APPENDIX IV

Environmental Data Report

Geo-Matters Limited

Geo-Matters Ltd, 104 Bondgate,
Castle Donington, DE74 2NR

Groundsure Reference:	GEO-M-3360535
Your Reference:	GML16197
Report Date	10 Oct 2016
Report Delivery Method:	Email - pdf

Groundsure Enviro Insight

Address: 13, FEN ROAD, SPALDING, PE12 8QA

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,

Geo-Matters Limited

Enc.
Groundsure Enviroinsight

Groundsure Enviro Insight

Address:	**13, FEN ROAD, SPALDING, PE12 8QA**
Date:	**10 Oct 2016**
Reference:	**GEO-M-3360535**
Client:	**Geo-Matters Limited**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	16-Sep-2007
Grid Reference:	535521,324065
Site Size:	15.73ha

Report Reference: GEO-M-3360535
Client Reference: GML16197

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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	6	3	34	34
1.2 Additional Information – Historical Tank Database	0	0	7	10
1.3 Additional Information – Historical Energy Features Database	0	0	0	6
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	9	3
1.6 Potentially Infilled Land	0	9	11	28

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	2
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	6
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	2	3	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	3	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	3	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	5	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	1
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?	Yes
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?	Yes
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	0	0
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	0	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)	0	0	0	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	No
6.10 Detailed River Network entries within 500m of the site	0	0	0	2	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding	
7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Medium
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?	Not Prone
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Not Applicable

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
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	0	0	0	0	0	0
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?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Moderate
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Negligible
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Moderate
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.

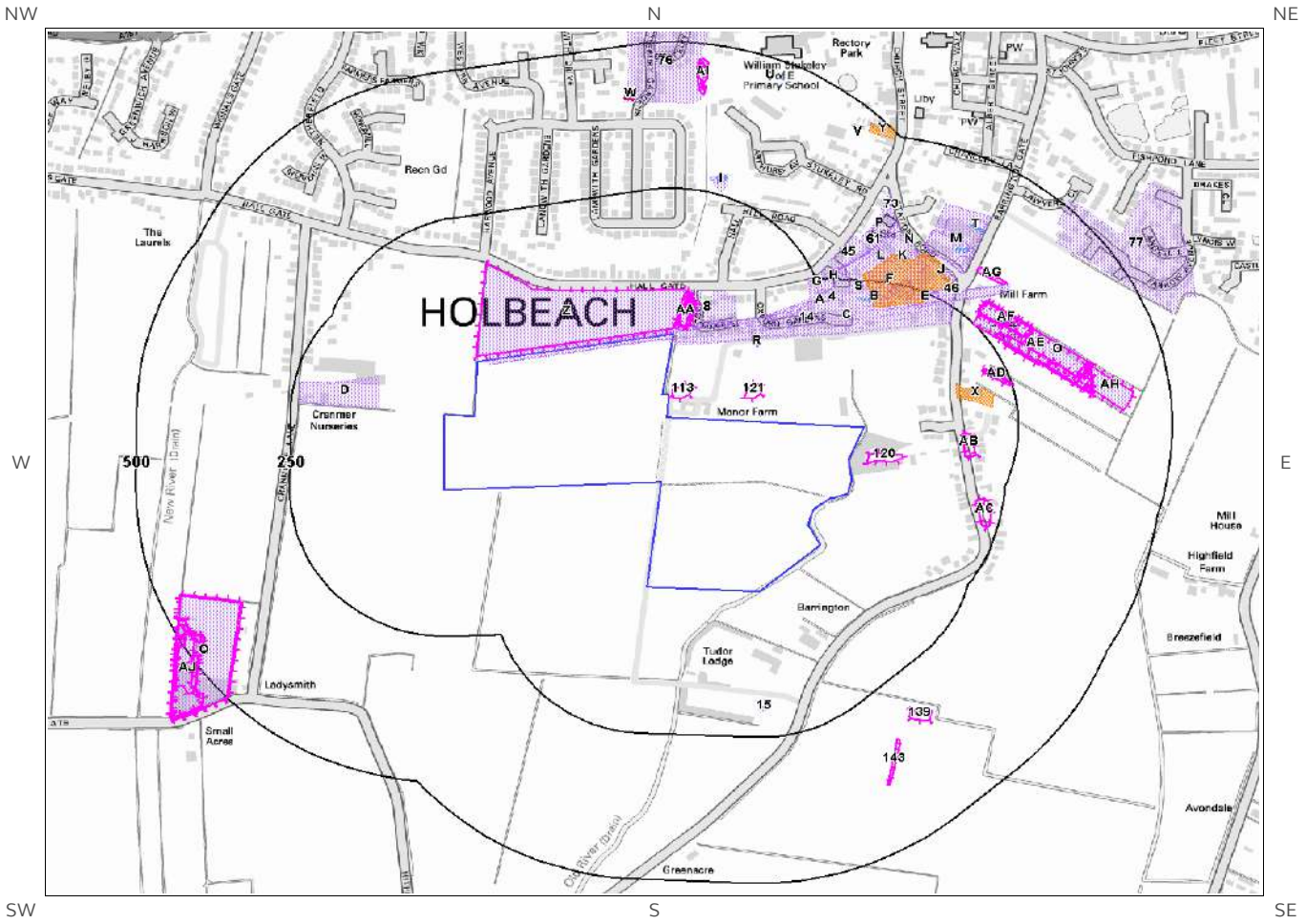
Note: Maps

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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Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

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: 77

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Railway Sidings	1938
2A	0	On Site	Railway Sidings	1958
3S	0	On Site	Railway Sidings	1887
4	0	On Site	Railway Sidings	1950
5A	0	On Site	Railway Sidings	1903
6B	0	N	Railway Sidings	1903
7B	1	N	Railway Sidings	1929
8	9	NE	Nurseries	1970
9Z	9	N	Burial Ground	1958
10C	108	E	Railway Sidings	1903
11C	108	E	Railway Sidings	1929
12D	109	W	Nurseries	1971
13D	109	W	Nurseries	1992
14	141	N	Unspecified Depot	1992
15	197	S	Unspecified Tank	1958
16E	204	N	Railway Station	1903
17E	204	N	Railway Station	1929
18F	204	N	Coal Yard	1970
19A	216	N	Railway Building	1903
20E	219	N	Railway Station	1958
21E	219	NE	Railway Station	1950
22E	219	NE	Railway Station	1903
23E	219	NE	Railway Station	1938
24G	224	N	Railway Building	1950
25L	227	N	Unspecified Commercial/Industrial	1887
26F	229	N	Railway Building	1950
27F	229	N	Railway Building	1903
28E	230	N	Railway Building	1950
29E	230	N	Railway Building	1903
30F	230	N	Railway Buildings	1958
31F	230	N	Railway Building	1887
32F	232	N	Railway Buildings	1938
33F	232	N	Railway Building	1903

34F	232	N	Railway Building	1929
35G	233	N	Railway Building	1903
36E	234	N	Railway Building	1903
37E	234	N	Railway Building	1929
38E	240	N	Railway Station	1887
39G	244	N	Railway Building	1903
40H	247	N	Railway Building	1950
41H	247	N	Railway Building	1903
42G	247	N	Railway Building	1958
43AE	250	NE	Brick Works	1887
44I	256	N	Unspecified Works	1970
45	259	N	Unspecified Depot	1970
46	267	NE	Railway Building	1958
47I	268	N	Unspecified Tanks	1970
48J	284	NE	Railway Building	1958
49J	285	NE	Railway Building	1950
50K	289	N	Railway Building	1903
51K	289	N	Railway Building	1950
52K	292	N	Railway Building	1950
53K	292	N	Railway Building	1903
54K	293	N	Railway Building	1950
55K	293	N	Railway Building	1903
56L	293	N	Railway Building	1958
57P	302	N	Fire Station	1992
58O	304	NE	Unspecified Depot	1970
59M	306	NE	Unspecified Mills	1958
60M	307	NE	Corn Mills	1887
61	307	N	Railway Building	1950
62M	308	NE	Flour Mills	1938
63M	308	NE	Flour Mills	1929
64M	313	NE	Disused Corn Mill	1903
65M	313	NE	Flour Mill	1950
66M	314	NE	Disused Corn Mill	1903
67N	317	N	Railway Building	1903
68N	317	N	Railway Building	1950
69AG	324	NE	Police and Ambulance Station	1938
70O	328	NE	Unspecified Kiln	1887
71P	331	N	Railway Building	1903
72AH	366	E	Sewage Settling Beds	1970
73	374	N	Railway Building	1950
74Q	380	SW	Brick Works	1903
75Q	381	SW	Brick Works	1903
76	396	N	Nurseries	1970
77	444	NE	Nurseries	1970

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: 17

ID	Distance (m)	Direction	Use	Date
78R	129	N	Unspecified Tank	1991
79R	131	N	Unspecified Tank	1996
80R	131	N	Unspecified Tank	1996
81R	131	N	Unspecified Tank	1995
82S	215	N	Tanks	1981
83S	216	N	Tanks	1986
84S	216	N	Tanks	1986
85I	272	N	Tanks	1968
86M	335	NE	Unspecified Tank	1904
87M	335	NE	Unspecified Tank	1931
88M	340	NE	Unspecified Tank	1888
89T	382	NE	Tanks	1986
90T	384	NE	Tanks	1981
91V	451	NE	Unspecified Tank	1904
92U	463	N	Unspecified Tank	1931
93U	471	N	Unspecified Tank	1931
94V	478	NE	Unspecified Tank	1904

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: 6

ID	Distance (m)	Direction	Use	Date
95W	406	N	Electricity Substation	1981
96W	406	N	Electricity Substation	1991
97W	406	N	Electricity Substation	1986
98W	407	N	Electricity Substation	1995
99W	407	N	Electricity Substation	1996
100W	407	N	Electricity Substation	1996

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: 12

ID	Distance (m)	Direction	Use	Date
101X	157	E	Garage	1981
102X	157	E	Garage	1986
103X	167	E	Garage	1968
104F	205	N	Garage	1981
105F	206	N	Garage	1991
106F	206	N	Garage	1986
107F	207	N	Garage	1995
108F	207	N	Garage	1996
109F	207	N	Garage	1996
110Y	470	NE	Garage	1986
111Y	470	NE	Garage	1981
112Y	475	NE	Garage	1968

1.6 Potentially Infilled Land

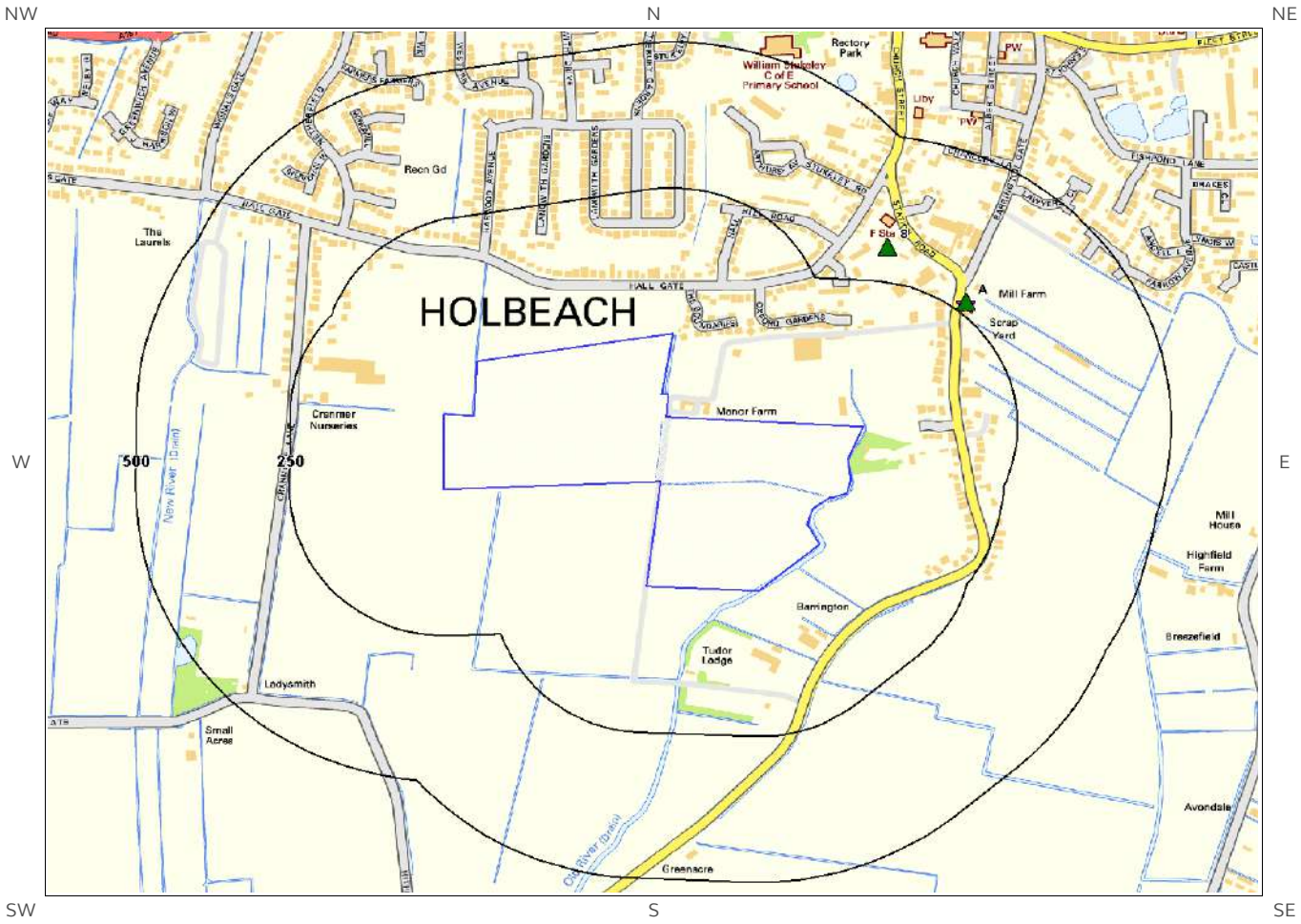
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 48

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

ID	Distance(m)	Direction	Use	Date
113	7	E	Pond	1903
114Z	9	N	Burial Ground	1958
115AA	17	NE	Pond	1958
116AA	18	NE	Pond	1903
117AA	19	NE	Pond	1950
118AA	19	NE	Pond	1929
119AA	20	NE	Pond	1938
120	27	SE	Pond	1992

121	39	N	Pond	1903
122AB	157	E	Pond	1887
123AB	157	E	Pond	1903
124AB	159	E	Pond	1903
125AC	204	E	Pond	1903
126AC	206	E	Pond	1887
127AC	206	E	Pond	1903
128AD	213	NE	Pond	1950
129AD	213	NE	Pond	1887
130AD	213	NE	Pond	1903
131AD	214	NE	Pond	1938
132AE	250	NE	Brick Works	1887
133AE	263	NE	Ponds	1887
134AE	264	NE	Ponds	1903
135O	265	NE	Ponds	1903
136AF	270	NE	Pond	1903
137AF	286	NE	Pond	1938
138AF	287	NE	Pond	1929
139	314	SE	Pond	1887
140AG	322	NE	Pond	1887
141AG	322	NE	Pond	1950
142AG	322	NE	Pond	1903
143	337	SE	Pond	1887
144AH	351	E	Pond	1929
145AH	351	E	Pond	1938
146AH	366	E	Sewage Settling Beds	1970
147Q	380	SW	Brick Works	1903
148Q	381	SW	Brick Works	1903
149AI	414	N	Ponds	1950
150AI	414	N	Ponds	1903
151AI	414	N	Ponds	1887
152AI	421	N	Ponds	1938
153AJ	461	SW	Water Body	1938
154AJ	463	SW	Pond	1950
155AJ	463	SW	Water Body	1903
156AJ	463	SW	Pond	1903
157AJ	463	SW	Pond	1929
158AJ	476	SW	Pond	1971
159AJ	477	SW	Ponds	1887
160Q	479	SW	Pond	1992

2. Environmental Permits, Incidents and Registers Map



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Site Outline

250
500
Search Buffers (m)

Recorded Pollution Incident

Dangerous Substances (List 1)

Dangerous Substances (List 2)

Water Industry Referrals

Licenced Discharge Consents

Red List Discharge Consents

RAS 3 & 4 Authorisations

Part A(1) Authorised Processes and Historic IPC Authorisations

Part A(2) and Part B Authorised Processes

COMAH / NIHHS Sites

Sites Determined as Contaminated Land

Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency 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	
7A	268	NE	535956 324338	Address: Eric Ladbrook (Holbeach) Ltd, 5a Fen Road, Holbeach, Spalding, PE12 8QA Process: Melting and Casting of Non Ferrous Metals Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
8	307	N	535828 324432	Address: Lefleys Garage, Station Street, Holbeach, Spalding, PE12 7LF Process: Petrol Vapour Recovery Status: Historical 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:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

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

6

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

ID	Distance (m)	Direction	NGR	Details	
1A	267	NE	535955 324337	Incident Date: 10-Jan-2003 Incident Identification: 130373 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
2A	267	NE	535955 324337	Incident Date: 18-Oct-2002 Incident Identification: 115579 Pollutant: Atmospheric Pollutants and Effects:Contaminated Water Pollutant Description: Smoke:Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
3A	267	NE	535955 324337	Incident Date: 18-Oct-2002 Incident Identification: 115579 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
4A	267	NE	535955 324337	Incident Date: 18-Oct-2002 Incident Identification: 115579 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
5A	267	NE	535955 324337	Incident Date: 18-Oct-2002 Incident Identification: 115579 Pollutant: Contaminated Water Pollutant Description: Smoke Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
6A	267	NE	535955 324337	Incident Date: 18-Oct-2002 Incident Identification: 115579 Pollutant: Atmospheric Pollutants and Effects : Contaminated Water Pollutant Description: Smoke :Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

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

0

Database searched and no data found.

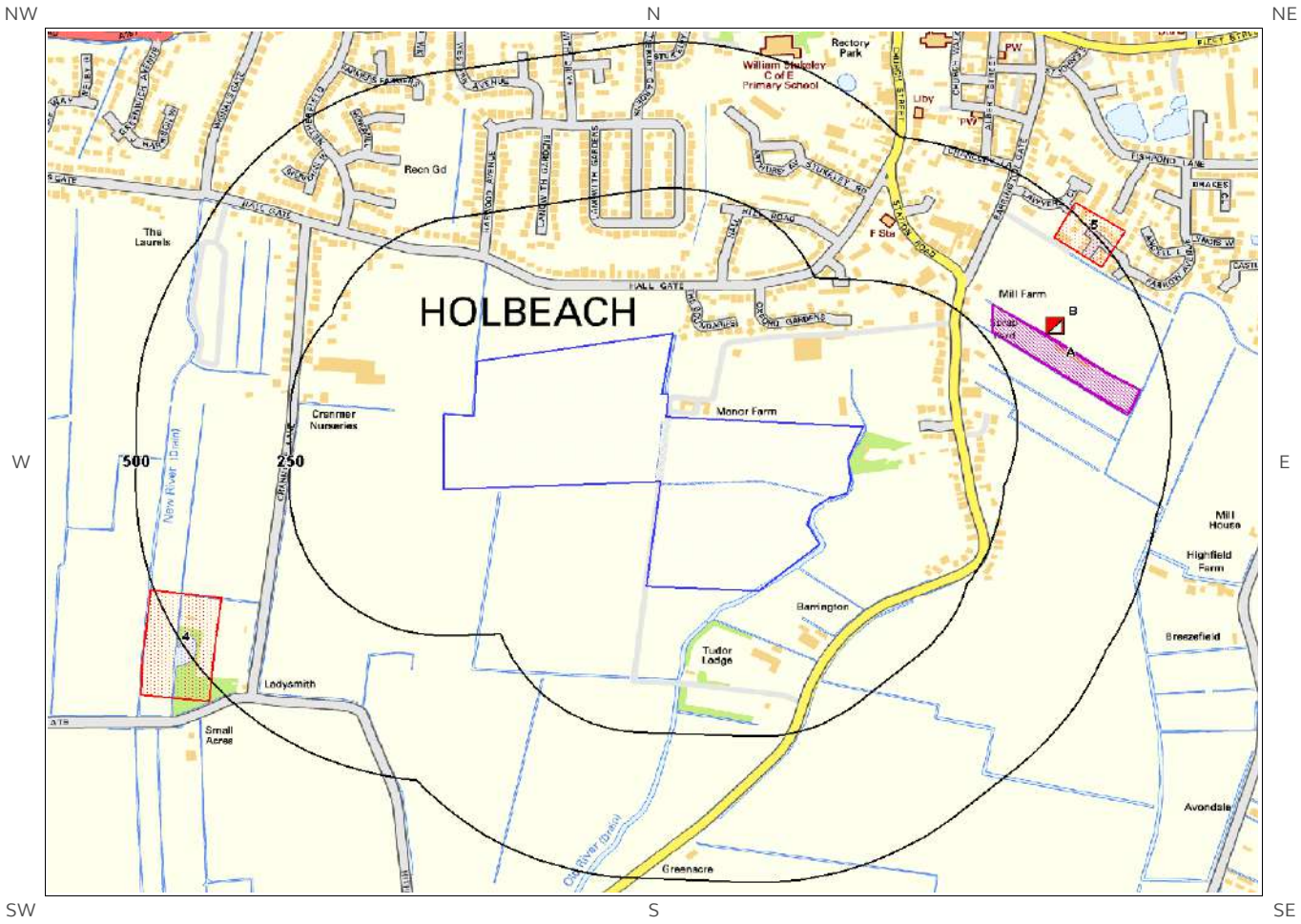
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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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Site Outline

250
500
Search Buffers (m)

E.A. Active Landfill

E.A. Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

E.A. Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

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:

6

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	
4	406	SW	534600 323700	Site Address: Cranmore Lane, Holbeach, Lincolnshire Waste Licence: - Site Reference: RD7-51-01/89, SH-51-01/89, 2500/5052 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
5	449	NE	536100 324400	Site Address: Barrington Gate, Holbeach, Lincolnshire Waste Licence: - Site Reference: RD7-52-01/89, SH-52-01/89, 0500/5053 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	745	E	536600 324300	Site Address: Holbeach Fen, Dam Gate, Holbeach, Lincolnshire Waste Licence: - Site Reference: RD7-53-01/89, SH-53-01/89, 2500/5036 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	796	NE	536400 324600	Site Address: Allison Avenue, Holbeach, Lincolnshire Waste Licence: - Site Reference: SH-54-01/89, RD7-54-01/89, RD7-55-01/89, 2500/5263 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	912	NW	534200 324600	Site Address: Main Road, Whaplode, Lincolnshire Waste Licence: - Site Reference: RD7-50-01/89, SH-50-01/89, 2500/5051 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1022	NW	534200 324800	Site Address: Main Road, Whaplode, Lincolnshire Waste Licence: - Site Reference: SH-49-01/89, RD7-49-01/89, 2500/5063 Waste Type: Household 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:

3

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

ID	Distance (m)	Direction	NGR	Details		
1A	265	NE	536119 324240	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
2A	265	NE	536120 324242	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1995	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

ID	Distance (m)	Direction	NGR	Details		
3A	265	NE	536120 324242	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1997	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

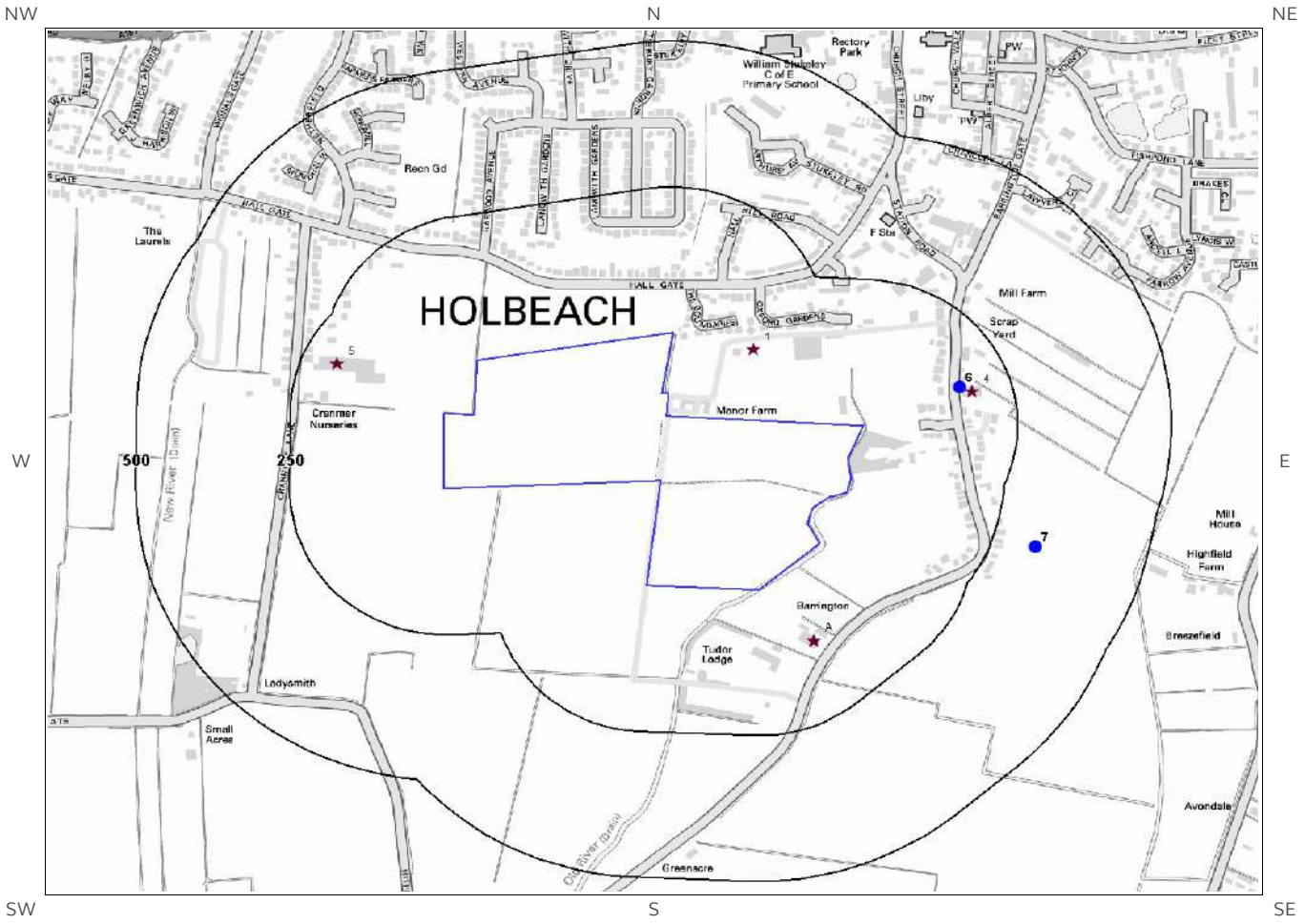
3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

3

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

ID	Distance (m)	Direction	NGR	Details	
10B	355	NE	536100 324300	Site Address: Ladbrook Mr E., 5a, Fen Road, Holbeach, Lincolnshire, PE12 8QA Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAD001 EPR reference: - Operator: Ladbrook Mr E Waste Management licence No: 71024 Annual Tonnage: 30000.0	Issue Date: 13/05/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Eric Ladbrooke Ltd Correspondence Address: Ladbrook Mr E., 5a, Fen Road, Holbeach, Lincolnshire, PE12 8QA
11B	355	NE	536100 324300	Site Address: Ladbrook Mr E., 5a, Fen Road, Holbeach, Lincolnshire, PE12 8QA Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LAD001 EPR reference: EA/EPR/TP3498NJ/A001 Operator: Ladbrooke Mr E Waste Management licence No: 71024 Annual Tonnage: 30000.0	Issue Date: 13/05/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Eric Ladbrooke Ltd Correspondence Address: -
12B	355	NE	536100 324300	Site Address: Ladbrook Mr E., 5a, Fen Road, Holbeach, Lincolnshire, PE12 8QA Type: Metal Recycling Site (mixed MRS's) Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NMR003 EPR reference: EA/EPR/LB3135RD/V002 Operator: Nationwide Metal Recycling Ltd Waste Management licence No: 71024 Annual Tonnage: 30000.0	Issue Date: 13/05/1992 Effective Date: 26/10/2012 Modified: 05/11/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Nationwide Metal Recycling Ltd Correspondence Address: -

4. Current Land Use Map



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Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 5

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	122	N	Tank	535610 324258	PE12	Tanks (Generic)	Industrial Features
2A	122	SE	T R M Racing	535707 323759	Barrington, Fen Road, Holbeach, Spalding, PE12 8QD	New Vehicles	Motoring
3A	122	SE	L R Signs & Designs Ltd	535707 323759	Barrington, Fen Road, Holbeach, Spalding, PE12 8QD	Signs	Industrial Products
4	185	E	Grays of Holbeach	535965 324186	25-27, Fen Road, Holbeach, Spalding, PE12 8QA	New Vehicles	Motoring
5	194	NW	Terry Johnson Ltd	534933 324233	31, Cranmore Lane, Holbeach, Spalding, PE12 7HT	General Purpose Machinery	Industrial Products

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 2

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
6	168	NE	535945 324193	Murco	Grays Of Holbeach, Fen Road, Holbeach, Spalding, Lincolnshire, PE12 8QA	Not Applicable	Obsolete
7	319	E	536068 323919	Obsolete	David Lefley, Fen Road, Holbeach, Spalding, Lincolnshire, PE12 7LF	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

---

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
TFD	TIDAL FLAT DEPOSITS	CLAY AND SILT [UNLITHIFIED DEPOSITS CODING SCHEME]

5.3 Bedrock and Solid Geology

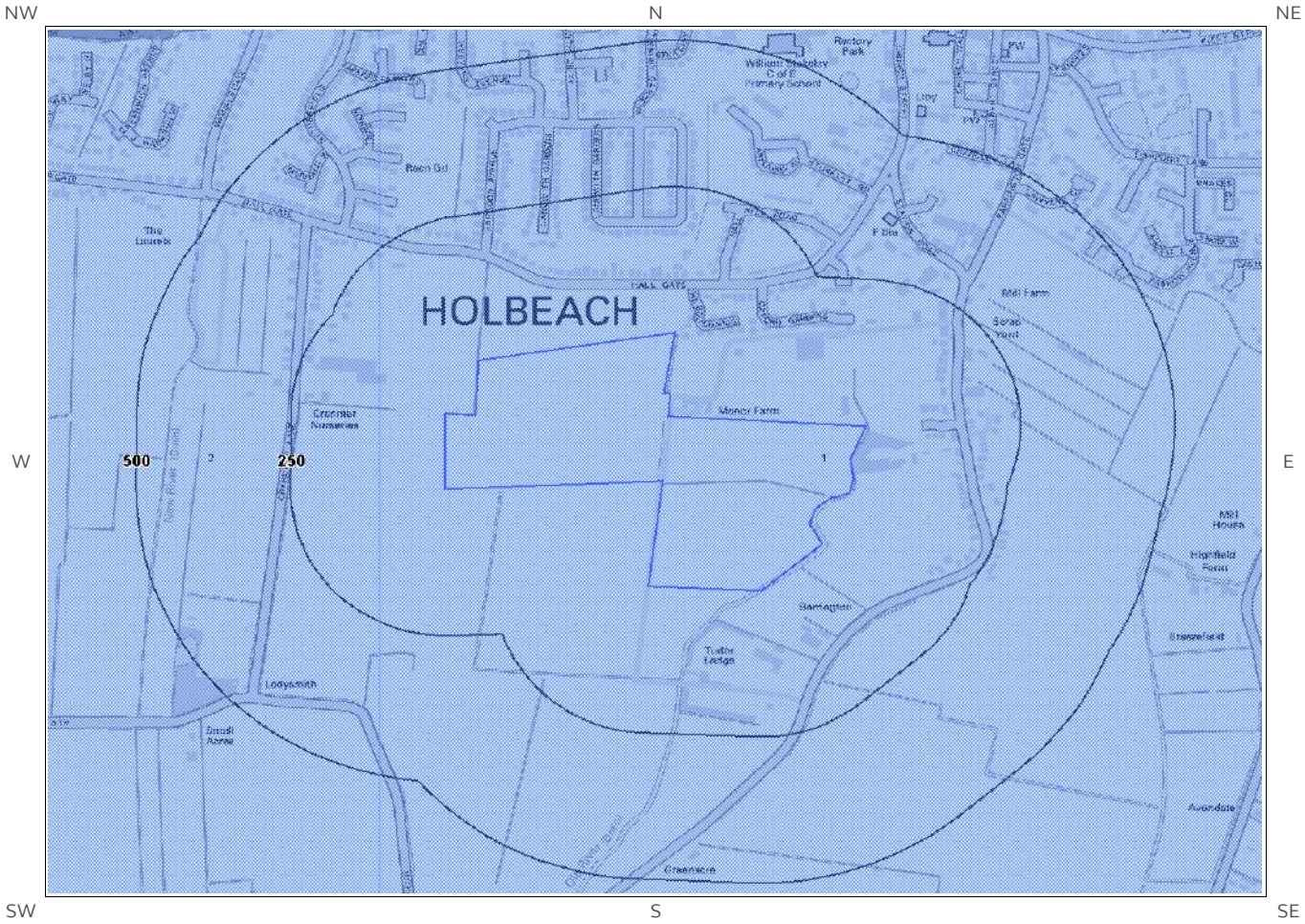
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
WWB-MDSI	WEST WALTON FORMATION	MUDSTONE AND SILTSTONE

(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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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

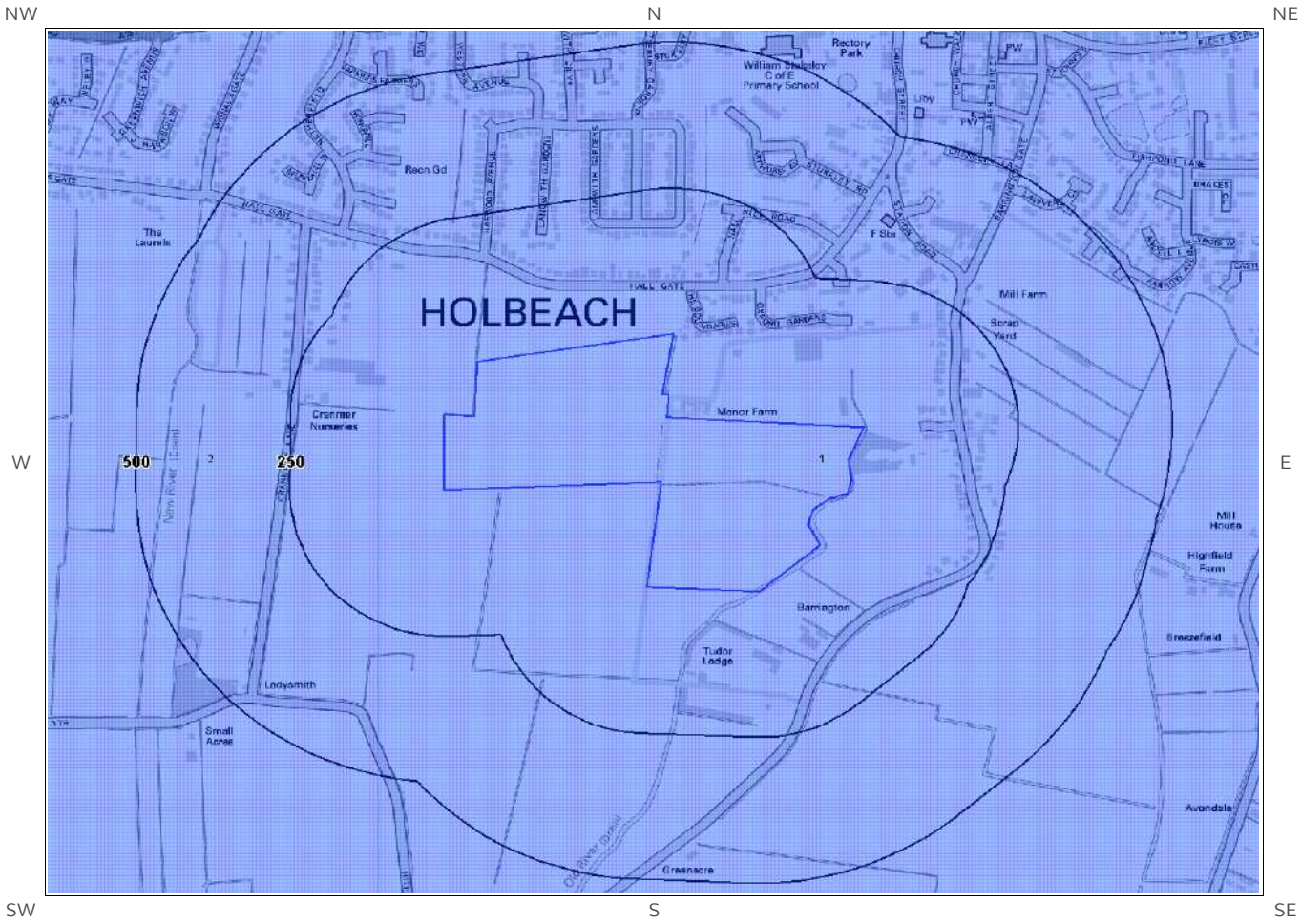
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

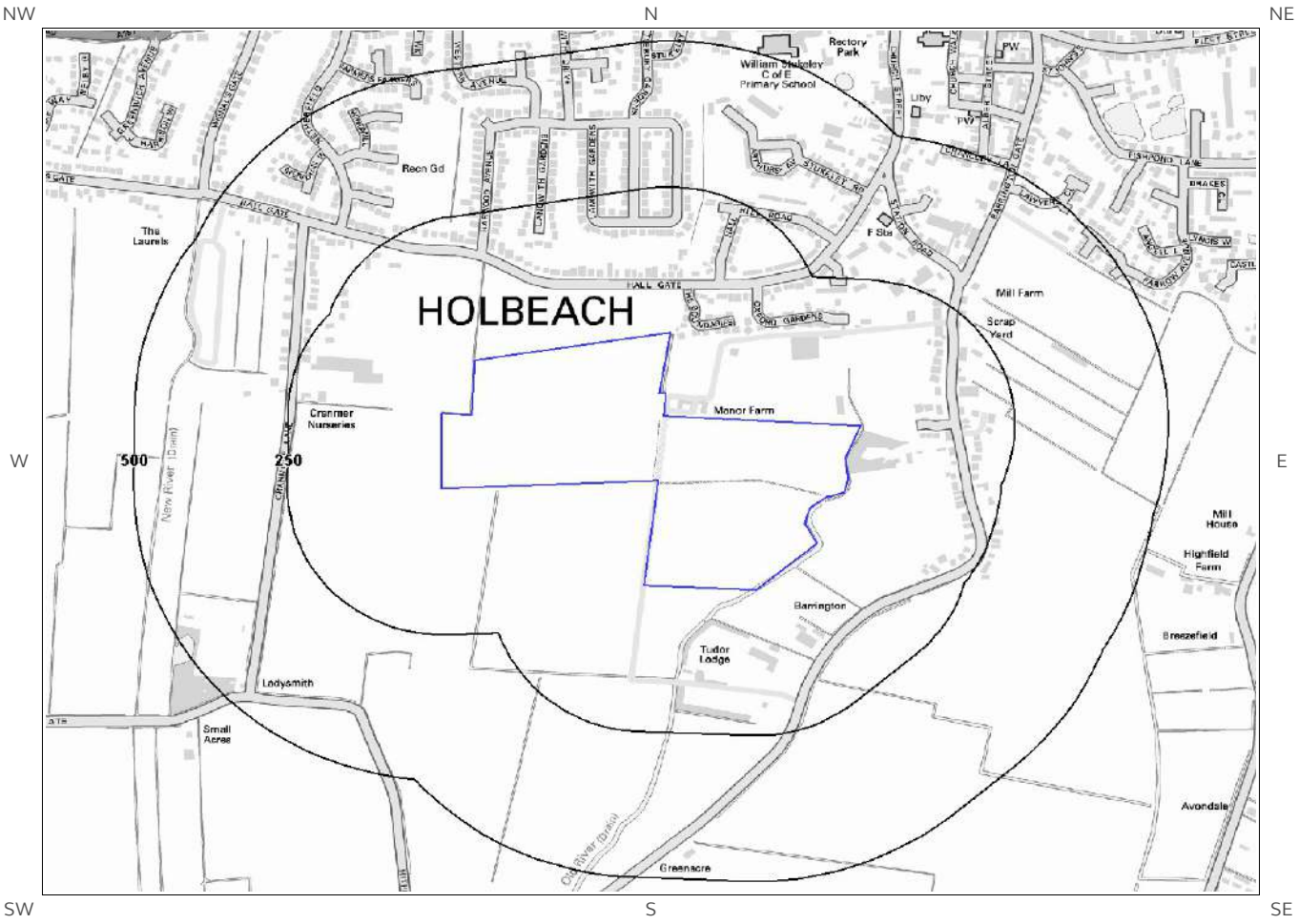
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



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Site Outline

250 500 Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

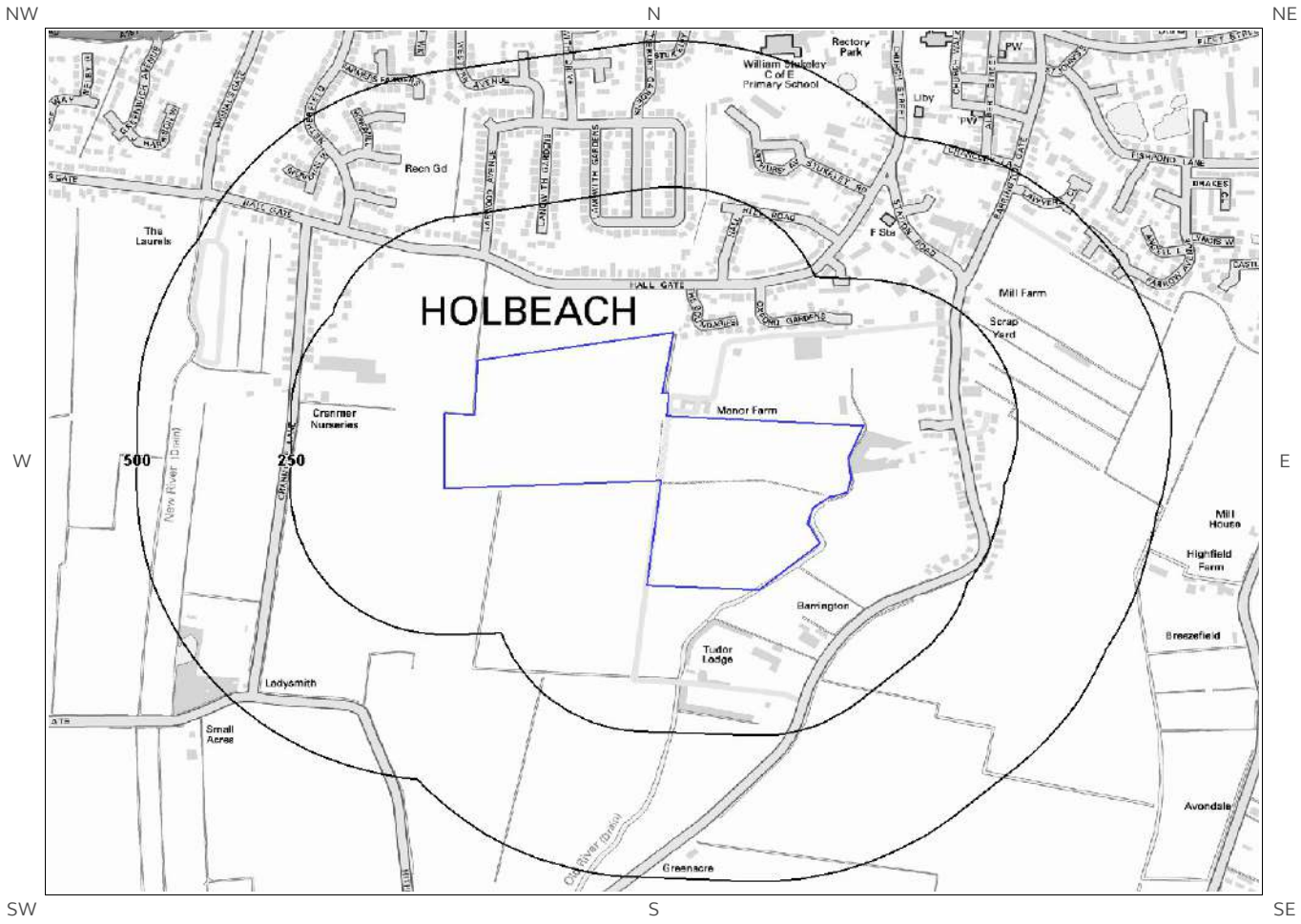
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

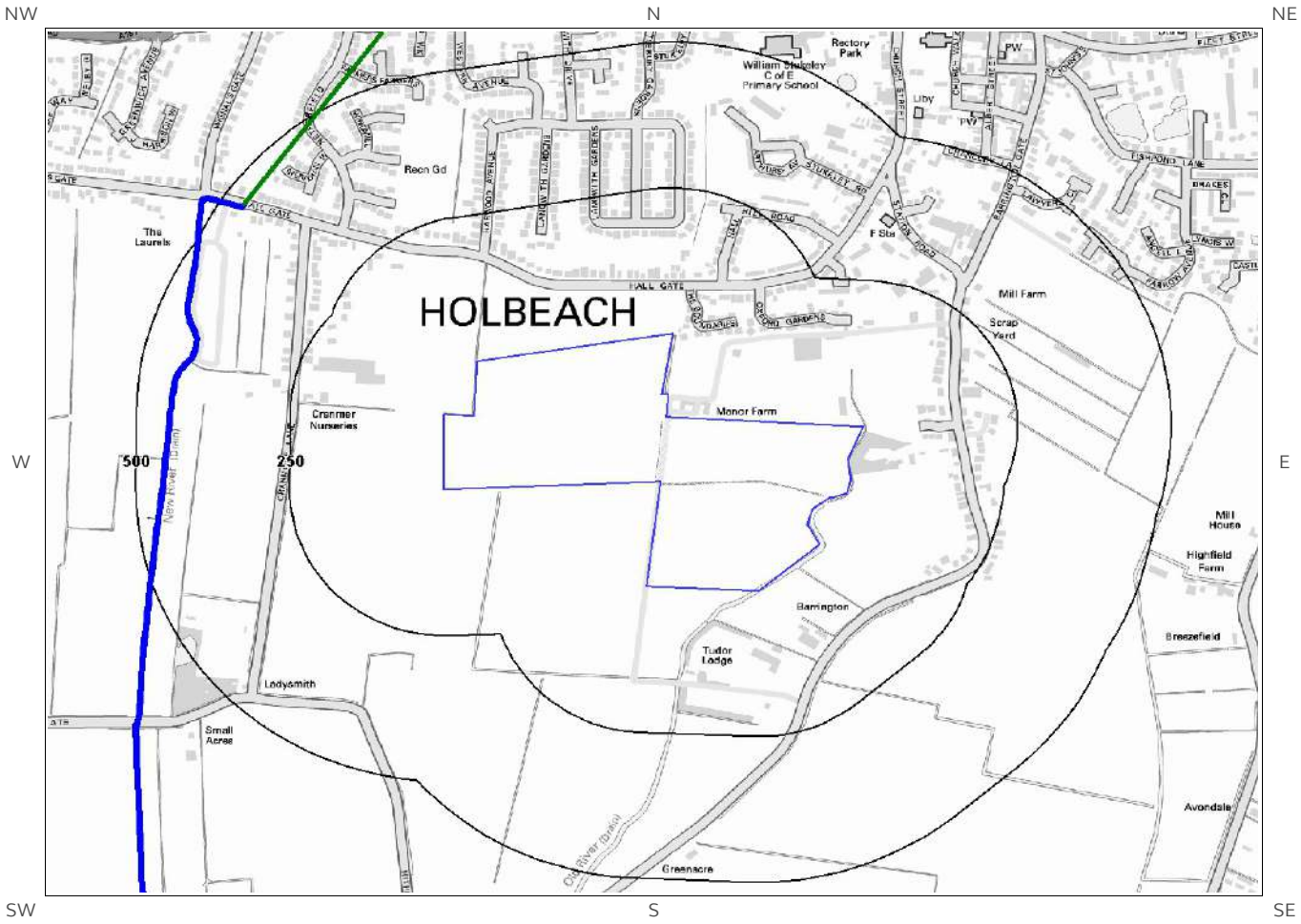
Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Detailed River Network and River Quality



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Site Outline

250
500
Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

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? 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 Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	107	W	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	107	W	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

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? No

Database searched and no data found.

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? No

Database searched and no data found.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

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	419	W	River Name: New River Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
2	465	NW	River Name: New River Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

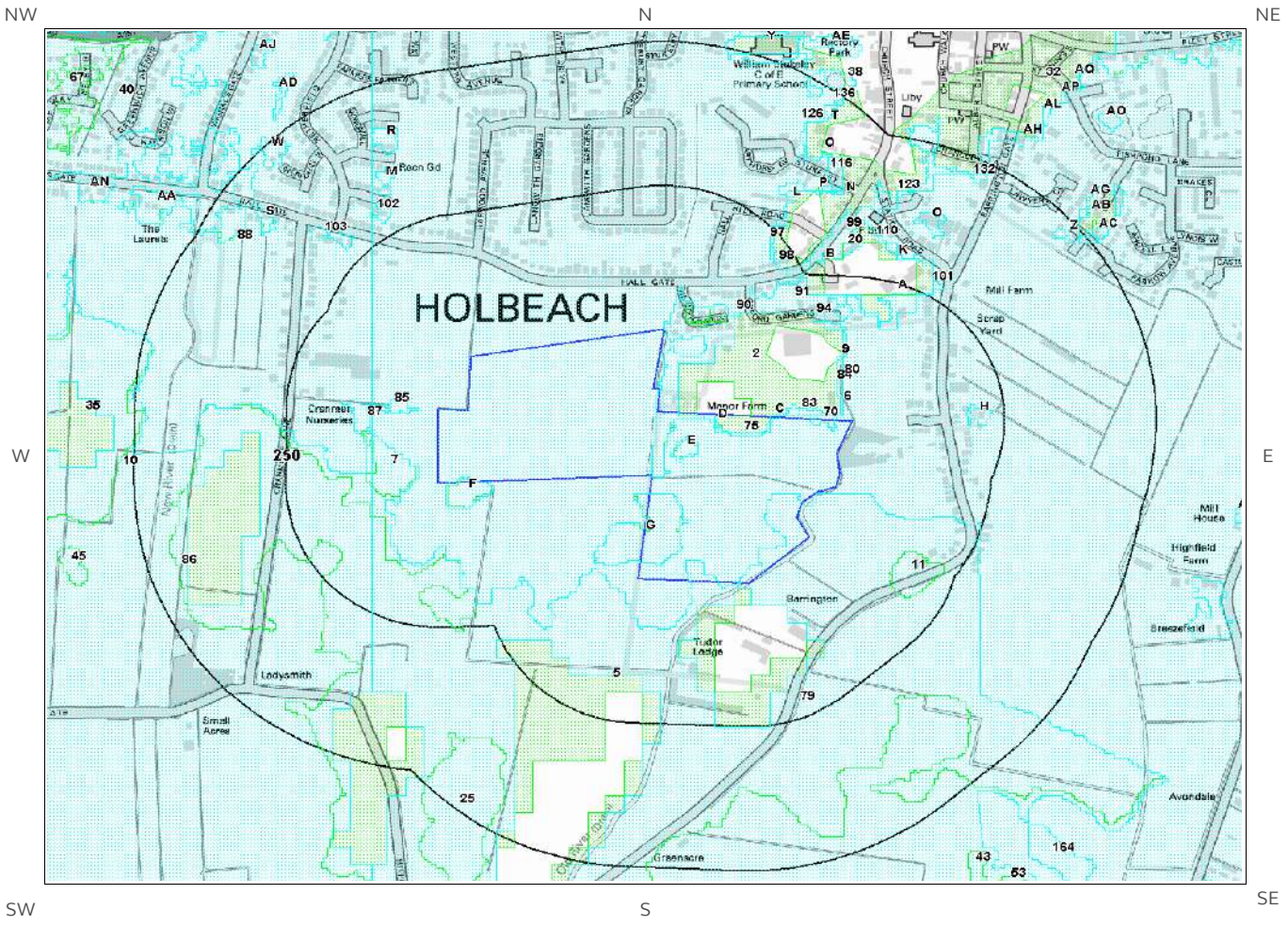
6.11 Surface Water Features

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
0	On Site
0	On Site
0	On Site
6	S
76	SE
82	W
135	SE
147	SE
155	N
164	S
182	SE
187	SE
196	NE
228	NE
229	SW
246	N

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



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Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

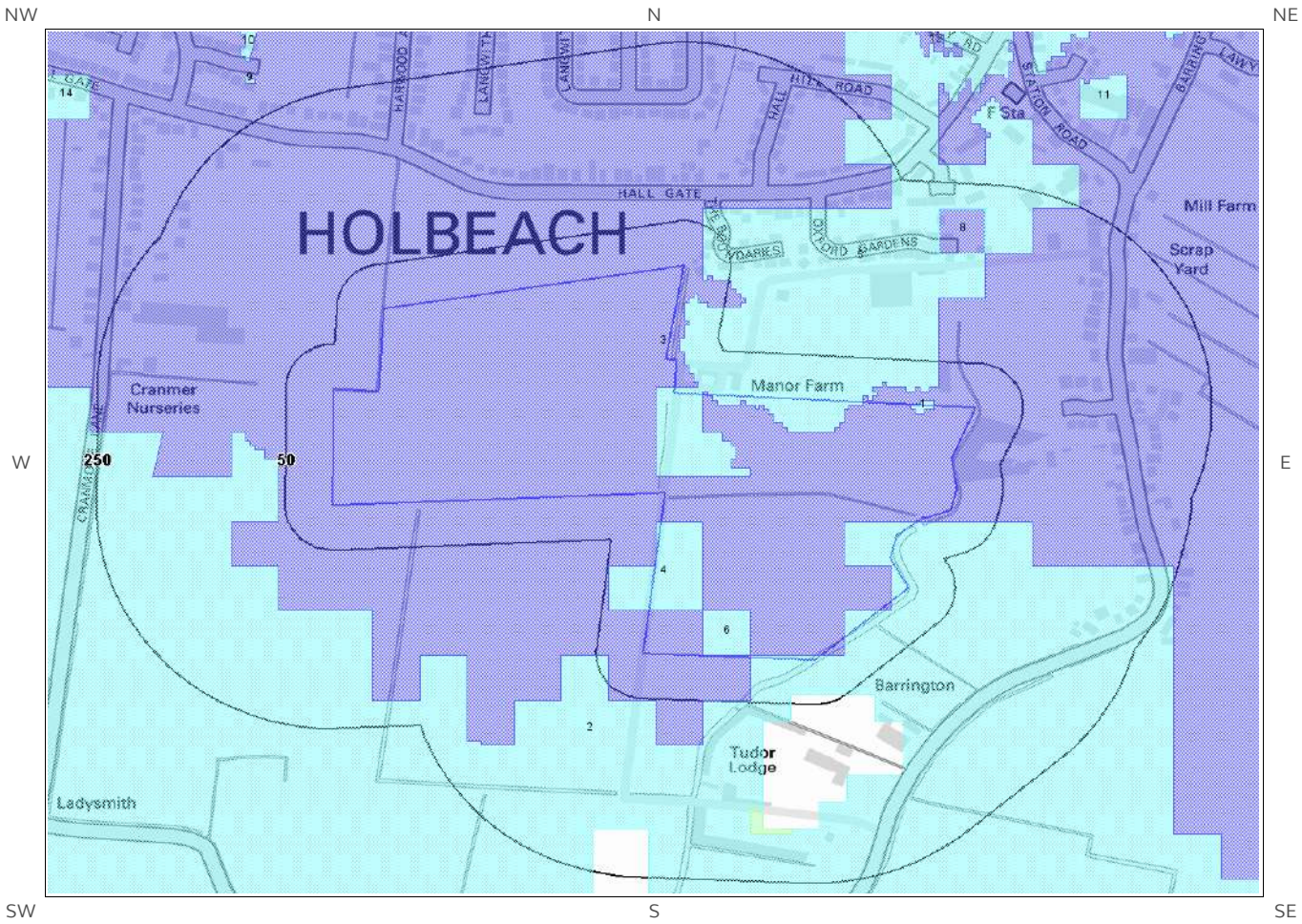
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



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Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

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:

ID	Distance (m)	Direction	Update	Type
1F	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
2	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
3E	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
4G	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
5	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
6	0	On Site	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
7	37	W	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
8	102	W	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
9	102	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
10	109	W	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
11	145	SE	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
12H	185	E	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
13N	213	NE	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
14A	229	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
15A	232	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
16A	237	N	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)
17K	246	NE	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

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

ID	Distance (m)	Direction	Update	Type
1F	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
2	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
3E	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
4G	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
5	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
6	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
7	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
8	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
9	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
10	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
11	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
12H	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
13N	0	On Site	09-Sep-2016	Zone 3 - (Fluvial Models)
14A	2	N	09-Sep-2016	Zone 3 - (Fluvial Models)
15A	3	N	09-Sep-2016	Zone 3 - (Fluvial Models)
16A	4	N	09-Sep-2016	Zone 3 - (Fluvial Models)
17K	7	N	09-Sep-2016	Zone 3 - (Fluvial Models)
	33	W	09-Sep-2016	Zone 3 - (Fluvial Models)
	109	W	09-Sep-2016	Zone 3 - (Fluvial Models)
	110	W	09-Sep-2016	Zone 3 - (Fluvial Models)
	110	W	09-Sep-2016	Zone 3 - (Fluvial Models)
	112	N	09-Sep-2016	Zone 3 - (Fluvial Models)

116	E	09-Sep-2016	Zone 3 - (Fluvial Models)
143	E	09-Sep-2016	Zone 3 - (Fluvial Models)
165	N	09-Sep-2016	Zone 3 - (Fluvial Models)
168	N	09-Sep-2016	Zone 3 - (Fluvial Models)
170	N	09-Sep-2016	Zone 3 - (Fluvial Models)
185	E	09-Sep-2016	Zone 3 - (Fluvial Models)
190	N	09-Sep-2016	Zone 3 - (Fluvial Models)
211	NE	09-Sep-2016	Zone 3 - (Fluvial Models)
213	NE	09-Sep-2016	Zone 3 - (Fluvial Models)
222	NE	09-Sep-2016	Zone 3 - (Fluvial Models)

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

What is the highest risk of flooding onsite? Medium

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 Medium (greater than 1 in 100 but less than 1 in 30) chance of flooding in any given year.

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

ID	Distance (m)	Direction	RoFRas flood Risk
1	0.0	On Site	Low
2	0.0	On Site	Low
3	0.0	On Site	Medium
4	0.0	On Site	Low
5	0.0	On Site	Low
6	0.0	On Site	Low

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? No

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?

Not Prone

The area is not considered to be prone to groundwater flooding based on rock type.

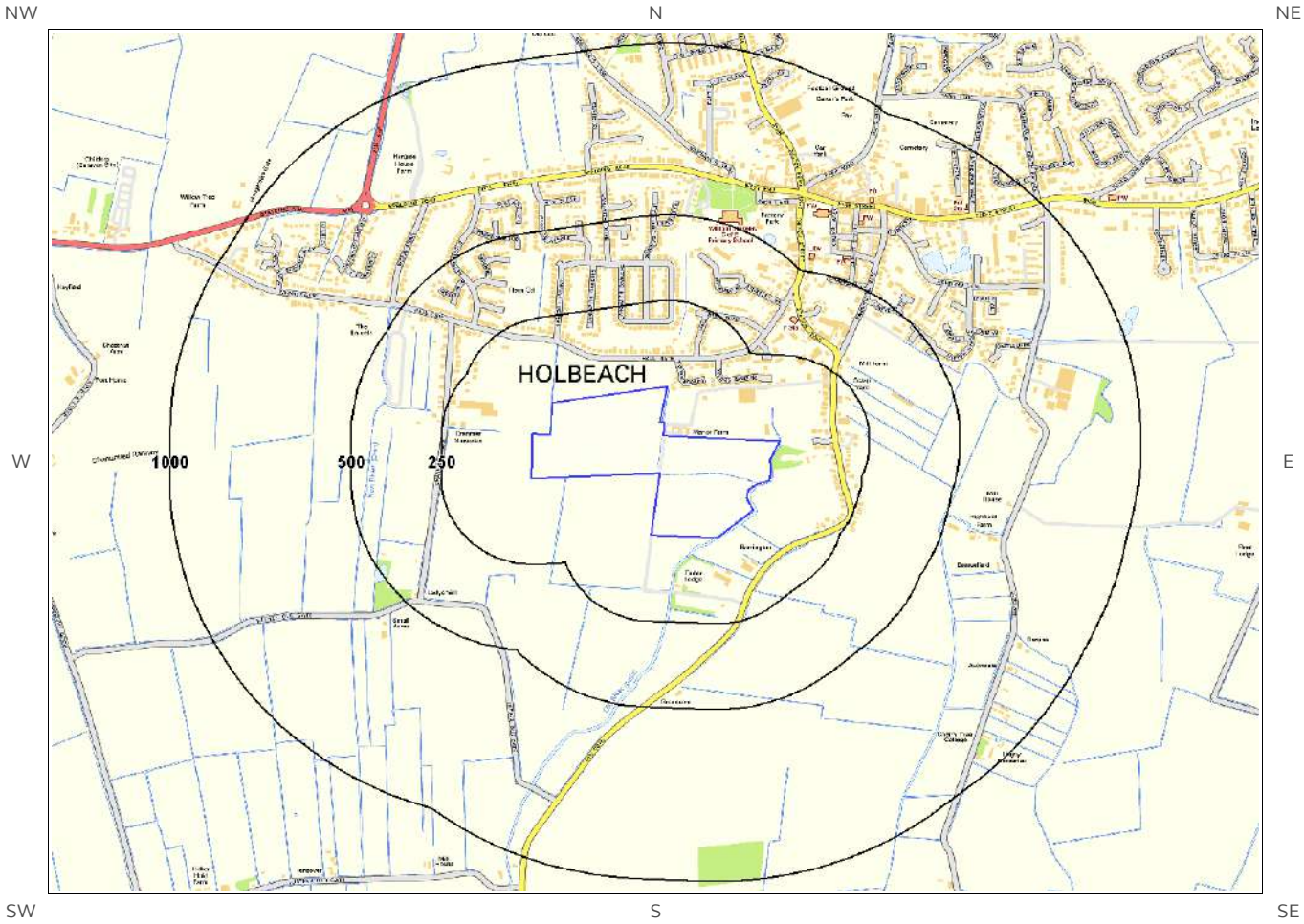
7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Not Applicable

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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Site Outline

100
250
Search Buffers (m)

AONB

National Park

SSSI

Special Protection Areas

Nitrate Vulnerable Zones

Green Belt

Environmentally Sensitive Areas

Special Areas of Conservation

World Heritage Sites

Nitrate Sensitive Areas

Ancient Woodland

National Nature Reserve

Local Nature Reserves

Ramsar Sites

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?	No

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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? Low

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

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

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

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

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* 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
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* 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? Moderate

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

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* 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 collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. 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? Moderate

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

Hazard
Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build consider the consequences of soil and groundwater conditions during and after construction. For existing property possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.

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.

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Geo-Matters Limited

Geo-Matters Ltd, 104 Bondgate,
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Report Reference: GEO-M-3360536

Your Reference: GML16197

Report Date 10 Oct 2016

Report Delivery Method: Email - pdf

Groundsure Geo Insight

Address: 13, FEN ROAD, SPALDING, PE12 8QA

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,

Geo-Matters Limited

Enc.
Groundsure Geoinsight

Groundsure Geo Insight

Address:	**13, FEN ROAD, SPALDING, PE12 8QA**
Date:	**10 Oct 2016**
Reference:	**GEO-M-3360536**
Client:	**Geo-Matters Limited**

NW N NE

W E



SW S SE

Aerial Photograph Capture date:	16-Sep-2007
Grid Reference:	535521,324065
Site Size:	15.73ha

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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?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	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	0	7	8	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	2	2

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	Low
4.2 Landslides	Very Low
4.3 Ground Dissolution of Soluble Rocks	Negligible
4.4 Compressible Deposits	Moderate
4.5 Collapsible Deposits	Negligible
4.6 Running Sand	Moderate

Section 5: Borehole Records	On-site	0-50m	51-250
5 BGS Recorded Boreholes	0	0	0

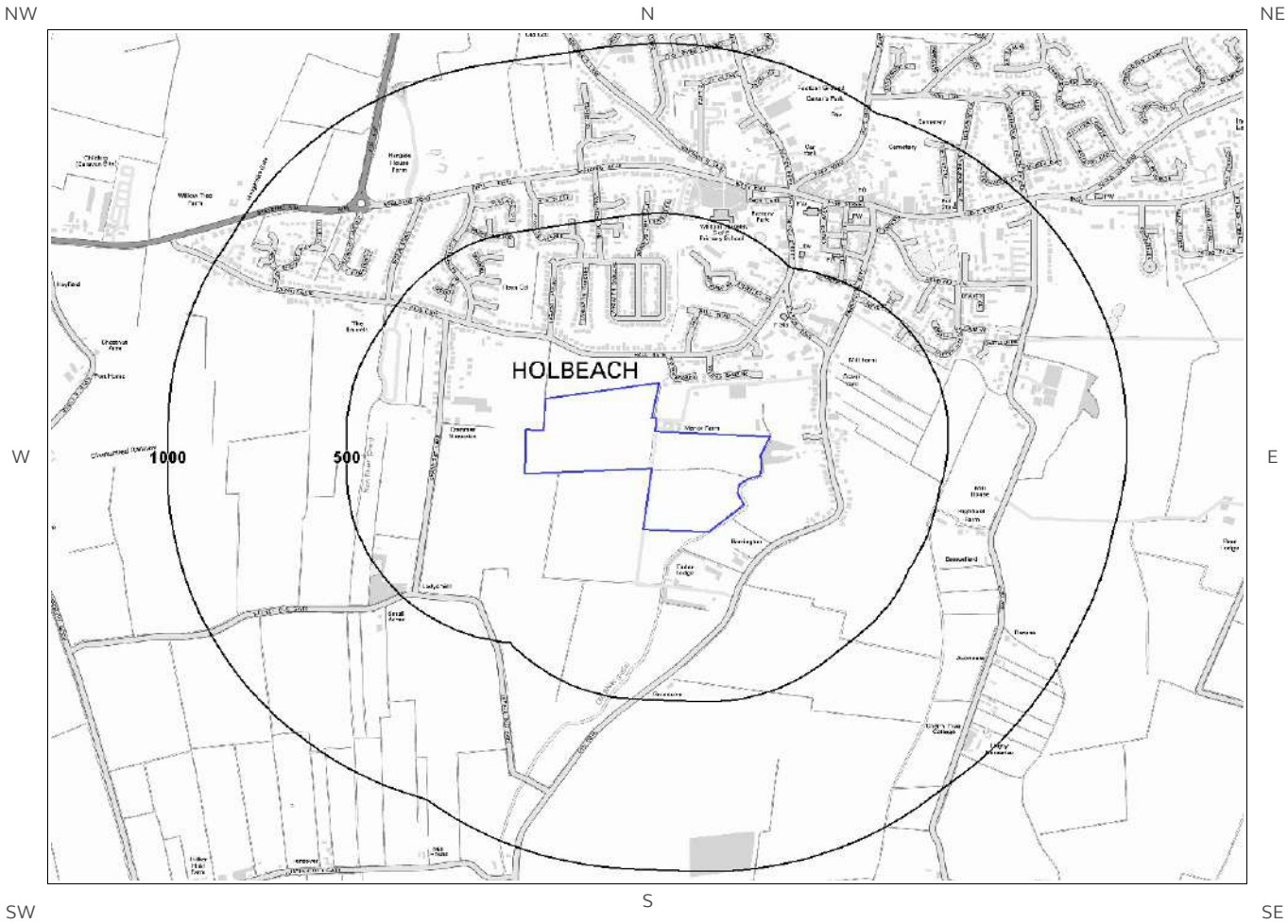
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250
6 Records of Background Soil Chemistry	6	0	8

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	9	1	2	Not Searched
7.3 Historical Railways	1	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

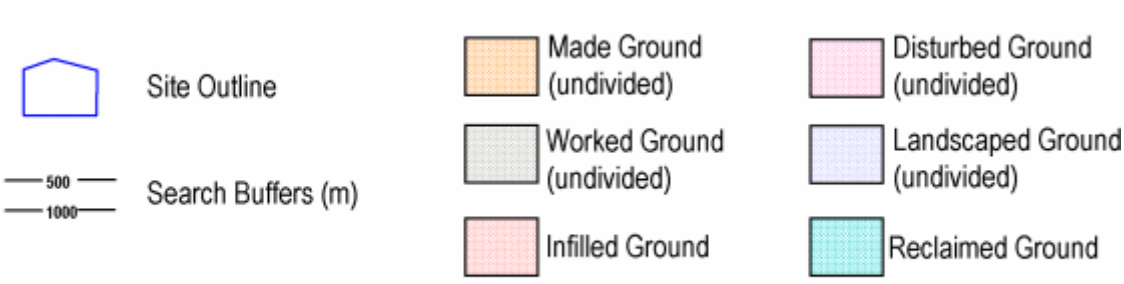
1 Geology

1.1 Artificial Ground Map



Artificial Ground Legend

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1 Geology

1.1 Artificial Ground

1.1.1Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:144

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

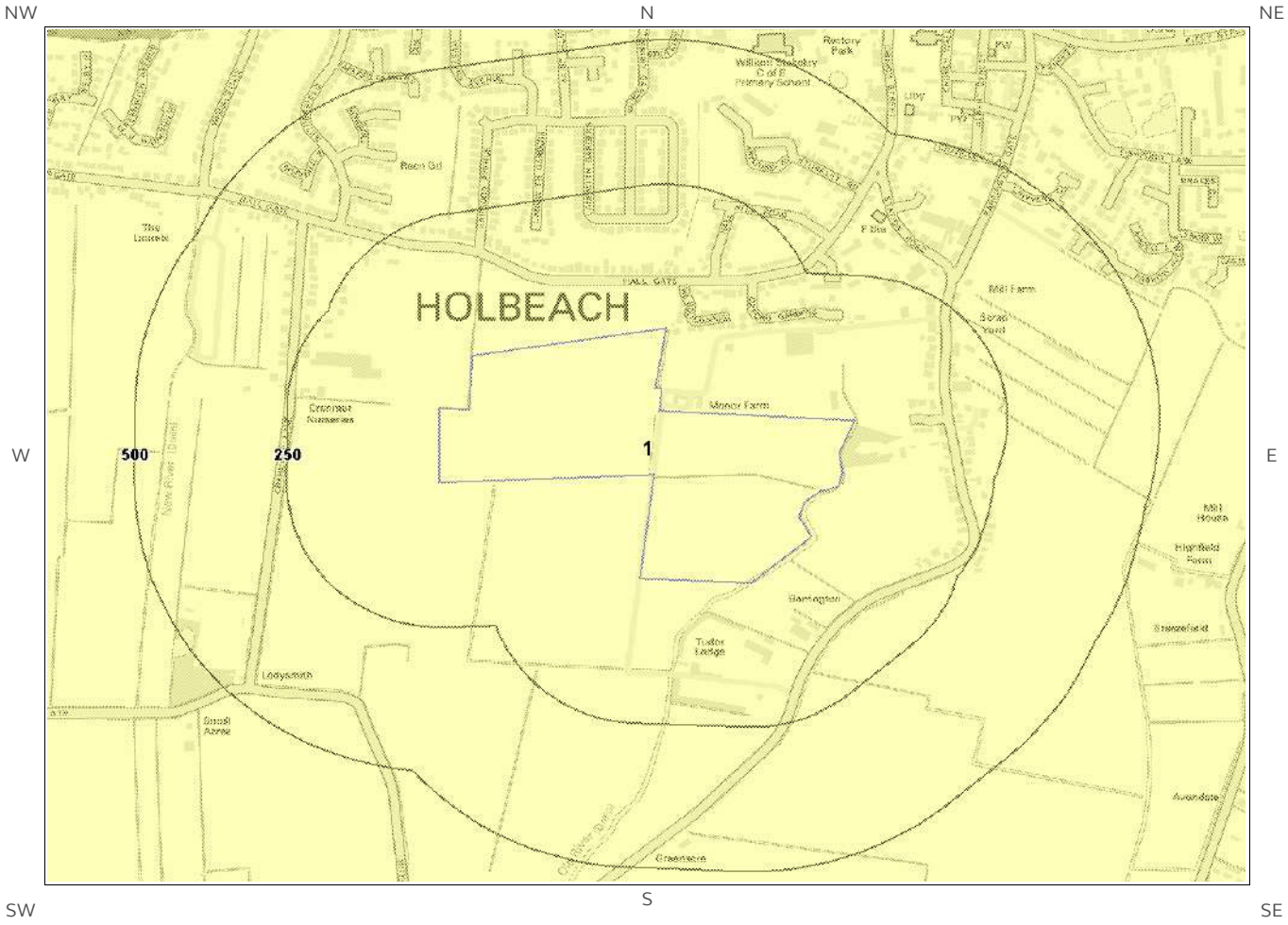
Database searched and no data found.

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
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? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TFD	TIDAL FLAT DEPOSITS	CLAY AND SILT [UNLITHIFIED DEPOSITS CODING SCHEME]

1.2.2 Permeability of Superficial Ground

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

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

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.

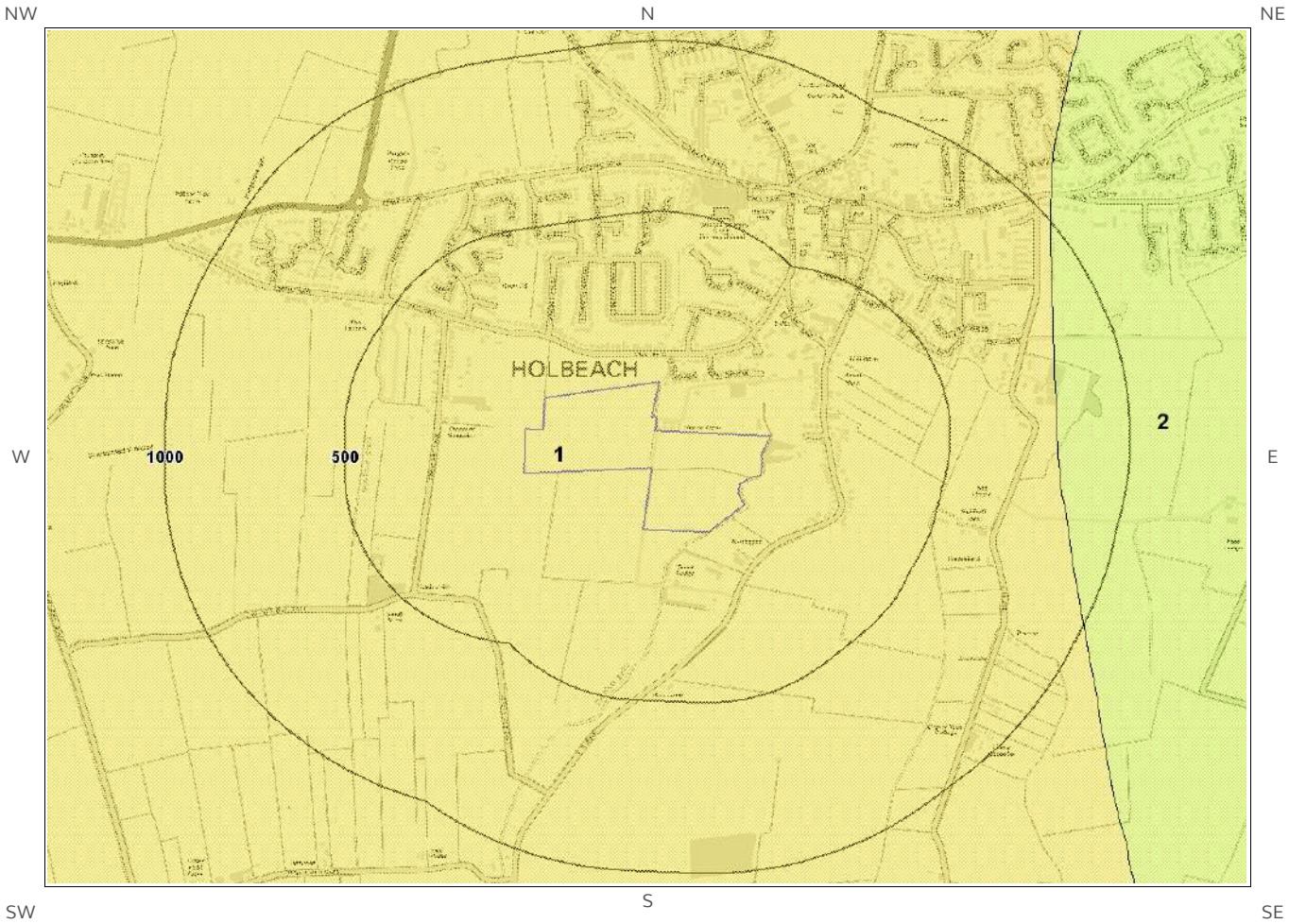
1.2.4 Landslip Permeability

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

500
1000
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:144

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	WWB-MDSI	West Walton Formation - Mudstone And Siltstone	Oxfordian

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	Low	Very 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

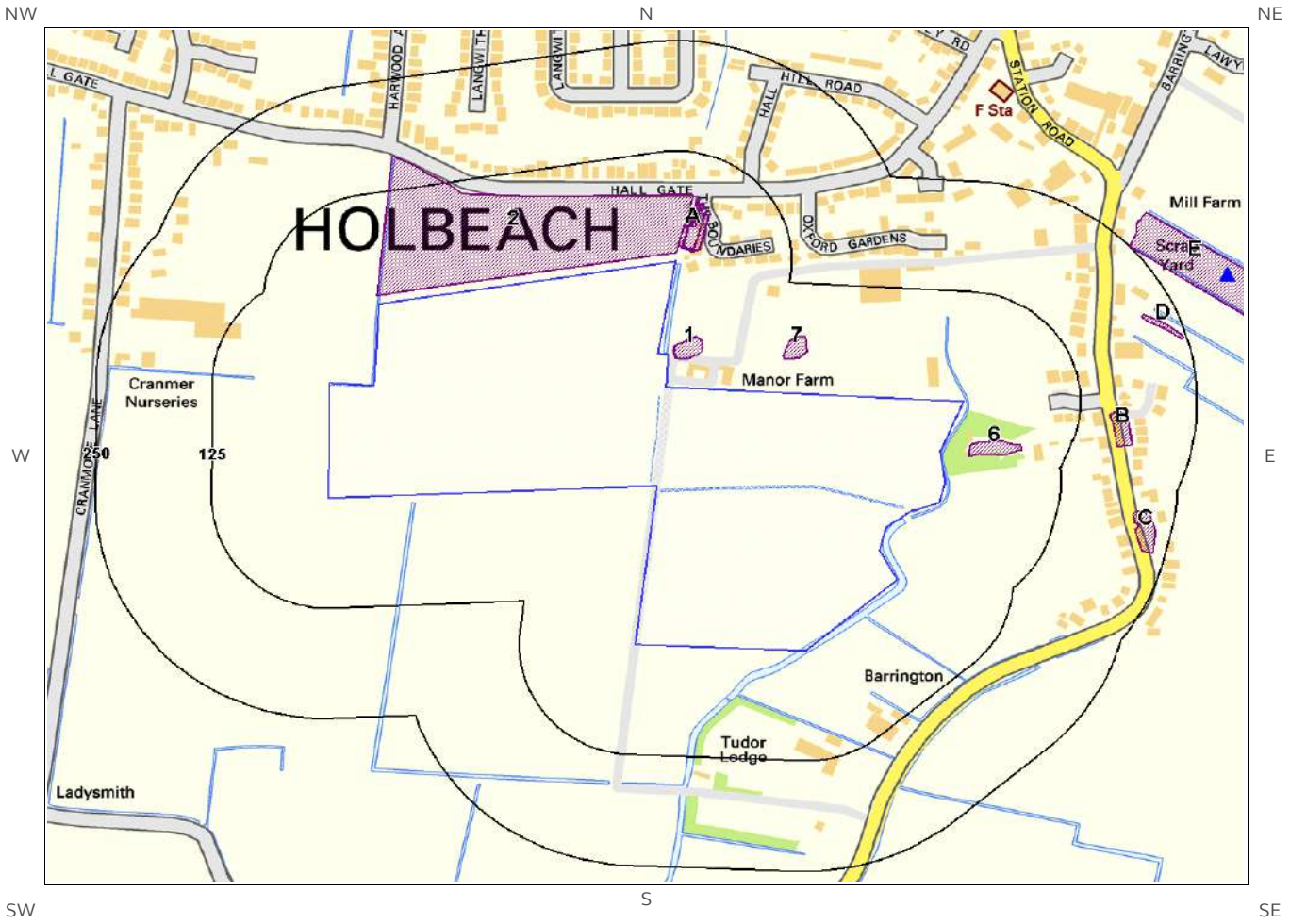
---

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

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

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
1	7.0	E	535494 324188	Pond	1903
2	9.0	N	535330 324326	Burial Ground	1950
3A	17.0	NE	535498 324326	Pond	1950
4A	18.0	NE	535502 324325	Pond	1903
5A	19.0	NE	535502 324329	Pond	1950
6	27.0	SE	535824 324074	Pond	1992
7	39.0	N	535609 324188	Pond	1903
8B	157.0	E	535958 324096	Pond	1903
9B	157.0	E	535958 324096	Pond	1887
10C	206.0	E	535984 323979	Pond	1903
11C	206.0	E	535984 323979	Pond	1887
12D	213.0	NE	536003 324211	Pond	1950
13D	213.0	NE	536003 324211	Pond	1903
14D	213.0	NE	536003 324211	Pond	1887
15E	250.0	NE	536062 324262	Brick Works	1887

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:

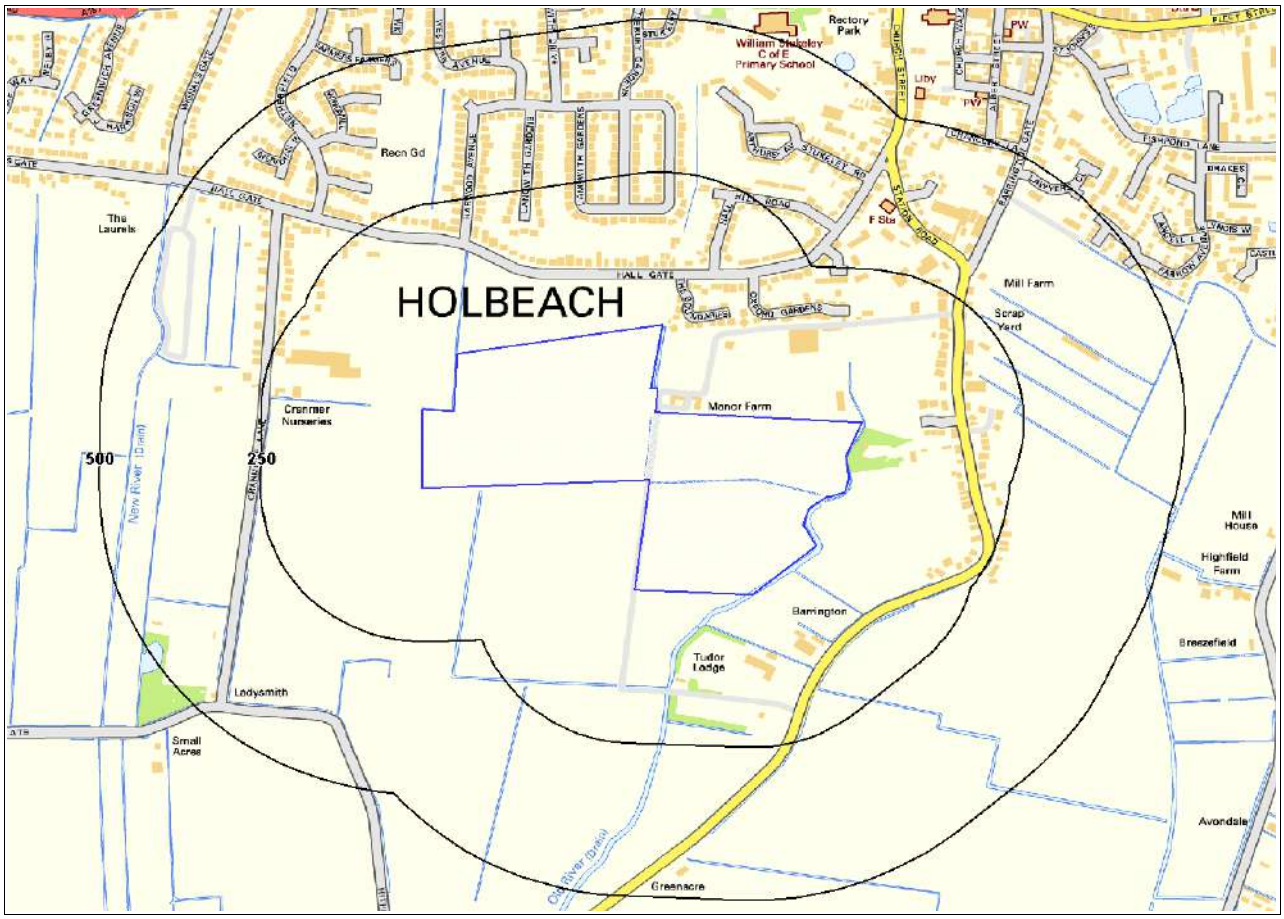
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
16E	317.0	NE	536072 324271	Clay & Shale	Holbeach Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	443.0	SW	534767 323734	Clay & Shale	Hither Old Gate Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	666.0	NE	536205 324648	Clay & Shale	Holbeach Brick Pits	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	726.0	NE	536298 324645	Clay & Shale	Holbeach Brick Pits	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3 Mining, Extraction & Natural Cavities Map

NW N NE

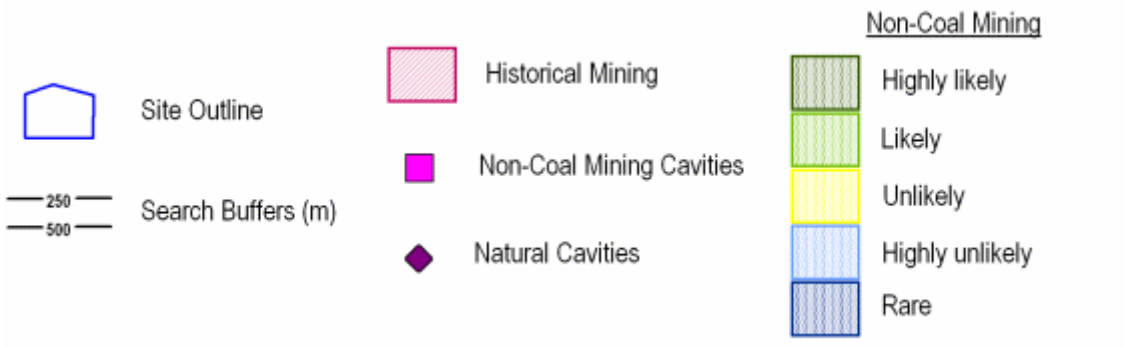
W E

SW S SE



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

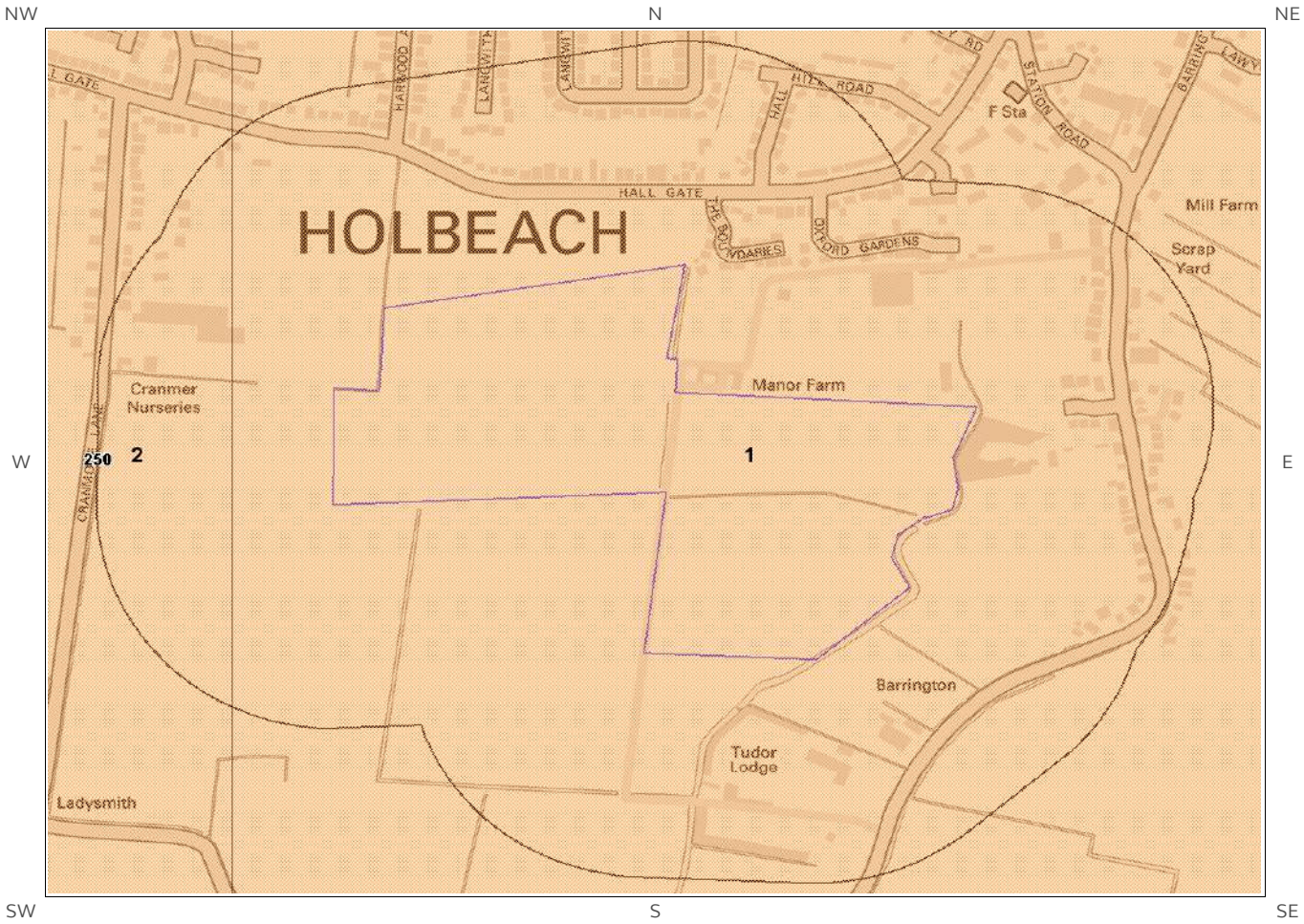
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

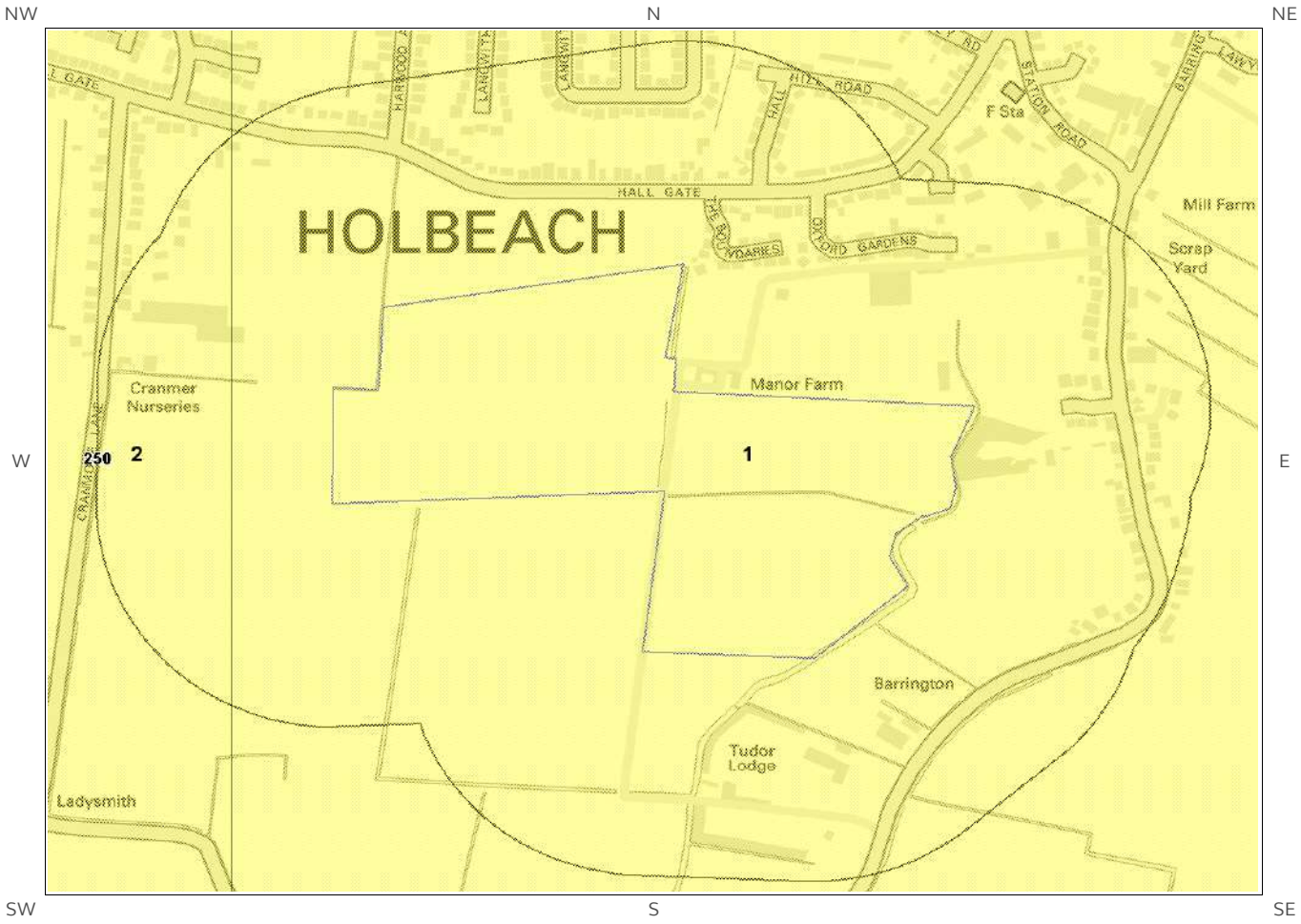


Shrink Swell Clay Legend

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4.2 Landslides Map



Landslides Legend

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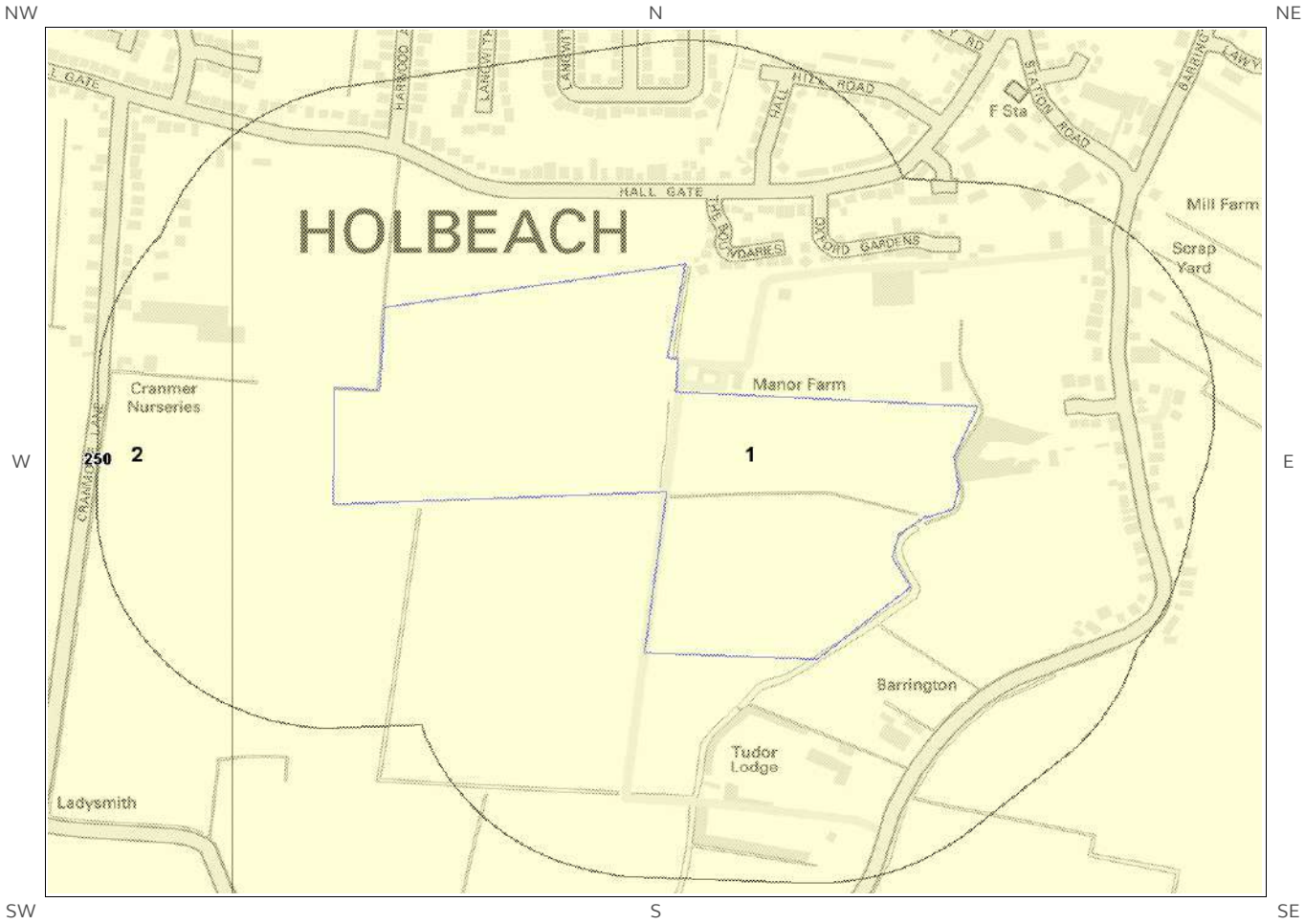
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.3 Ground Dissolution Soluble Rocks Map

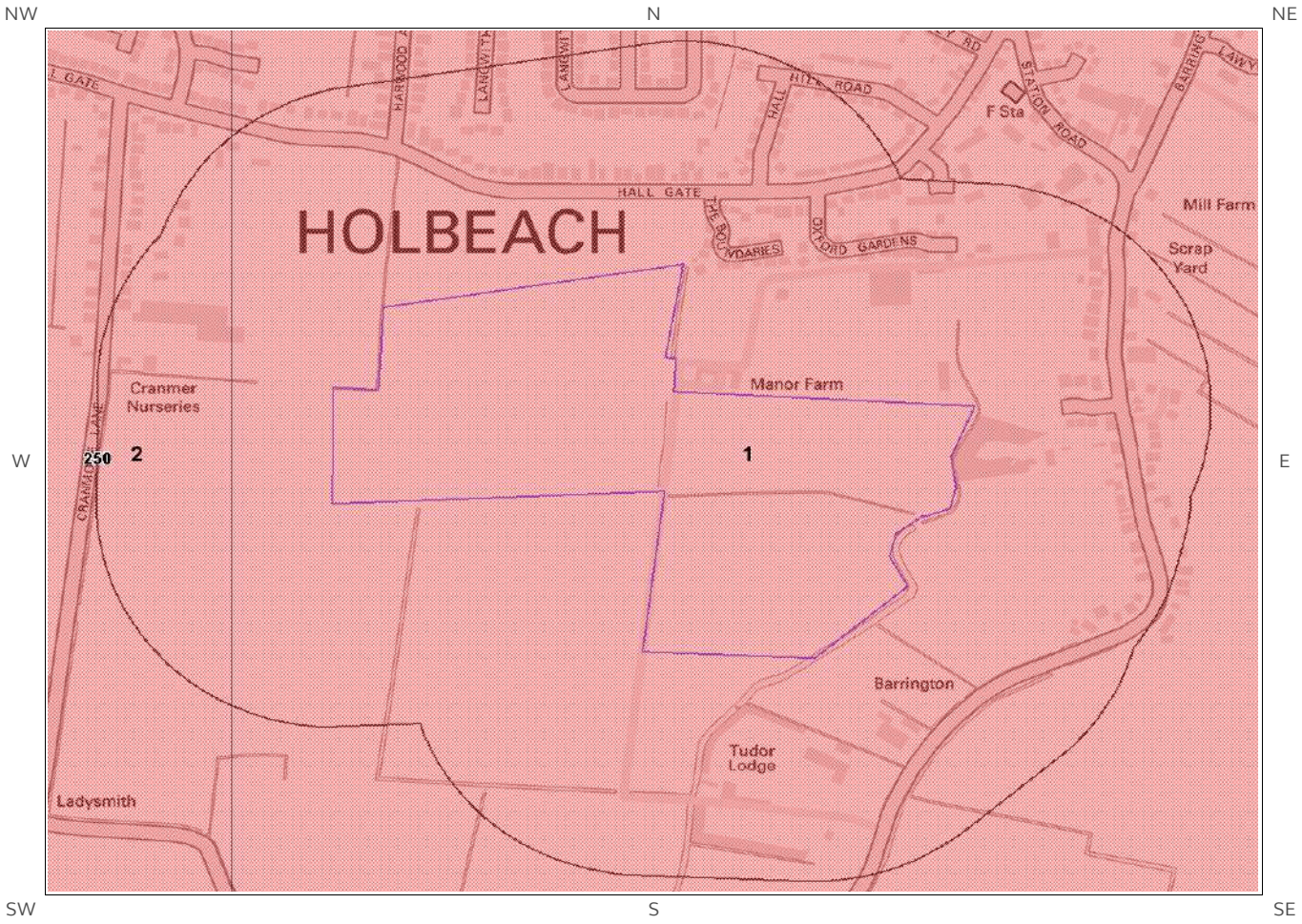


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Ground Dissolution Soluble Rocks Legend



4.4 Compressible Deposits Map

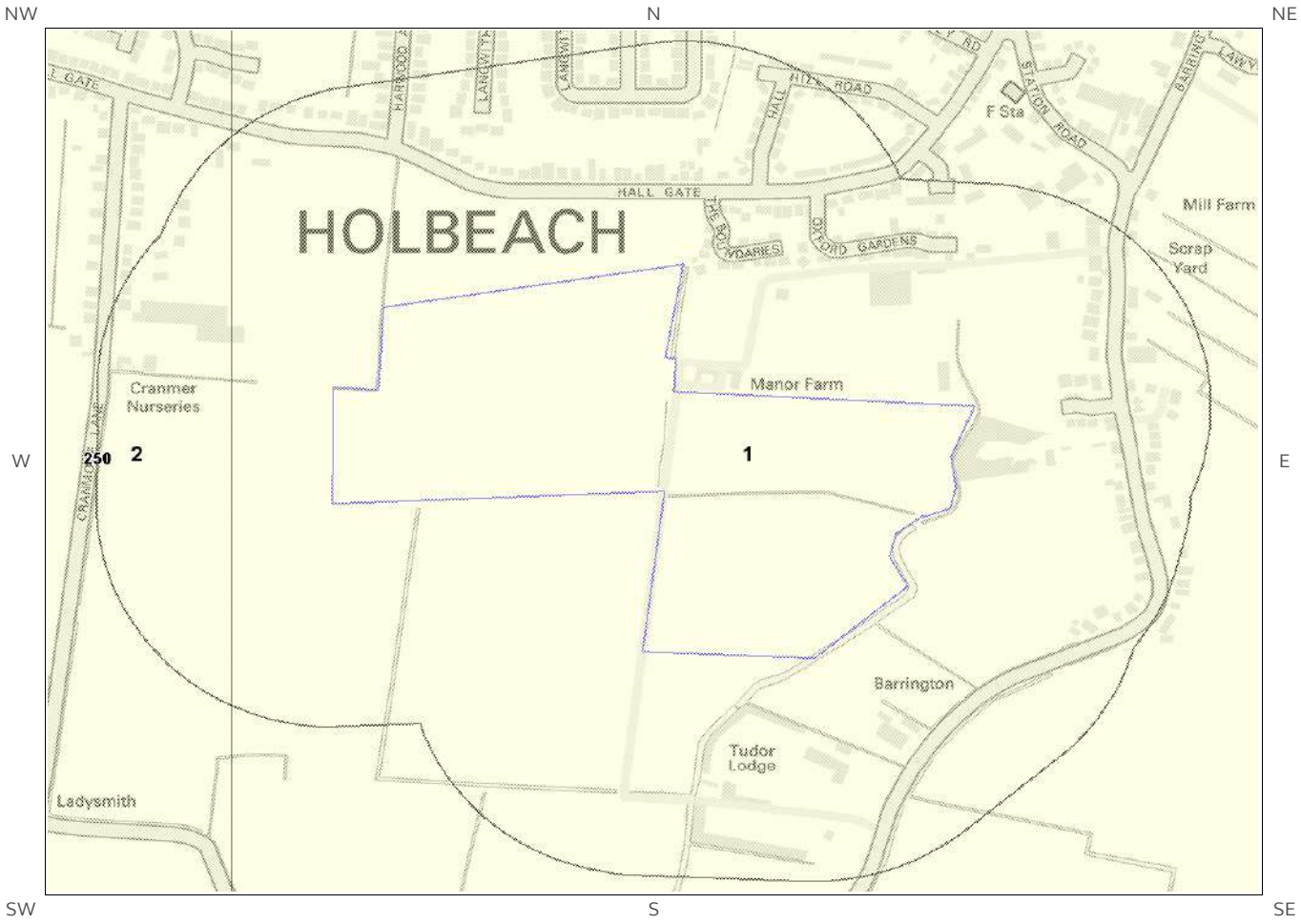


Compressible Deposits Legend

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4.5 Collapsible Deposits Map

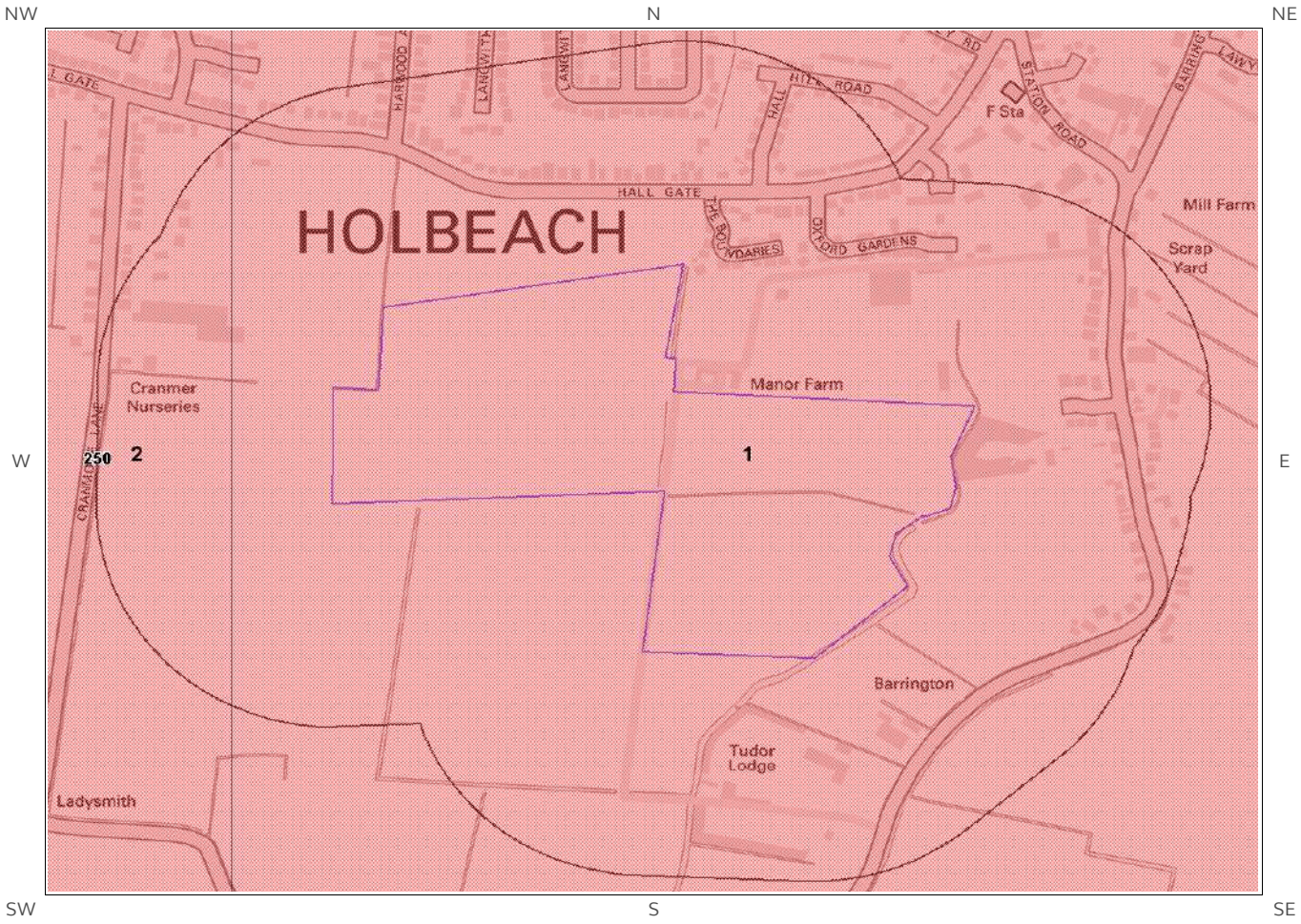


Collapsible Deposits Legend

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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? Moderate

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	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

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

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	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* 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	Moderate	Significant potential for compressibility problems. Do not drain, load or de-water ground near the property without technical advice. For new build, consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property, possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

4.5 Collapsible Deposits

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

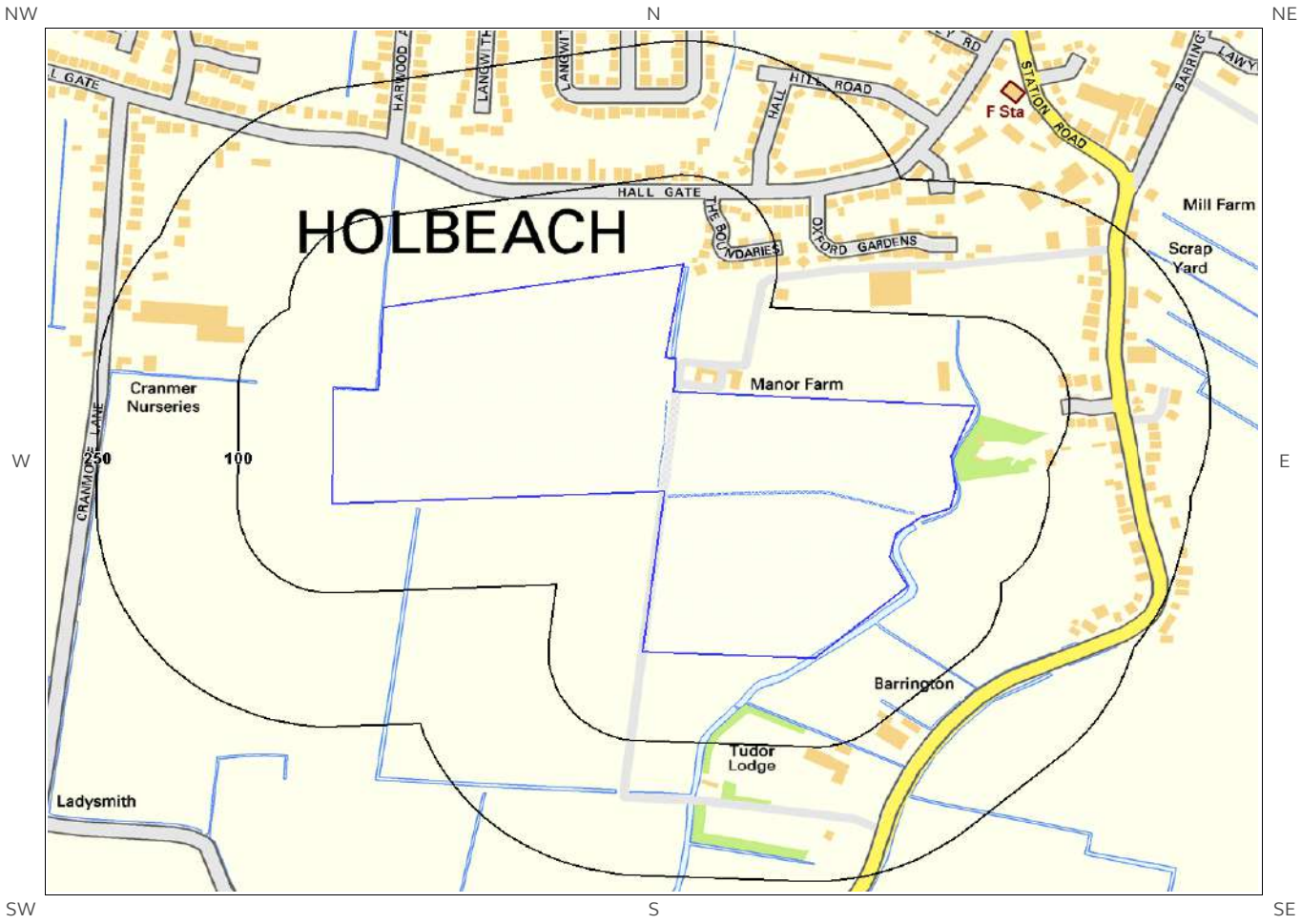
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential 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	Moderate	Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build, consider the consequences of soil and groundwater conditions during and after construction. For existing property, possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.

5 Borehole Records Map



Borehole Records Legend

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Site Outline

Borehole Locations

125
250
Search Buffers (m)

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: 0

Database searched and no data found.

6 Estimated Background Soil Chemistry

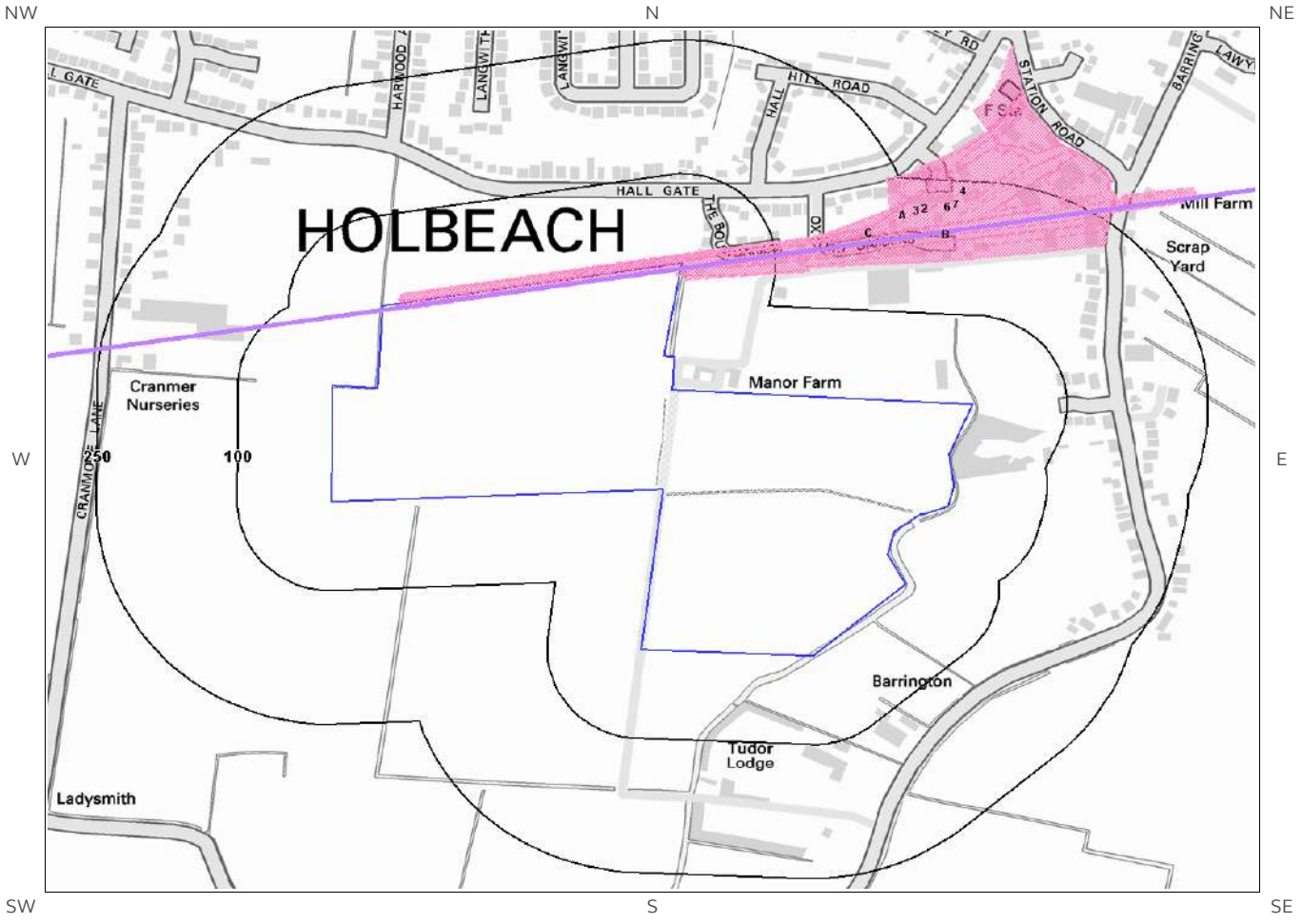
Records of background estimated soil chemistry within 250m of the study site boundary: 14

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 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
0.0	On Site	RuralSoil	<15 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
107.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
109.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
109.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
210.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
214.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
215.0	N	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
234.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
234.0	E	RuralSoil	15 - 25 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
- Search Buffers (m): 250, 500
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- High Speed 2 Revised Proposed Route
- 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? Yes

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

ID	Distance (m)	Direction	NGR	Details	Date
1A	0	On Site	535860 324355	Railway Sidings	1958
2	0	On Site	535806 324358	Railway Sidings	1950
3	0	On Site	535806 324358	Railway Sidings	1903
4	0	On Site	535801 324393	Railway Sidings	1887
5A	0	On Site	535771 324351	Railway Sidings	1938
6	0	N	535761 324357	Railway Sidings	1903

ID	Distance (m)	Direction	NGR	Details	Date
10C	0	On Site	535703 324310	Railway Sidings	1904
11C	0	On Site	535702 324310	Railway Sidings	1932
12C	0	On Site	535739 324323	Railway Sidings	1888
7	1	N	535773 324354	Railway Sidings	1929
8B	108	E	535758 324315	Railway Sidings	1903
9B	108	E	535758 324315	Railway Sidings	1929

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? Yes

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

Distance (m)	Direction	Status
0	On Site	Abandoned

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

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info@geo-matters.com
104 Bondgate, Castle Donington, Derbyshire, DE74 2NR

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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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The Coal Authority

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

Public Health England

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https://www.gov.uk/government/organisations/public-health-england
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Website:**http://www.peterbrett.com/home**

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