

Enviro Insight

Address: Land at, MAYFLOWER WAY, LITTLEHAMPTON, BN16 4AY

Date: 17 Jul 2017

Reference: HMD-137-4090048

Client: Southern Testing Laboratories Ltd HQ



Aerial Photograph Capture date: 07-Jun-2015

Grid Reference: 507262,103274

Site Size: 0.43ha

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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	3	0	16	23
1.2 Additional Information – Historical Tank Database	0	0	26	23
1.3 Additional Information – Historical Energy Features Database	0	0	11	25
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	9
1.6 Potentially Infilled Land	0	1	0	0
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	4	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	1	0
2.2 Records of COMAH and NIHHS sites	0	0	1	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	1	4	1
2.3.2 National Incidents Recording System, List 1	0	0	1	1
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	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/Natural Resources Wales Licensed Waste Sites	0	0	0	0	2	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	1	21	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	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	2	1	5
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	1	Not searched	Not searched

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Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales 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	0	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No					
7.2 Are there any Environment Agency/Natural Resources Wales 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?	High					

Section 8: Designated Environmentally Sensitive Sites

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

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	1	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	1	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?	Low
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?	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?	Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 1 and 3% 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?	Yes
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.

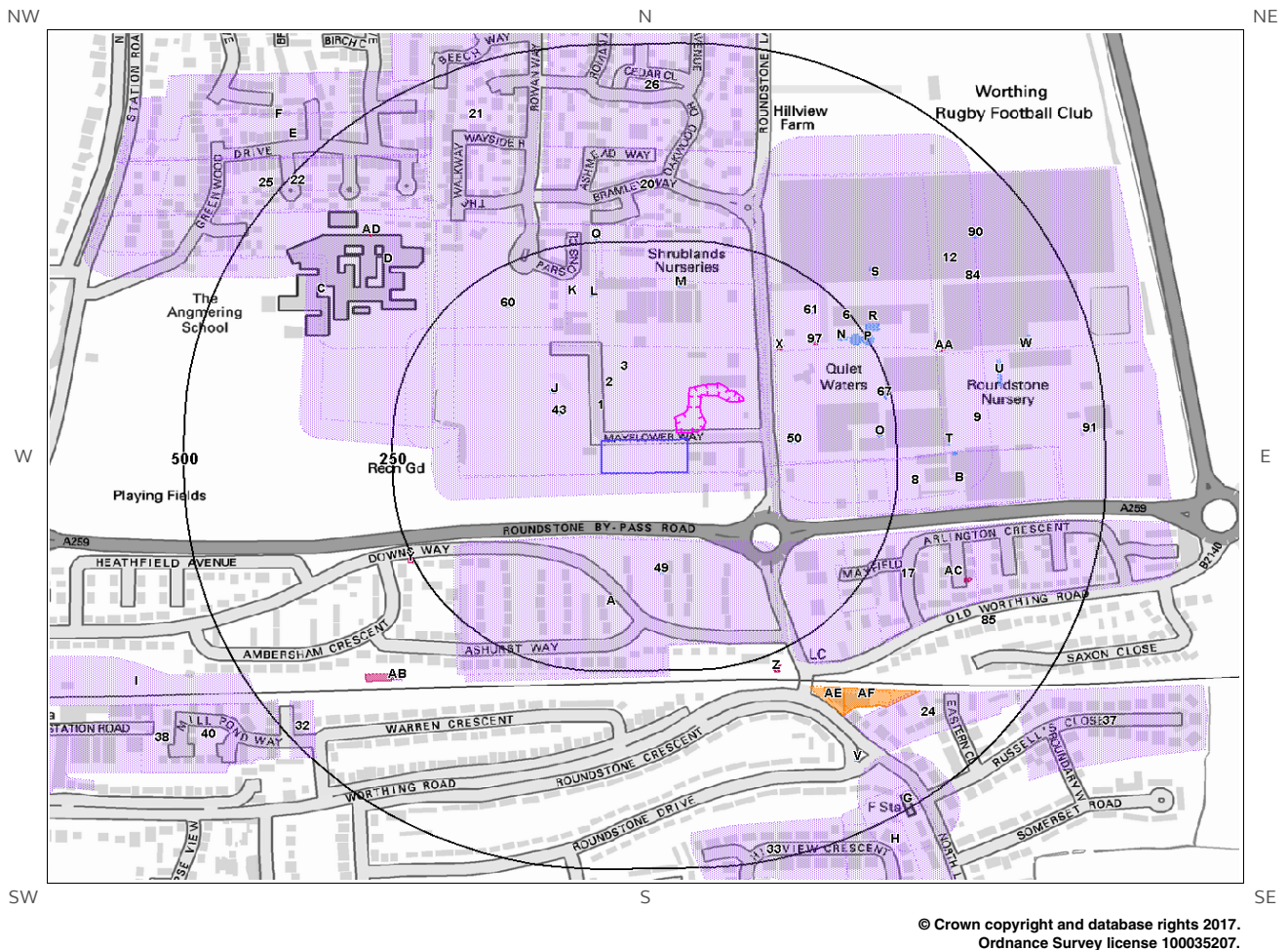
Note: Maps

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



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: 42

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Nursery	1974
2	0	On Site	Nurseries	1957
3	0	On Site	Nurseries	1943
4A	79	S	Nursery	1943
5A	81	S	Nursery	1957
6	95	E	Nursery	1957
7R	98	E	Nursery	1943
8	99	E	Nursery	1957
9	103	E	Nursery	1974
10K	116	N	Nursery	1974
11AC	143	SE	Nursery	1957
12	149	NE	Nursery	1974
13C	177	W	Nursery	1932
14B	199	E	Nursery	1943
15B	199	E	Nursery	1932
16C	203	W	Nursery	1943
17	203	SE	Nursery	1943
18D	239	NW	Nursery	1957
19D	239	NW	Nursery	1974
20	268	N	Nursery	1974
21	286	N	Nursery	1974
22	349	NW	Nursery	1943
23AB	350	SW	Railway Building	1943
24	358	SE	Nursery	1957
25	363	NW	Nursery	1957
26	365	N	Nursery	1974
27E	415	NW	Nursery	1932
28E	416	NW	Nursery	1943
29F	417	NW	Nursery	1974
30F	417	NW	Nursery	1957
31G	427	SE	Fire Station	1943
32	449	SW	Council Yard	1943
33	450	S	Nursery	1943
34H	465	SE	Nursery	1932

35G	477	SE	Fire Engine Station	1957
36G	477	SE	Fire Engine Station	1974
37	482	SE	Nursery	1943
38	482	SW	Unspecified Commercial/Industrial	1974
39H	483	SE	Unspecified Commercial/Industrial	1943
40	487	SW	Unspecified Works	1957
41I	493	SW	Railway Sidings	1974
42I	493	SW	Railway Sidings	1957

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:

49

ID	Distance (m)	Direction	Use	Date
43	58	NW	Unspecified Tank	1942
44J	81	NW	Unspecified Tank	1990
45J	81	NW	Unspecified Tank	1985
46J	81	NW	Unspecified Tank	1970
47J	82	NW	Unspecified Tank	1970
48J	82	NW	Unspecified Tank	1990
49	123	S	Unspecified Tank	1943
50	123	E	Tanks	1990
51K	182	N	Unspecified Tank	1990
52L	183	N	Unspecified Tank	1990
53L	183	N	Unspecified Tank	1985
54L	183	N	Unspecified Tank	1970
55L	183	N	Unspecified Tank	1970
56M	192	N	Unspecified Tank	1990
57M	192	N	Unspecified Tank	1985
58M	193	N	Unspecified Tank	1970
59M	193	N	Unspecified Tank	1970
60	201	NW	Unspecified Tank	1990
61	215	NE	Unspecified Tank	1990
62N	218	NE	Tanks	1990
63N	225	NE	Unspecified Tank	1990
64O	226	E	Unspecified Tank	1990
65O	226	E	Unspecified Tank	1985
66N	230	NE	Unspecified Tank	1990
67	241	E	Unspecified Tank	1978

68P	242	NE	Unspecified Tank	1990
69P	253	NE	Unspecified Tank	1990
70Q	254	N	Unspecified Tank	1990
71Q	254	N	Unspecified Tank	1985
72R	255	NE	Unspecified Tank	1990
73S	302	NE	Unspecified Tank	1985
74S	305	NE	Unspecified Tank	1970
75S	306	NE	Unspecified Tank	1985
76T	312	E	Sewage Tanks	1985
77T	317	E	Unspecified Tank	1970
78T	317	E	Unspecified Tank	1978
79T	317	E	Unspecified Tank	1970
80T	318	E	Unspecified Tank	1990
81T	318	E	Unspecified Tank	1985
82U	379	E	Tanks	1985
83U	379	E	Tanks	1990
84	396	NE	Unspecified Tank	1985
85	406	SE	Unspecified Tank	1943
86V	413	SE	Unspecified Tank	1959
87V	413	SE	Unspecified Tank	1959
88W	420	E	Unspecified Tank	1990
89W	425	E	Unspecified Tank	1990
90	426	NE	Unspecified Tank	1985
91	481	E	Unspecified Tank	1990

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:

36

ID	Distance (m)	Direction	Use	Date
92X	156	NE	Electricity Substation	1990
93X	157	NE	Electricity Substation	1970
94X	157	NE	Electricity Substation	1970
95X	158	NE	Electricity Substation	1985
96X	158	NE	Electricity Substation	1990
97	192	NE	Gas Governor	1990
98Y	250	SW	Electricity Substation	1982
99Y	250	SW	Electricity Substation	1970
100Y	250	SW	Electricity Substation	1969
101Y	250	SW	Electricity Substation	1974
102Y	250	SW	Electricity Substation	1994

103Z	265	SE	Electricity Substation	1990
104Z	265	SE	Electricity Substation	1970
105Z	265	SE	Electricity Substation	1990
106Z	265	SE	Electricity Substation	1985
107Z	265	SE	Electricity Substation	1970
108AA	323	E	Electricity Substation	1978
109AA	323	E	Electricity Substation	1990
110AA	323	E	Electricity Substation	1985
111AB	349	SW	Electricity Substation	1997
112AB	354	SW	Electricity Substation	1970
113AB	354	SW	Electricity Substation	1982
114AB	354	SW	Electricity Substation	1969
115AB	354	SW	Electricity Substation	1974
116AB	354	SW	Electricity Substation	1994
117AC	356	E	Electricity Substation	1985
118AC	356	E	Electricity Substation	1990
119AC	357	E	Electricity Substation	1970
120AC	357	E	Electricity Substation	1978
121AC	357	E	Electricity Substation	1970
122AC	358	E	Electricity Substation	1990
123AC	358	E	Electricity Substation	1985
124AB	358	SW	Electricity Substation	1984
125AB	358	SW	Electricity Substation	1989
126AD	377	NW	Electricity Substation	1994
127AD	378	NW	Electricity Substation	

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 9

ID	Distance (m)	Direction	Use	Date
128AE	308	SE	Garage	1979

129AE	308	SE	Garage	1959
130AE	308	SE	Garage	1969
131AF	317	SE	Garage	1959
132AF	317	SE	Garage	1969
133AF	330	SE	Garage	1994
134AF	333	SE	Garage	1959
135AF	333	SE	Garage	1966
136AE	336	SE	Garage	1976

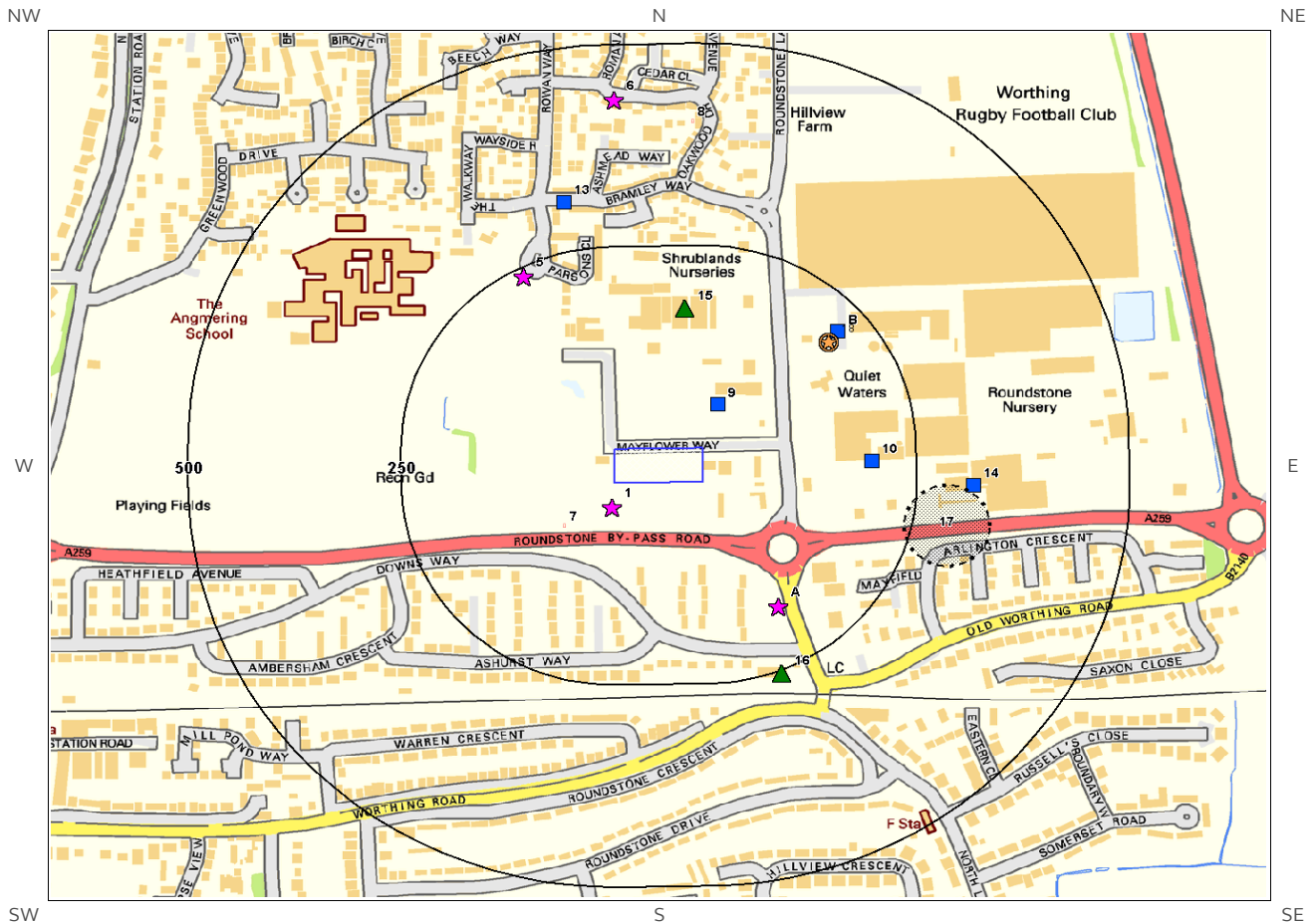
1.6 Potentially Infilled Land

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

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

ID	Distance(m)	Direction	Use	Date
137	7	N	Pond	1974

2. Environmental Permits, Incidents and Registers Map



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2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

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

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details
15	171	N	507291 103467	Address: Town & Country Paving Ltd, Shrublands Nurseries, Roundstone Lane, BN16 4AT Process: concrete & crushing process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
16	257	S	507405 103015	Address: East Preston Laudrette, 132 Downs Way, East Preston, BN16 1AF Process: Dry Cleaning Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

6

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

ID	Distance (m)	Direction	NGR	Details
9	56	N	507330 103350	Address: T & H MOTOR SERVICES, T & H MOTOR SERVICES, MAYFLOWER WAY, ANGMERING, WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P02859 Permit Version: 1 Receiving Water: INTO LAND Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 04/04/1990 Effective Date: 04-Apr-1990 Revocation Date: -
10	197	E	507510 103280	Address: ROUNDSTONE NURSERY, ROUNDSTONE NURSERY, ROUNDSTONE LANE, LITTLEHAMPTON WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P02730 Permit Version: 1 Receiving Water: INTO LAND Status: REVOKED UNDER EPR 2010 Issue date: 25/01/1990 Effective Date: 25-Jan-1990 Revocation Date: 08/10/2013

ID	Distance (m)	Direction	NGR	Details
11B	213	NE	507470 103440	Address: A SEWAGE TREATMENT PLANT SERVNG, A SEWAGE TREATMENT PLANT SERVNG, "WEST END NURSERY",HUMBER VHB LT, ROUNDSTONE LANE, ANGMERING, WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P09757 Permit Version: 2 Receiving Water: INTO LAND Status: VARIED UNDER EPR 2010 Issue date: 21/12/2012 Effective Date: 21-Dec-2012 Revocation Date: -
12B	213	NE	507470 103440	Address: A SEWAGE TREATMENT PLANT SERVNG, A SEWAGE TREATMENT PLANT SERVNG, "WEST END NURSERY",HUMBER VHB LT, ROUNDSTONE LANE, ANGMERING, WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P09757 Permit Version: 1 Receiving Water: INTO LAND Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 10/08/2001 Effective Date: 10-Aug-2001 Revocation Date: 20/12/2012
13	311	N	507150 103600	Address: GREEN PASTURES NURSERY, GREEN PASTURES NURSERY, OFF ROUNDSTONE LANE, EAST PRESTON, LITTLEHAMPTON WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P00873 Permit Version: 1 Receiving Water: INTO LAND Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 17/03/1987 Effective Date: 17-Mar-1987 Revocation Date: 31/03/1997
14	317	E	507630 103250	Address: ROUNDSTONE GARDEN CENTRE, ROUNDSTONE GARDEN CENTRE, ANGMERING, LITTLEHAMPTON, WEST SUSSEX Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: N01461 Permit Version: 1 Receiving Water: FRESHWATER STREAM OR RIVER Status: SURRENDERED UNDER EPR 2010 Issue date: 11/04/1983 Effective Date: 11-Apr-1983 Revocation Date: 26/07/2012

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:

1

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

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
19B	195	NE	A/148/92/HS	507459 103426	Approved	01/01/1992	Roundstone Nurseries, Roundstone Lane, Angmering, BN16 4AT	Application under the Hazardous Substances Act 1992 for the storage of liquified petroleum gas.	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.2 Dangerous or Hazardous Sites

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

1

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
17	241	E	Roundstone Nurseries	Roundstone Nurseries, Roundstone Lane, Angmering	Historical NIHHS Site	-

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

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
1	31	S	507205 103222	Incident Date: 09-Feb-2002 Incident Identification: 57414 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

ID	Distance (m)	Direction	NGR	Details
2A	177	SE	507400 103100	Incident Date: 18-Mar-2003 Incident Identification: 143932 Pollutant: Inert Materials and Wastes:Other Pollutant Pollutant Description: Construction and Demolition Materials and Wastes:Other Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
3A	177	SE	507400 103100	Incident Date: 18-Mar-2003 Incident Identification: 143932 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
4A	177	SE	507400 103100	Incident Date: 18-Mar-2003 Incident Identification: 143932 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
5	239	NW	507102 103508	Incident Date: 17-Oct-2003 Incident Identification: 196731 Pollutant: Contaminated Water Pollutant Description: Urban Run-Off Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
6	431	N	507207 103726	Incident Date: 11-May-2002 Incident Identification: 78070 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

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

2

The following NIRS List 1 records are represented as points on the Environmental Permits, Incidents and Registers Map:

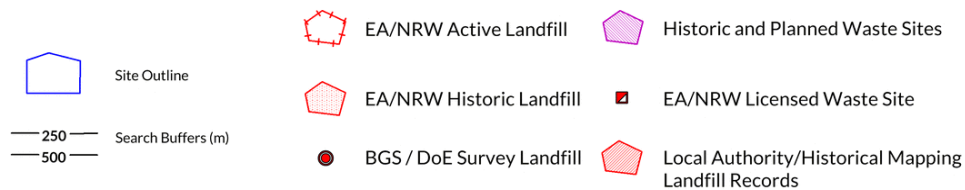
ID	Distance (m)	Direction	NGR	Details
7	80	SW		Incident Date: 30-Jun-2000 Incident Identification: 6666.0 Catchments Name: ARUN Water Description: RIVER STRETCH (FRESHWATER) Water Course: A2 Incident Substantiated: Yes Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: Minor Impact Land Impact: Minor Impact Air Impact: Significant Impact Action Taken: Not Available
8	403	N		Incident Date: 26-May-2001 Incident Identification: 15209.0 Catchments Name: COLNE Water Description: RIVER STRETCH (FRESHWATER) Water Course: GADE / G.U.C. Incident Substantiated: N/A Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: Significant Impact Land Impact: No Impact Air Impact: No Impact Action Taken: Not Available

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

3.1 Landfill Sites

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

0

Database searched and no data found.

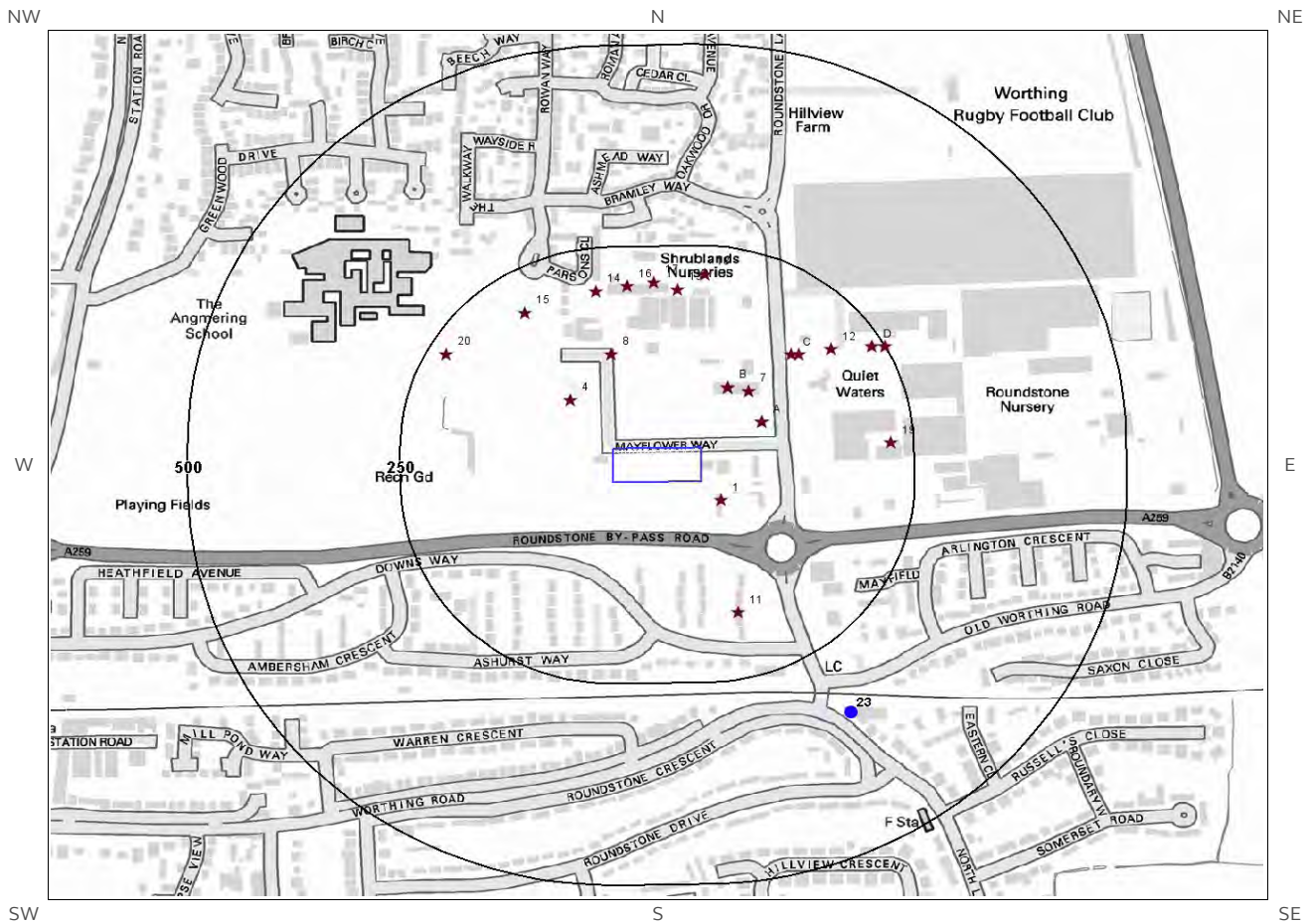
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

2

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	707	SW	506570 102950	Site Address: Arun Works Services, Station Road, East Preston, West Sussex, BN16 3AA Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ARU001 EPR reference: - Operator: Arun District Council Waste Management licence No: 10107 Annual Tonnage: 4999.0	Issue Date: 03/11/1999 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Arun Works Services Correspondence Address: Arun District Council, Station Road, East Preston, West Sussex, BN16 3AA
2A	707	SW	506570 102950	Site Address: Arun Works Services, Station Road, East Preston, West Sussex, BN16 3AA Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ARU001 EPR reference: EA/EPR/AP3790LE/S002 Operator: Arun District Council Waste Management licence No: 10107 Annual Tonnage: 0.0	Issue Date: 03/11/1999 Effective Date: - Modified: - Surrendered Date: 07/05/2009 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Arun Works Services Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

22

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	32	SE	Wood Design	507335 103231	Wood Design, Roundstone by-Pass, Angmering, Littlehampton, BN16 4BD	Furniture	Consumer Products
2A	78	NE	Love Cars Sussex Ltd	507383 103328	Love Cars Sussex Ltd, Mayflower Way, Angmering, Littlehampton, BN16 4AY	Secondhand Vehicles	Motoring
3A	78	NE	Roundstone Car Sales	507383 103328	Roundstone Car Sales, Mayflower Way, Angmering, Littlehampton, BN16 4AY	Secondhand Vehicles	Motoring
4	80	NW	Tank	507158 103356	Tank, BN16	Tanks (Generic)	Industrial Features
5B	81	NE	P H N Motors	507343 103371	P H N Motors, Mayflower Way, Angmering, Littlehampton, BN16 4AY	Scrap Metal Merchants	Recycling Services
6B	81	NE	D & A Motors	507343 103371	D & A Motors, Mayflower Way, Angmering, Littlehampton, BN16 4AY	Vehicle Repair, Testing and Servicing	Repair and Servicing
7	89	NE	Hillsons Ltd	507367 103367	Hillsons Ltd, Roundstone Lane, Angmering, Littlehampton, BN16 4AT	Vehicle Repair, Testing and Servicing	Repair and Servicing
8	118	N	Pylon	507206 103413	Pylon, BN16	Electrical Features	Infrastructure and Facilities
9C	156	NE	Pylon	507418 103412	Pylon, BN16	Electrical Features	Infrastructure and Facilities
10C	163	NE	Electricity Sub Station	507427 103413	Electricity Sub Station, BN16	Electrical Features	Infrastructure and Facilities
11	168	S	The Service Centre	507355 103092	The Service Centre, 121, Downs Way, East Preston, Littlehampton, BN16 1AD	Electrical Equipment Repair and Servicing	Repair and Servicing
12	196	NE	Gas Governor Station	507465 103419	Gas Governor Station, BN16	Gas Features	Infrastructure and Facilities
13	197	N	Works	507284 103493	Works, BN16	Unspecified Works Or Factories	Industrial Features
14	198	N	Works	507188 103491	Works, BN16	Unspecified Works Or Factories	Industrial Features
15	199	NW	Tank	507105 103464	Tank, BN16	Tanks (Generic)	Industrial Features
16	202	N	Works	507225 103497	Works, BN16	Unspecified Works Or Factories	Industrial Features

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
17	206	N	Works	507256 103502	Works, BN16	Unspecified Works Or Factories	Industrial Features
18	215	N	Overland Travel (Sussex) Ltd	507316 103511	Overland Travel (Sussex) Ltd, Roundstone Lane, Angmering, Littlehampton, BN16 4AT	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
19	223	E	Tank	507535 103303	Tank, BN16	Tanks (Generic)	Industrial Features
20	230	NW	Pylon	507012 103413	Pylon, BN16	Electrical Features	Infrastructure and Facilities
21D	236	NE	Tank	507513 103422	Tank, BN16	Tanks (Generic)	Industrial Features
22D	249	NE	Tank	507528 103422	Tank, BN16	Tanks (Generic)	Industrial Features

4.2 Petrol and Fuel Sites

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

1

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
23	336	SE	507488 102968	Obsolete	John Cooper Garages, North Lane, North Lane, Worthing Road, East Preston, Littlehampton, West Sussex, BN16 1BN	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
RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY

5.3 Bedrock and Solid Geology

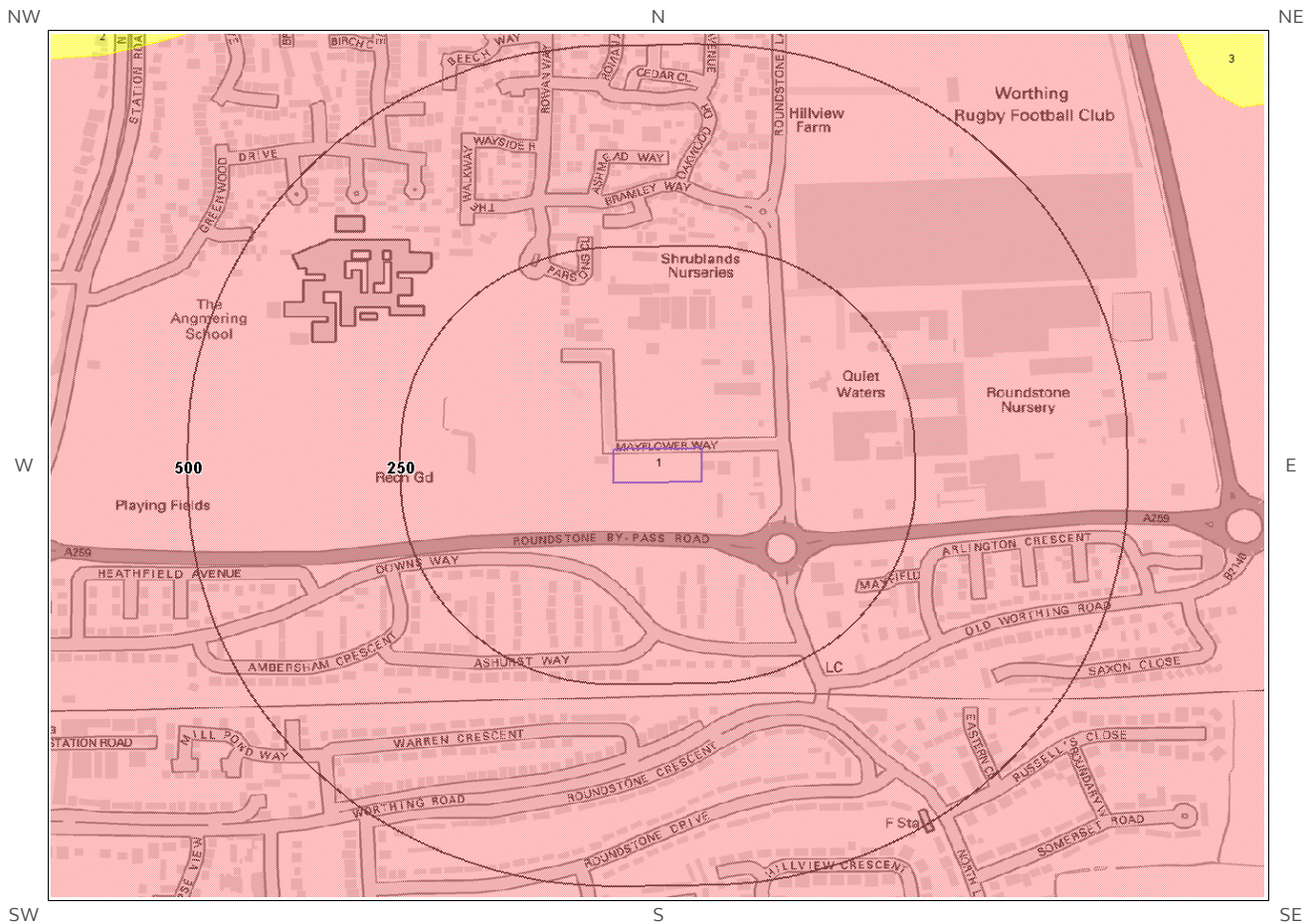
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
NPCH-CHLK	NEW PIT CHALK FORMATION	CHALK

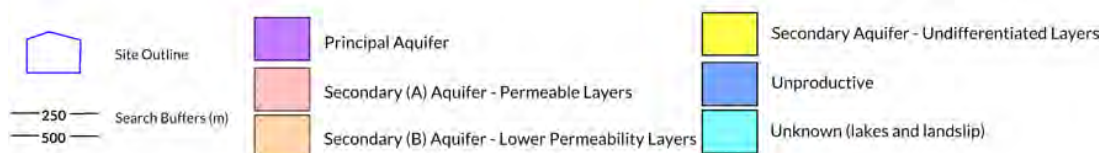
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



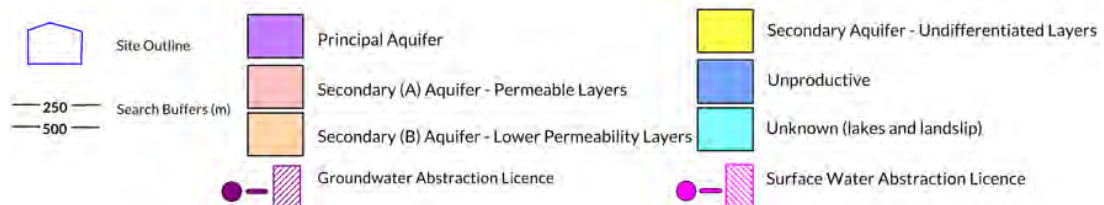
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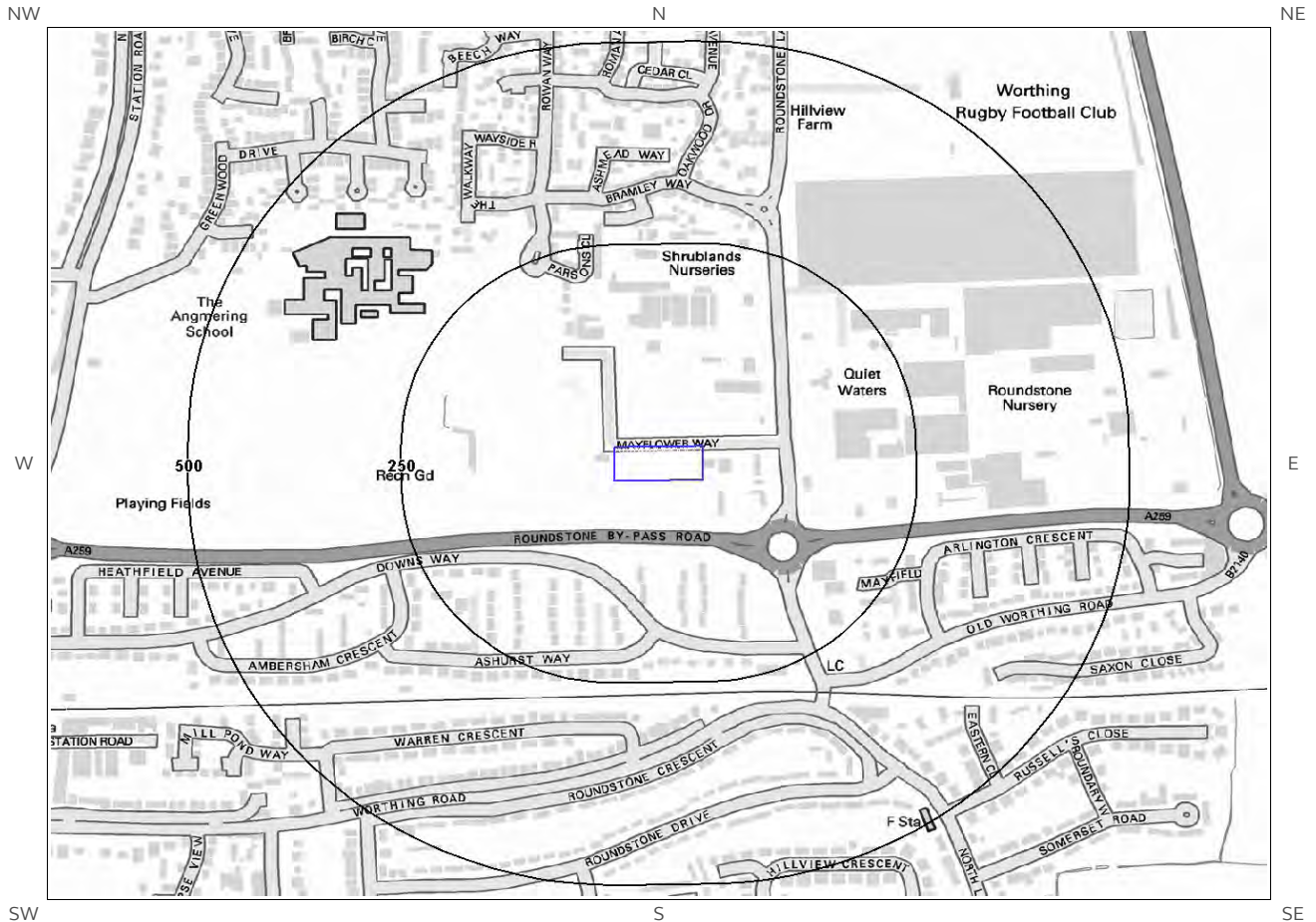
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



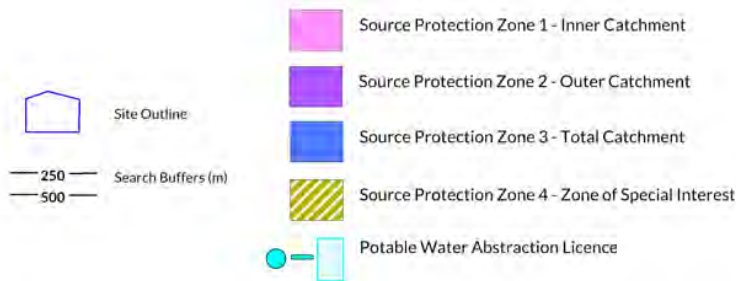
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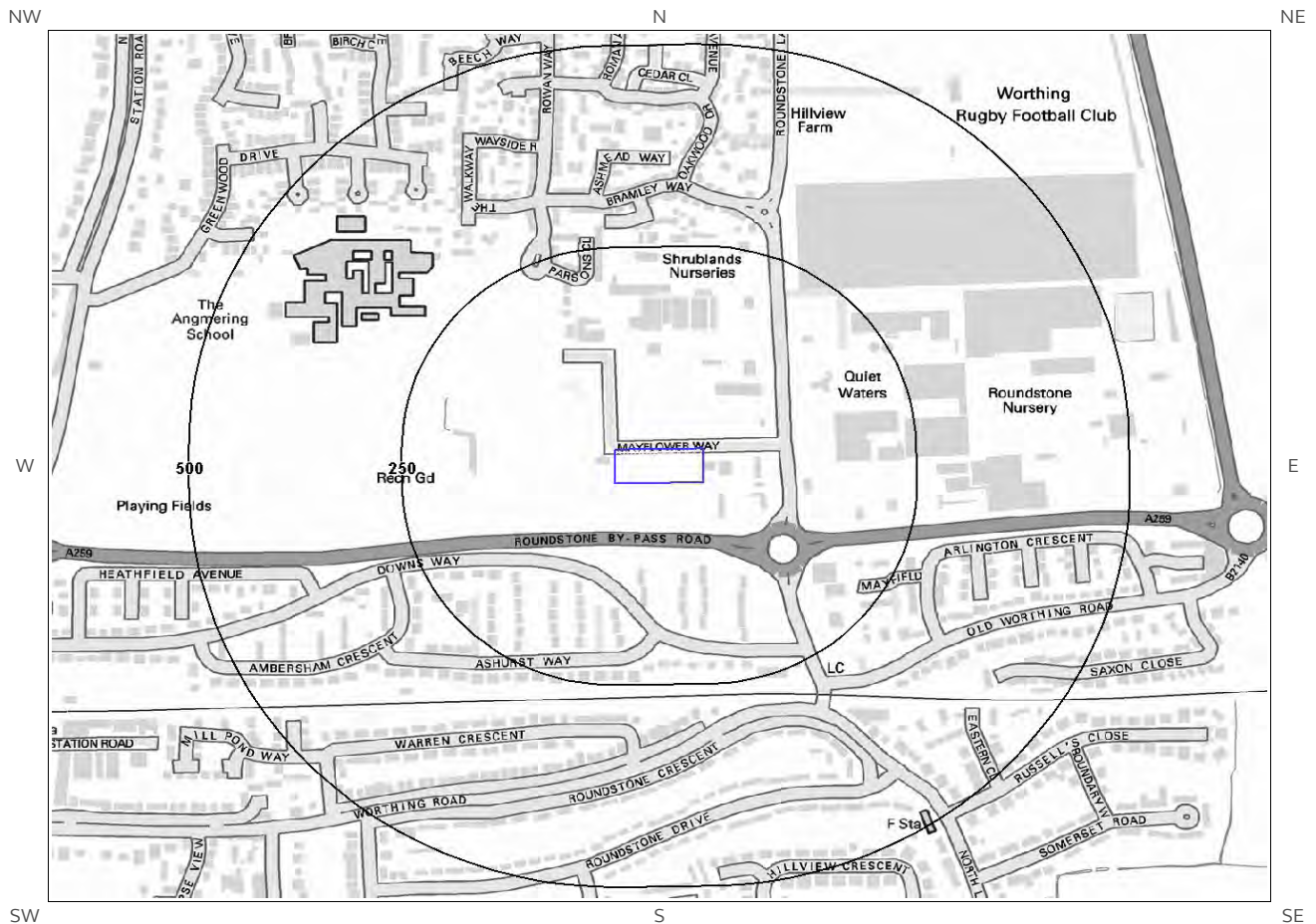
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



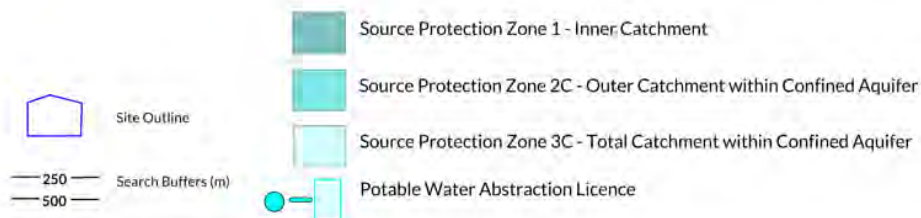
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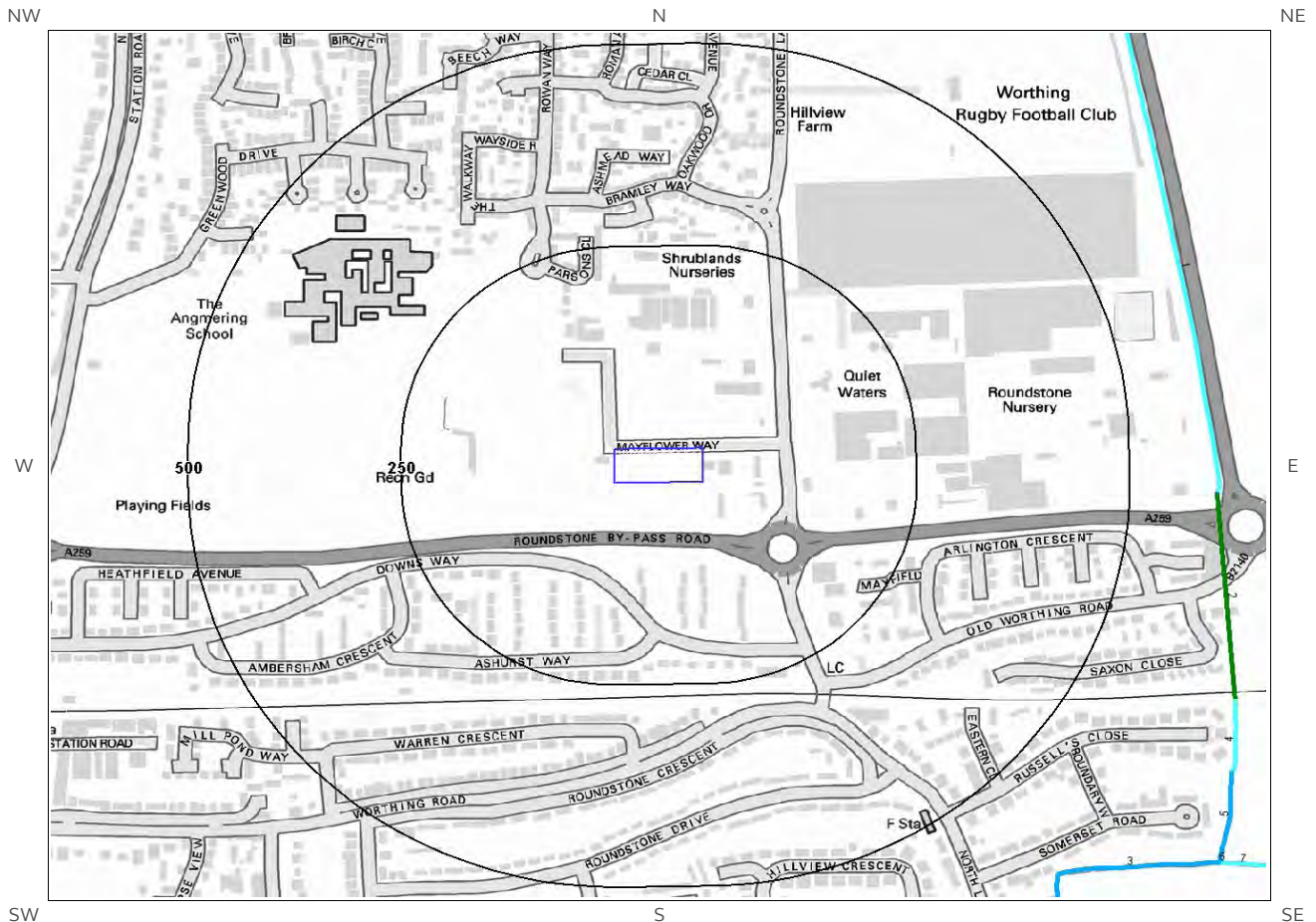
6d. Hydrogeology – Source Protection Zones within confined aquifer



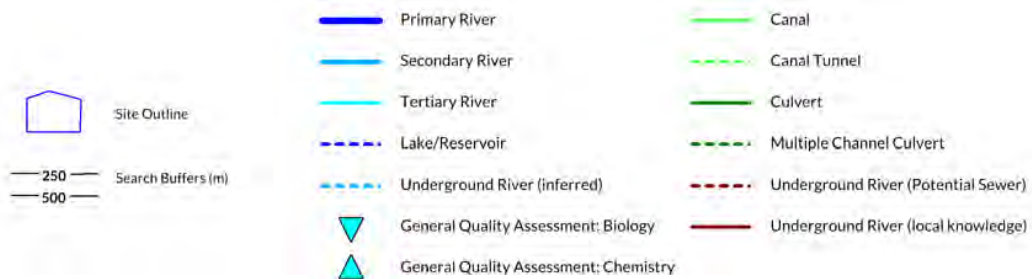
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6e. Hydrology – Detailed River Network and River Quality



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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?
Yes

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

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

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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
2	326	NE	507540 103530	Status: Historical Licence No: 10/41/414002 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: West End Nurseries Data Type: Point Name: Van Heyningen Bros. Ltd Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.0392 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 11/1/1966 Version End Date:
3	327	E	507640 103240	Status: Active Licence No: 10/41/310106 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Roundstone Nursery Data Type: Point Name: Roundstone Garden Centre Ltd Annual Volume (m ³): 18200 Max Daily Volume (m ³): 191 Original Application No: WR.0596 Original Start Date: 27/1/1966 Expiry Date: - Issue No: 101 Version Start Date: 8/5/2015 Version End Date:
Not shown	530	N	507140 103820	Status: Historical Licence No: 10/41/414018 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: Fresh Acres Nurseries Data Type: Point Name: Fresh Acres Nurseries Ltd Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.0295 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 19/7/1967 Version End Date:
Not shown	1465	NW	505870 103890	Status: Active Licence No: 10/41/414009 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Black Ditch At Ham Manor Golf Club Data Type: Point Name: Ham Manor Golf Club Ltd Annual Volume (m ³): 11783 Max Daily Volume (m ³): 109.1 Original Application No: WR.0187 Original Start Date: 7/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/3/2016 Version End Date:
Not shown	1511	NE	508580 104120	Status: Active Licence No: 10/41/310112 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Roundstone Farm Ferring Data Type: Point Name: Langmead Annual Volume (m ³): 77270 Max Daily Volume (m ³): 1820 Original Application No: 169/0753 Original Start Date: 3/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 8/6/2009 Version End Date:
Not shown	1611	E	508900 103570	Status: Historical Licence No: 10/41/310103 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: Reynards Nursery Data Type: Point Name: Fox Esq Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.0061 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/1/1971 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1772	SW	505630 102450	Status: Historical Licence No: 10/41/310009 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Aquadom Station Road Rustington Borehole 1 Data Type: Point Name: Southern Water Services Ltd Annual Volume (m³): 150018 Max Daily Volume (m³): 636.4 Original Application No: WR.0683 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 8/6/2009 Version End Date:
Not shown	1772	SW	505630 102450	Status: Historical Licence No: 10/41/310009 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Aquadom Station Road Rustington Borehole 2 Data Type: Point Name: Southern Water Services Ltd Annual Volume (m³): 150018 Max Daily Volume (m³): 636.4 Original Application No: WR.0683 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 8/6/2009 Version End Date:

6.4 Surface Water Abstraction Licences

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

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1571	W	505620 104190	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Black Ditch At Ham Manor Farm Rustington Data Type: Line Name: Rustington Golf Centre Ltd Annual Volume (m³): 31822 Max Daily Volume (m³): 3000 Application No: WR.0761 Original Start Date: 8/3/1966 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2016 Version End Date:
Not shown	1571	W	505620 104190	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Black Ditch At Ham Manor Farm Rustington Data Type: Line Name: Rustington Golf Centre Ltd Annual Volume (m³): 31822 Max Daily Volume (m³): 3000 Application No: WR.0761 Original Start Date: 8/3/1966 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2016 Version End Date:

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
Not shown	1772	SW	505630 102450	Status: Historical Licence No: 10/41/310009 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Aquadom Station Road Rustington Borehole 1 Data Type: Point Name: Southern Water Services Ltd Annual Volume (m ³): 150018 Max Daily Volume (m ³): 636.4 Original Application No: WR.0683 Original Start Date: - 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/Natural Resources Wales 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.
319	W	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales 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? No

Database searched and no data found.

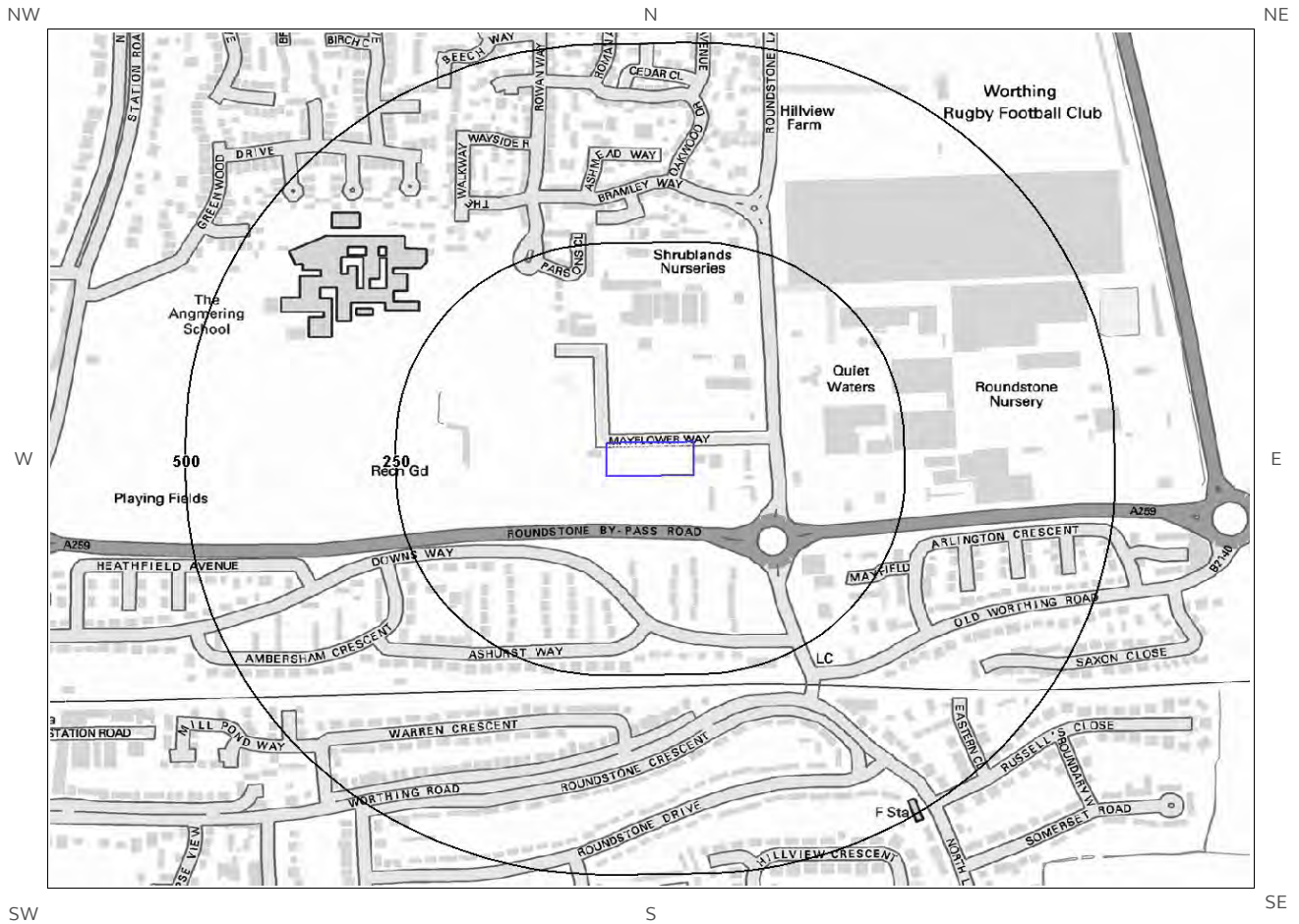
6.11 Surface Water Features

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
195	W

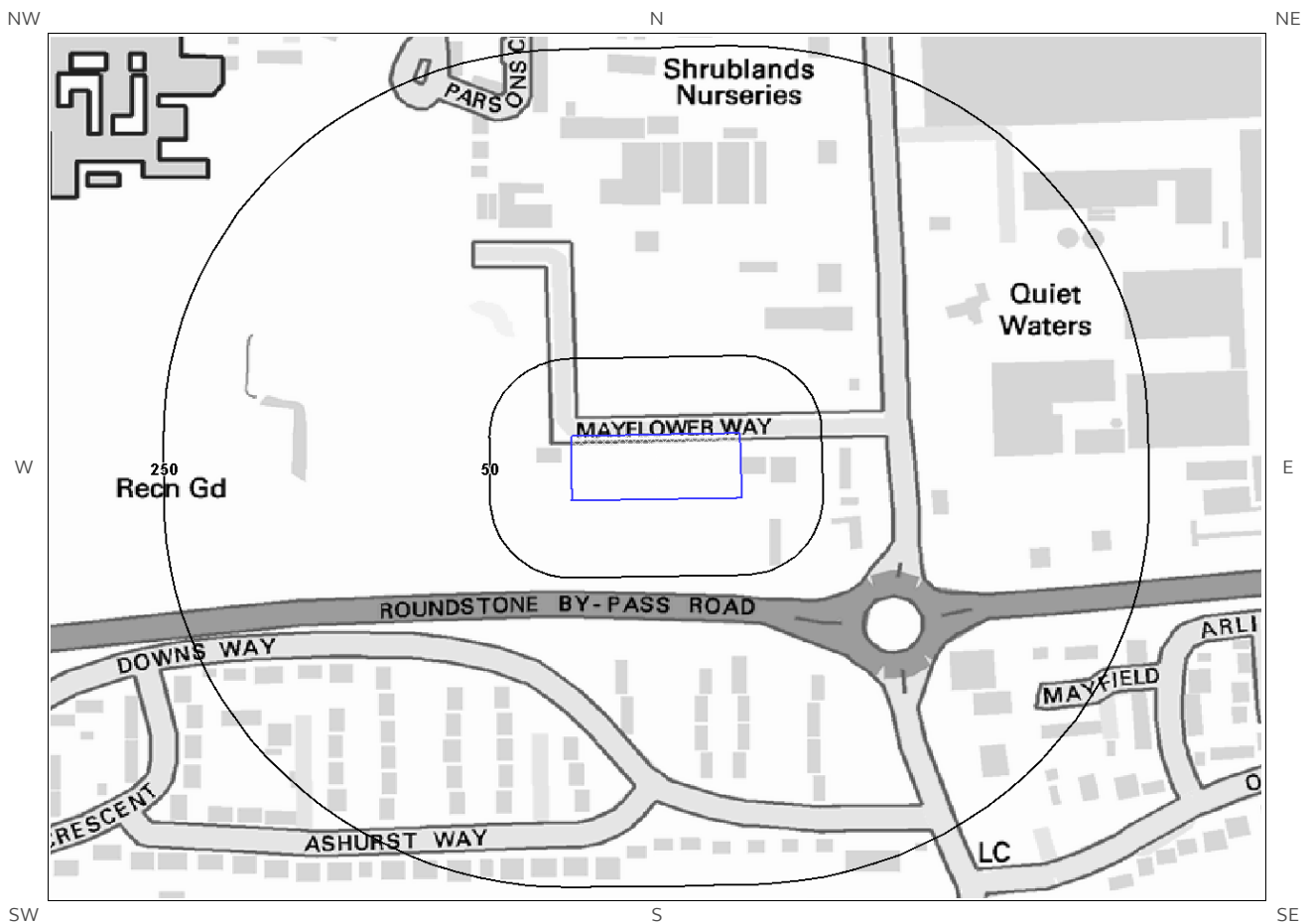
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



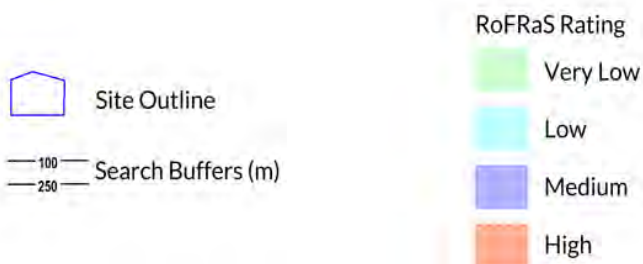
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? No

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

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales 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/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

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

7.4 Flood Defences

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

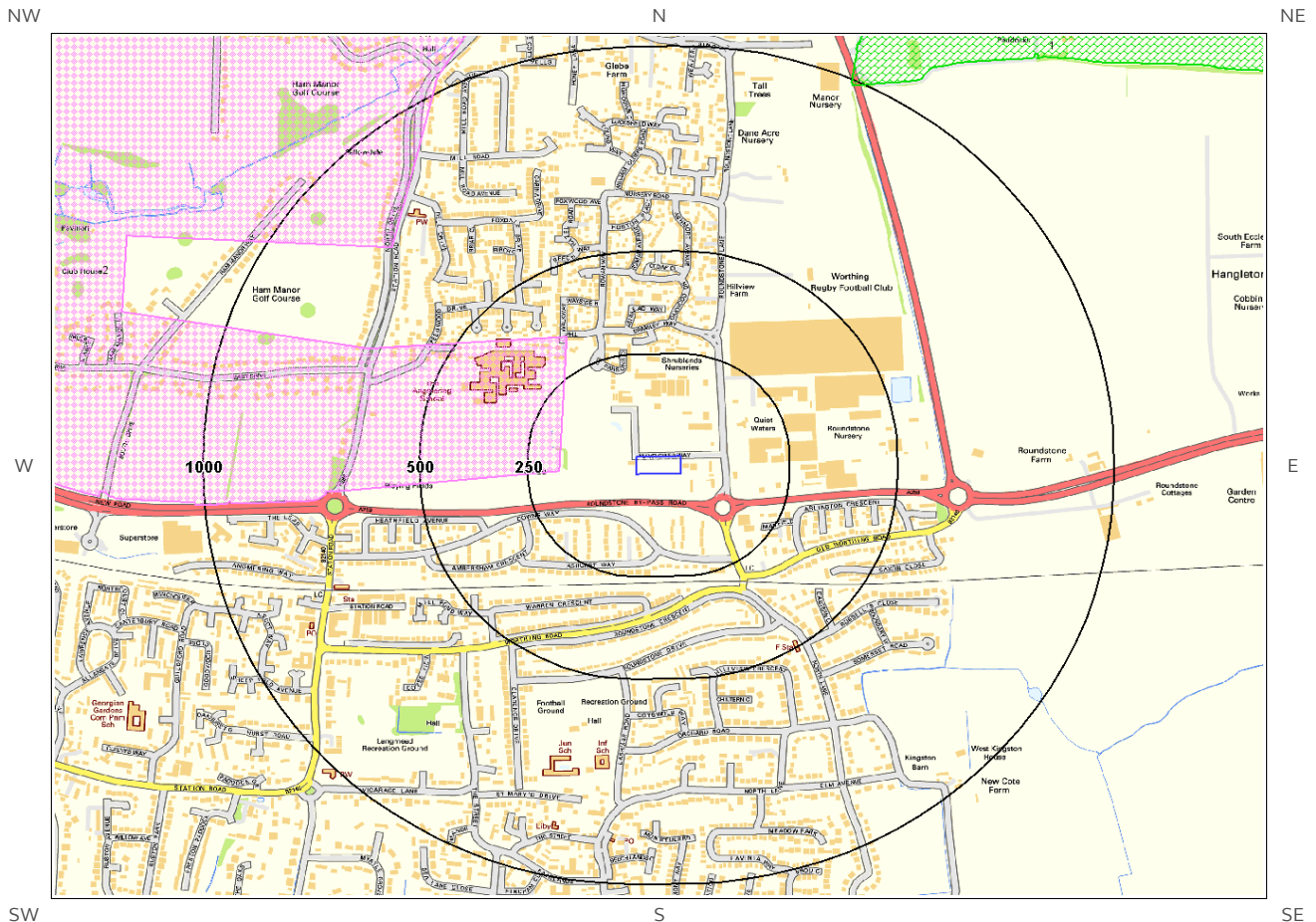
What is the British Geological Survey confidence rating in this result?

High

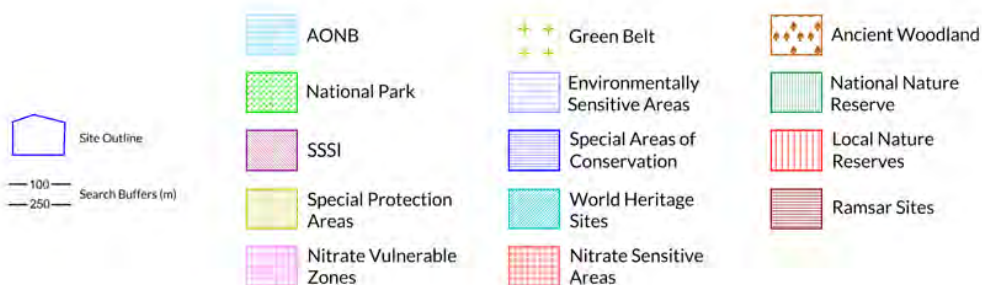
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

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:

1

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1833	N	UNKNOWN	Ancient and Semi-Natural Woodland

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:

1

The following National Park records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NP Name	Data Source
1	988	NE	South Downs	Natural England

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	NVZ Name	Data Source
2	176	W	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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? 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? Low

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

Hazard
Slight possibility for collapsible deposit problems after major changes in loading or groundwater conditions. Normal maintenance to avoid large amounts of water entering the ground through pipe leakage or soak-aways should reduce the likelihood of problems due to collapsible deposits. For new build, assess the possibility of collapsible (loessic) deposits in ground investigation. For existing property, no significant increase in insurance risk from collapsible deposits is likely.

9.1.6 Running Sand

What is the maximum Running Sand** 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
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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 in a Radon Affected Area, as between 1 and 3% 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? Yes

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

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

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

10.3 Brine Affected Areas

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



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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>



Southern Testing Laboratories Ltd HQ
Keeble House, Stuart Way,
East Grinstead, RH19 4QA

Groundsure Reference: HMD-137-4090049
Your Reference: J13227DK_ANGMERING

Report Date 17 Jul 2017

Report Delivery Method: Email - pdf

Geo Insight

Address: Land at, MAYFLOWER WAY, LITTLEHAMPTON, BN16 4AY

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: Land at, MAYFLOWER WAY, LITTLEHAMPTON, BN16 4AY

Date: 17 Jul 2017

Reference: HMD-137-4090049

Client: Southern Testing Laboratories Ltd HQ

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 07-Jun-2015

Grid Reference: 507262,103274

Site Size: 0.43ha

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Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and 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 of faults within 500m of the study site boundary at 1:10,000 scale?	Yes
Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults

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

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

Yes

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

Yes

Section 3: Radon

3. Radon

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

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

On-site

0-50m

51-250

251-500

501-1000

4.1 Historical Surface Ground Working Features from Small Scale Mapping

0

1

0

Not Searched

Not Searched

4.2 Historical Underground Workings from Small Scale Mapping

0

0

0

0

0

4.3 Current Ground Workings

0

0

0

0

0

Section 5: Mining, Extraction & Natural Cavities

On-site

0-50m

51-250

251-500

501-1000

5.1 Historical Mining

0

0

0

0

0

5.2 Coal Mining

0

0

0

0

0

5.3 Johnson Poole and Bloomer Mining Area

0

0

0

0

0

5.4 Non-Coal Mining*

1

0

0

0

0

5.5 Non-Coal Mining Cavities

0

0

0

0

0

5.5 Natural Cavities

0

0

0

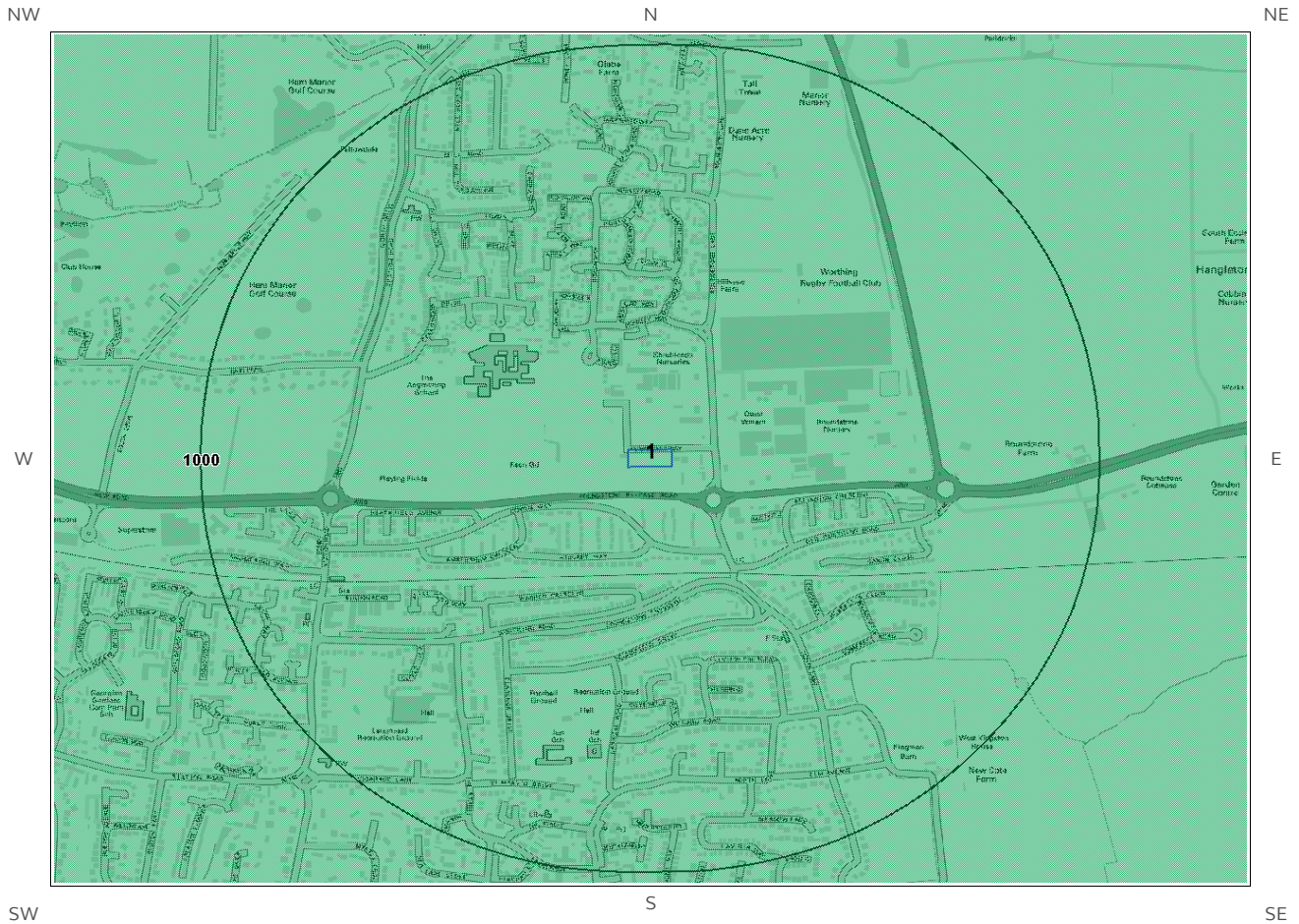
0

0

Report Reference: HMD-137-4090049
Client Reference: J13227DK_ANGMERING

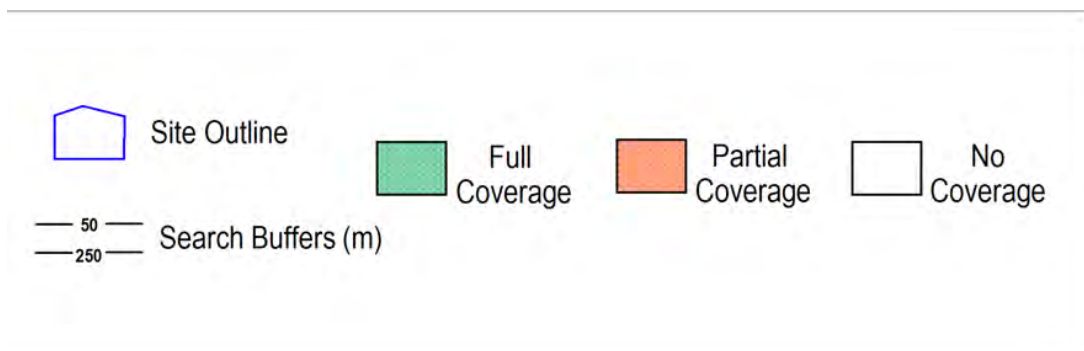
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Low				
6.2 Landslides	Very Low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

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	Full	Full	No coverage
N2	1703.0	Some deposits are mapped	Full	Full	Some deposits are mapped

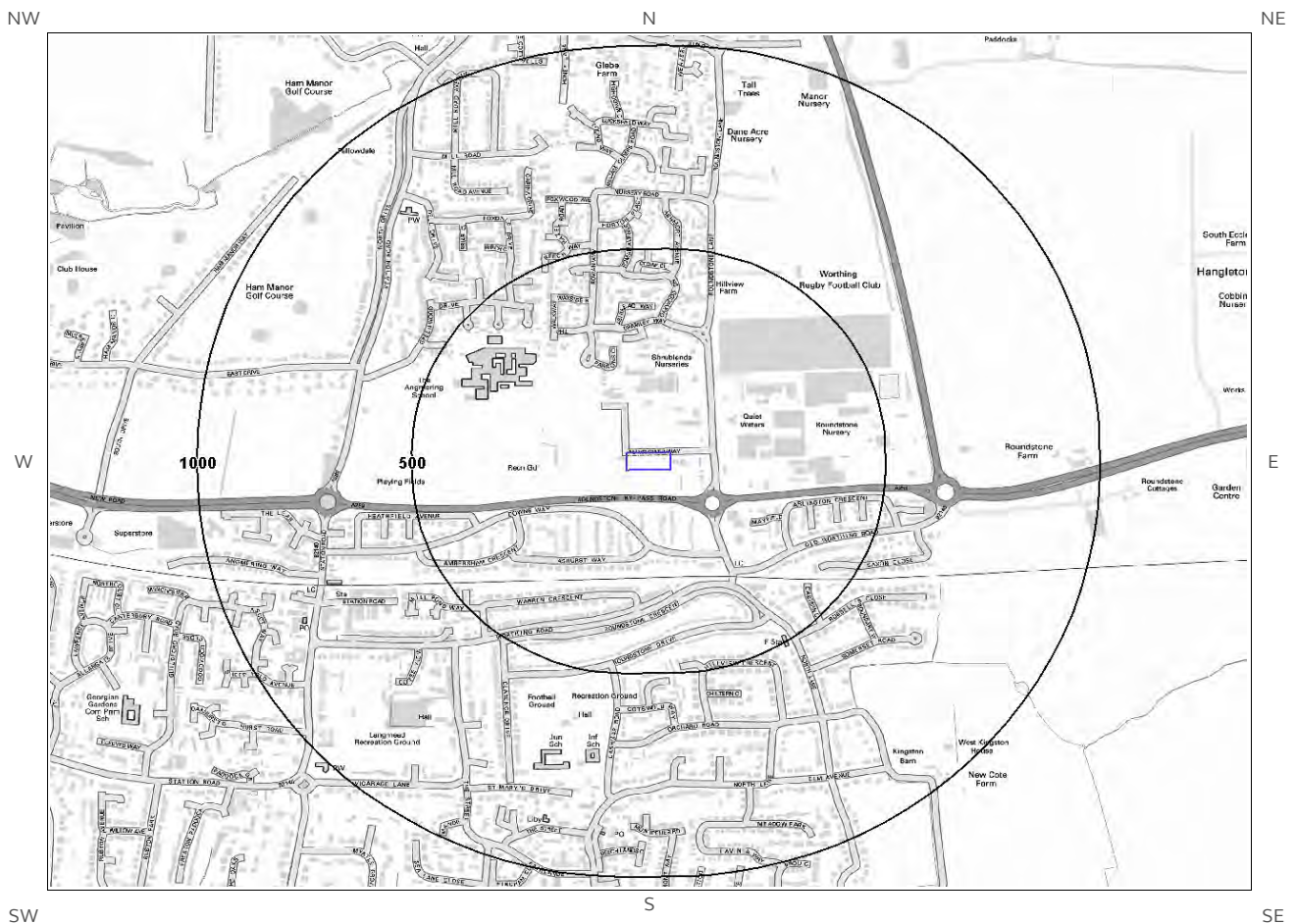
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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1. Geology 1:10,000 scale

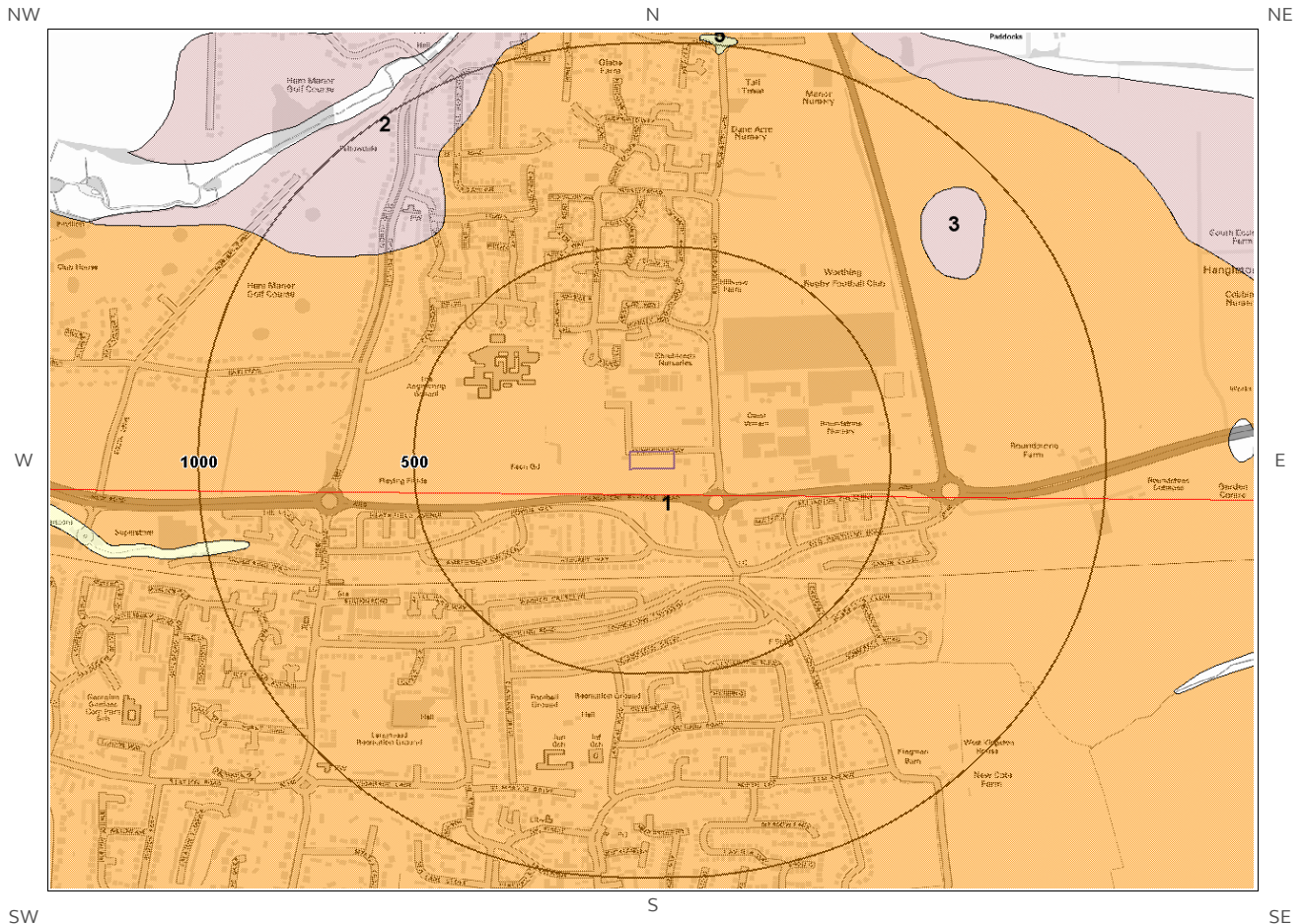
1.1 Artificial Ground

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

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

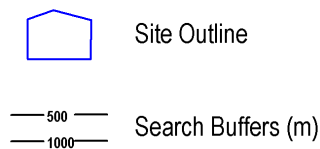
Database searched and no data found.

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



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	BRK-Z	Brickearth - Silt	Silt

1.2.2 Landslip

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

Database searched and no data found.

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

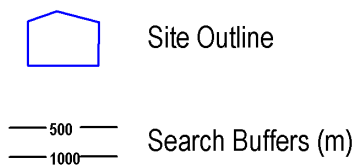
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and Faults Map (1:10,000 scale)



Bedrock and Faults Legend

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1.3 Bedrock and Faults

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	NPCH-CHLK	New Pit Chalk Formation - Chalk	Turonian Age
2	78.0	N	LPCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portsdown Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age

1.3.2 Faults

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

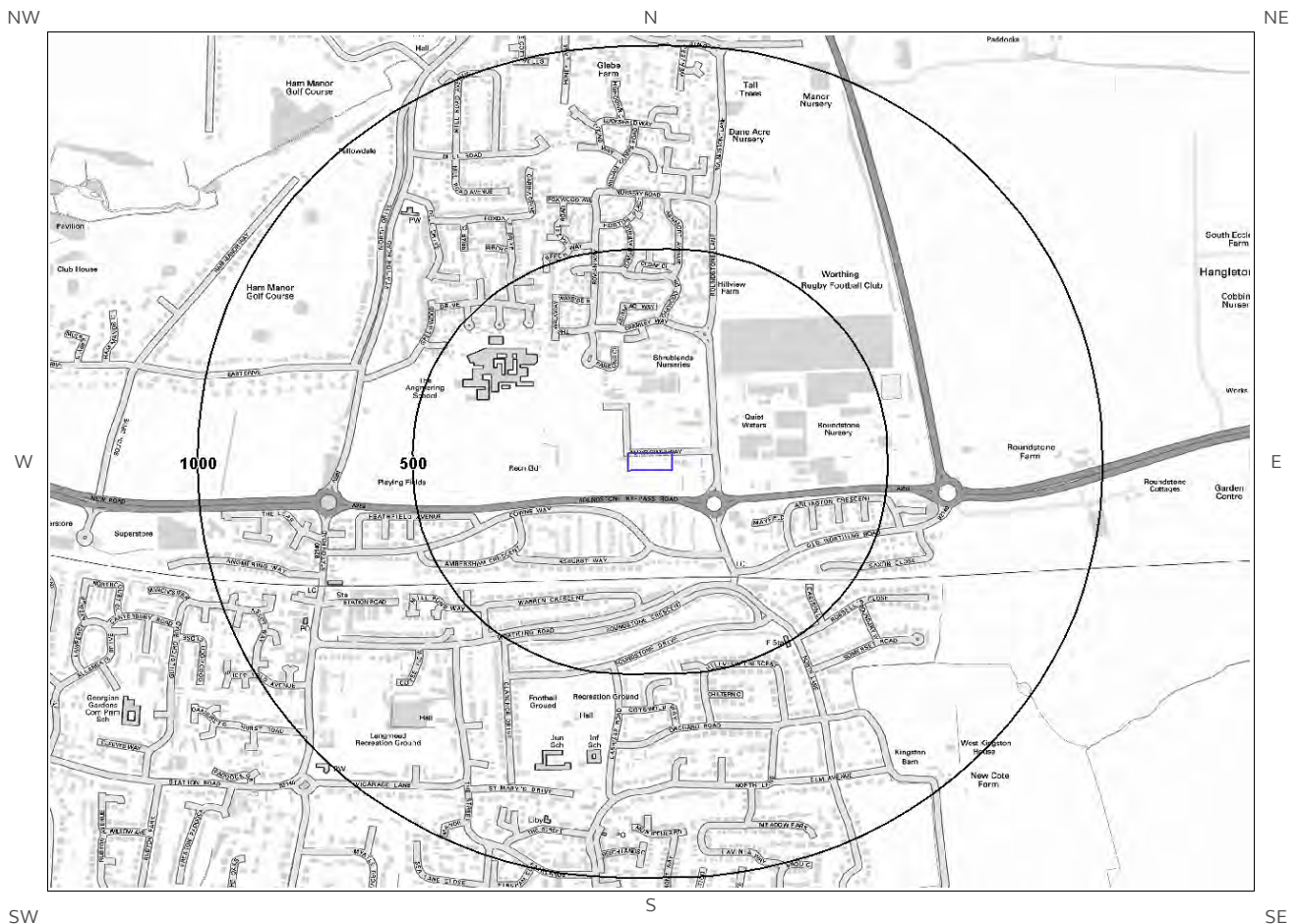
ID	Distance (m)	Direction	Category Description	Feature Description
3	406.0	S	FOLD_AXIS	Axial plane trace of major anticline

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

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground Map



Ground Workings Legend

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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 317

2.1.1 Artificial/ Made Ground

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

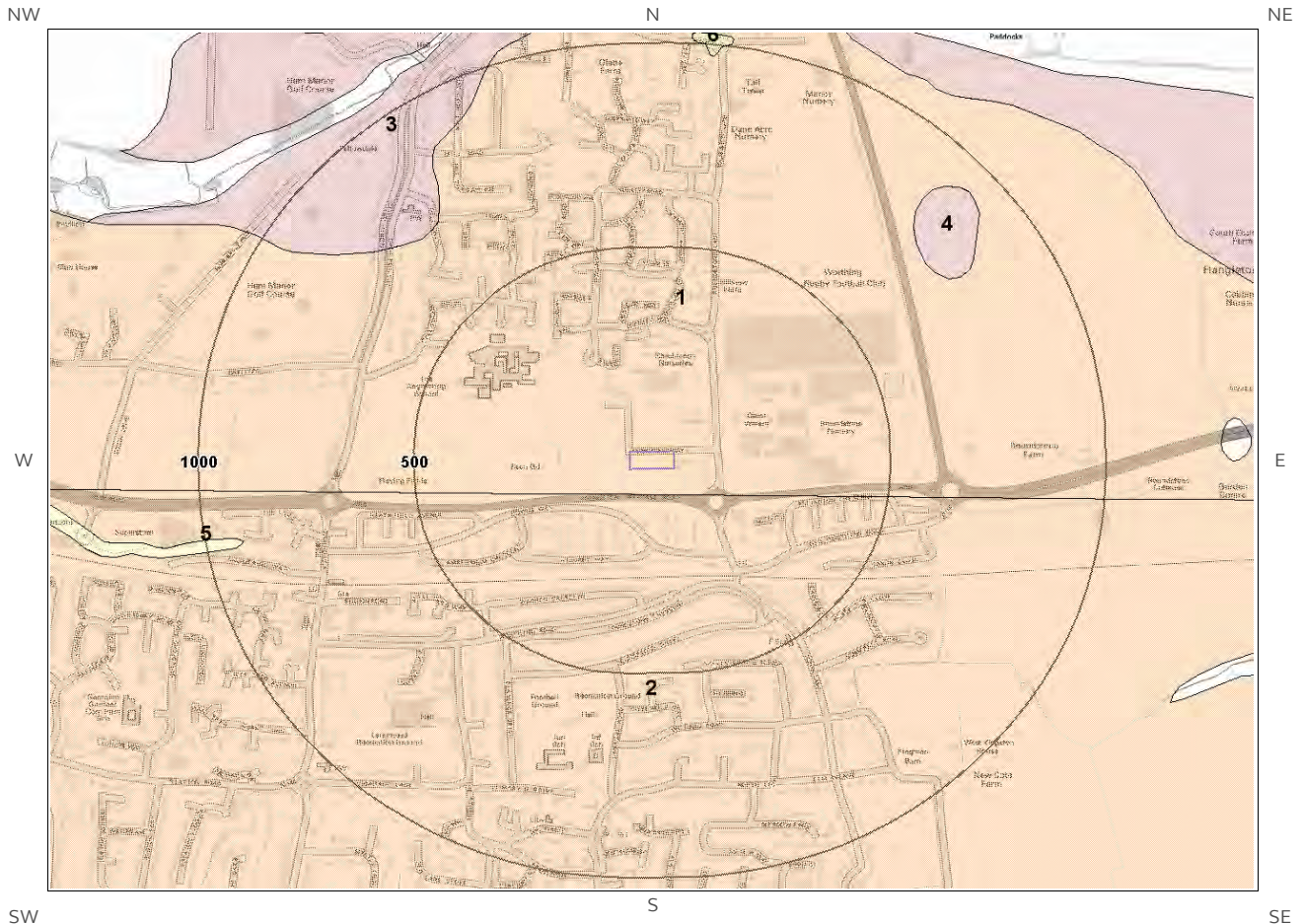
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

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

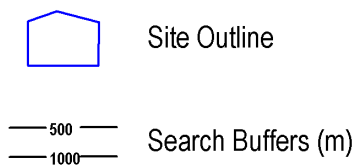
Database searched and no data found.

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



Ground Workings Legend

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2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY
2	61.0	S	RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

Database searched and no data found.

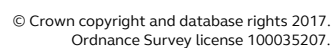
The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

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

2.2.4 Landslip Permeability

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

Database searched and no data found.



Report Reference: HMD-137-4090049
Client Reference: J13227DK ANGMERING

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 317

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	NPCH-CHLK	NEW PIT CHALK FORMATION - CHALK	TURONIAN
2	61.0	S	NPCH-CHLK	NEW PIT CHALK FORMATION - CHALK	TURONIAN
3	78.0	N	LPCK-CHLK	LEWES NODULAR CHALK FORMATION, SEAFORD CHALK FORMATION, NEWHAVEN CHALK FORMATION, CULVER CHALK FORMATION AND PORTSDOWN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	TURONIAN

2.3.2 Permeability of Bedrock Ground

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

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

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
4	409.0	S	FOLD_AXIS	Axial plane trace of major anticline

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

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

3 Radon Data

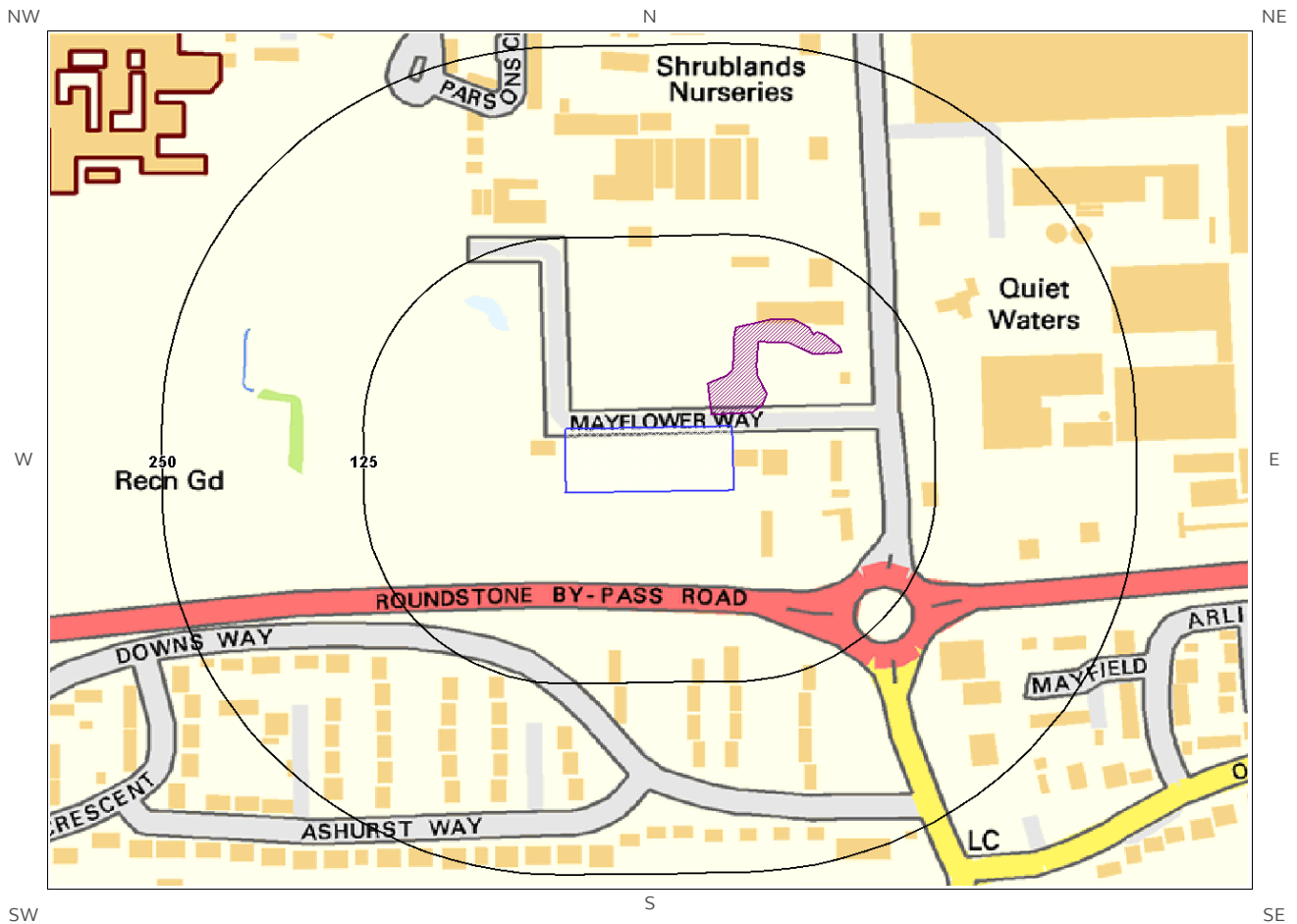
3.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

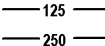
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings Map



Ground Workings Legend

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

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	7.0	N	507319 103335	Pond	1974

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

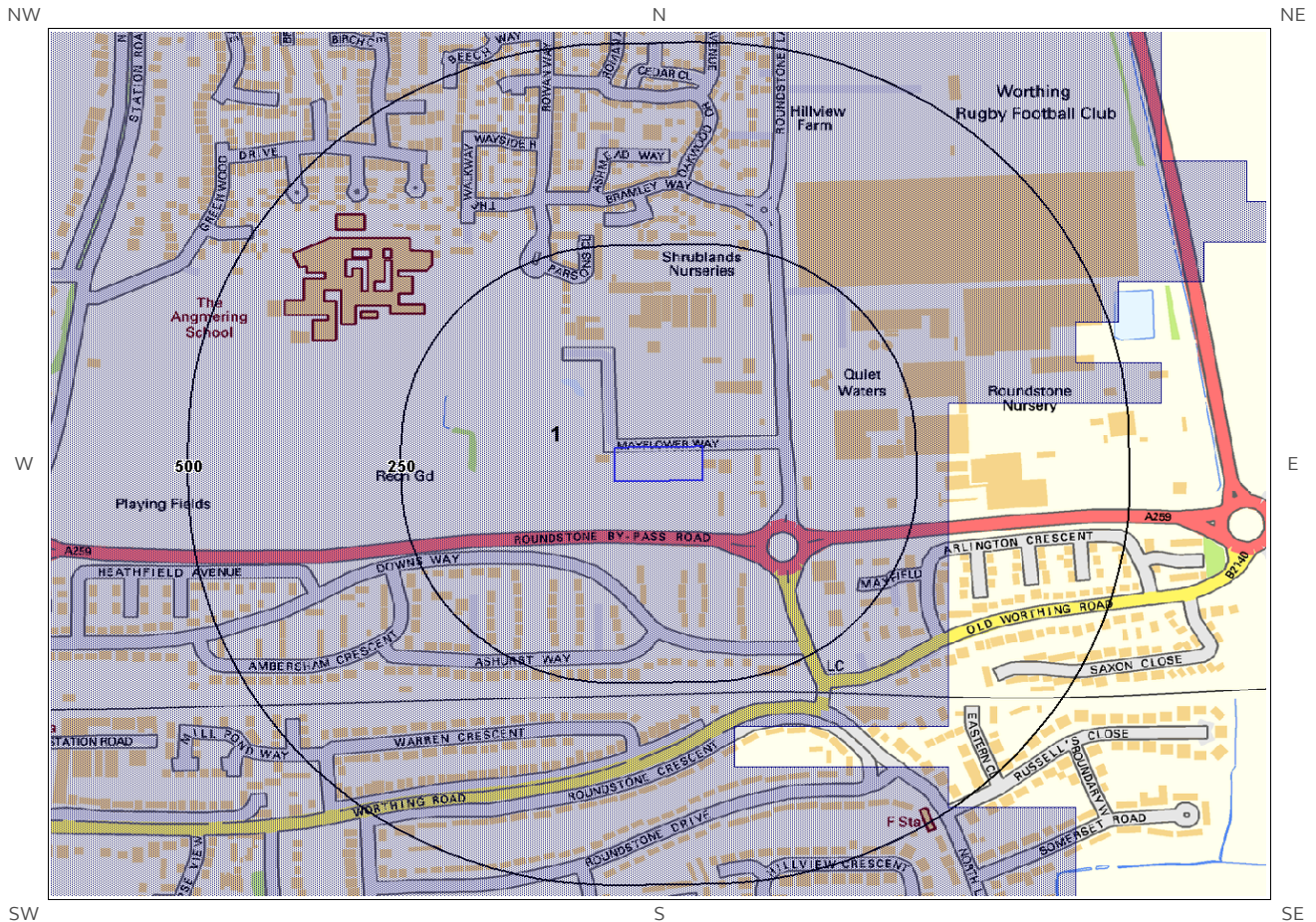
4.3 Current Ground Workings

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

Are there any BGS Current Ground Workings within 1000m of the study site boundary? No

Database searched and no data found.

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and
Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

Database searched and no data found.

5.2 Coal Mining

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

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

Database searched and no data found.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

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

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

5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 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.

5.7 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.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 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.

5.10 Clay Mining

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

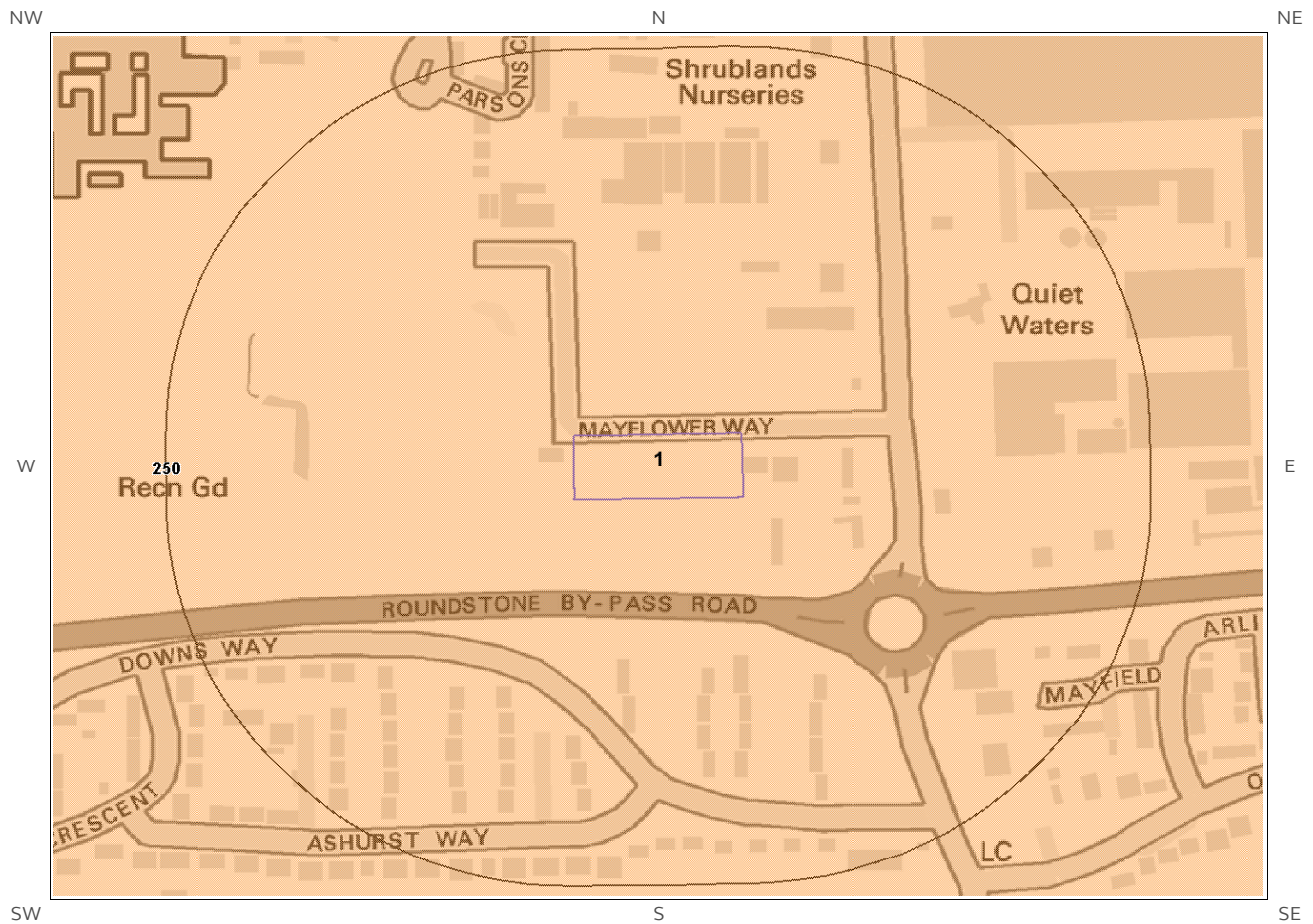
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map

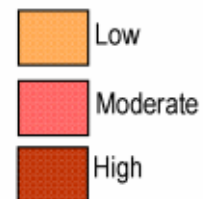
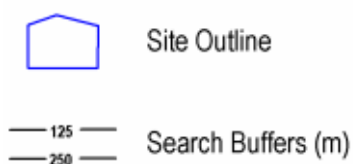
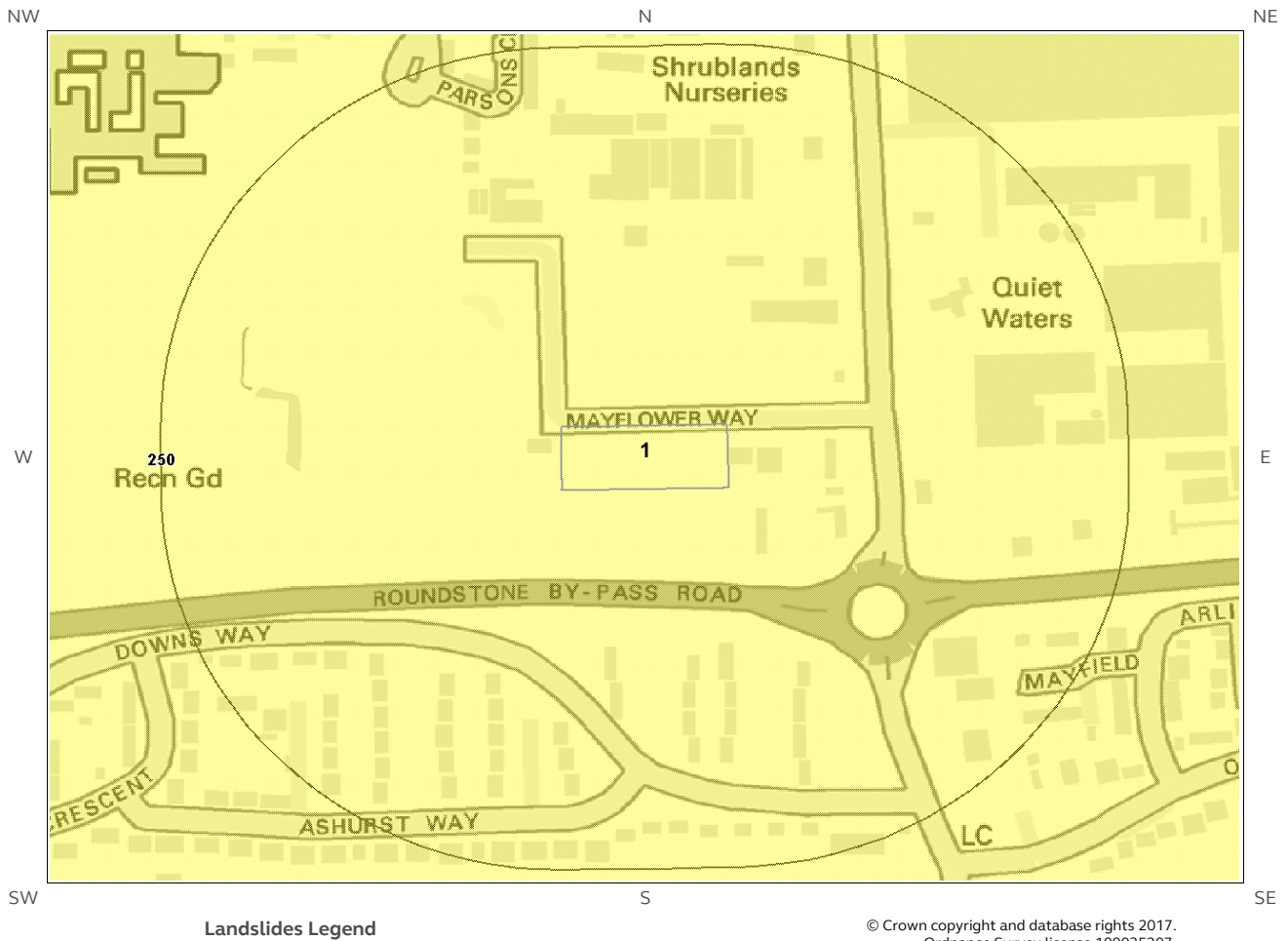


Shrink Swell Clay Legend

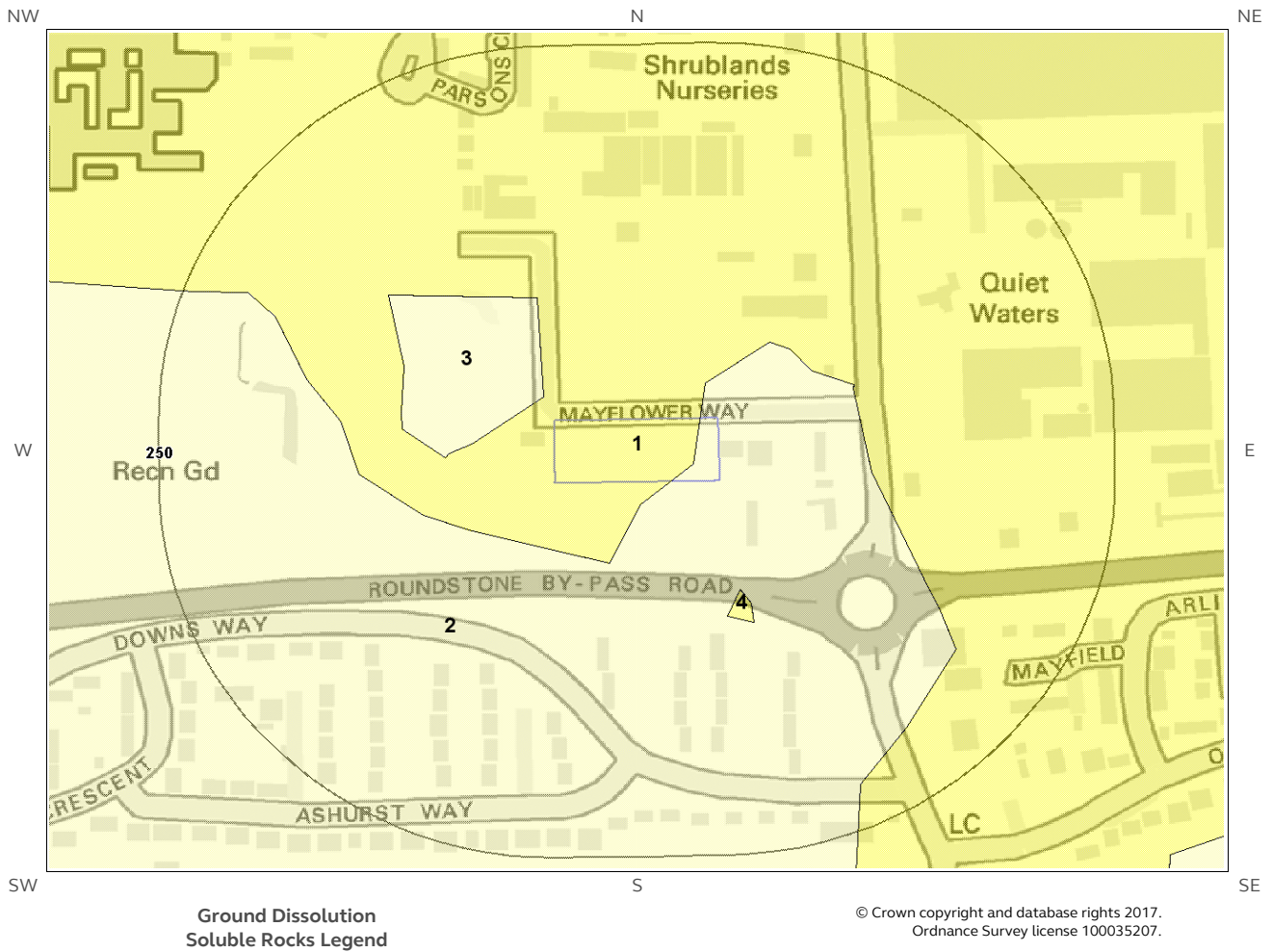
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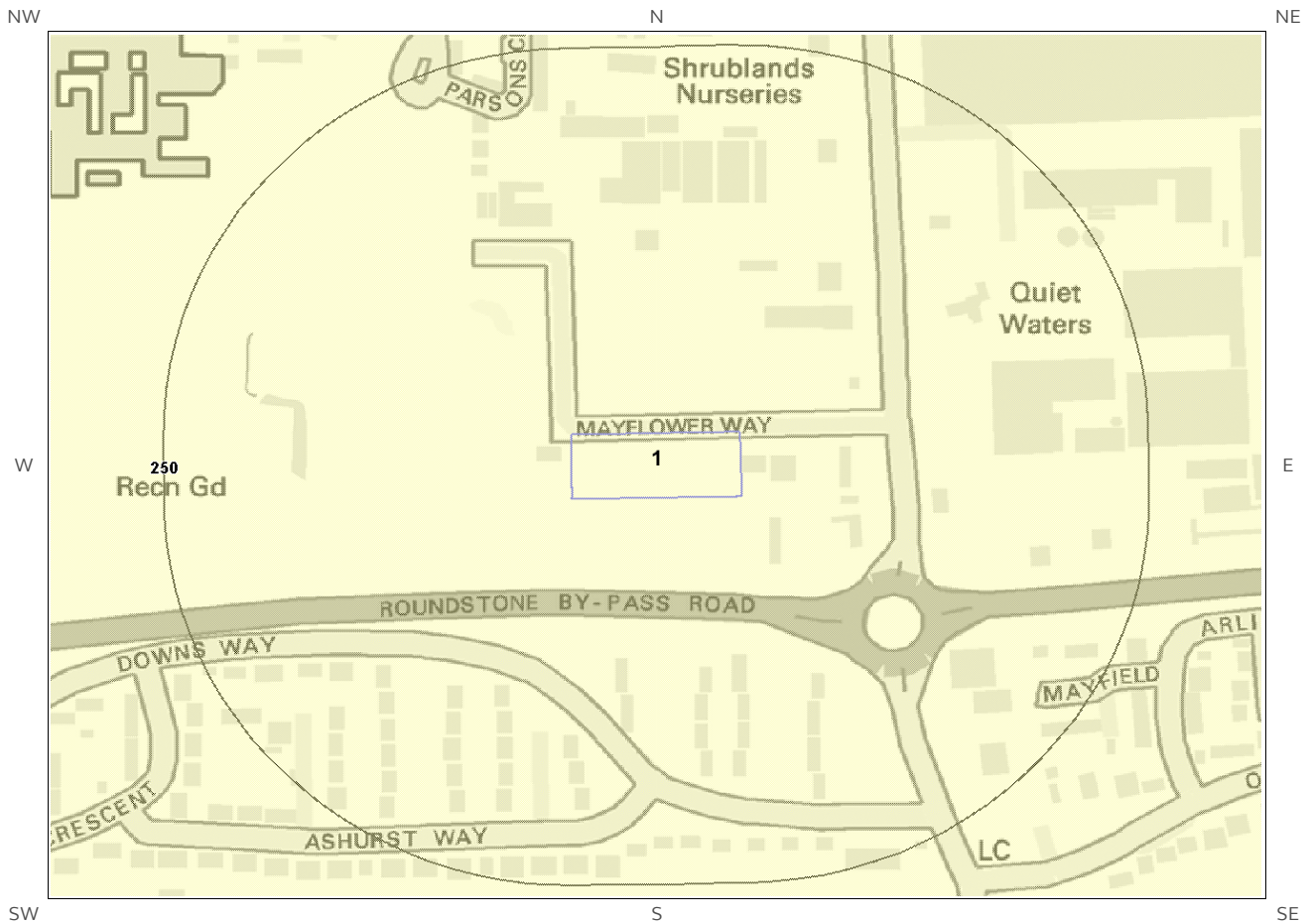
6.2 Landslides Map



6.3 Ground Dissolution of Soluble Rocks Map

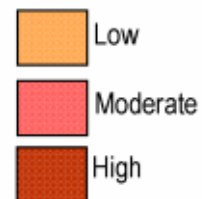
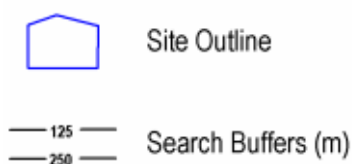


6.4 Compressible Deposits Map

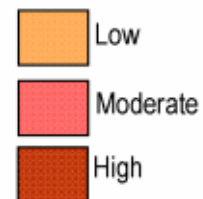
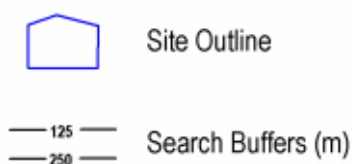
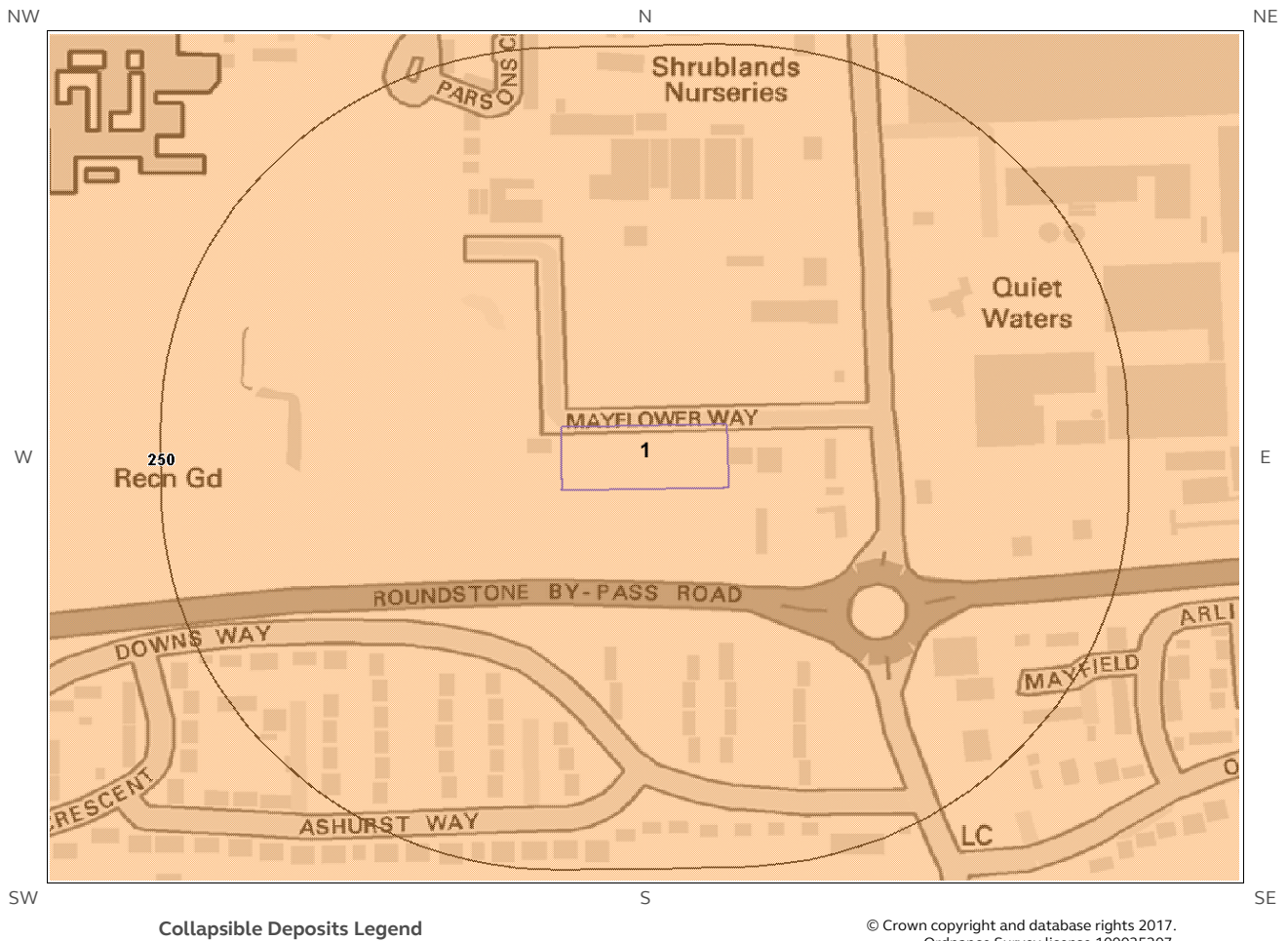


Compressible Deposits Legend

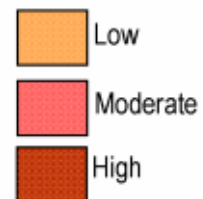
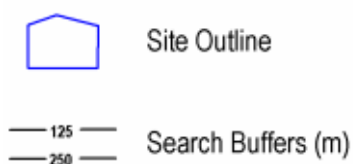
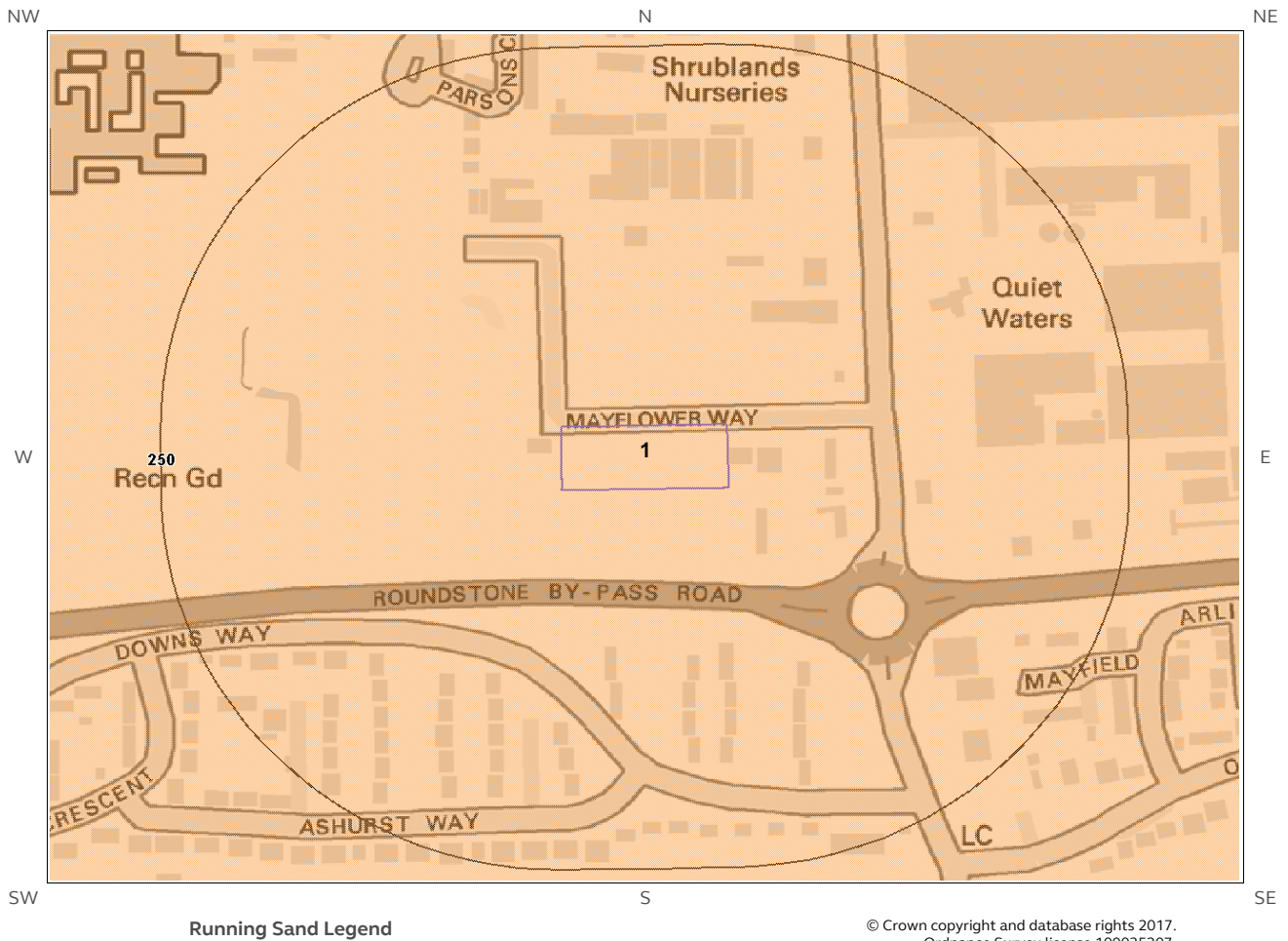
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6.5 Collapsible Deposits Map



6.6 Running Sand Map



6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	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.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	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.
2	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.
3	17.0	NW	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.

6.4 Compressible Deposits

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

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

6.5 Collapsible Deposits

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

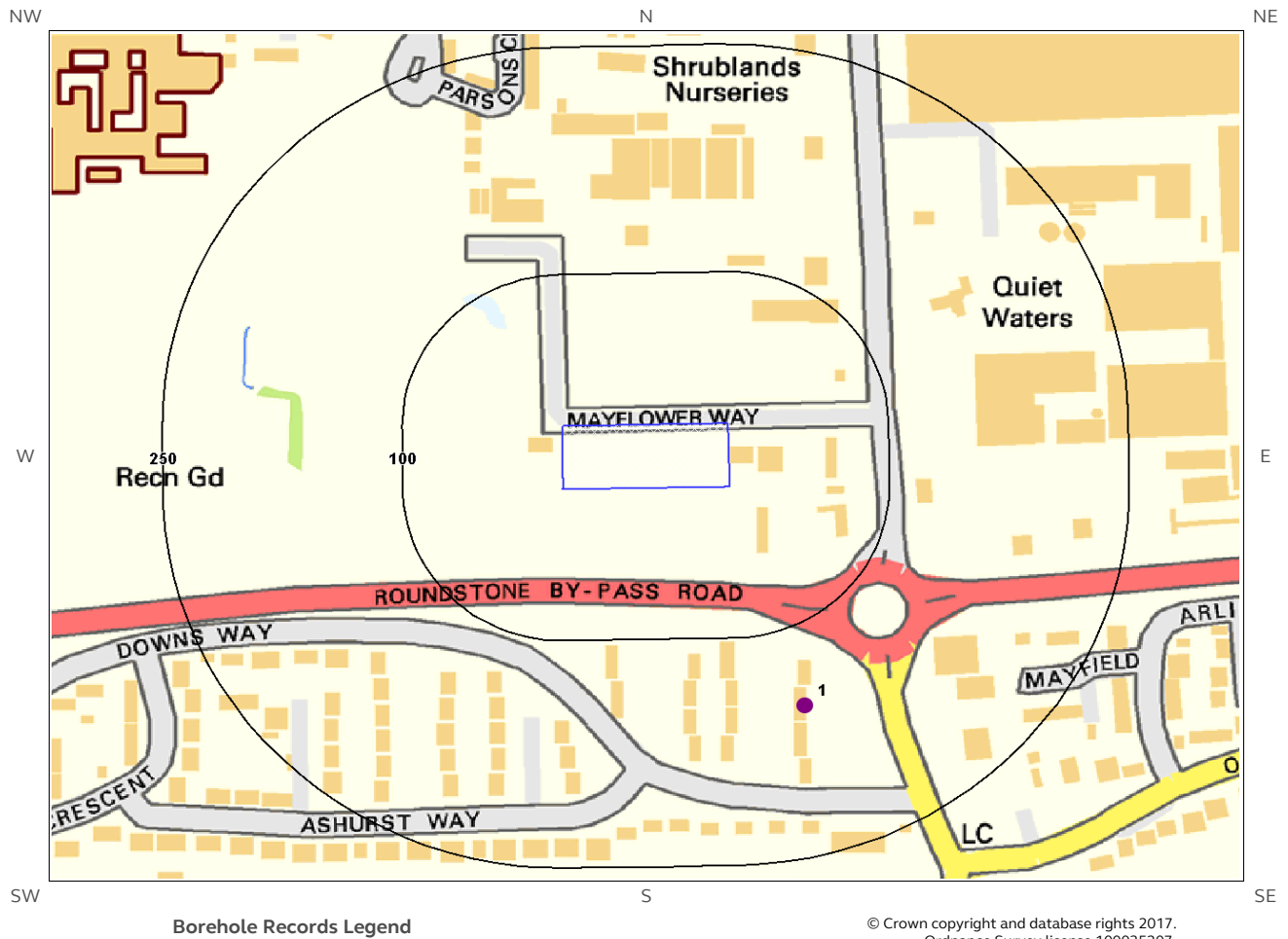
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Slight possibility for collapsible deposit problems after major changes in loading or groundwater conditions. Normal maintenance to avoid large amounts of water entering the ground through pipe leakage or soak-aways should reduce the likelihood of problems due to collapsible deposits. For new build, assess the possibility of collapsible (loessic) deposits in ground investigation. For existing property, no significant increase in insurance risk from collapsible deposits is likely.

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records Map



7 Borehole Records

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

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

1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	152.0	S	507360 103110	TQ00SE37	45.72	HALFMOON NURSERIES

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/569989

8 Estimated Background Soil Chemistry

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

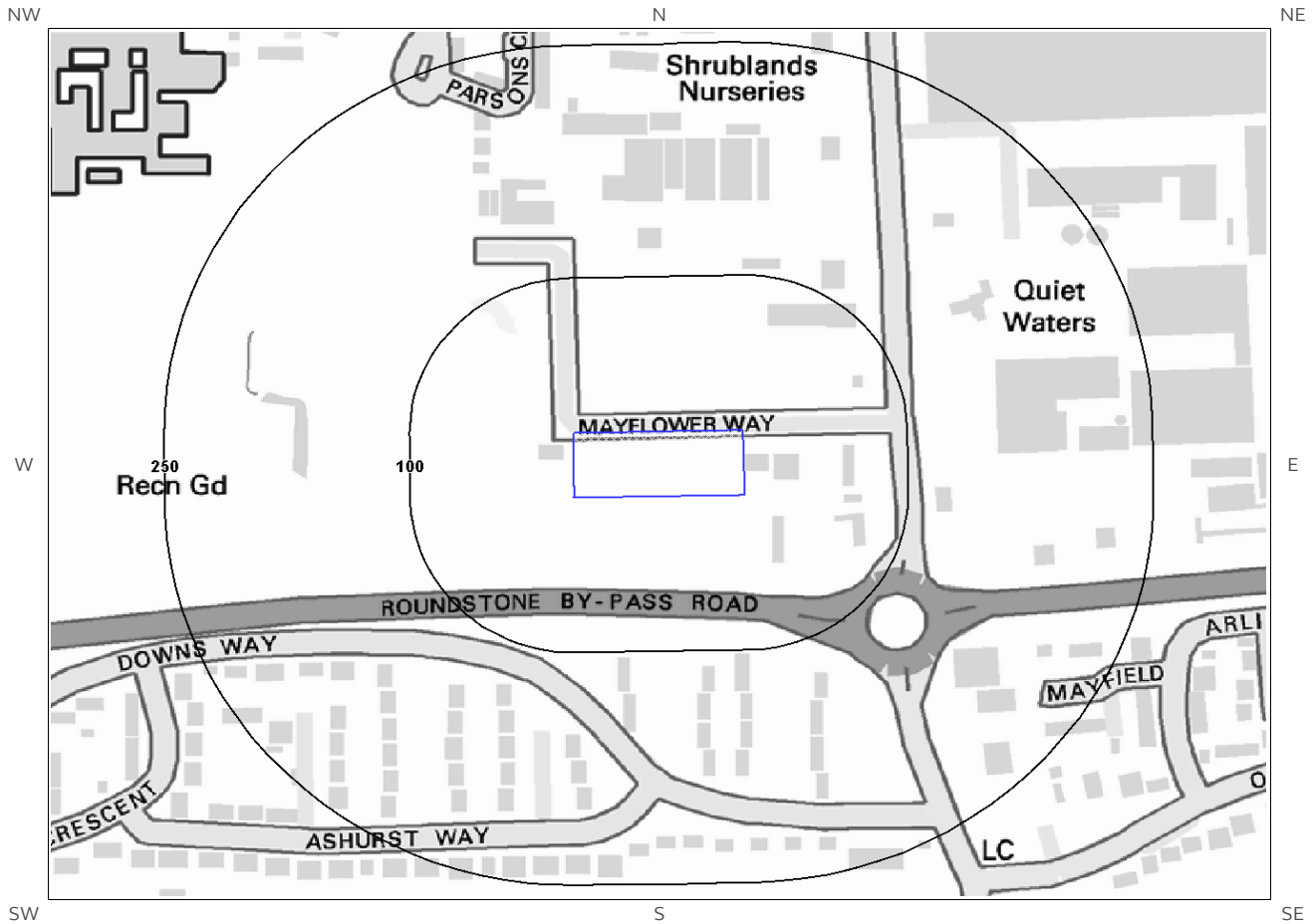
1

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

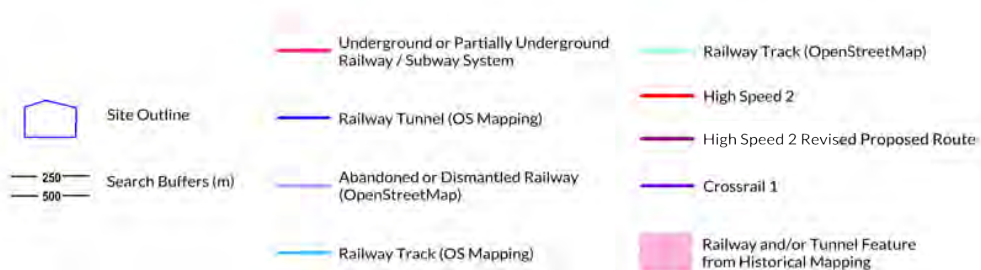
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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

9.3 Historical Railways

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

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

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

Database searched and no data found.

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

9.4 Active Railways

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

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

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

Database searched and no data found.

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

9.5 Railway Projects

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

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

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

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

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

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

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