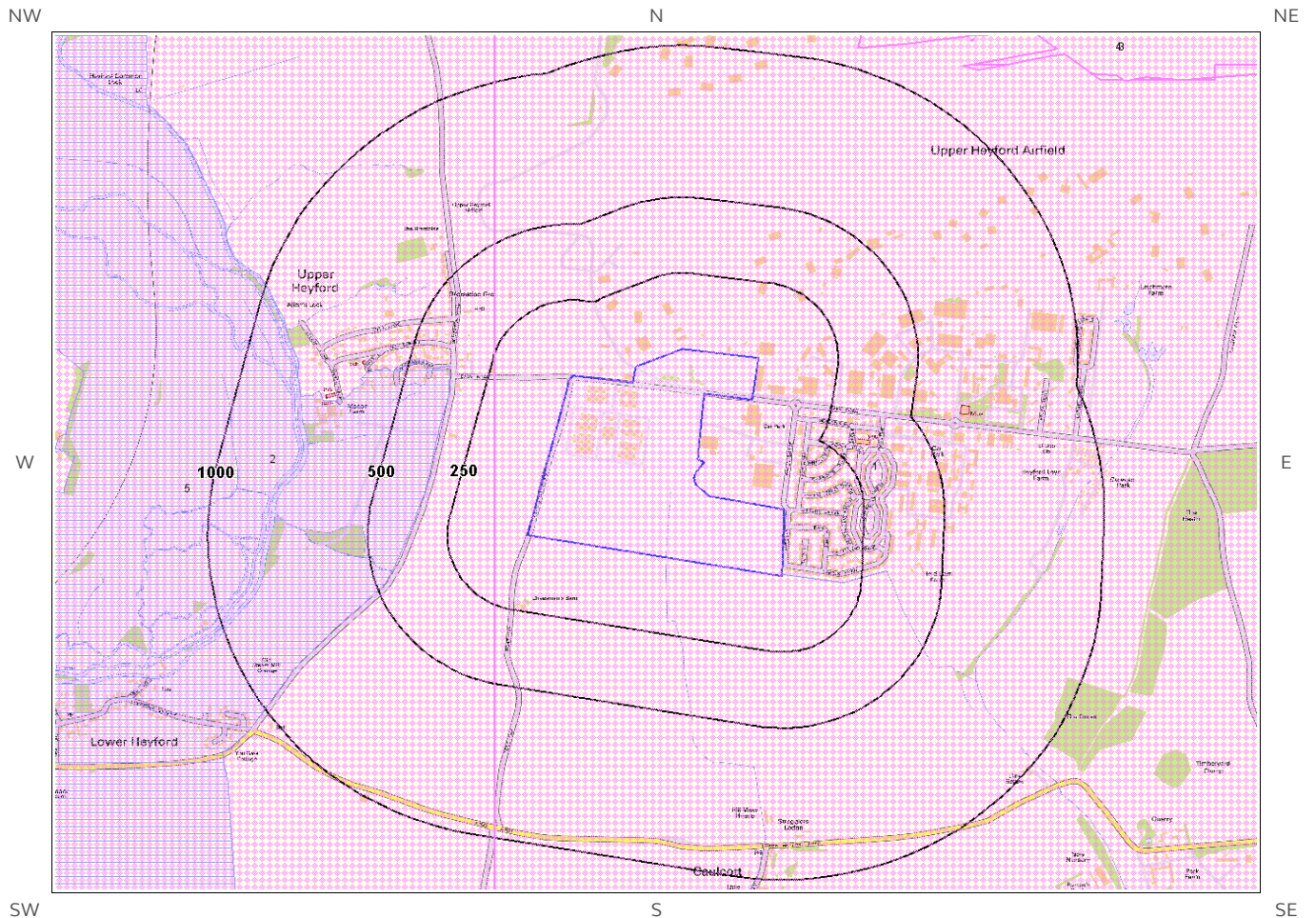
What is the British Geological Survey confidence rating in this result?

Low

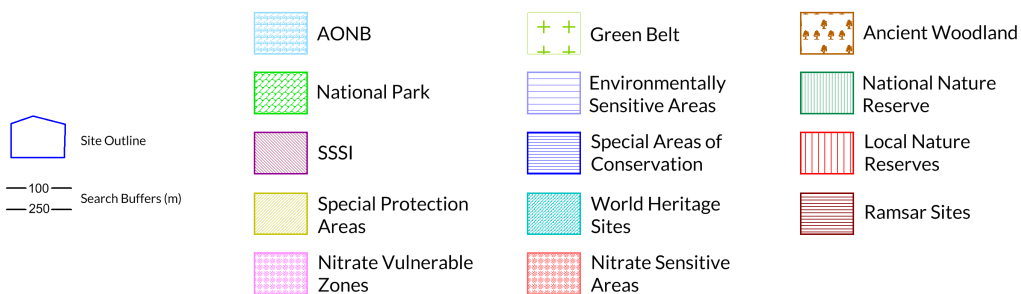
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	ESA Name	Data Source
5	347	W	Upper Thames Tributaries	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	0	On Site	Existing	DEFRA
2	101	W	Existing	DEFRA
3	1068	N	Existing	DEFRA
4	1068	N	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

What is the maximum Shrink-Swell* hazard rating identified on the study site? Negligible

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

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

9.1.2 Landslides

What is the maximum Landslide* 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 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.

9.1.3 Soluble Rocks

What is the maximum Soluble 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
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.

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

9.1.4 Compressible Ground

What is the 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

What is the 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

What is the maximum Running Sand** 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 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.

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

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

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

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
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: 08708 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: Cherwell District Council
Phone: 01295 252 535

Web: <http://www.cherwell-dc.gov.uk/>

Address: Bodicote House, Bodicote, Banbury, Oxfordshire, OX15 4AA

Gemapping PLC

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



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

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<https://www.groundsure.com/terms-and-conditions-sept-2016>



Groundsure

LOCATION INTELLIGENCE

Hydrock Consultants Ltd

HYDROCK,2-4 HAWTHORN PARK, HOLDENBY
ROAD,
NORTHAMPTON, NN6 8LD

Groundsure
Reference:

GS-3401439

Your Reference:

POP000713_-_C-04583-C_Main_site

Report Date

26 Oct 2016

Report Delivery
Method:

Email - pdf

Groundsure Geo Insight

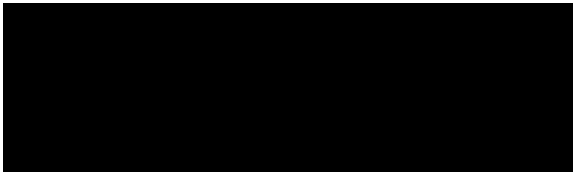
Address: 450525 , 225579,

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 Geoinsight

Groundsure Geo Insight

Address: 450525 , 225579,
Date: 26 Oct 2016
Reference: GS-3401439
Client: Hydrock Consultants Ltd



Aerial Photograph Capture date: 19-Aug-2009
Grid Reference: 450547,225584
Site Size: 36.73ha

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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 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow 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

1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	No
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	No
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	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 relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.4 Radon data	1.4.1 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
	1.4.2 Is the property in an area where Radon Protection Measures 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

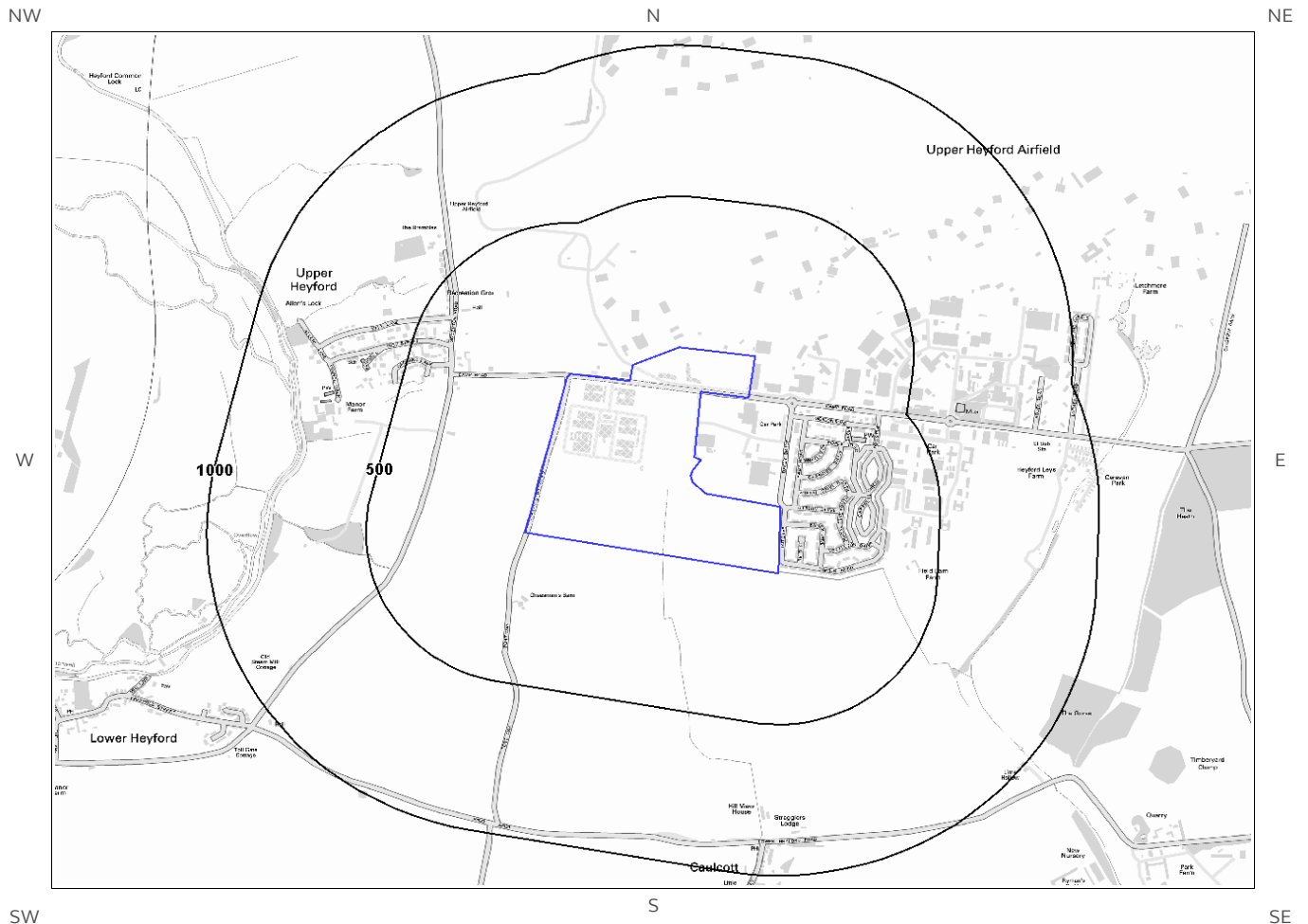
Section 2:Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	2	3	1	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	1	0	1	4

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	0	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence	On-site				
4.1 Shrink Swell Clay	Negligible				
4.2 Landslides	Negligible				
4.3 Ground Dissolution of Soluble Rocks	Very Low				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Negligible				
Section 5: Borehole Records	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	18	10	15		
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	5	1	8		
Section 7: Railways and Tunnels	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
7.3 Historical Railways	0	0	0	Not Searched	
7.4 Active Railways	0	0	0	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

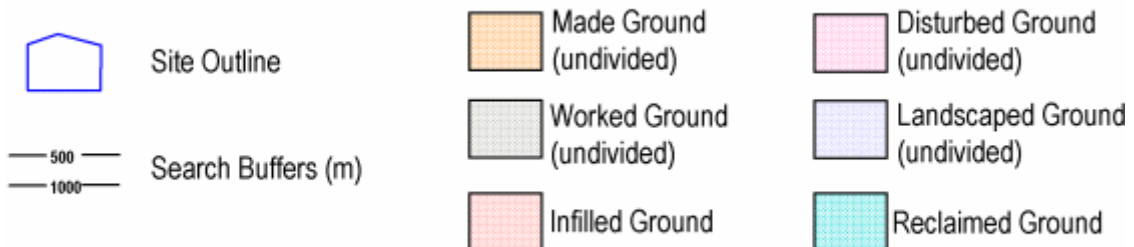
1 Geology

1.1 Artificial Ground Map



Artificial Ground Legend

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1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:218

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

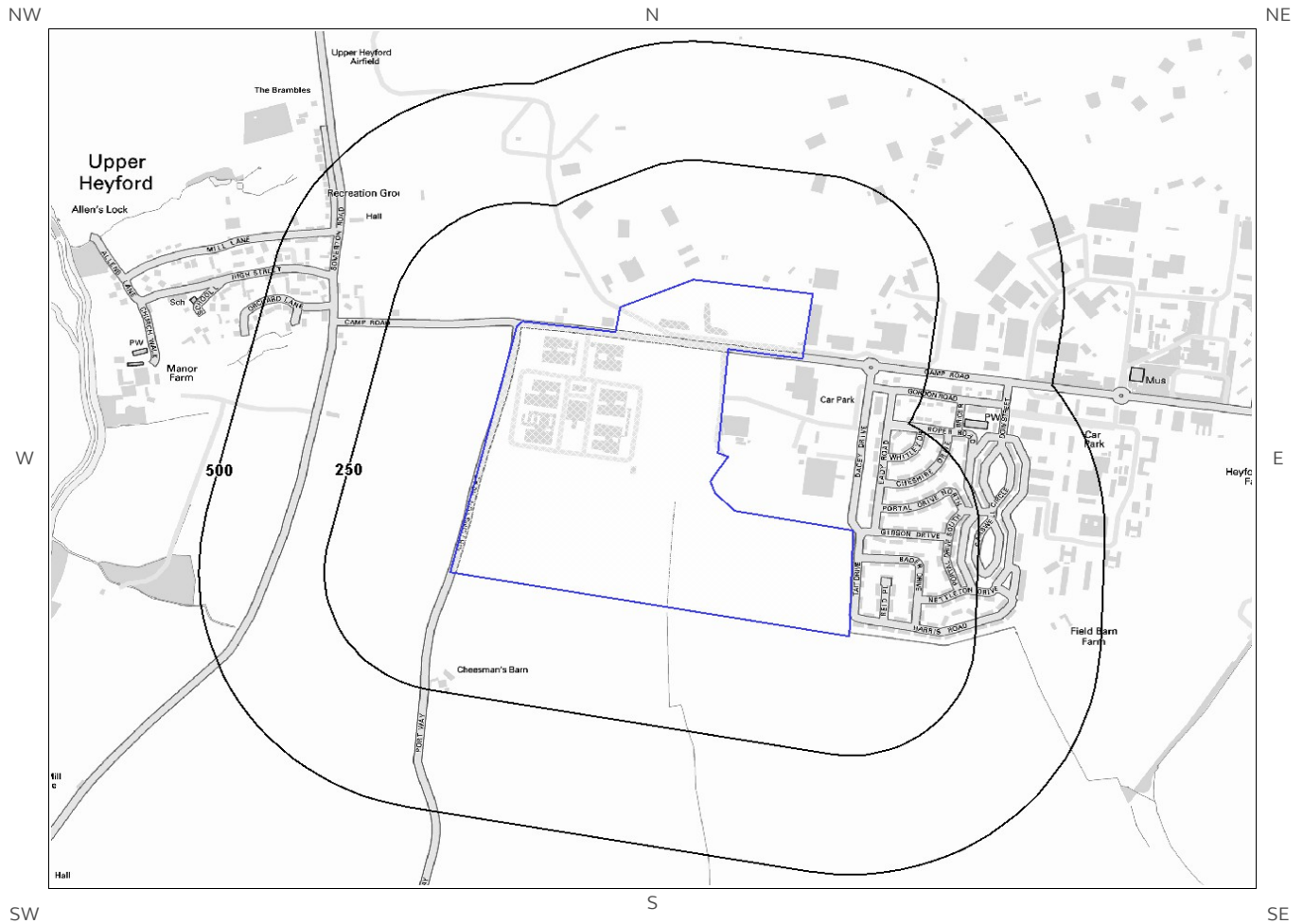
Database searched and no data found.

1.1.2 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.

1.2 Superficial Deposits and Landslips Map



Superficial Deposits and Landslips Legend

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-  Site Outline
-  500 Search Buffers (m)
-  1000 Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? No

Database searched and no data found.

1.2.2 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.

1.2.3 Landslip

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

Database searched and no data found.

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.

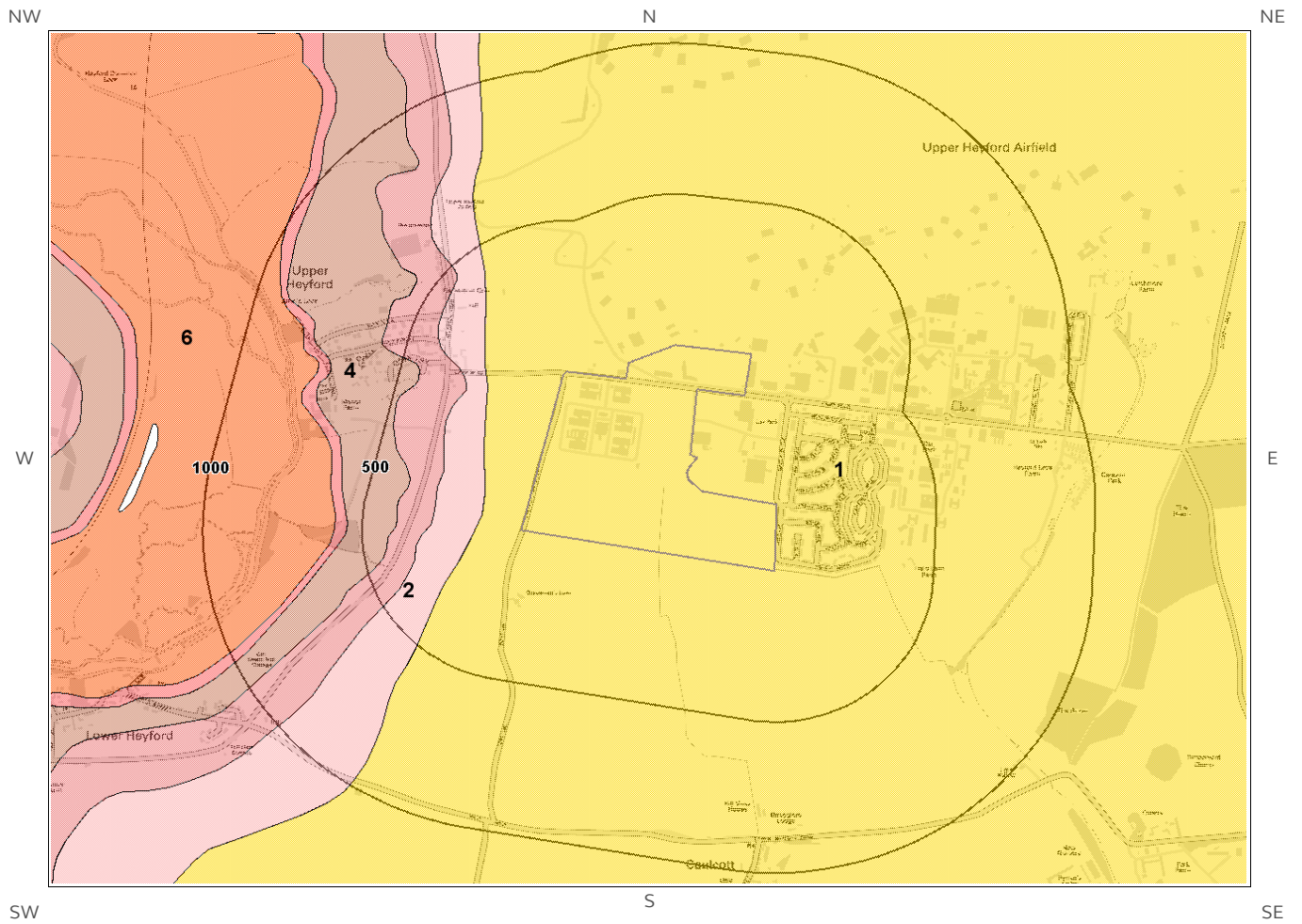
1.2.4 Landslip Permeability

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

Database searched and no data found.


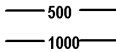
* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map



Bedrock and Faults Legend

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-  Site Outline
-  Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:218

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	GOG-LMAR	Great Oolite Group - Limestone And [subequal/subordinate] Argillaceous Rocks, Interbedded	Bathonian
2	134.0	W	HYSA-SDST	Horsehay Sand Formation - Sandstone	Bathonian / Bajocian
3	281.0	W	NS-SDLI	Northampton Sand Formation - Sandstone, Limestone And Ironstone	Aalenian
4	380.0	W	WHM-MDST	Whitby Mudstone Formation - Mudstone	Toarcian

1.3.2 Permeability of Bedrock Ground

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

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

1.3.3 Faults

Are there any records of Faults 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 nationwide coverage.

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

1.4 Radon Data

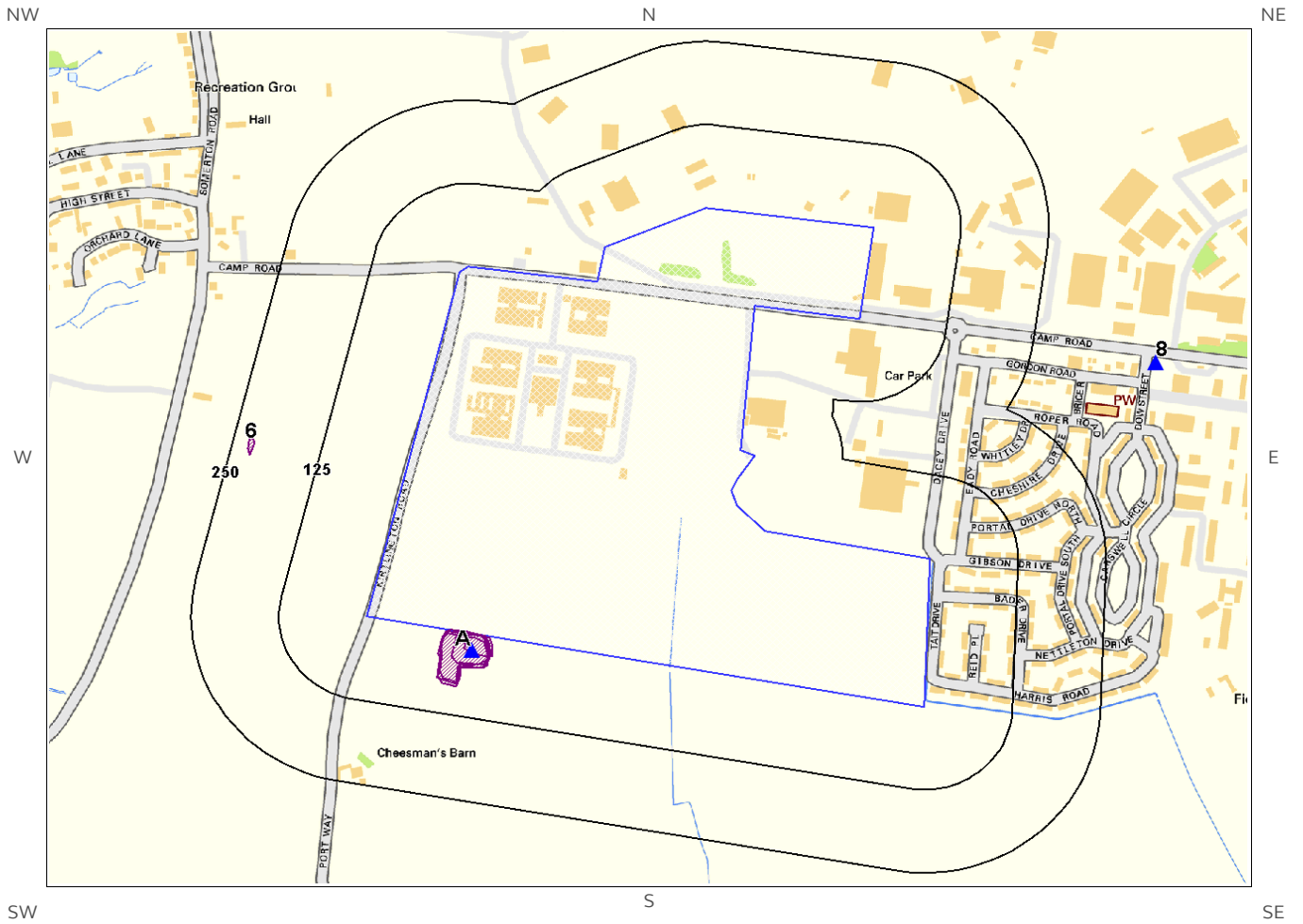
1.4.1 Radon Affected Areas

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

1.4.2 Radon Protection


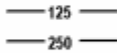

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary

2 Ground Workings Map



Ground Workings Legend

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

2 Ground Workings

2.1 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

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	450241 225339	Unspecified Quarry	1950
2A	0.0	On Site	450250 225350	Unspecified Quarry	1898
3A	1.0	S	450260 225355	Unspecified Pit	1880
4A	2.0	S	450238 225337	Unspecified Quarry	1923
5A	5.0	S	450238 225333	Unspecified Quarry	1920
6	220.0	W	449936 225655	Refuse Heap	1880

2.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

2.3 Current Ground Workings

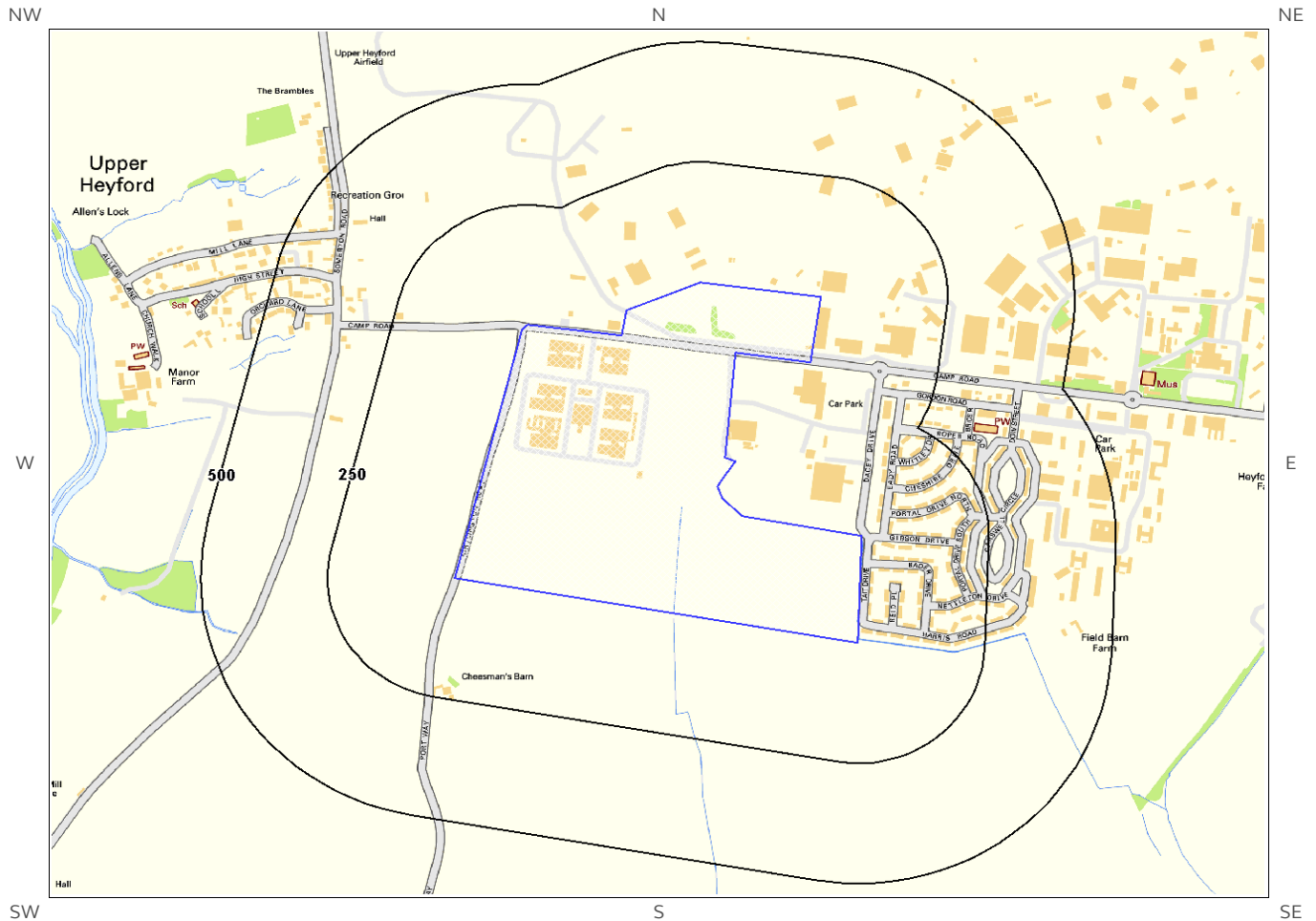
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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
7A	25.0	S	450250 225347	Limestone	Manor Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
8	426.0	E	451224 225780	Limestone	The Tower	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	866.0	S	450563 224441	Sand & Gravel	Horse & Groom (P.H.)	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	884.0	E	451705 225928	Limestone	Gorse Covert	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	932.0	NW	449842 226764	Mineral	Three Horse Shoes (P.H.)	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	968.0	SE	451610 224609	Limestone	The Gorse	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

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3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

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

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

Database searched and no data found.

3.2 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.

3.3 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? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 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? No

Database searched and no data found.

3.5 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? No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of 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.

3.8 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.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

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

Database searched and no data found.

3.10 Clay Mining

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

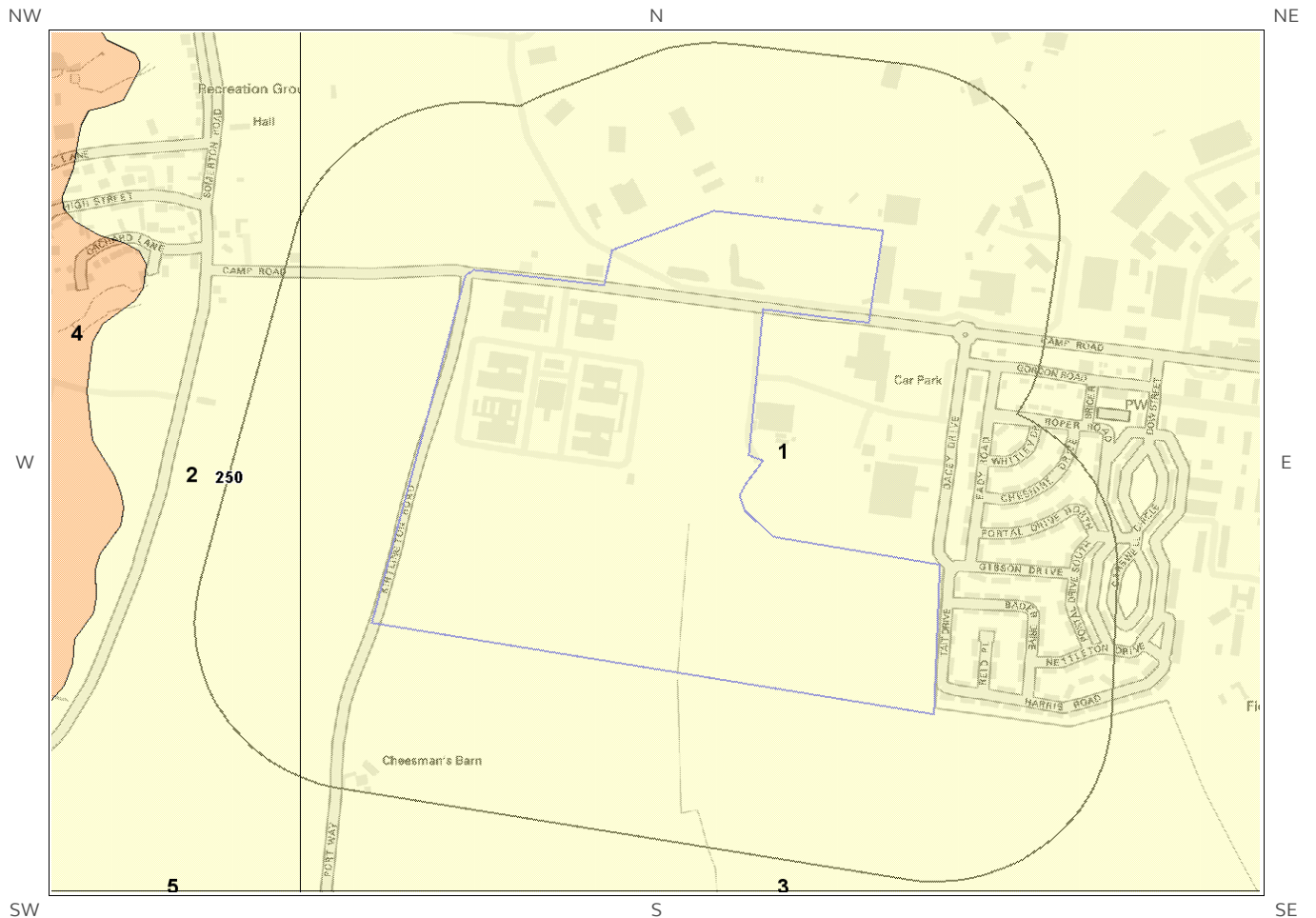
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map

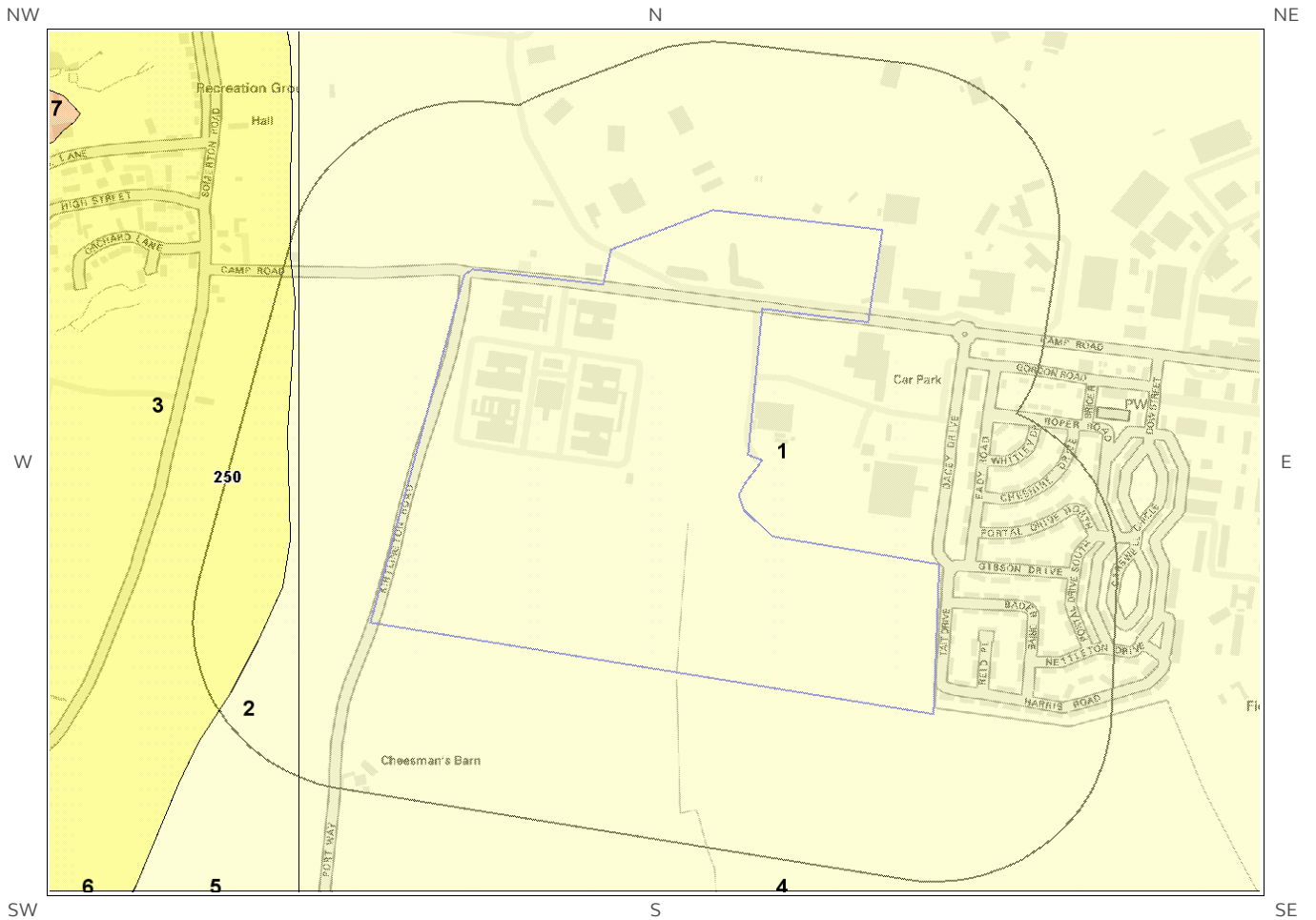


Shrink Swell Clay Legend

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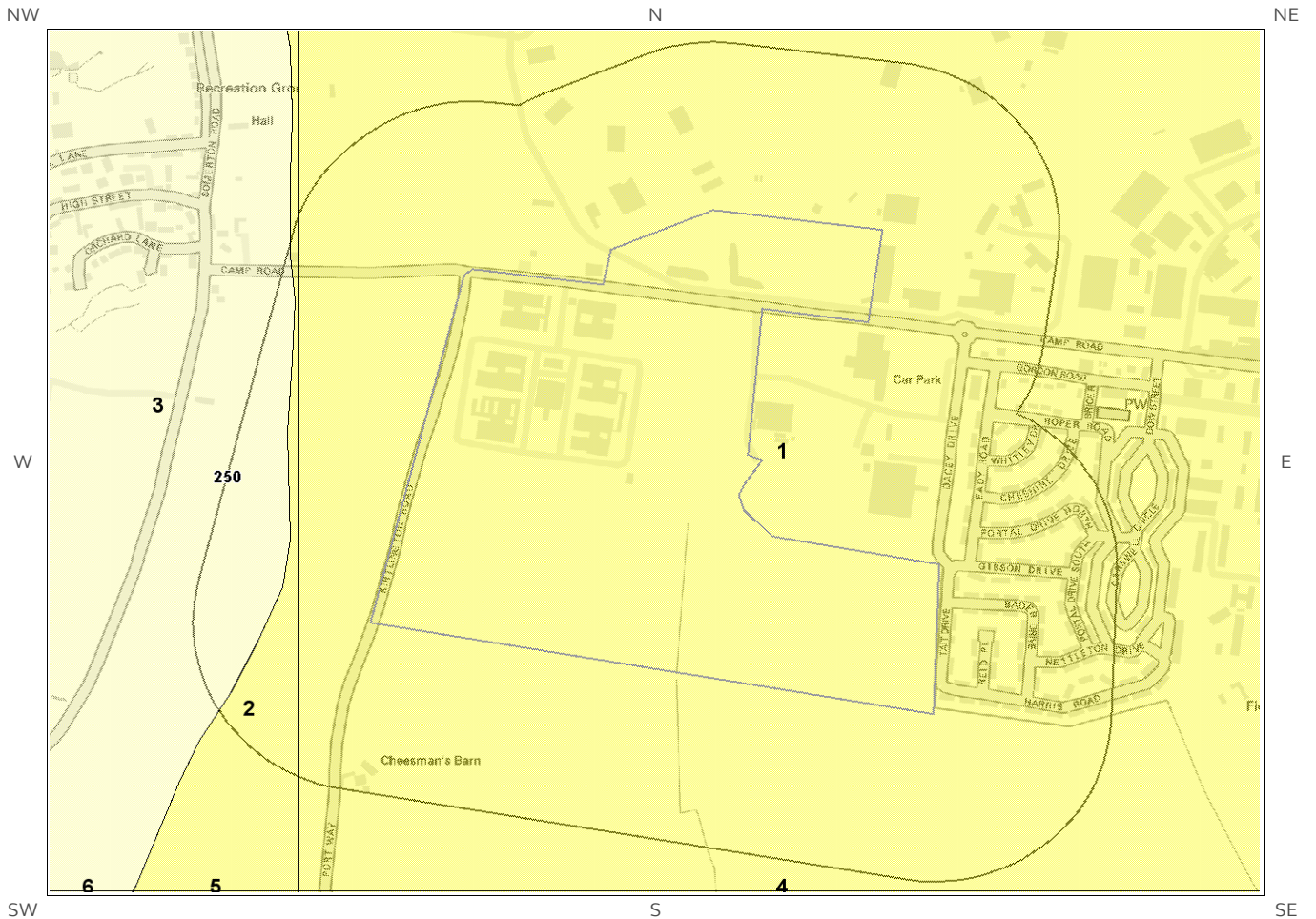
4.2 Landslides Map



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4.3 Ground Dissolution Soluble Rocks Map

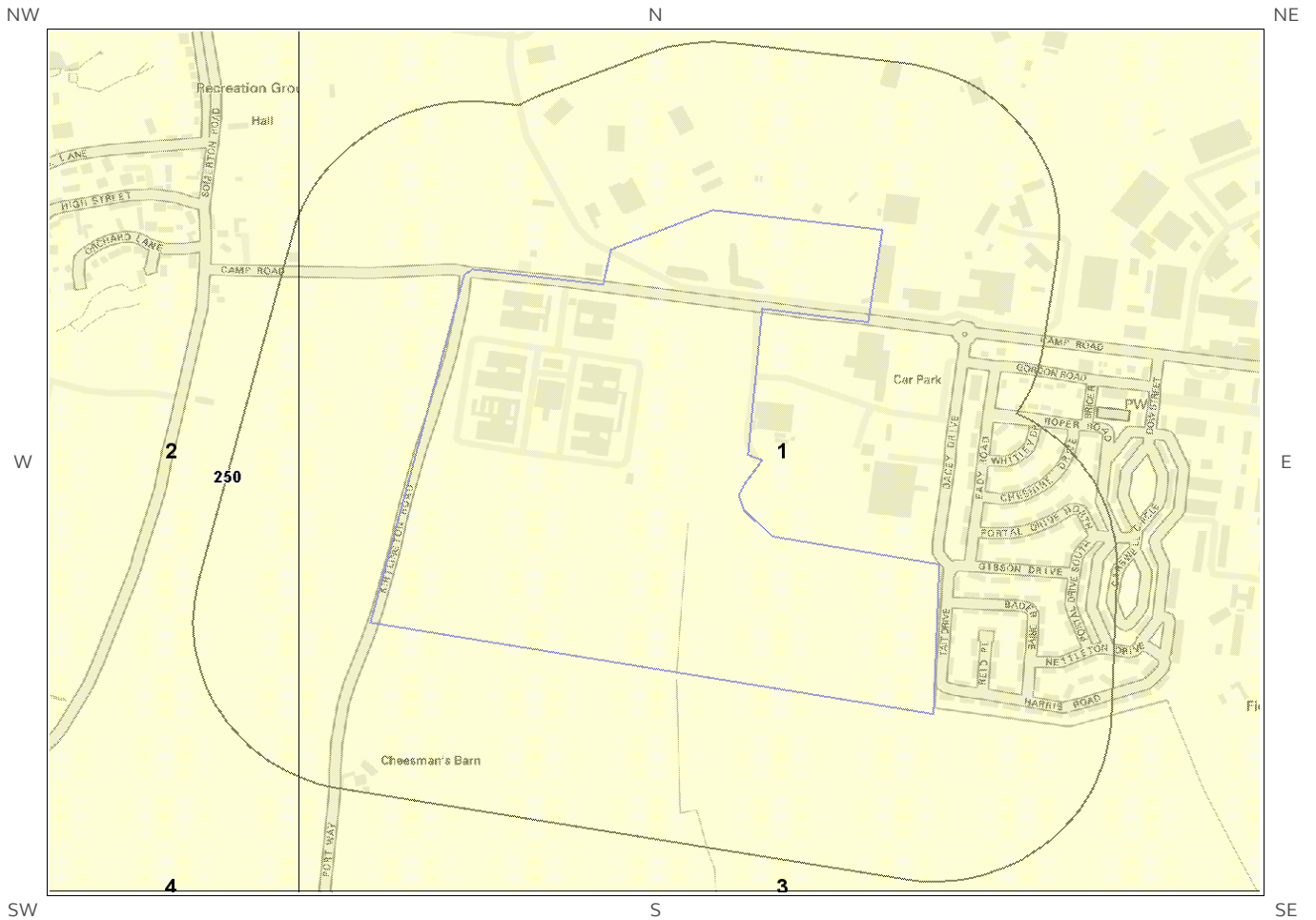


Ground Dissolution Soluble Rocks Legend

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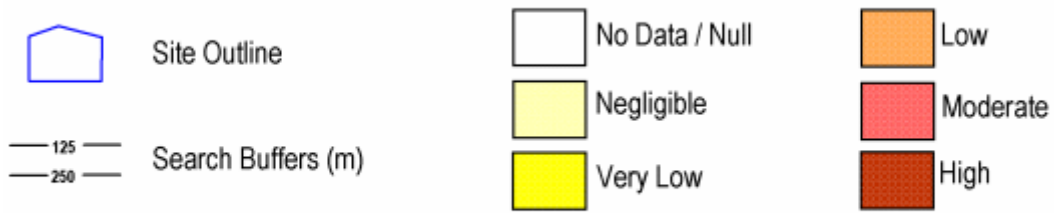


4.4 Compressible Deposits Map

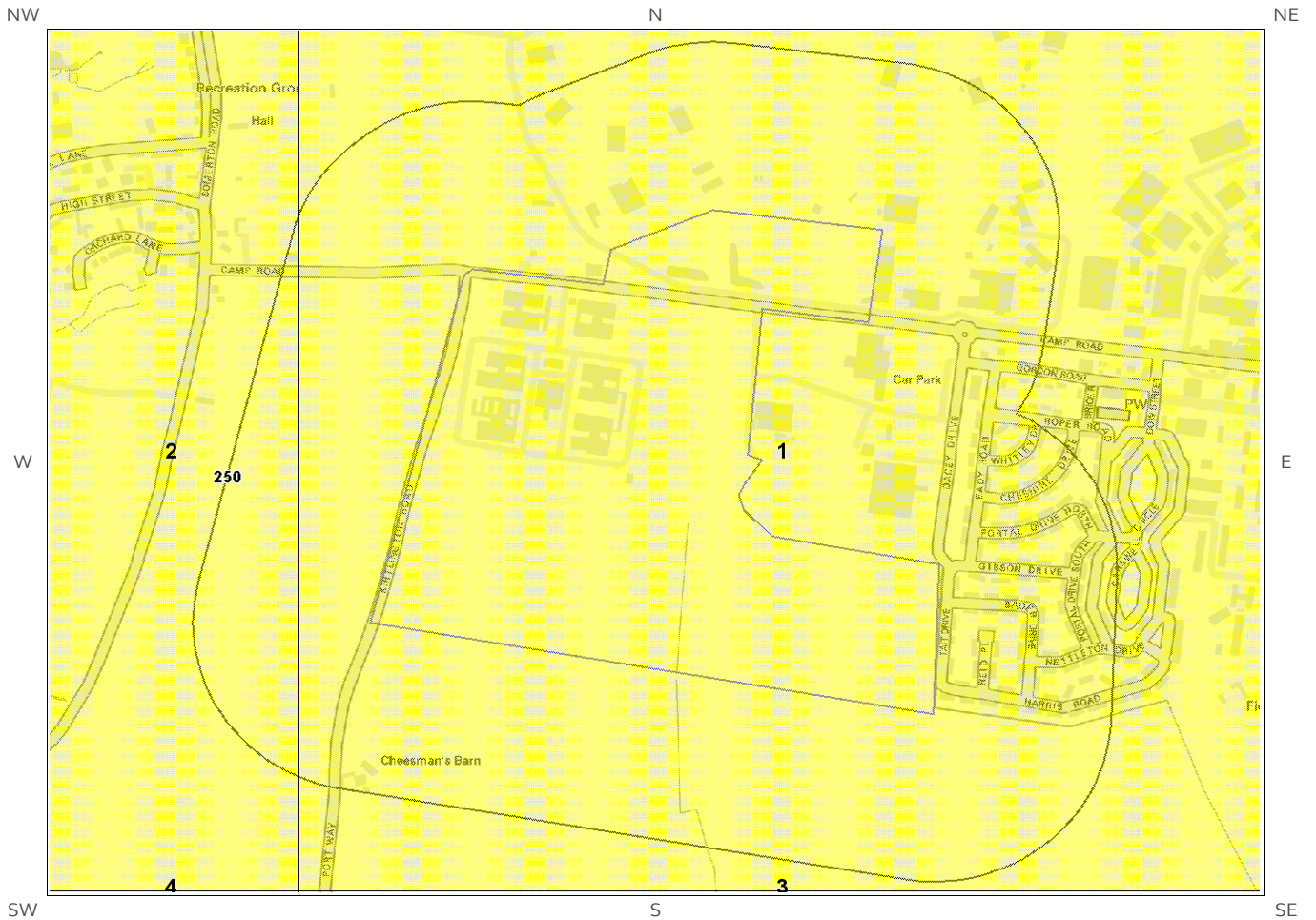


Compressible Deposits Legend

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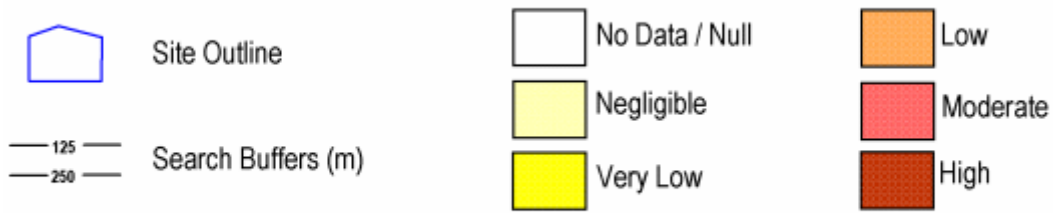


4.5 Collapsible Deposits Map

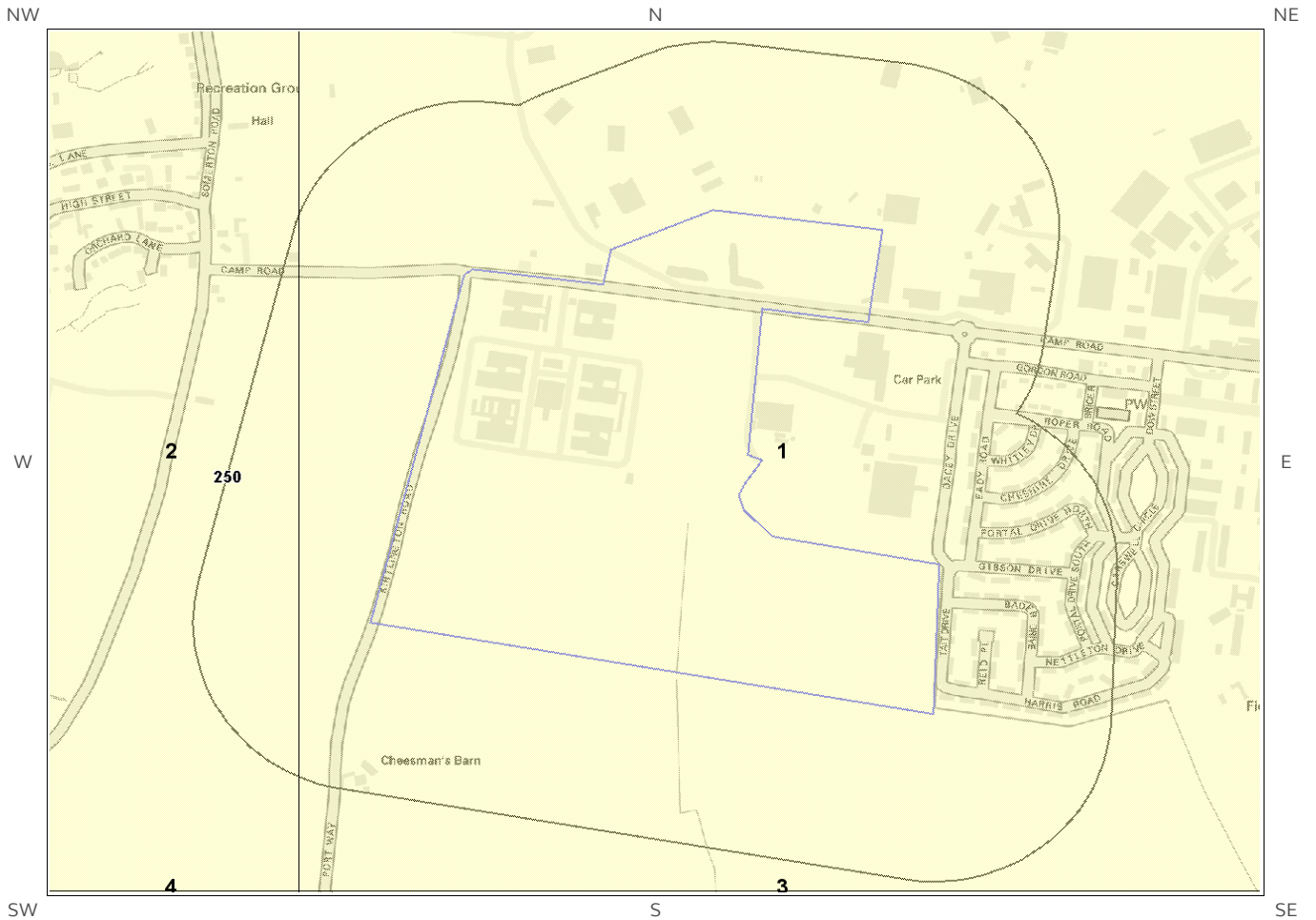


Collapsible Deposits Legend

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4.6 Running Sand Map



Running Sand Legend

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4 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? Very Low

4.1 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 due to potential problems with shrink-swell clays.

4.2 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.

4.3 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	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.

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

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

4.5 Collapsible Deposits

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

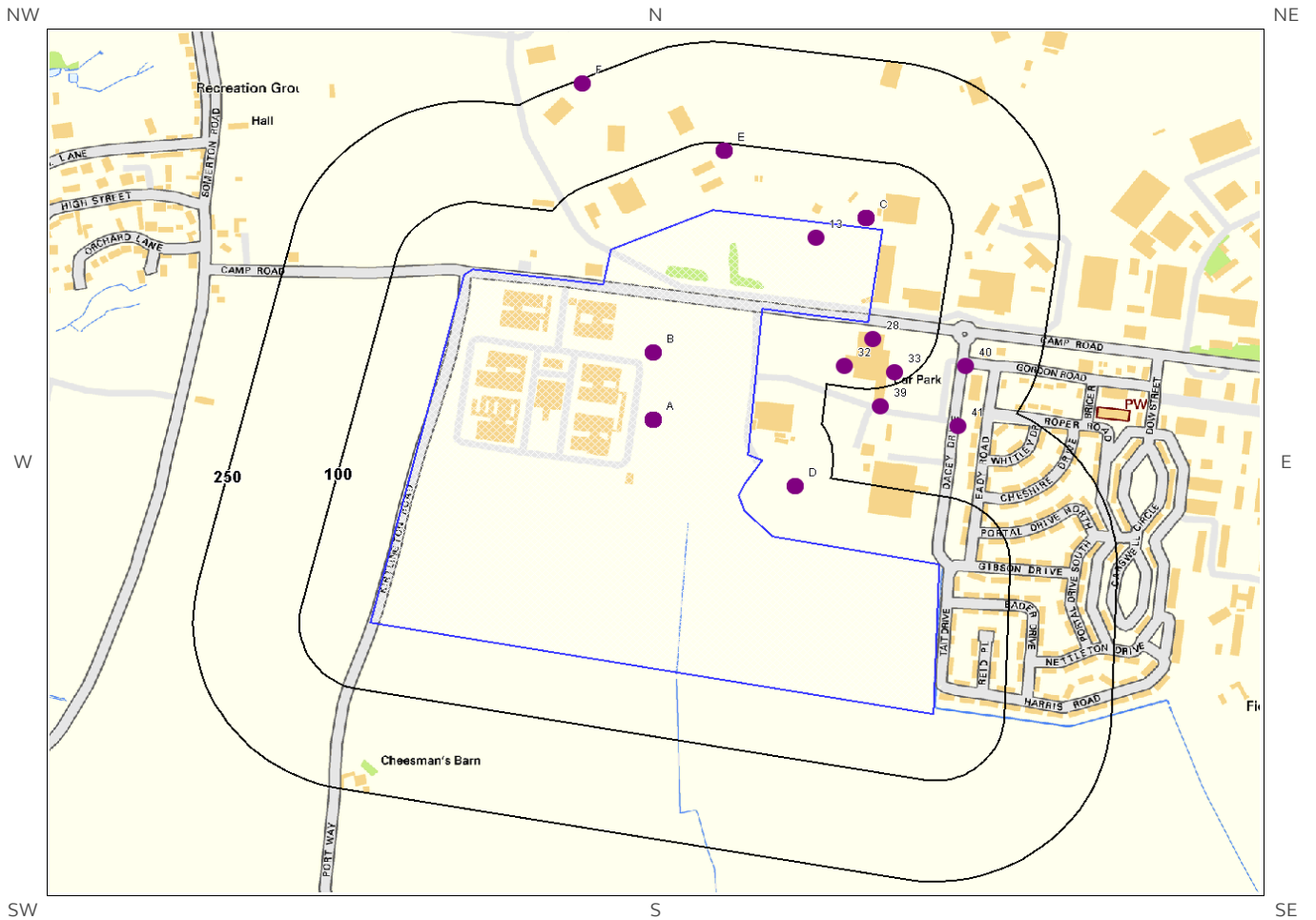
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

4.6 Running Sands

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

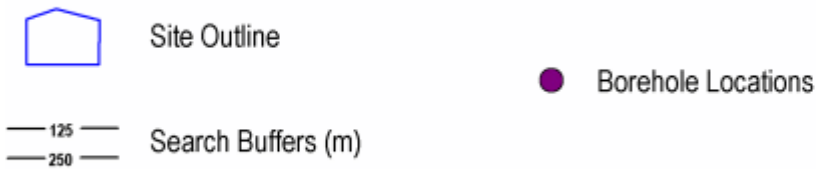
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due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

5 Borehole Records Map



Borehole Records Legend

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5 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:

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ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	0.0	On Site	450500 225700	SP52NW162	3.0	RAF UPPER HEYFORD COMMISSARY BH4
2A	0.0	On Site	450500 225700	SP52NW157	5.0	RAF UPPER HEYFORD COMMISSARY TP6
3B	0.0	On Site	450500 225800	SP52NW204	1.0	RAF UPPER HEYFORD G/0399 TP 3
4A	0.0	On Site	450500 225700	SP52NW160	5.0	RAF UPPER HEYFORD COMMISSARY BH2
5A	0.0	On Site	450500 225700	SP52NW156	2.0	RAF UPPER HEYFORD COMMISSARY TP5A
6B	0.0	On Site	450500 225800	SP52NW202	1.0	RAF UPPER HEYFORD G/0399 TP 1
7A	0.0	On Site	450500 225700	SP52NW159	6.0	RAF UPPER HEYFORD COMMISSARY BH1
8A	0.0	On Site	450500 225700	SP52NW158	5.0	RAF UPPER HEYFORD COMMISSARY TP7
9A	0.0	On Site	450500 225700	SP52NW150	2.0	RAF UPPER HEYFORD COMMISSARY TP1
10A	0.0	On Site	450500 225700	SP52NW151	2.0	RAF UPPER HEYFORD COMMISSARY TP2
11A	0.0	On Site	450500 225700	SP52NW155	0.0	RAF UPPER HEYFORD COMMISSARY TP5
12B	0.0	On Site	450500 225800	SP52NW203	1.0	RAF UPPER HEYFORD G/0399 TP 2
13	0.0	On Site	450730 225970	SP52NW277	0.85	RAF UPPER HEYFORD OXFORDSHIRE 52
14A	0.0	On Site	450500 225700	SP52NW152	5.0	RAF UPPER HEYFORD COMMISSARY TP3
15A	0.0	On Site	450500 225700	SP52NW163	8.0	RAF UPPER HEYFORD COMMISSARY BH4A
16A	0.0	On Site	450500 225700	SP52NW153	5.0	RAF UPPER HEYFORD COMMISSARY TP3A
17A	0.0	On Site	450500 225700	SP52NW154	3.0	RAF UPPER HEYFORD COMMISSARY TP4
18A	0.0	On Site	450500 225700	SP52NW161	8.0	RAF UPPER HEYFORD COMMISSARY BH3
19C	14.0	N	450800 226000	SP52NW190	0.0	RAF UPPER HEYFORD G/0245 TP 3
20C	14.0	N	450800 226000	SP52NW191	0.0	RAF UPPER HEYFORD G/0245 TP 4
21C	14.0	N	450800 226000	SP52NW188	1.0	RAF UPPER HEYFORD G/0245
22C	14.0	N	450800 226000	SP52NW193	1.0	RAF UPPER HEYFORD G/0245 TP 6

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23C	14.0	N	450800 226000	SP52NW194	2.0	RAF UPPER HEYFORD G/0245 TP 7
24C	14.0	N	450800 226000	SP52NW189	2.0	RAF UPPER HEYFORD G/0245 TP 2
25C	14.0	N	450800 226000	SP52NW195	0.0	RAF UPPER HEYFORD G/0245 TP 8
26C	14.0	N	450800 226000	SP52NW192	0.0	RAF UPPER HEYFORD G/0245 TP 5
27C	14.0	N	450800 226000	SP52NW196	2.0	RAF UPPER HEYFORD G/0245 TP 9
28	27.0	S	450810 225820	SP52NW288	-1.0	RAF BASE UPPER HEYFORD 5
29D	61.0	SE	450700 225600	SP52NW173	1.0	UPPER HEYFORD RAF COMBAT READINESS TP2
30D	61.0	SE	450700 225600	SP52NW174	1.0	UPPER HEYFORD RAF COMBAT READINESS TP3
31D	61.0	SE	450700 225600	SP52NW172	1.0	UPPER HEYFORD RAF COMBAT READINESS TP1
32	70.0	S	450770 225780	SP52NW289	-1.0	RAF BASE UPPER HEYFORD 6
33	85.0	SE	450840 225770	SP52NW286	-1.0	RAF BASE UPPER HEYFORD 3
34E	88.0	N	450600 226100	SP52NW197	10.0	RAF UPPER HEYFORD G/0259 1
35E	88.0	N	450600 226100	SP52NW201	1.0	RAF UPPER HEYFORD G/0259 TP 4
36E	88.0	N	450600 226100	SP52NW199	3.0	RAF UPPER HEYFORD G/0259 TP 2
37E	88.0	N	450600 226100	SP52NW198	2.0	RAF UPPER HEYFORD G/0259 TP 1
38E	88.0	N	450600 226100	SP52NW200	4.0	RAF UPPER HEYFORD G/0259 TP 3
39	127.0	S	450820 225720	SP52NW287	-1.0	RAF BASE UPPER HEYFORD 4
40	152.0	SE	450940 225780	SP52NW285	-1.0	RAF BASE UPPER HEYFORD 2
41	201.0	SE	450930 225690	SP52NW284	-1.0	RAF BASE UPPER HEYFORD 1
42F	243.0	N	450400 226200	SP52NW133	2.0	R.A.F. UPPER HEYFORD DEB FACILITY TP1
43F	243.0	N	450400 226200	SP52NW134	1.0	R.A.F. UPPER HEYFORD DEB FACILITY TP2

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

#1A: scans.bgs.ac.uk/sobi_scans/boreholes/336595
 #2A: scans.bgs.ac.uk/sobi_scans/boreholes/336590
 #3B: scans.bgs.ac.uk/sobi_scans/boreholes/336638
 #4A: scans.bgs.ac.uk/sobi_scans/boreholes/336593
 #5A: scans.bgs.ac.uk/sobi_scans/boreholes/336589
 #6B: scans.bgs.ac.uk/sobi_scans/boreholes/336636
 #7A: scans.bgs.ac.uk/sobi_scans/boreholes/336592
 #8A: scans.bgs.ac.uk/sobi_scans/boreholes/336591
 #9A: scans.bgs.ac.uk/sobi_scans/boreholes/336583

#10A: scans.bgs.ac.uk/sobi_scans/boreholes/336584
#11A: scans.bgs.ac.uk/sobi_scans/boreholes/336588
#12B: scans.bgs.ac.uk/sobi_scans/boreholes/336637
#13: scans.bgs.ac.uk/sobi_scans/boreholes/15951666
#14A: scans.bgs.ac.uk/sobi_scans/boreholes/336585
#15A: scans.bgs.ac.uk/sobi_scans/boreholes/336596
#16A: scans.bgs.ac.uk/sobi_scans/boreholes/336586
#17A: scans.bgs.ac.uk/sobi_scans/boreholes/336587
#18A: scans.bgs.ac.uk/sobi_scans/boreholes/336594
#19C: scans.bgs.ac.uk/sobi_scans/boreholes/336624
#20C: scans.bgs.ac.uk/sobi_scans/boreholes/336625
#21C: scans.bgs.ac.uk/sobi_scans/boreholes/336622
#22C: scans.bgs.ac.uk/sobi_scans/boreholes/336627
#23C: scans.bgs.ac.uk/sobi_scans/boreholes/336628
#24C: scans.bgs.ac.uk/sobi_scans/boreholes/336623
#25C: scans.bgs.ac.uk/sobi_scans/boreholes/336629
#26C: scans.bgs.ac.uk/sobi_scans/boreholes/336626
#27C: scans.bgs.ac.uk/sobi_scans/boreholes/336630
#29D: scans.bgs.ac.uk/sobi_scans/boreholes/336607
#30D: scans.bgs.ac.uk/sobi_scans/boreholes/336608
#31D: scans.bgs.ac.uk/sobi_scans/boreholes/336606
#34E: scans.bgs.ac.uk/sobi_scans/boreholes/336631
#35E: scans.bgs.ac.uk/sobi_scans/boreholes/336635
#36E: scans.bgs.ac.uk/sobi_scans/boreholes/336633
#37E: scans.bgs.ac.uk/sobi_scans/boreholes/336632
#38E: scans.bgs.ac.uk/sobi_scans/boreholes/336634
#42F: scans.bgs.ac.uk/sobi_scans/boreholes/336566
#43F: scans.bgs.ac.uk/sobi_scans/boreholes/336567

6 Estimated Background Soil Chemistry

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

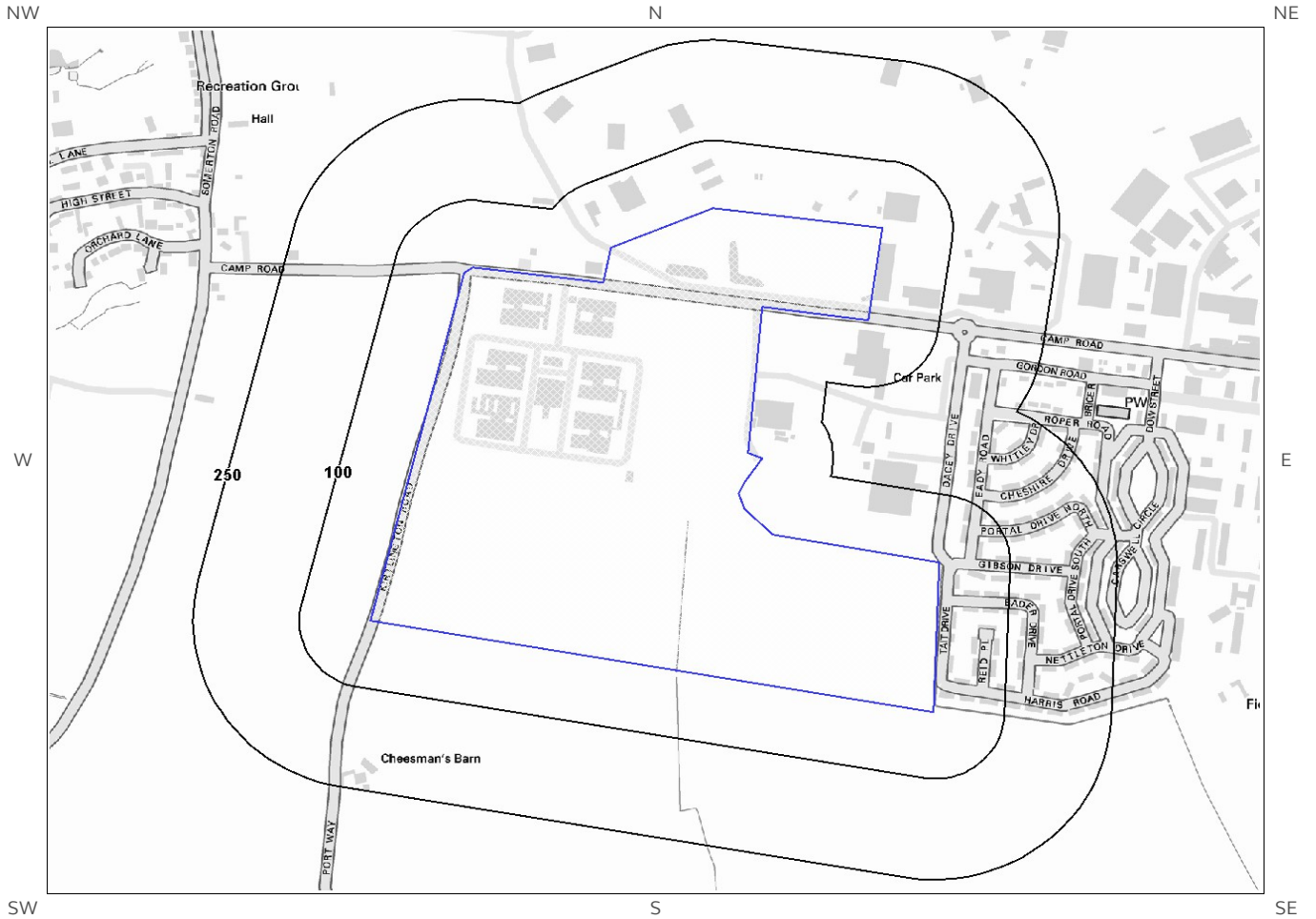
14

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	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
20.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
96.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
97.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
101.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
123.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
134.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
138.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
178.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
249.0	W	RuralSoil	<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.

7 Railways and Tunnels Map



Railways and Tunnels Legend

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- | | | | | | |
|---|------------------------|---|--|---|---|
|  | Site Outline |  | Underground or Partially Underground Railway / Subway System |  | Railway Track (OpenStreetMap) |
|  | 250 Search Buffers (m) |  | Railway Tunnel (OS Mapping) |  | High Speed 2 |
|  | 500 Search Buffers (m) |  | Abandoned or Dismantled Railway (OpenStreetMap) |  | High Speed 2 Revised Proposed Route |
| | |  | Railway Track (OS Mapping) |  | Crossrail 1 |
| | | | |  | Railway and/or Tunnel Feature from Historical Mapping |

7 Railways and Tunnels

7.1 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.

7.2 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.

7.3 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.

Note: 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.

7.4 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.

Note: 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.

7.5 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 5km of the proposed alternative 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.

Contact Details

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



British Geological Survey Enquiries

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Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



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LE12 6HX



The Coal Authority

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



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<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
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Standard Terms and Conditions

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<https://www.groundsure.com/terms-and-conditions-sept-2016/>