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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	5	41	67	227
1.2 Additional Information – Historical Tank Database	1	0	2	13
1.3 Additional Information – Historical Energy Features Database	0	0	3	7
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	3	0	2	2
1.6 Potentially Infilled Land	5	41	60	146

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	2
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	1	1	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

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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	1	4	0	2	2
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	1	1	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	1	5	0	1	1
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	3

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	6	0	8	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	0
4.3 National Grid Underground Electricity Cables	0	0	9	18
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?	Yes
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	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	1	11	10	15
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	4
6.6 Source Protection Zones (within 500m of the study site)	1	0	0	1	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	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency/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?	Yes
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	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	2

Section 9: Natural Hazards

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

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

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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.

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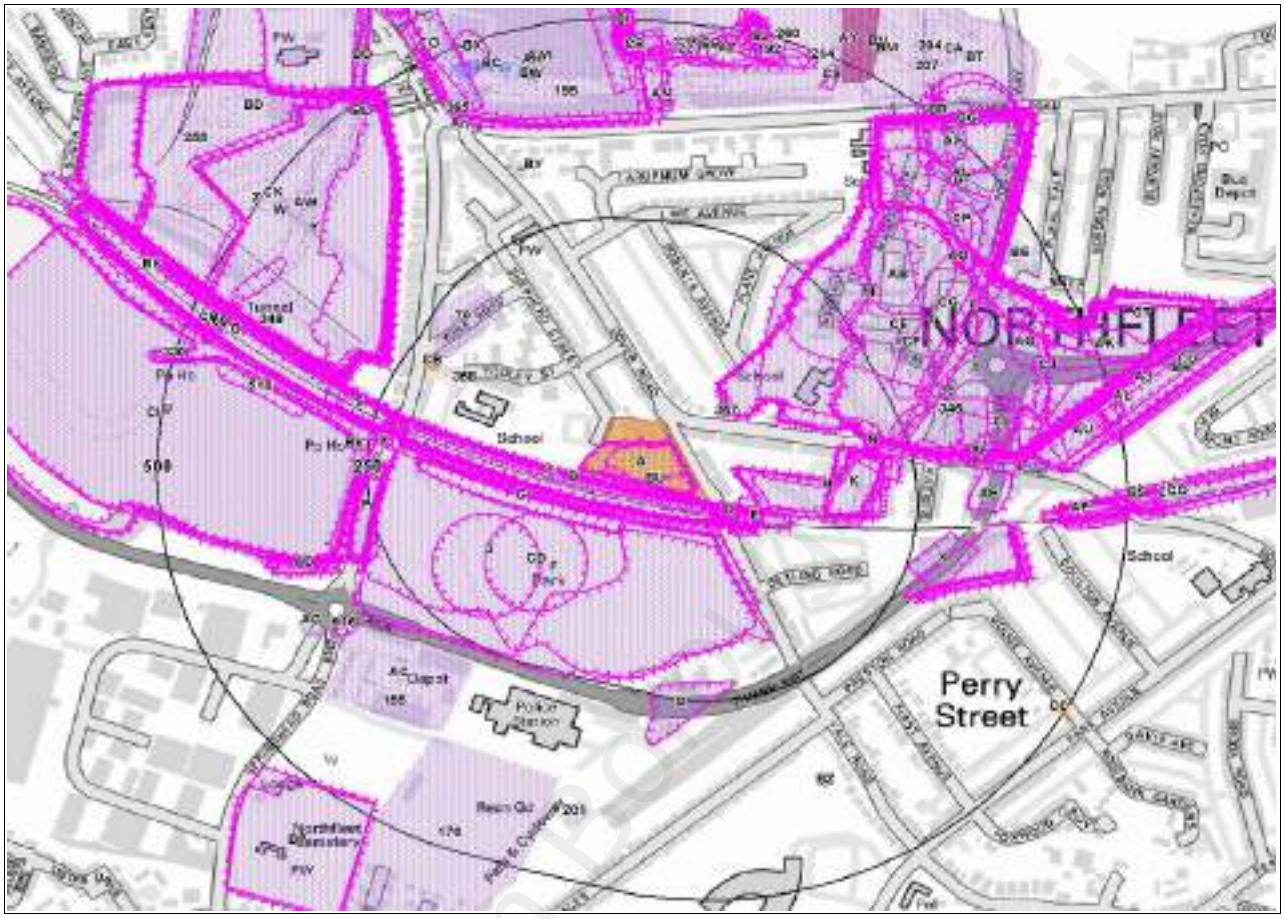
1. Historical Land Use

NW N NE

W E



SW S SE

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Site Outline

250
500
Search Buffers (m)

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

Industrial Land Use

Potentially Infilled Land

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

Energy Features

Petrol Stations

Tanks

Garages

Gravesham

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: 340

ID	Distance [m]	Direction	Use	Date
1C	0	On Site	Cuttings	1895
2A	0	On Site	Chalk Pit	1932
3BU	0	On Site	Refuse Heap	1966
4A	0	On Site	Chalk Pit	1938
5A	0	On Site	Refuse Heap	1946
6B	1	S	Cuttings	1916
7B	1	S	Cuttings	1898
8B	1	S	Cuttings	1898
9C	2	S	Cuttings	1938
10R	4	S	Cuttings	1938
11B	4	S	Cuttings	1888
12B	5	S	Cuttings	1946
13B	5	S	Cuttings	1907
14B	5	S	Cuttings	1932
15B	5	S	Cuttings	1895
16C	5	S	Cuttings	1966
17C	5	S	Cuttings	1990
18C	5	S	Cuttings	1971
19C	5	S	Cuttings	1977
20C	5	S	Cuttings	1955
21D	6	SE	Cuttings	1895
22C	6	S	Cuttings	1865
23C	6	S	Cuttings	1938
24C	13	S	Cuttings	1923
25D	19	E	Cuttings	1938
26E	19	SE	Cuttings	1946
27E	20	SE	Cuttings	1932
28E	23	SE	Cuttings	1865
29E	24	SE	Cuttings	1888
30E	24	E	Cuttings	1895
31E	24	E	Cuttings	1907
32E	32	E	Cuttings	1977
33E	32	E	Cuttings	1990
34E	32	E	Cuttings	1971

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35E	32	E	Cuttings	1955
36E	33	SE	Cuttings	1923
37H	38	E	Gravel Pit	1971
38F	38	S	Chalk Pit	1946
39J	40	S	Gravel Pit	1977
40F	42	S	Unspecified Ground Workings	1955
41F	42	S	Unspecified Ground Workings	1966
42I	42	NE	Old Chalk Pit	1932
43G	46	S	Chalk Pit	1932
44G	46	S	Chalk Pit	1938
45H	46	E	Unspecified Pit	1966
46H	46	E	Unspecified Pit	1955
47H	59	NE	Gravel Pit	1990
48H	59	NE	Gravel Pit	1977
49I	63	NE	Old Chalk Pit	1938
50CE	63	NE	Unspecified Pit	1955
51CD	64	S	Unspecified Disused Pit	1971
52I	65	NE	Old Chalk Pit	1946
53CF	68	NE	Unspecified Pit	1966
54J	96	SW	Unspecified Disused Workings	1990
55CG	114	NE	Chalk Pit	1938
56J	131	SW	Tramway Sidings	1946
57K	140	E	Chalk Pit	1938
58K	140	E	Chalk Pit	1916
59K	140	E	Railway Sidings	1938
60K	140	E	Chalk Pit	1938
61K	140	E	Chalk Pit	1907
62K	144	E	Chalk Pit	1923
63K	165	E	Tramway Sidings	1907
64I	170	E	Railway Sidings	1923
65K	170	E	Railway Sidings	1938
66	172	E	Railway Sidings	1916
67L	182	NE	Chalk Pit	1907
68L	182	NE	Chalk Pit	1923
69L	183	NE	Chalk Pit	1916
70	183	NW	Barrack Field	1865
71M	184	NE	Unspecified Pit	1977
72M	184	NE	Unspecified Pit	1971
73M	184	NE	Unspecified Pit	1990
74AB	184	NE	Disused Workings	1990
75N	197	E	Tunnel	1938
76N	198	E	Tunnel	1907
77N	198	E	Tunnel	1923
78N	198	E	Tunnel	1916

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79N	199	E	Tunnel	1938
80O	217	W	Cuttings	1923
81V	220	W	Tunnel	1946
82O	221	W	Cuttings	1938
83O	222	W	Cuttings	1895
84O	222	W	Cuttings	1907
85P	223	W	Cuttings	1938
86P	225	W	Cuttings	1938
87Q	226	S	Unspecified Heap	1966
88Q	226	S	Unspecified Heap	1971
89Q	226	S	Unspecified Heap	1955
90P	227	W	Cuttings	1923
91S	228	W	Cuttings	1932
92P	228	W	Cuttings	1898
93P	228	W	Cuttings	1898
94P	230	W	Cuttings	1895
95P	230	W	Cuttings	1907
96O	231	W	Cuttings	1865
97T	232	E	Chalk Pit	1895
98O	233	W	Cuttings	1895
99CH	234	W	Tramway Sidings	1946
100R	234	W	Cuttings	1971
101S	234	W	Cuttings	1955
102S	234	W	Cuttings	1990
103S	234	W	Cuttings	1977
104T	235	E	Chalk Pit	1898
105T	235	E	Chalk Pit	1898
106T	236	E	Chalk Pit	1895
107T	241	E	Chalk Pit	1888
108U	241	W	Chalk Pit	1938
109	241	W	Tramway Sidings	1938
110U	242	W	Chalk Pit	1932
111AV	242	W	Tramway Sidings	1932
112X	249	E	Cuttings	1990
113AO	249	E	Chalk Pit	1938
114CJ	252	E	Gravel Pit	1971
115V	256	W	Pump House	1990
116W	258	NW	Chalk Pit	1923
117CK	262	NW	Chalk Pit	1907
118BV	263	W	Pumping House	1946
119W	263	NW	Unspecified Disused Pit	1990
120W	263	NW	Burial Ground	1977
121W	263	NW	Unspecified Disused Pit	1977
122X	264	SE	Unspecified Heap	1895
123Y	266	NW	Chalk Pit	1898
124Y	266	NW	Chalk Pit	1898

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125W	266	NW	Chalk Pit	1938
126W	266	NW	Chalk Pit	1916
127Z	268	NW	Old Chalk Pit	1938
128AC	268	SW	Unspecified Depot	1990
129Z	268	NW	Burial Ground	1966
130Z	268	NW	Burial Ground	1955
131W	270	NW	Old Chalk Pit	1946
132Z	270	NW	Old Chalk Pit	1932
133AA	275	SE	Unspecified Ground Workings	1898
134AA	275	SE	Unspecified Ground Workings	1898
135Y	275	NW	Chalk Pit	1895
136Y	276	NW	Chalk Pit	1895
137AA	277	SE	Unspecified Ground Workings	1938
138AA	277	SE	Unspecified Ground Workings	1938
139AA	280	SE	Unspecified Ground Workings	1888
140Z	280	NW	Chalk Pit	1938
141L	285	NE	Railway Sidings	1907
142AB	289	NE	Unspecified Workings	1977
143AF	301	E	Cuttings	1895
144AD	304	W	Old Chalk Pit	1888
145AC	304	SW	Nursery	1971
146AD	305	W	Old Chalk Pit	1895
147AE	307	E	Unspecified Works	1977
148AD	307	W	Old Chalk Pit	1898
149AD	307	W	Old Chalk Pit	1898
150AE	310	E	Cuttings	1990
151AD	314	W	Old Chalk Pit	1895
152AF	315	E	Cuttings	1895
153W	330	NW	Chalk Pit	1888
154CL	335	E	Cuttings	1990
155	340	SW	Unspecified Depot	1977
156AG	358	SW	Unspecified Tank	1932
157AG	359	SW	Unspecified Tank	1938
158AG	359	SW	Unspecified Tank	1895
159AG	361	SW	Unspecified Tank	1898
160AG	361	SW	Unspecified Tank	1898
161AH	366	N	Brick Works	1923
162AH	369	N	Brick Works	1895
163AH	369	N	Brick Works	1907
164AH	370	N	Brick Works	1888
165AK	371	E	Tramway Sidings	1946
166AI	371	NE	Old Chalk Pit	1895

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167AH	372	N	Brick Works	1898
168AH	372	N	Brick Works	1898
169AI	372	NE	Old Chalk Pit	1888
170	372	S	Isolation Hospital	1907
171AI	373	NE	Old Chalk Pit	1895
172AJ	373	E	Tramway Sidings	1932
173AL	374	E	Railway Sidings	1966
174AI	375	NE	Old Chalk Pit	1898
175AI	375	NE	Old Chalk Pit	1898
176AH	380	N	Brick Works	1916
177CM	380	N	Brick Works	1895
178AJ	383	E	Cuttings	1932
179AJ	384	E	Cuttings	1946
180AK	384	E	Tramway Sidings	1938
181AJ	386	E	Railway Sidings	1938
182BF	386	NE	Railway Sidings	1895
183AJ	387	E	Railway Sidings	1938
184AL	389	E	Railway Sidings	1923
185AN	390	N	Unspecified Heap	1946
186AJ	391	E	Railway Sidings	1907
187AU	391	E	Cuttings	1977
188AM	392	N	Railway Sidings	1895
189AM	392	N	Railway Sidings	1907
190AJ	392	E	Railway Sidings	1916
191AN	394	N	Unspecified Heap	1955
192	395	N	Disused Cement Works	1946
193AO	395	E	Railway Sidings	1895
194AQ	396	NE	Chalk Pit	1895
195	397	N	Rifle Range	1865
196AP	397	E	Cuttings	1932
197CN	398	E	Cuttings	1938
198AP	399	E	Cuttings	1946
199AQ	401	NE	Chalk Pit	1898
200AQ	401	NE	Chalk Pit	1898
201	401	S	Disused Railway Station	1946
202AR	402	NE	Railway Sidings	1898
203AR	402	NE	Railway Sidings	1898
204AQ	403	NE	Chalk Pit	1888
205AM	404	N	Railway Sidings	1888
206AR	404	NE	Railway Sidings	1888
207	404	N	Tramway Sidings	1938
208AM	407	N	Railway Sidings	1898
209AM	407	N	Railway Sidings	1898
210CO	407	N	Brick Works	1923
211BA	408	N	Railway Sidings	1865
212AL	409	E	Cuttings	1938

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213AM	411	N	Railway Sidings	1895
214	413	N	Tramway Sidings	1946
215CP	414	NE	Unspecified Pit	1966
216AO	414	NE	Cuttings	1946
217AH	417	N	Paper Mill	1990
218AP	417	E	Cuttings	1907
219AP	417	E	Cuttings	1938
220AI	418	NE	Railway Sidings	1895
221CQ	418	E	Cuttings	1938
222AS	418	NW	Tramway Sidings	1938
223	418	N	Railway Sidings	1971
224AS	418	NW	Tramway Sidings	1907
225BO	419	E	Cuttings	1916
226AW	419	NW	Tramway Sidings	1946
227AS	419	NW	Tramway Sidings	1923
228AT	420	NE	Railway Sidings	1938
229AT	422	NE	Railway Sidings	1938
230AI	422	NE	Unspecified Pits	1955
231AP	422	E	Cuttings	1923
232AP	422	E	Cuttings	1977
233AP	422	E	Cuttings	1990
234AP	422	E	Cuttings	1955
235AP	422	E	Cuttings	1966
236AP	422	E	Cuttings	1971
237	423	N	Mineral Railway Sidings	1966
238AX	424	NE	Unspecified Works	1990
239AM	426	N	Tramway Sidings	1916
240AU	426	E	Cuttings	1971
241AV	431	NW	Cuttings	1955
242AV	431	NW	Cuttings	1966
243AW	431	NW	Mineral Railway Sidings	1966
244AX	431	NE	Unspecified Works	1977
245AH	433	N	Unspecified Commercial/Industrial	1966
246AH	433	N	Unspecified Mills	1977
247AH	433	N	Unspecified Mills	1971
248AS	433	NW	Tramway Sidings	1938
249BC	433	N	Unspecified Tanks	1990
250CR	434	N	Unspecified Ground Workings	1932
251AZ	436	N	Unspecified Ground Workings	1888
252AY	436	N	Unspecified Works	1977
253AY	436	N	Unspecified Works	1971
254AS	440	NW	Tramway Sidings	1916
255	441	NW	Railway Sidings	1977
256AX	443	NE	Unspecified Quarry	1865

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257AX	443	NE	Railway Sidings	1865
258BE	445	NE	Corn Windmill	1865
259BD	445	NW	Railway Sidings	1990
260	446	N	Unspecified Works	1990
261AZ	448	N	Unspecified Ground Workings	1895
262BA	449	N	Unspecified Heap	1938
263BA	449	N	Unspecified Heap	1938
264BB	450	N	Unspecified Ground Workings	1938
265BB	450	N	Unspecified Ground Workings	1938
266AZ	451	N	Unspecified Heap	1955
267BC	451	N	Unspecified Tanks	1971
268BC	451	N	Unspecified Tanks	1977
269BA	451	N	Unspecified Heap	1946
270BA	452	N	Unspecified Heap	1938
271O	452	NW	Tunnel	1990
272O	452	NW	Tunnel	1977
273BD	453	NW	Railway Sidings	1971
274BB	455	N	Unspecified Ground Workings	1916
275BA	457	N	Unspecified Heap	1888
276AZ	457	N	Unspecified Ground Workings	1932
277O	458	NW	Tunnel	1946
278BE	458	NE	Unspecified Tank	1907
279O	458	NW	Tunnel	1938
280CS	459	NE	Unspecified Heap	1955
281BG	459	NE	Tunnel	1938
282O	460	NW	Tunnel	1932
283BL	461	NW	Railway Sidings	1895
284BE	461	NE	Unspecified Tank	1938
285BF	462	NE	Disused Cement Works	1932
286BG	463	NE	Tunnel	1907
287CT	463	NE	Unspecified Pit	1955
288BX	464	N	Unspecified Heap	1865
289BK	465	NW	Cuttings	1946
290BH	466	E	Cuttings	1907
291BH	466	E	Cuttings	1895
292BA	467	N	Unspecified Heap	1955
293BC	467	N	Unspecified Tank	1966
294BM	467	NE	Whiting Works	1923
295BI	468	N	Unspecified Ground Workings	1898
296BI	468	N	Unspecified Ground Workings	1898
297BH	469	E	Cuttings	1895

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298BJ	471	N	Unspecified Ground Workings	1898
299BJ	471	N	Unspecified Ground Workings	1898
300BK	471	NW	Cuttings	1938
301BL	473	NW	Railway Sidings	1888
302BN	474	NE	White Lead Works	1895
303BH	475	E	Cuttings	1938
304	476	NE	Whiting Works	1938
305BK	476	NW	Cuttings	1932
306BM	476	NE	Whiting Works	1916
307BN	476	NE	Whiting Works	1938
308BJ	478	N	Unspecified Heap	1923
309BH	479	E	Cuttings	1923
310CU	479	E	Cuttings	1938
311BP	482	SW	Cemetery	1946
312BL	482	NW	Railway Sidings	1898
313BL	482	NW	Railway Sidings	1898
314BJ	483	N	Unspecified Heap	1907
315BS	484	E	Cuttings	1895
316BQ	484	NW	Tunnel	1971
317BO	484	E	Cuttings	1898
318BO	484	E	Cuttings	1898
319BP	484	SW	Cemetery	1966
320BP	484	SW	Cemetery	1955
321BP	484	SW	Cemetery	1971
322BQ	486	NW	Tunnel	1990
323BJ	488	N	Unspecified Heap	1938
324BJ	488	N	Unspecified Heap	1938
325BJ	488	N	Unspecified Heap	1938
326BR	489	NE	Tunnel	1923
327BI	490	N	Unspecified Ground Workings	1946
328BJ	491	N	Unspecified Heap	1946
329BJ	491	N	Unspecified Heap	1895
330	491	W	Pump House	1990
331BR	493	NE	Tunnel	1938
332BS	495	E	Cuttings	1946
333BR	495	NE	Tunnel	1932
334BR	496	NE	Tunnel	1946
335BS	498	E	Cuttings	1938
336BR	499	NE	Tunnel	1916
337BS	500	E	Cuttings	1923
338CA	500	NE	Railway Sidings	1895
339BT	500	NE	Whiting Works	1895
340BT	500	NE	Whiting Works	1907

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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: 16

ID	Distance (m)	Direction	Use	Date
341BU	0	On Site	Tanks	1972
342N	194	NE	Unspecified Tank	1952
343N	194	NE	Unspecified Tank	1952
344BV	264	W	Unspecified Tank	1952
345BV	264	W	Unspecified Tank	1952
346	307	E	Unspecified Tank	1909
347BY	325	N	Unspecified Tank	1865
348	406	NW	Unspecified Tank	1897
349BW	431	N	Tanks	1993
350BW	450	N	Tanks	1993
351BW	451	N	Unspecified Tank	1973
352BC	457	N	Tanks	1993
353BX	461	N	Unspecified Tank	1964
354BX	461	N	Unspecified Tank	1959
355BX	461	N	Unspecified Tank	1973
356BC	464	N	Unspecified Tank	1993

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: 10

ID	Distance (m)	Direction	Use	Date
357	66	NE	Electricity Transformer	1972
358	172	NW	Electricity Transformer	1972
359BV	237	W	Electricity Transformer	1972
360BV	257	W	Electricity Transformer	1972
361BY	326	N	Electricity Transformer	1972
362BY	336	N	Electricity Substation	1993
363BZ	378	S	Electricity Transformer	1972
364BZ	378	S	Electricity Transformer	1989

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365	423	NW	Electricity Substation	1952
366CA	476	NE	Power Station	1975

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 7

ID	Distance (m)	Direction	Use	Date
367A	0	On Site	Garage	1972
368A	0	On Site	Garage	1952
369A	0	On Site	Garage	1952
370CB	208	NW	Garage	1952
371CB	208	NW	Garage	1952
372CC	490	SE	Garage	1952
373CC	492	SE	Garage	1952

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 252

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

ID	Distance(m)	Direction	Use	Date
374A	0	On Site	Refuse Heap	1946
375BU	0	On Site	Refuse Heap	1966
376A	0	On Site	Chalk Pit	1932
377A	0	On Site	Chalk Pit	1938
378C	0	On Site	Cuttings	1895
379B	1	S	Cuttings	1916
380B	1	S	Cuttings	1898
381B	1	S	Cuttings	1898
382B	2	S	Cuttings	1938

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383R	4	S	Cuttings	1938
384B	4	S	Cuttings	1888
385B	5	S	Cuttings	1946
386B	5	S	Cuttings	1907
387B	5	S	Cuttings	1895
388B	5	S	Cuttings	1932
389B	5	S	Cuttings	1955
390B	5	S	Cuttings	1990
391B	5	S	Cuttings	1977
392B	5	S	Cuttings	1971
393C	5	S	Cuttings	1966
394D	6	SE	Cuttings	1895
395C	6	S	Cuttings	1865
396B	6	S	Cuttings	1938
397B	13	S	Cuttings	1923
398D	19	E	Cuttings	1938
399E	19	SE	Cuttings	1946
400E	20	SE	Cuttings	1932
401D	23	SE	Cuttings	1865
402D	24	SE	Cuttings	1888
403D	24	E	Cuttings	1907
404D	24	E	Cuttings	1895
405D	32	E	Cuttings	1955
406D	32	E	Cuttings	1971
407D	32	E	Cuttings	1977
408D	32	E	Cuttings	1990
409D	33	SE	Cuttings	1923
410H	38	E	Gravel Pit	1971
411CD	38	S	Chalk Pit	1946
412J	40	S	Gravel Pit	1977
413F	42	S	Unspecified Ground Workings	1966
414F	42	S	Unspecified Ground Workings	1955
415I	42	NE	Old Chalk Pit	1932
416G	46	S	Chalk Pit	1932
417G	46	S	Chalk Pit	1938
418H	46	E	Unspecified Pit	1966
419H	46	E	Unspecified Pit	1955
420H	59	NE	Gravel Pit	1977
421H	59	NE	Gravel Pit	1990
422I	63	NE	Old Chalk Pit	1938
423CE	63	NE	Unspecified Pit	1955
424CD	64	S	Unspecified Disused Pit	1971
425I	65	NE	Old Chalk Pit	1946
426CF	68	NE	Unspecified Pit	1966

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427J	96	SW	Unspecified Disused Workings	1990
428CG	114	NE	Chalk Pit	1938
429K	140	E	Chalk Pit	1938
430K	140	E	Chalk Pit	1916
431K	140	E	Chalk Pit	1938
432K	140	E	Chalk Pit	1907
433K	144	E	Chalk Pit	1923
434L	182	NE	Chalk Pit	1907
435L	182	NE	Chalk Pit	1923
436L	183	NE	Chalk Pit	1916
437M	184	NE	Unspecified Pit	1971
438M	184	NE	Unspecified Pit	1990
439M	184	NE	Unspecified Pit	1977
440AB	184	NE	Disused Workings	1990
441N	197	E	Tunnel	1938
442N	198	E	Tunnel	1907
443N	198	E	Tunnel	1923
444N	198	E	Tunnel	1916
445N	199	E	Tunnel	1938
446CH	217	W	Cuttings	1923
447V	220	W	Tunnel	1946
448O	221	W	Cuttings	1938
449O	222	W	Cuttings	1907
450O	222	W	Cuttings	1895
451P	223	W	Cuttings	1938
452P	225	W	Cuttings	1938
453Q	226	S	Unspecified Heap	1971
454Q	226	S	Unspecified Heap	1955
455Q	226	S	Unspecified Heap	1966
456P	227	W	Cuttings	1923
457S	228	W	Cuttings	1932
458P	228	W	Cuttings	1898
459P	228	W	Cuttings	1898
460P	230	W	Cuttings	1895
461P	230	W	Cuttings	1907
462O	231	W	Cuttings	1865
463T	232	E	Chalk Pit	1895
464O	233	W	Cuttings	1895
465S	234	W	Cuttings	1971
466S	234	W	Cuttings	1977
467S	234	W	Cuttings	1955
468S	234	W	Cuttings	1990
469T	235	E	Chalk Pit	1898
470T	235	E	Chalk Pit	1898
471T	236	E	Chalk Pit	1895

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472CI	240	W	Water Body	1990
473CI	240	W	Water Body	1977
474CI	240	W	Water Body	1971
475T	241	E	Chalk Pit	1888
476U	241	W	Chalk Pit	1938
477U	242	W	Chalk Pit	1932
478X	249	E	Cuttings	1990
479AO	249	E	Chalk Pit	1938
480CJ	252	E	Gravel Pit	1971
481CI	256	W	Pond	1966
482CI	256	W	Pond	1955
483W	258	NW	Chalk Pit	1923
484CK	262	NW	Chalk Pit	1907
485CI	263	W	Water Body	1946
486W	263	NW	Burial Ground	1977
487W	263	NW	Unspecified Disused Pit	1977
488W	263	NW	Unspecified Disused Pit	1990
489AA	264	SE	Unspecified Heap	1895
490Y	266	NW	Chalk Pit	1898
491Y	266	NW	Chalk Pit	1898
492W	266	NW	Chalk Pit	1938
493W	266	NW	Chalk Pit	1916
494Z	268	NW	Old Chalk Pit	1938
495Z	268	NW	Burial Ground	1966
496Z	268	NW	Burial Ground	1955
497W	270	NW	Old Chalk Pit	1946
498Z	270	NW	Old Chalk Pit	1932
499AA	275	SE	Unspecified Ground Workings	1898
500AA	275	SE	Unspecified Ground Workings	1898
501Y	275	NW	Chalk Pit	1895
502Y	276	NW	Chalk Pit	1895
503AA	277	SE	Unspecified Ground Workings	1938
504AA	277	SE	Unspecified Ground Workings	1938
505AA	280	SE	Unspecified Ground Workings	1888
506W	280	NW	Chalk Pit	1938
507AB	289	NE	Unspecified Workings	1977
508AF	301	E	Cuttings	1895
509AD	304	W	Old Chalk Pit	1888
510AD	305	W	Old Chalk Pit	1895
511AD	307	W	Old Chalk Pit	1898
512AD	307	W	Old Chalk Pit	1898
513AE	310	E	Cuttings	1990

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514AD	314	W	Old Chalk Pit	1895
515AF	315	E	Cuttings	1895
516	321	SW	Pond	1865
517AW	330	NW	Chalk Pit	1888
518	332	W	Pond	1932
519CL	335	E	Cuttings	1990
520AH	366	N	Brick Works	1923
521AH	369	N	Brick Works	1907
522AH	369	N	Brick Works	1895
523AH	370	N	Brick Works	1888
524AI	371	NE	Old Chalk Pit	1895
525AH	372	N	Brick Works	1898
526AH	372	N	Brick Works	1898
527AI	372	NE	Old Chalk Pit	1888
528AI	373	NE	Old Chalk Pit	1895
529AI	375	NE	Old Chalk Pit	1898
530AI	375	NE	Old Chalk Pit	1898
531AH	380	N	Brick Works	1916
532CM	380	N	Brick Works	1895
533AJ	383	E	Cuttings	1932
534AJ	384	E	Cuttings	1946
535AN	390	N	Unspecified Heap	1946
536AU	391	E	Cuttings	1977
537AN	394	N	Unspecified Heap	1955
538AQ	396	NE	Chalk Pit	1895
539AP	397	E	Cuttings	1932
540CN	398	E	Cuttings	1938
541AP	399	E	Cuttings	1946
542AQ	401	NE	Chalk Pit	1898
543AQ	401	NE	Chalk Pit	1898
544AQ	403	NE	Chalk Pit	1888
545CO	407	N	Brick Works	1923
546AL	409	E	Cuttings	1938
547CP	414	NE	Unspecified Pit	1966
548AT	414	NE	Cuttings	1946
549AP	417	E	Cuttings	1907
550AP	417	E	Cuttings	1938
551CQ	418	E	Cuttings	1938
552BO	419	E	Cuttings	1916
553AI	422	NE	Unspecified Pits	1955
554AP	422	E	Cuttings	1923
555AP	422	E	Cuttings	1990
556AP	422	E	Cuttings	1971
557AP	422	E	Cuttings	1977
558AP	422	E	Cuttings	1955
559AP	422	E	Cuttings	1966

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560AU	426	E	Cuttings	1971
561AV	431	NW	Cuttings	1955
562AV	431	NW	Cuttings	1966
563CR	434	N	Unspecified Ground Workings	1932
564AZ	436	N	Unspecified Ground Workings	1888
565AX	443	NE	Unspecified Quarry	1865
566AZ	448	N	Unspecified Ground Workings	1895
567BA	449	N	Unspecified Heap	1938
568BA	449	N	Unspecified Heap	1938
569BB	450	N	Unspecified Ground Workings	1938
570BB	450	N	Unspecified Ground Workings	1938
571AZ	451	N	Unspecified Heap	1955
572BA	451	N	Unspecified Heap	1946
573BA	452	N	Unspecified Heap	1938
574CH	452	NW	Tunnel	1990
575CH	452	NW	Tunnel	1977
576BB	455	N	Unspecified Ground Workings	1916
577BA	457	N	Unspecified Heap	1888
578AZ	457	N	Unspecified Ground Workings	1932
579CH	458	NW	Tunnel	1946
580CH	458	NW	Tunnel	1938
581CS	459	NE	Unspecified Heap	1955
582BG	459	NE	Tunnel	1938
583CH	460	NW	Tunnel	1932
584BG	463	NE	Tunnel	1907
585CT	463	NE	Unspecified Pit	1955
586BX	464	N	Unspecified Heap	1865
587BK	465	NW	Cuttings	1946
588BH	466	E	Cuttings	1907
589BH	466	E	Cuttings	1895
590BA	467	N	Unspecified Heap	1955
591BI	468	N	Unspecified Ground Workings	1898
592BI	468	N	Unspecified Ground Workings	1898
593BH	469	E	Cuttings	1895
594BJ	471	N	Unspecified Ground Workings	1898
595BJ	471	N	Unspecified Ground Workings	1898
596BK	471	NW	Cuttings	1938
597BH	475	E	Cuttings	1938
598BK	476	NW	Cuttings	1932

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599BJ	478	N	Unspecified Heap	1923
600BH	479	E	Cuttings	1923
601CU	479	E	Cuttings	1938
602BP	482	SW	Cemetery	1946
603BJ	483	N	Unspecified Heap	1907
604BS	484	E	Cuttings	1895
605BQ	484	NW	Tunnel	1971
606BO	484	E	Cuttings	1898
607BO	484	E	Cuttings	1898
608BP	484	SW	Cemetery	1955
609BP	484	SW	Cemetery	1971
610BP	484	SW	Cemetery	1966
611BQ	486	NW	Tunnel	1990
612BJ	488	N	Unspecified Heap	1938
613BJ	488	N	Unspecified Heap	1938
614BJ	488	N	Unspecified Heap	1938
615BR	489	NE	Tunnel	1923
616BI	490	N	Unspecified Ground Workings	1946
617BJ	491	N	Unspecified Heap	1946
618BJ	491	N	Unspecified Heap	1895
619BR	493	NE	Tunnel	1938
620BS	495	E	Cuttings	1946
621BR	495	NE	Tunnel	1932
622BR	496	NE	Tunnel	1946
623BS	498	E	Cuttings	1938
624BR	499	NE	Tunnel	1916
625BS	500	E	Cuttings	1923

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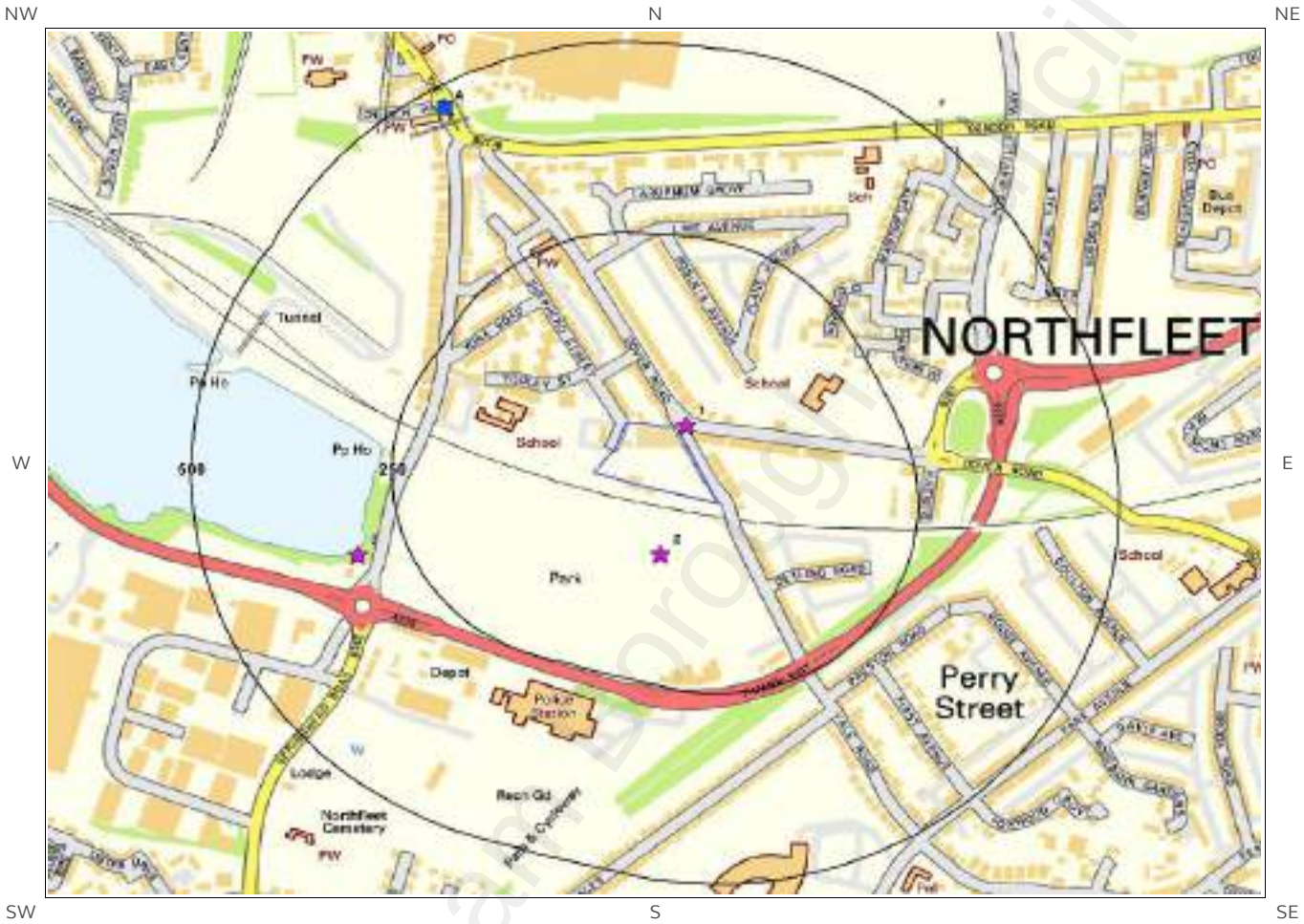
2. Environmental Permits, Incidents and Registers Map



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Site Outline

250 / 500 Search Buffers (m)

Recorded Pollution Incident

Dangerous Substances (List 1)

Dangerous Substances (List 2)

Water Industry Referrals

Licenced Discharge Consents

Red List Discharge Consents

RAS 3 & 4 Authorisations

Part A(1) Authorised Processes and Historic IPC Authorisations

Part A(2) and Part B Authorised Processes

COMAH / NIHHS Sites

Sites Determined as Contaminated Land

Hazardous Substance Consents and Enforcements

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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.

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

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details	
4A	472	NW	562500 174100	Address: TISSUE MILL, NORTHFLEET, KENT, TISSUE MILL, NORTHFLEET, KENT, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTMR.0185 Permit Version: 1	Receiving Water: THAMES Status: REVOKED - UNSPECIFIED Issue date: 26/06/1975 Effective Date: 14-Jun-1979 Revocation Date: 20/01/1992
5A	472	NW	562500 174100	Address: TISSUE MILL, NORTHFLEET, KENT, TISSUE MILL, NORTHFLEET, KENT, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTMR.0185 Permit Version: 1	Receiving Water: THAMES Status: REVOKED - UNSPECIFIED Issue date: 26/06/1975 Effective Date: 14-Jun-1979 Revocation Date: 20/01/1992

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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2.2 Dangerous or Hazardous Sites

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

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

3

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

ID	Distance (m)	Direction	NGR	Details	
1	11	NE	562799 173683	Incident Date: 09-Mar-2003 Incident Identification: 141950 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	81	S	562768 173514	Incident Date: 24-Jul-2003 Incident Identification: 176439 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	312	W	562391 173512	Incident Date: 02-Jul-2001 Incident Identification: 12815 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

0

Database searched and no data found.

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

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.

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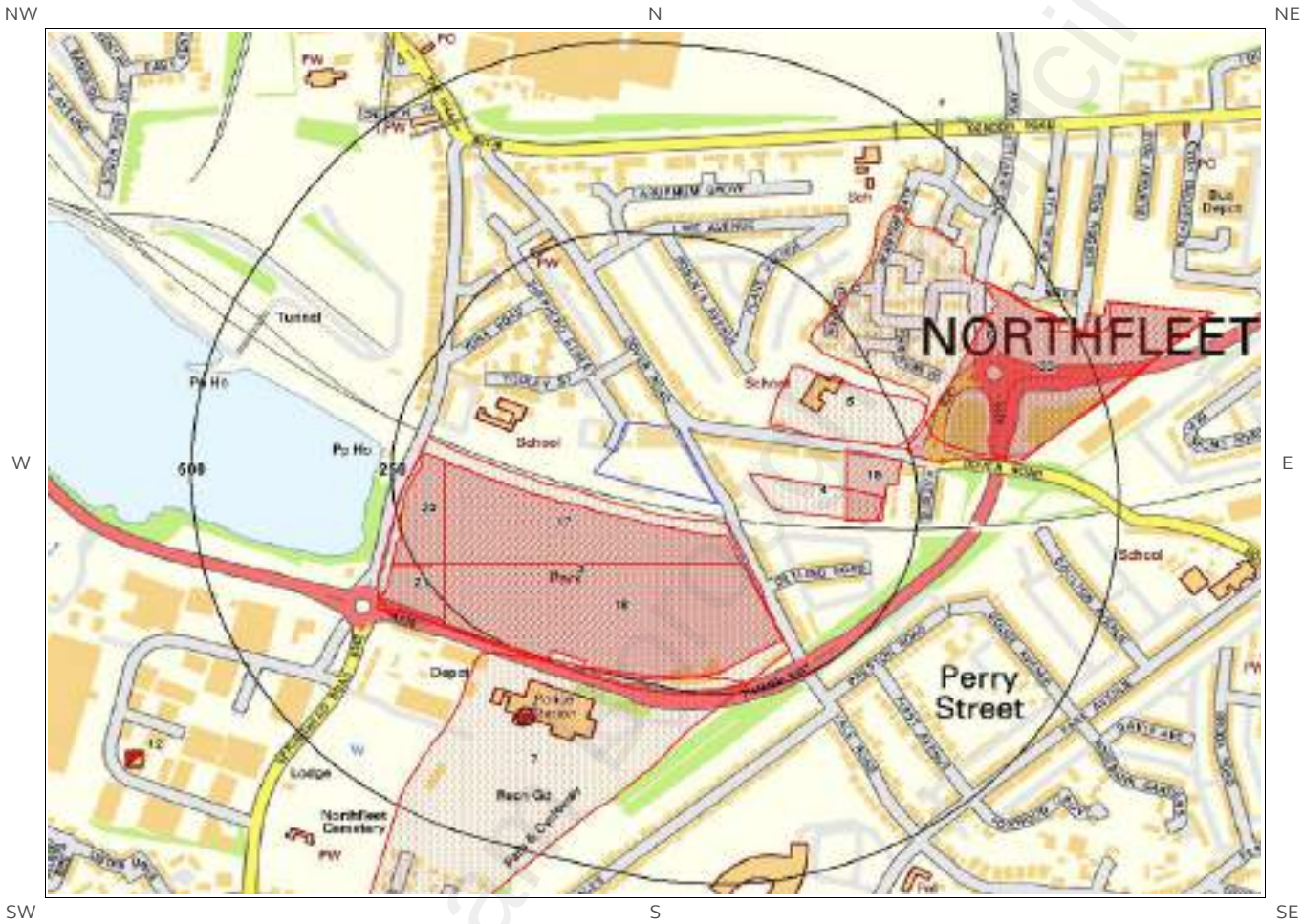
3. Landfill and Other Waste Sites Map



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Site Outline

250 500 Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

Gravesham Borough Council

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:

9

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

ID	Distance (m)	Direction	NGR	Details	
3	24	S	562600 173400	Site Address: Springhead Road, Swale, Kent Waste Licence: Yes Site Reference: REIN.2/1, 21BF Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 01-Jan-1976 Licence Surrendered: Licence Holder Address: - Operator: Northfleet Urban District Council Licence Holder: Kent County Council First Recorded: 31-Dec-1951 Last Recorded: 31-Dec-1984
4	51	NE	562900 173500	Site Address: Dykes Pit, Swale, Kent Waste Licence: Yes Site Reference: P/02/05, 21EH Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 22-Apr-1977 Licence Surrendered: 22-Dec-1993 Licence Holder Address: - Operator: D Justice Licence Holder: D Justice First Recorded: 31-Dec-1977 Last Recorded: 31-Dec-1993
5	104	NE	562900 173700	Site Address: Northfleet Power Station, Northfleet, Kent Waste Licence: Yes Site Reference: 21EL, P/02/02 Waste Type: Inert, Industrial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 14-May-1977 Licence Surrendered: 31-Dec-1992 Licence Holder Address: - Operator: - Licence Holder: Central Electricity Generating Board First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1992

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ID	Distance (m)	Direction	NGR	Details	
6	202	NE	563100 173700	Site Address: Northfleet Power Station, Northfleet, Kent Waste Licence: Yes Site Reference: 21EL, P/02/02 Waste Type: Inert, Industrial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 14-May-1977 Licence Surrendered: 31-Dec-1992 Licence Holder Address: - Operator: Central Electricity Generating Board Licence Holder: Central Electricity Generating Board First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1992
7	229	S	562600 173200	Site Address: South Of Springhead, Gravesend, Kent Waste Licence: - Site Reference: GR14 Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Reed Paper and Board First Recorded: - Last Recorded: -
Not shown	941	E	563800 173600	Site Address: Campbell Road Pit, Gravesend, Kent Waste Licence: Yes Site Reference: GR18, P/02/10 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 17-Sep-1991 Licence Surrendered: 19-Sep-2000 Licence Holder Address: - Operator: T B F Thompson Properties Limited Licence Holder: T B F Thompson Properties Limited First Recorded: - Last Recorded: -
Not shown	977	E	563800 173900	Site Address: Lennox Road, Gravesend, Kent Waste Licence: Yes Site Reference: P/02/03, 21EK Waste Type: Inert, Commercial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 08-Mar-1977 Licence Surrendered: 29-Oct-1992 Licence Holder Address: - Operator: Reed Paper and Board Licence Holder: Reed Paper and Board First Recorded: 31-Dec-1977 Last Recorded: 31-Dec-1988
Not shown	1023	W	561300 173700	Site Address: Southfleet Pit, Southfleet Waste Licence: - Site Reference: GR19 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Blue Circle Industries Plc Licence Holder: Blue Circle Industries Plc First Recorded: - Last Recorded: -
Not shown	1452	NE	564200 174200	Site Address: Asda Site, Gravesend, Kent Waste Licence: Yes Site Reference: GR15 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 01-Jan-1976 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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

2

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

ID	Distance (m)	Direction	NGR	Details	
1	331	S	562600.0 173300.0	Address: Springhead rd, Northfleet, Kent BGS Number: 1987.0	Risk: Risk to major aquifer Waste Type: N/A

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ID	Distance (m)	Direction	NGR	Details	
Not shown	615	N	562700.0 174300.0	Address: Northfleet Power stn, Crete Hall Rd, Northfleet,Kt BGS Number: 1947.0	Risk: Risk to major aquifer Waste Type: N/A

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

8

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
17	42	S	562685 173567	Refuse Tip	1971 mapping	Polygon
18	80	S	562710 173424	Refuse Tip	1971 mapping	Polygon
19	160	E	563034 173604	Refuse Tip	1971 mapping	Polygon
20	184	W	562467 173573	Refuse Tip	1971 mapping	Polygon
21	220	SW	562457 173460	Refuse Tip	1971 mapping	Polygon
22	247	E	563266 173749	Refuse Tip	1971 mapping	Polygon
Not shown	737	W	561920 173632	Refuse Tip	1969 mapping	Polygon
Not shown	1462	W	561072 173893	Refuse Tip	1985 mapping	Polygon

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.

Gravesham Borough Council

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

5

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	
12	684	SW	562113 173244	Site Address: Springhead Enterprise Park, Unit D2, Springhead Road, Northfleet, Kent, DA11 8HH Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: POL066 EPR reference: EA/EPR/CB3005LP/A001 Operator: Polihim - S S U K Limited Waste Management licence No: 401775 Annual Tonnage: 2400.0	Issue Date: 05/05/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Unit D2 Springhead Enterprise Park Correspondence Address: -
Not shown	802	NE	563160 174390	Site Address: Red Lion Wharf, Crete Hall Road, Northfleet, Gravesend, Kent, DA11 9AA Type: Treatment of waste wood <75000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HWR004 EPR reference: EA/EPR/GB3538AC/S002 Operator: Hadfield Wood Recyclers Limited Waste Management licence No: 104141 Annual Tonnage: 0.0	Issue Date: 23/05/2012 Effective Date: - Modified: - Surrendered Date: 28/04/2014 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Red Lion Wharf Correspondence Address: -
Not shown	1081	N	562315 174686	Site Address: Northfleet Works, Northfleet Embankment, Gravesham, Kent, DA11 9AN Type: Transfer Station taking Non-Biodegradable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRO117 EPR reference: EA/EPR/RP3194EY/V003 Operator: Bam Nuttal Ltd, Ferrovial Agroman (U K) Ltd, Kier Infrastructure & Overseas Ltd Waste Management licence No: 102226 Annual Tonnage: 1200000.0	Issue Date: 24/04/2012 Effective Date: - Modified: 07/05/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Northfleet Temporary Inert Waste Transfer Facility Correspondence Address: -
Not shown	1081	N	562315 174686	Site Address: Northfleet Works, Northfleet Embankment, Gravesham, Kent, DA11 9AN Type: Transfer Station taking Non-Biodegradable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRO117 EPR reference: EA/EPR/RP3194EY/S004 Operator: B A M Nuttal Ltd, Ferrovial Agroman (U K) Ltd, Kier Infrastructure & Overseas Waste Management licence No: 102226 Annual Tonnage: 0.0	Issue Date: 24/04/2012 Effective Date: - Modified: 07/05/2013 Surrendered Date: 09/10/2015 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Northfleet Temporary Inert Waste Transfer Facility Correspondence Address: -

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ID	Distance (m)	Direction	NGR	Details	
Not shown	1081	N	562315 174686	Site Address: Northfleet Works, Northfleet Embankment, Gravesham, Kent, DA1 9AN Type: Transfer Station taking Non-Biodegradable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRO117 EPR reference: EA/EPR/RP3194EY/V002 Operator: Bam Ferrovial Kier Joint Venture Waste Management licence No: 102226 Annual Tonnage: 700000.0	Issue Date: 24/04/2012 Effective Date: - Modified: 11/03/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Northfleet Temporary Inert Waste Transfer Facility Correspondence Address: -

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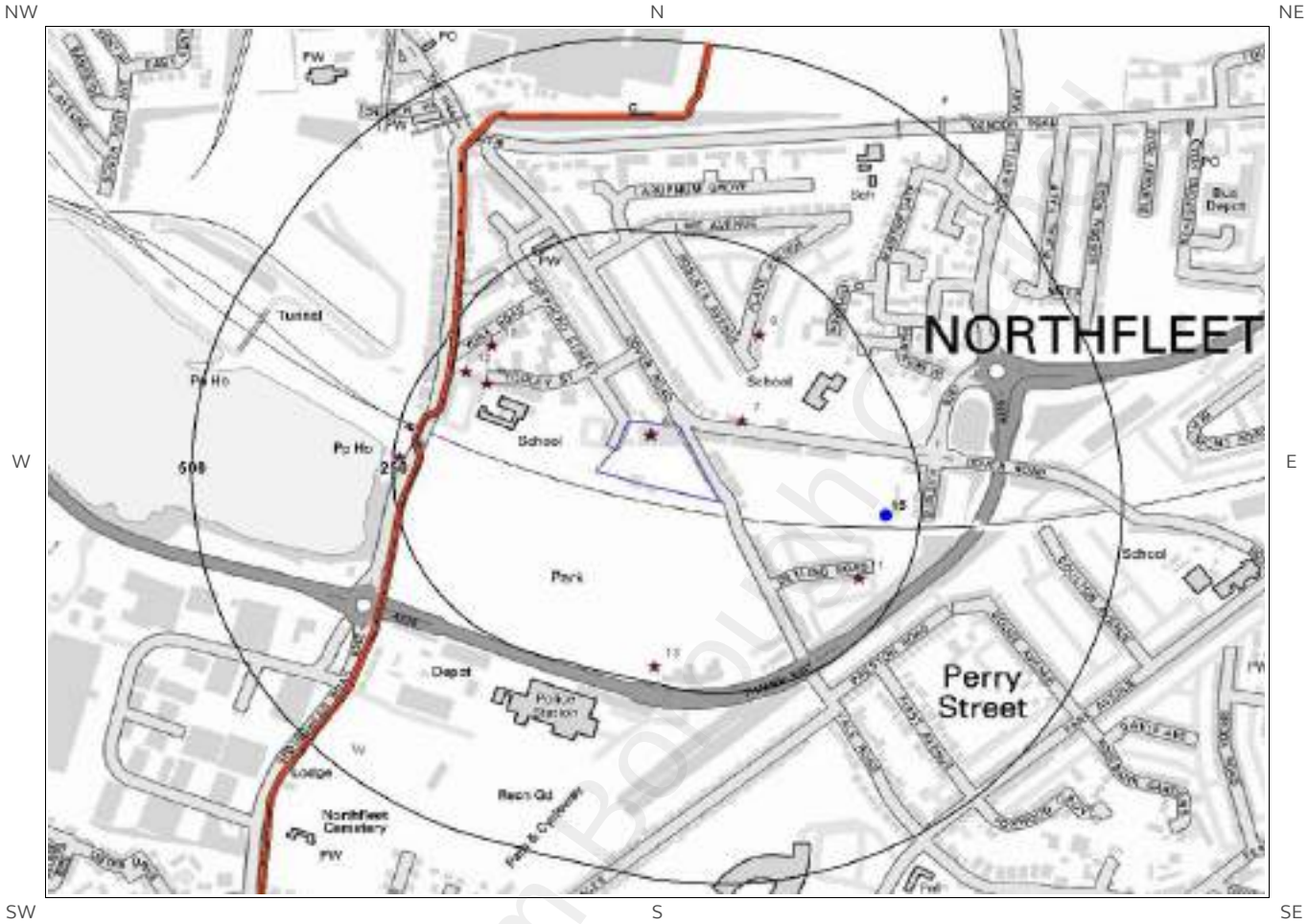
4. Current Land Use Map



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Site Outline

Search Buffers (m)

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

Gravesham Borough

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 14

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1A	0	On Site	Affordable Skips	562753 173669	Hardys Corner 2, Vale Road, Northfleet, Gravesend, DA11 8BZ	Construction and Tool Hire	Hire Services
2A	0	On Site	B & S Motors	562753 173669	Hardys Corner 2, Vale Road, Northfleet, Gravesend, DA11 8BZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
3A	0	On Site	Vauxparts UK	562753 173669	Hardys Corner 2, Vale Road, Northfleet, Gravesend, DA11 8BZ	Vehicle Parts and Accessories	Motoring
4A	0	On Site	Thomas Trucks	562753 173669	Hardys Yard 2, Vale Road, Northfleet, Gravesend, DA11 8BZ	New Vehicles	Motoring
5A	0	On Site	Conway Motor Services	562754 173669	Hardys Corner 2, Vale Road, Northfleet, Gravesend, DA11 8BZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
6A	0	On Site	Fleet Hire	562754 173669	2 Vale Road, Northfleet, Gravesend, DA11 8BZ	Vehicle Hire and Rental	Hire Services
7	73	NE	Electricity Sub Station	562867 173687	DA11	Electrical Features	Infrastructure and Facilities
8	157	NE	Old Bikes-r-us	562888 173800	63, Plane Avenue, Northfleet, Gravesend, DA11 9QB	Vehicle Components	Industrial Products
9	177	NW	Electricity Sub Station	562550 173736	DA11	Electrical Features	Infrastructure and Facilities
10	197	NW	Dent Doctors	562555 173785	16, York Road, Northfleet, Gravesend, DA11 9PU	Vehicle Repair, Testing and Servicing	Repair and Servicing
11	199	SE	A W H Scrap Car Recovery	563012 173481	23, Detling Road, Northfleet, Gravesend, DA11 8DH	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
12	207	NW	Springhead Garage Services	562524 173752	85a, Springhead Road, Northfleet, Gravesend, DA11 9QZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
13	227	S	Electricity Sub Station	562758 173366	DA11	Electrical Features	Infrastructure and Facilities
14	243	W	Electricity Sub Station	562442 173640	DA11	Electrical Features	Infrastructure and Facilities

Gravesham Borough Council

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
15	207	E	563045 173563	Obsolete	Vale Service Station, 2, Vale Road, Northfleet, Gravesend, Kent, DA11 8BZ	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: 27

The following Underground Electricity Transmission Cable records are represented as linear features on the Current Land Use map:

ID	Distance (m)	Direction	Details	
16B	207	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
17B	208	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
18B	208	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
19B	209	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
20B	209	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
21B	210	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -

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ID	Distance (m)	Direction	Details	
22B	210	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
23B	211	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
24B	211	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
25C	313	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
26C	313	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
27C	314	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
28C	314	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
29C	314	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
30C	315	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
31C	315	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
32C	316	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
33C	316	NW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
34D	353	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
35D	354	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
36D	354	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -

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ID	Distance (m)	Direction	Details	
37D	354	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
38D	354	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
39D	354	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
40D	355	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
41D	355	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -
42D	355	SW	Cable Set: - Cable Route: - Cable Make: -	Cable Type: PILOT Operating Voltage (kV): - Year of installation: - Cable in tunnel: -

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.

Gravesham Borough Council

5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID
WMGR-MGRD	INFILLED GROUND	ARTIFICIAL DEPOSIT
WMGR-MGRD	INFILLED GROUND	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

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

5.3 Bedrock and Solid Geology

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

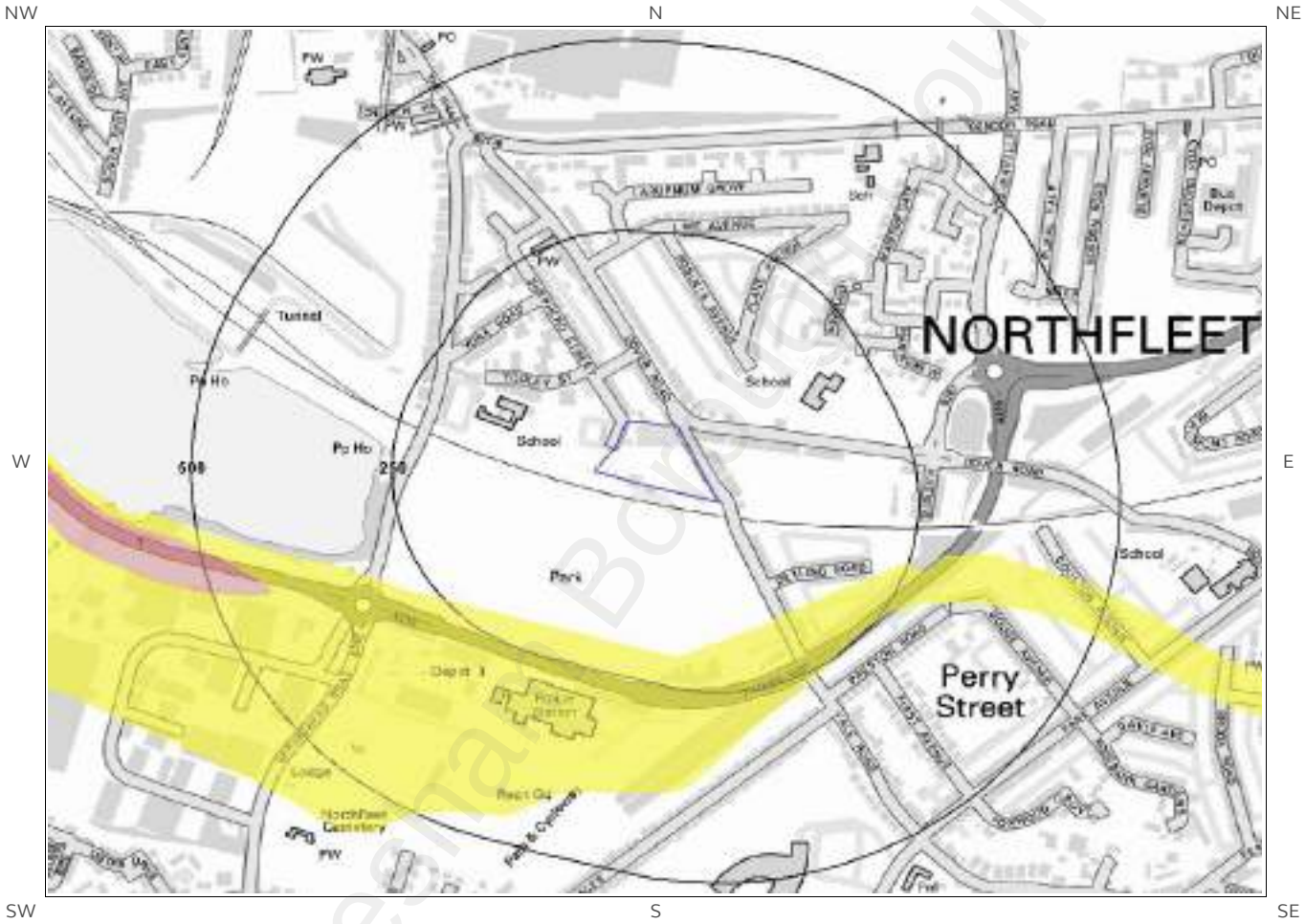
Lex Code	Description	Rock Type
SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED)	CHALK

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

Gravesham Borough Council

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



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Site Outline

250 500 Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

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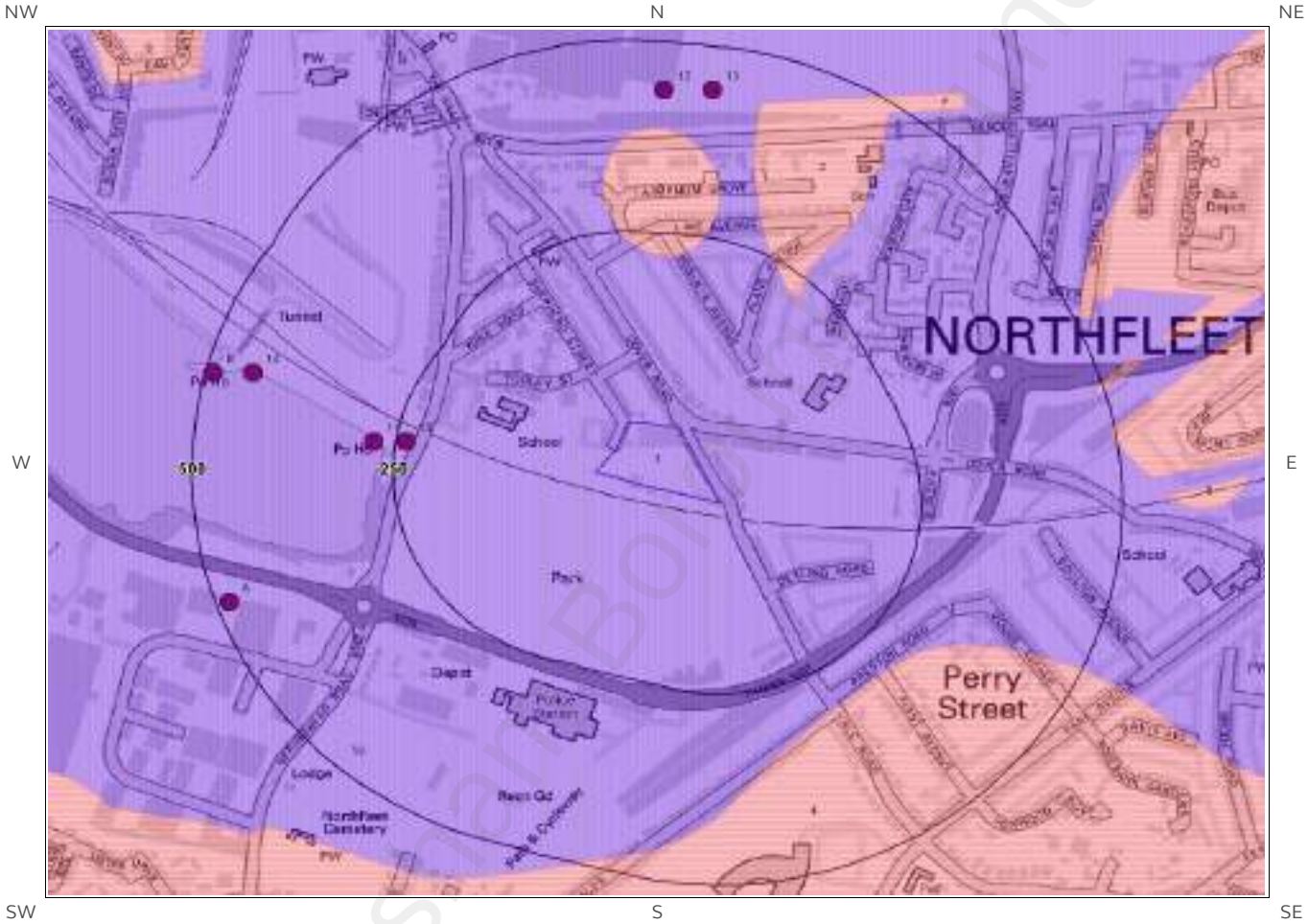
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline
Search Buffers (m) 250 500
Principal Aquifer
Secondary (A) Aquifer - Permeable Layers
Secondary (B) Aquifer - Lower Permeability Layers
Groundwater Abstraction Licence
Secondary Aquifer - Undifferentiated Layers
Unproductive
Unknown (lakes and landslip)
Surface Water Abstraction Licence

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

NW N NE

W E

SW S SE

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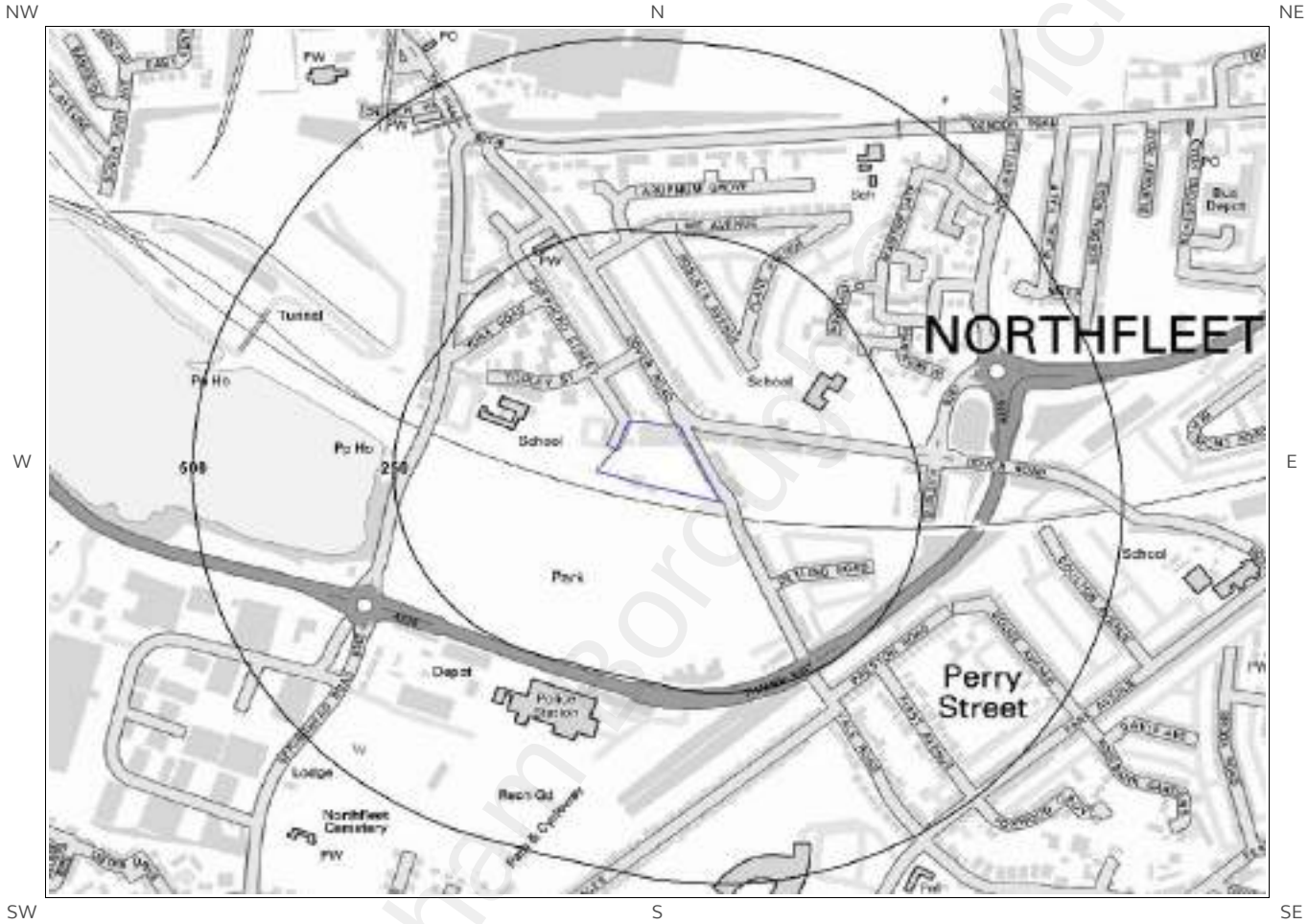
6d. Hydrogeology – Source Protection Zones within confined aquifer



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

Site Outline

250
500
Search Buffers (m)

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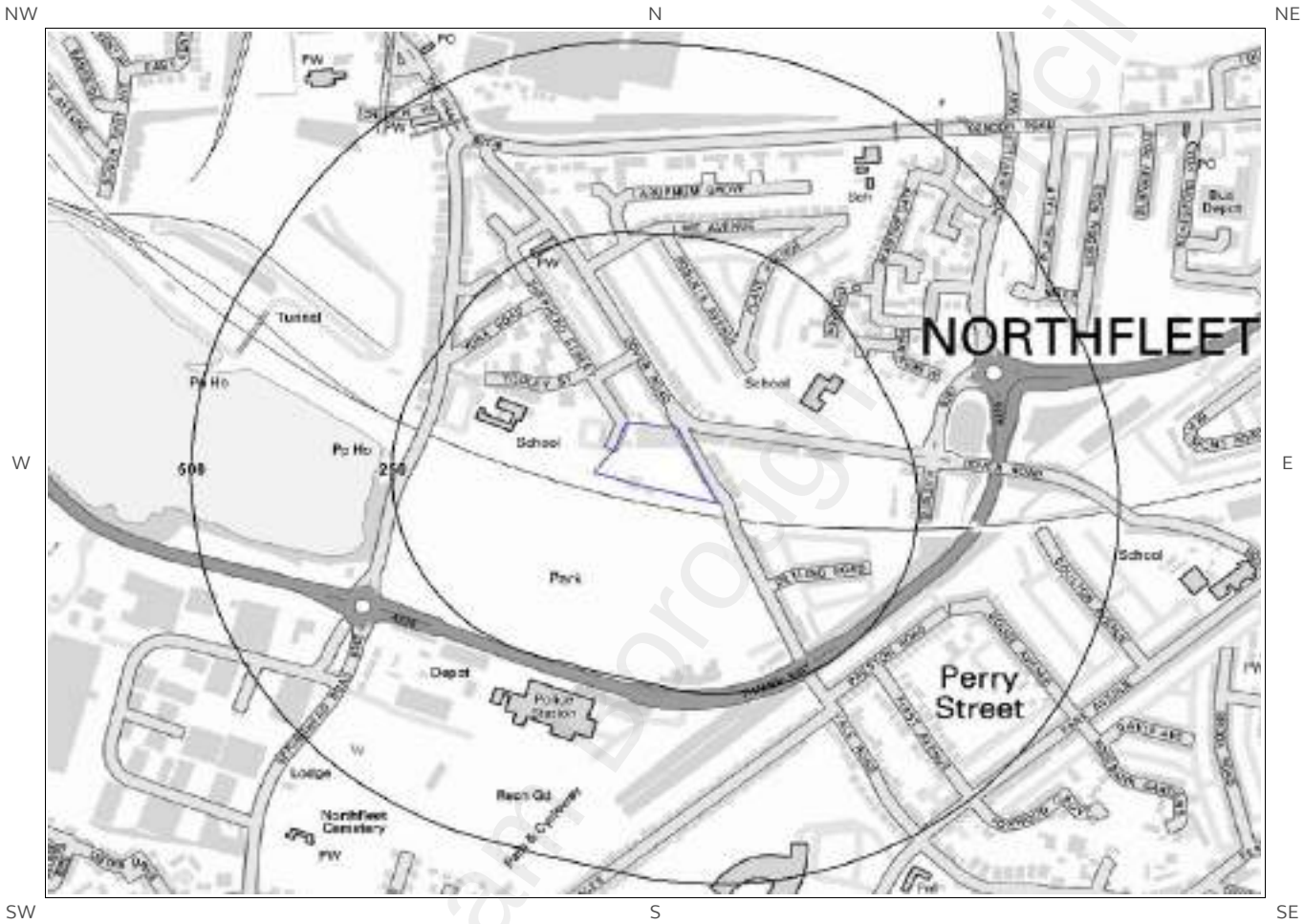
6e. Hydrology – Detailed River Network and River Quality



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Site Outline

250 — 500 — Search Buffers (m)

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

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

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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
3	169	SE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
1	430	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 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
2	220	NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	221	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	299	SE	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
5	488	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	494	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

Gravesham Borough Council

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	
10	237	W	562450 173660	Status: Historical Licence No: 9/40/01/0092/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Borehole 2, H5 Chalk, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 4710000 Max Daily Volume (m^3): 19656 Original Application No: WR.1969D Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/7/1996 Version End Date:
11	277	W	562410 173660	Status: Historical Licence No: 9/40/01/0092/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Borehole 1, H5 Chalk, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 4710000 Max Daily Volume (m^3): 19656 Original Application No: WR.1969D Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/7/1996 Version End Date:
12	436	N	562770 174120	Status: Historical Licence No: 9/40/01/0092/A/GR Details: Boiler Feed Direct Source: Southern Region Groundwater Point: Point B, Borehole At Kimberly Clark, Northfleet Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 400000 Max Daily Volume (m^3): 1309 Original Application No: WR.1969C Original Start Date: - Expiry Date: 31/3/2018 Issue No: 101 Version Start Date: 24/4/2002 Version End Date:
13	442	N	562830 174120	Status: Historical Licence No: 9/40/01/0092/A/GR Details: Boiler Feed Direct Source: Southern Region Groundwater Point: Point 2, Greensand Borehole, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.1969C Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 27/5/1966 Version End Date:
14	443	W	562260 173750	Status: Historical Licence No: 9/40/01/0092/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Borehole 3, Springhead Lake, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 4710000 Max Daily Volume (m^3): 19656 Original Application No: WR.1969D Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/7/1996 Version End Date:
15A	485	W	562230 173450	Status: Historical Licence No: 01/144 Details: Laundry Use Direct Source: Southern Region Groundwater Point: Point A, Borehole At Springhead Enterprise Park Data Type: Point Name: Shaws Laundries Ltd	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/1720 Original Start Date: 28/7/2000 Expiry Date: 05/06/2003 Issue No: 1 Version Start Date: 28/7/2000 Version End Date:

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ID	Distance (m)	Direction	NGR	Details	
16A	485	W	562230 173450	Status: Historical Licence No: 01/154 Details: Laundry Use Direct Source: Southern Region Groundwater Point: Point A, Borehole At Springhead Enterprise Park Data Type: Point Name: Berendsen UK Limited	Annual Volume (m^3): 120000 Max Daily Volume (m^3): 400 Original Application No: NPS/WR/016839 Original Start Date: 3/5/2004 Expiry Date: 31/3/2018 Issue No: 5 Version Start Date: 5/12/2014 Version End Date:
17B	492	W	562210 173750	Status: Historical Licence No: 9/40/01/0051/GR Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
18B	492	W	562210 173750	Status: Historical Licence No: 9/40/01/0051/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: Point A At Blue Lake Northfleet Cement Works Data Type: Point Name: LaFarge Cement UK PLC	Annual Volume (m^3): 1235375 Max Daily Volume (m^3): 10060 Original Application No: WR.2221B Original Start Date: 10/4/1967 Expiry Date: - Issue No: 103 Version Start Date: 27/11/2007 Version End Date:
19B	492	W	562210 173750	Status: Historical Licence No: 9/40/01/0051/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: Point A At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
20B	492	W	562210 173750	Status: Historical Licence No: 9/40/01/0051/GR Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Point A At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
21B	492	W	562210 173750	Status: Historical Licence No: 9/40/01/0051/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Point A At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
Not shown	611	N	562980 174260	Status: Historical Licence No: 9/40/01/0092/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Borehole 4, Crete Hall Road, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 4710000 Max Daily Volume (m^3): 19656 Original Application No: WR.1969D Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 1/7/1996 Version End Date:
Not shown	785	W	561920 173800	Status: Historical Licence No: 9/40/01/0051/GR Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point B At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:

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ID	Distance (m)	Direction	NGR	Details	
Not shown	785	W	561920 173800	Status: Historical Licence No: 9/40/01/0051/GR Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: Point B At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
Not shown	785	W	561920 173800	Status: Historical Licence No: 9/40/01/0051/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: Point B At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
Not shown	785	W	561920 173800	Status: Historical Licence No: 9/40/01/0051/GR Details: Process Water Direct Source: Southern Region Groundwater Point: Point B At Blue Lake Northfleet Cement Works Data Type: Point Name: Lafarge Cement UK PLC	Annual Volume (m^3): 1186000 Max Daily Volume (m^3): 6721 Original Application No: NPS/WR/001659 Original Start Date: 10/4/1967 Expiry Date: - Issue No: 104 Version Start Date: 22/9/2009 Version End Date:
Not shown	785	W	561920 173800	Status: Historical Licence No: 9/40/01/0051/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: Point B At Blue Lake Northfleet Cement Works Data Type: Point Name: LaFarge Cement UK PLC	Annual Volume (m^3): 1235375 Max Daily Volume (m^3): 10060 Original Application No: WR.2221B Original Start Date: 10/4/1967 Expiry Date: - Issue No: 103 Version Start Date: 27/11/2007 Version End Date:
Not shown	882	N	562860 174560	Status: Historical Licence No: 9/40/01/0092/A/GR Details: Boiler Feed Direct Source: Southern Region Groundwater Point: Point 1, Greensand Borehole, Northfleet. Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.1969C Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 27/5/1966 Version End Date:
Not shown	905	N	562760 174590	Status: Historical Licence No: 9/40/01/0092/A/GR Details: Boiler Feed Direct Source: Southern Region Groundwater Point: Point A, Borehole At Kimberly Clark, Northfleet Data Type: Point Name: Kimberly-Clark Limited	Annual Volume (m^3): 400000 Max Daily Volume (m^3): 1309 Original Application No: WR.1969C Original Start Date: - Expiry Date: 31/3/2018 Issue No: 101 Version Start Date: 24/4/2002 Version End Date:
Not shown	1000	SW	561900 173000	Status: Historical Licence No: 01/0157 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A, Wingfield Park Farm In Southfleet. Data Type: Point Name: Ebbsfleet Investment (GP) Limited	Annual Volume (m^3): 16843 Max Daily Volume (m^3): 682 Original Application No: NPS/WR/016318 Original Start Date: 17/11/2004 Expiry Date: 31/3/2018 Issue No: 2 Version Start Date: 18/7/2014 Version End Date:
Not shown	1000	SW	561900 173000	Status: Historical Licence No: 9/40/01/0523/G Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A, Wingfield Park Farm In Southfleet. Data Type: Point Name: Beslee Farms	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/0873 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 12/3/1996 Version End Date:

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ID	Distance (m)	Direction	NGR	Details	
Not shown	1305	SW	561660 172811	Status: Historical Licence No: 9/40/01/0504/G/R01 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point B, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/012674 Original Start Date: 1/4/2014 Expiry Date: 31/3/2024 Issue No: 1 Version Start Date: 1/4/2014 Version End Date:
Not shown	1305	SW	561660 172811	Status: Historical Licence No: 9/40/01/0504/G/R01 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: Point B, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/012674 Original Start Date: 1/4/2014 Expiry Date: 31/3/2024 Issue No: 1 Version Start Date: 1/4/2014 Version End Date:
Not shown	1306	SW	561660 172810	Status: Historical Licence No: 9/40/01/0504/G Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point B, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 909.6 Original Application No: 169/0234 Original Start Date: - Expiry Date: 31/3/2014 Issue No: 101 Version Start Date: 27/11/2006 Version End Date:
Not shown	1306	SW	561660 172810	Status: Historical Licence No: 9/40/01/0504/G Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: Point B, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 909.6 Original Application No: 169/0234 Original Start Date: - Expiry Date: 31/3/2014 Issue No: 101 Version Start Date: 27/11/2006 Version End Date:
Not shown	1334	SW	561700 172720	Status: Historical Licence No: 9/40/01/0504/G Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D.T.G. Elliott & Son Ltd.	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/0234 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 15/5/1978 Version End Date:
Not shown	1334	SW	561700 172720	Status: Historical Licence No: 9/40/01/0504/G Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet. Data Type: Point Name: D.T.G. Elliott & Son Ltd.	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/0234 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 15/5/1978 Version End Date:
Not shown	1370	SW	561660 172710	Status: Historical Licence No: 9/40/01/0504/G Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 909.6 Original Application No: 169/0234 Original Start Date: - Expiry Date: 31/3/2014 Issue No: 101 Version Start Date: 27/11/2006 Version End Date:
Not shown	1370	SW	561660 172710	Status: Historical Licence No: 9/40/01/0504/G Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 909.6 Original Application No: 169/0234 Original Start Date: - Expiry Date: 31/3/2014 Issue No: 101 Version Start Date: 27/11/2006 Version End Date:

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ID	Distance (m)	Direction	NGR	Details	
Not shown	1370	SW	561660 172710	Status: Historical Licence No: 9/40/01/0504/G/R01 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/012674 Original Start Date: 1/4/2014 Expiry Date: 31/3/2024 Issue No: 1 Version Start Date: 1/4/2014 Version End Date:
Not shown	1370	SW	561660 172710	Status: Historical Licence No: 9/40/01/0504/G/R01 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: Point A, Borehole, H5 Chalk, Southfleet Data Type: Point Name: D T G Elliott & Son Ltd	Annual Volume (m^3): 5910 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/012674 Original Start Date: 1/4/2014 Expiry Date: 31/3/2024 Issue No: 1 Version Start Date: 1/4/2014 Version End Date:
Not shown	1624	W	561161 173057	Status: Historical Licence No: 01/152 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Point B, Borehole At Southfleet, Kent Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/1686 Original Start Date: 7/7/2002 Expiry Date: 30/9/2004 Issue No: 1 Version Start Date: 7/7/2002 Version End Date:
Not shown	1627	W	561160 173050	Status: Historical Licence No: SO/040/0037/006 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole Point F, (epm) Southfleet (borehole & Two Audits) Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): 6716000 Max Daily Volume (m^3): 24200 Original Application No: NPS/WR/002774 Original Start Date: 23/6/2010 Expiry Date: 31/3/2020 Issue No: 1 Version Start Date: 23/6/2010 Version End Date:
Not shown	1627	W	561160 173050	Status: Historical Licence No: 01/156 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole Point F, (epm) Southfleet (borehole & Two Audits) Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): 6716000 Max Daily Volume (m^3): 24200 Original Application No: - Original Start Date: 1/10/2004 Expiry Date: 31/3/2010 Issue No: 3 Version Start Date: 1/2/2008 Version End Date:
Not shown	1655	W	561130 173050	Status: Historical Licence No: 9/40/01/0088/B/GR Details: Process water Direct Source: Southern Region Groundwater Point: Point 1, Well Nr. New Barn In Swanscombe, Kent. Data Type: Point Name: Empire Paper Limited	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.1970 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/7/1993 Version End Date:
Not shown	1940	SW	560900 172500	Status: Historical Licence No: 9/40/01/0128/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Wells And Adits At Southfleet Ps, Southfleet Data Type: Region Name: Thames Water Utilities Ltd	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.1971 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 17/6/1994 Version End Date:

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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	1653	NW	561870 175100	Status: Active Licence No: 9/40/01/0522/S Details: Mineral Washing Direct Source: Southern Region Surface Waters Point: Point A, Tidal River Thames At Swanscombe. Data Type: Point Name: Robert Brett & Sons Ltd	Annual Volume (m^3): 45500 Max Daily Volume (m^3): 375 Application No: 169/872 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 1/1/2002 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	1624	W	561161 173057	Status: Historical Licence No: 01/152 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Point B, Borehole At Southfleet, Kent Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 169/1686 Original Start Date: 7/7/2002 Expiry Date: 30/9/2004 Issue No: 1 Version Start Date: Version End Date:
Not shown	1627	W	561160 173050	Status: Active Licence No: SO/040/0037/006 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole Point F, (epm) Southfleet (borehole & Two Audits) Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): 6716000 Max Daily Volume (m^3): 24200 Original Application No: NPS/WR/002774 Original Start Date: 23/6/2010 Expiry Date: 31/3/2020 Issue No: 1 Version Start Date: Version End Date:
Not shown	1627	W	561160 173050	Status: Historical Licence No: 01/156 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Borehole Point F, (epm) Southfleet (borehole & Two Audits) Data Type: Point Name: Thames Water Utilities Ltd	Annual Volume (m^3): 6716000 Max Daily Volume (m^3): 24200 Original Application No: - Original Start Date: 1/10/2004 Expiry Date: 31/3/2010 Issue No: 3 Version Start Date: Version End Date:
Not shown	1940	SW	560900 172500	Status: Historical Licence No: 9/40/01/0128/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: Wells And Adits At Southfleet Ps, Southfleet Data Type: Region Name: Thames Water Utilities Ltd	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.1971 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

Gravesham Borough Council

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	0	On Site	1	Inner catchment
2	261	NE	2	Outer catchment

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.
422	SE	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

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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? No

Database searched and no data found.

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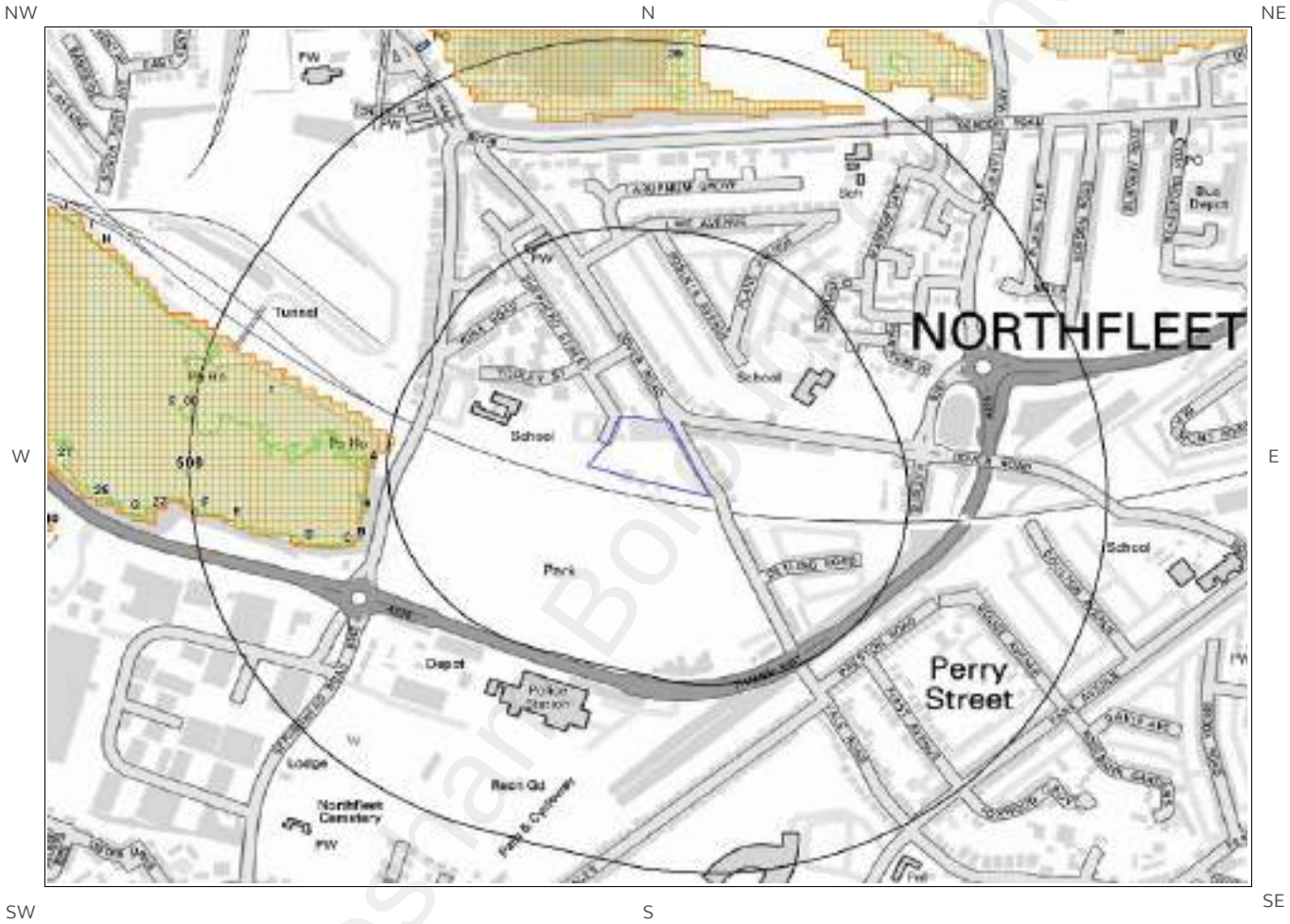
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



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Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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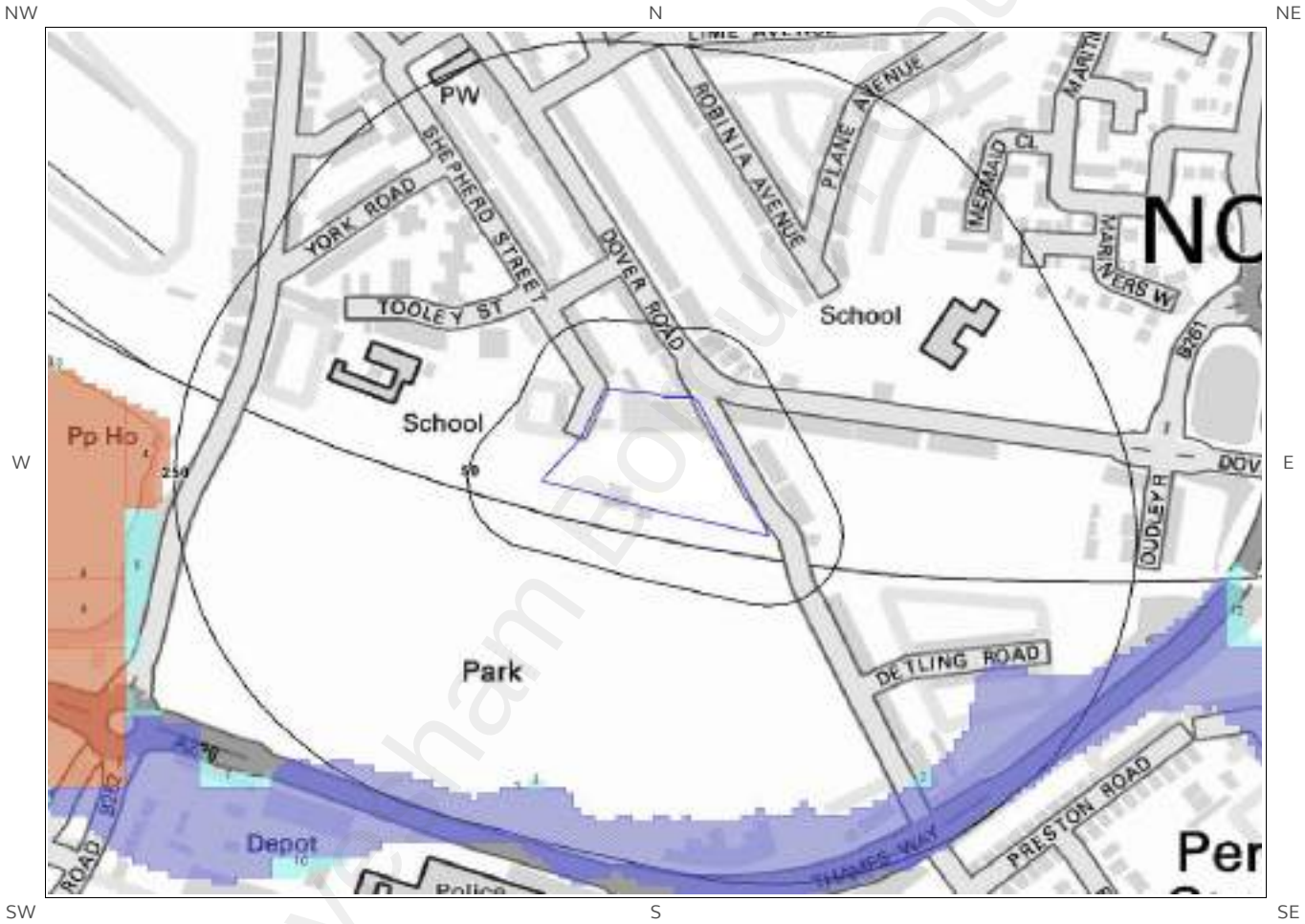
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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Site Outline

100 250 Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? Yes

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

ID	Distance (m)	Direction	Update	Type
1	243	W	09-Sep-2016	Zone 2 - (Fluvial/Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/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.

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.

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7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? Yes

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.

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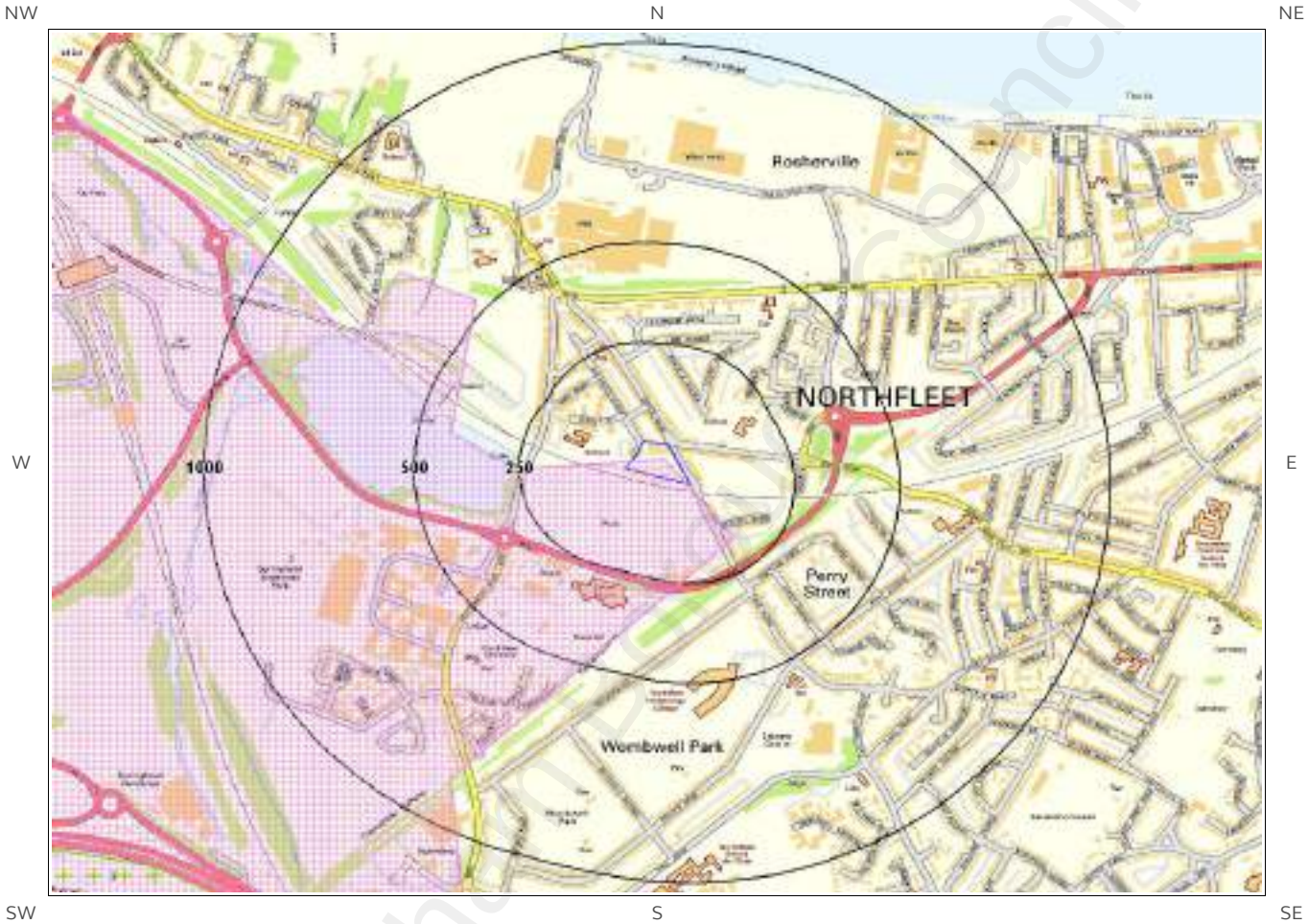
8. Designated Environmentally Sensitive Sites Map



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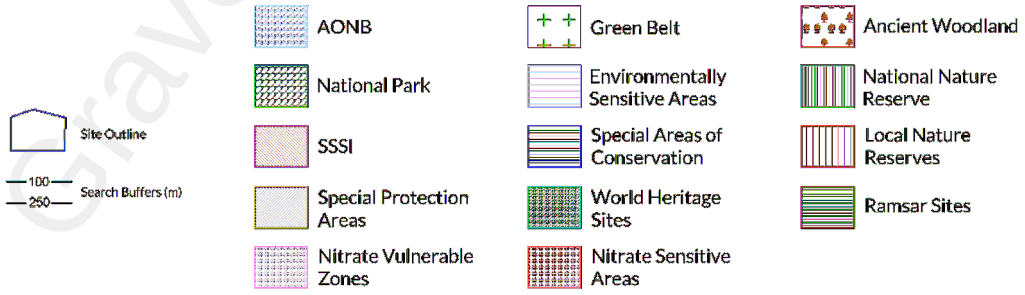

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8. Designated Environmentally Sensitive Sites

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:

1

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
Not shown	1436	W	Bakers Hole	Natural England

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.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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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	0	On Site	Existing	DEFRA

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

2

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
3	1435	SW	London Area Greenbelt	Dartford District (B)
Not shown	1528	S	London Area Greenbelt	Gravesham District (B)

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9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

9.1.2 Landslides

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

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9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Moderate

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

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

9.1.5 Collapsible Rocks

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

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

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

9.1.6 Running Sand

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

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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.

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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.

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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

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APPENDIX C
Legislative Background

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Legislative Background

Environmental liabilities and risks have been evaluated in terms of a source -pathway - target relationship in accordance with the approach set out in:

- The 1995 Environment Act;
- The Contaminated Land (England) Regulations 2000;
- The DETR circular 02/2000 Environmental Protection Act 1990: Part IIA Contaminated Land.

Contaminated land is defined within the legislative framework as land which is in such condition by reason of substances in, on or under the land that:

1) Significant harm is being caused or there is a significant possibility of such harm being caused;
2) Significant pollution of controlled waters is being or is likely to be caused.

The potential for harm is based on the presence of three factors:

- **Source** - substances that are potential contaminants or pollutants that may cause harm;
- **Pathway** - a potential route by which contaminants can move from the source to the receptor;
- **Receptor** - a receptor that may be harmed, for example the water environment, humans and water.

Where a source, pathway and target are all present a pollutant linkage exists and there is potential for harm to be caused. The presence of a source does not automatically imply that a contamination problem exists, since contamination must be defined in terms of pollutant linkages and unacceptable risk of harm. The nature and importance of both pathways and receptors are site specific and will vary according to the intended end use of the site, its characteristics and its surroundings.

The key principle which supports the SPR approach is 'suitable for use' criteria. This requires remedial action only where contamination is considered to pose unacceptable actual or potential risks to health or the environment and, taking into account the proposed use of the site.

Relevant Guidance Documents

This report has been prepared in accordance with the list of guidance below however the list is not exhaustive:

- CLR11 – Model Procedures;
- Contamination and Environmental Matters - Their implications for Property Professionals (2nd Edition RICS Nov 2003);
- Brownfields – Managing the development of previously developed land – A client's guide, CIRIA 2002;
- DEFRA and Environment Agency publications CLR7 – 10, supported by the TOX guides and SGV guides, dated March 2002;
- DETR Circular 02/2000, Contaminated Land: Implementation of Part IIA of the Environmental Protection Act 1990;
- Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the EPA1990, May 2002;

Relevant Legislative Documents

The following is a non-exhaustive list of legislative framework documents that has been considered in the production of this report:

- The Environment Act (1995);
- The Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance (2012);
- The Environment Protection Act (1990);
- The Contaminated Land (England) Act (2000);
- Contaminated Land (England) Regulations (2012);
- The Water Resources Act (1991);
- The Pollution Prevention and Control (England and Wales) Regulations (2000);
- The Landfill Regulations (England and Wales) Regulations (2002);
- The Landfill (England and Wales) (Amendment) Regulations (2004);
- Health and Safety at Work Act;

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APPENDIX D
Risk Assessment Methodology

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Contaminated Land Risk Assessment

Contaminated Land Risk Assessment is a technique that identifies and considers the associated risk, determines whether the risks are significant and whether action needs to be taken. The four main stages of risk assessment are:

Hazard Identification ⇨ Hazard Assessment ⇨ Risk Estimation ⇨ Risk Evaluation

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. The starting point of the risk assessment is to identify the context of the problem and the objectives of the process. Under CLR11, three tiers of risk assessment exist - Preliminary, Generic Quantitative and Detailed Quantitative.

Formulating and developing a conceptual model for the site is an important requirement of risk assessment, this supports the identification and assessment of pollutant linkages. Development of the conceptual model forms the main part of preliminary risk assessment, and the model is subsequently refined or revised as more information and understanding is obtained through the risk assessment process.

Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk.

The risk assessment process needs to take into account the degree of confidence required in decisions. Identification of uncertainties is an essential step in risk assessment.

The likelihood of an event is classified on a four-point system using the following terms and definitions from CIRIA C552:

- **High likelihood**: There is a pollution linkage and an event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;

- **Likely**: There is a pollution linkage and all the elements are present and in the right place, which means it is probable that an event will occur. Circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;

- **Low likelihood**: There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain even over a longer period such event would take place, and is less likely in the short term;

- **Unlikely**: There is a pollution linkage but circumstances are such that it is improbable the event would occur even in the long term.

The severity is also classified using a system based on CIRIA C552. The terms and definitions are:

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- **Severe**: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. A short-term risk to a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
  Examples – High concentrations of contaminant on surface of recreation area, major spillage of contaminants from site into controlled waters, explosion causing building to collapse;

- **Medium**: Chronic damage to human health ('significant harm' as defined in DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
  Examples - Concentrations of contaminants exceed the generic assessment criteria, leaching of contaminants from a site to a Principal or Secondary Aquifer, death of species within a designated nature reserve;

- **Mild**: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures, services or the environment;
  Examples – Pollution of non-classified groundwater or damage to buildings rendering it unsafe to occupy.

- **Minor**: harm, not necessarily significant harm, which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by use of personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.
  Examples – Presence of contaminants at such concentrations PPE is required during site work, loss of plants in landscaping scheme or discolouration of concrete.

Once the likelihood and severity have been determined, a risk category can be assigned using the table below.

		Consequences			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**Highly likely**	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very Low	Very low

Definitions of the risk categories obtained from the above table are as follows together with an assessment of the further work that might be required:

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- **Very high**: There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability. Urgent investigation and remediation are likely to be required;

- **High**: Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the longer term;

- **Moderate**: It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it would be more likely to be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term;

- **Low**: It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild;

- **Very Low**: There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

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APPENDIX E
Ground Gas Guidance

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Ground Gas Guidance

Redevelopment on brownfield sites is an ever increasing occurrence, including those sites where a potential ground gas issue is present.

CIRIA C665 is the current guidance which gives up-to-date advice on all aspects of ground gas. It outlines good practice in investigation, the collection of relevant data and monitoring programmes in a risk-based approach to gas contaminated land. Two semi-quantitative methods are set out for the assessment of risk:

1. For low rise housing with a ventilated under floor void at minimum 150 mm (Boyle and Witherington);
2. For all other development types (Wilson and Card).

Both methods use the concept of Gas Screening Values (GSVs) to identify levels of risk. The mitigation and management of potentially unacceptable risk is described with reference to both passive and active systems of gas. Source removal is also discussed as an option.

CIRIA C665 and the advice it contains has been prepared to be generally consistent with CLR11 *Model Procedures for the management of land contamination* (Defra and Environment Agency, 2004a). The aim of CIRIA C665 is a consistent approach to decision making, particularly relating to the scope of protective design measures on a site specific basis.

Legislative Framework

CIRIA C665 provides technical guidance however also recognises the context into which the guidance has to be employed. Government policy is based upon a "suitable for use approach", which is relevant to both the current and proposed future use of land. When considering the current use of land, Part IIA of the Environment Protection Act 1990 provides the regulatory regime. The presence of hazardous ground gases could provide the "source" in a "pollutant linkage" which could lead the regulator to determine that considerable harm or there is a significant possibility of such harm being caused. Under such circumstances, the regulator would determine the land to be "contaminated land" under the provisions of the Act, setting out the process of remediation as described in the DETR Circular 02/2000 *Statutory guidance on contaminated land* (DETR, 2000a).

Frequency and Duration of Monitoring

The monitoring period for a specific site covers the "worst case" scenario. A "worst case" scenario will occur during falling atmospheric pressure and, in particular, weather conditions such as rainfall, frost and dry weather.

The benefits of the additional information and whether it is likely to change the scope of gas protection should be considered, as are the consequences of failing to characterise adequately pollutant linkages. Investigations concerned with soil gas are required to provide monitoring data sufficient to allow prediction of worst case conditions enabling the confident assessment of risk and subsequent design of appropriate gas protection schemes. Monitoring programmes should not be an academic exercise in data collection.

Below are matrices that will aid in determining an appropriate number of gas monitoring visits and the length of monitoring period.

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Typical/idealised periods of monitoring

		Generation of Potential Source				
		Very Low	**Low**	**Moderate**	**High**	**Very High**
Sensitivity of Development	**Low (Commercial)**	1 month	2 months	3 months	6 months	12 months
	Moderate (Flats)	2 months	3 months	6 months	12 months	24 months
	High (Residential with Gardens)	3 months	6 months	6 months	12 months	24 months

Typical/idealised frequency of monitoring

		Generation of Potential Source				
		Very Low	**Low**	**Moderate**	**High**	**Very High**
Sensitivity of Development	**Low (Commercial)**	4	6	6	12	12
	Moderate (Flats)	6	6	9	12	24
	High (Residential with Gardens)	6	9	12	24	24

Note

1 NHBC guidance also recommends this period of monitoring (Boyle and Witherington, 2007).
2 There is no industry consent over "high", "medium" or "low" generation potential of source.
3 At least two sets of readings should be at low and falling atmospheric pressure (but not restricted to periods below <1000 mb) known as worst case conditions. Historical data can be used as part of the data set (Table 5.5b).

It is recommended that newly installed monitoring wells are left for 24 hours to allow the soil gas to reach equilibrium. It should be recognised, however, that some soil gas regimes could take considerably longer (up to seven days). Interpretation of any initial readings should take this equilibrium process into account.

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APPENDIX F
Limitations

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Standard Limitations

This desk study report was conducted and has been prepared for the sole internal use and reliance of the Client, BRT Properties Limited. This report shall not be relied upon or transferred to any other parties without the express written authorisation of BSL. If an unauthorised third party comes into possession of this report they rely on it at their risk and the authors owe them no duty of care or skill.

The findings and opinions conveyed via the desk study are based on information obtained from a variety of sources as detailed within this report, which BSL believes are reliable. Nevertheless, BSL cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

Any recommendations made in this report should be confirmed with the Regulatory bodies and Planning Authority prior to implementation to ensure compliance.

No existing manhole covers were lifted or drainage runs inspected during the course of this ground investigation.

The site plans enclosed in this report should not be scaled off.

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