

5d. Hydrology – Detailed River Network and River Quality



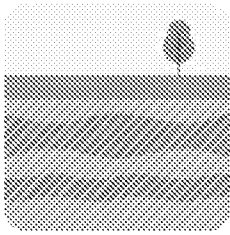
Map Legend



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	Site Outline		Primary River		Canal
	250 Search Buffers (m)		Secondary River		Canal Tunnel
	500 Search Buffers (m)		Tertiary River		Culvert
			Lake/Reservoir		Multiple Channel Culvert
			Underground River (Inferred)		Underground River (Potential Sewer)
			General Quality Assessment: Biology		Underground River (Local Knowledge)
			General Quality Assessment: Chemistry		

Report Reference: HYD-1466354
Client Reference: N5752 / C14459



5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

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

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

The following aquifer records are shown on the Aquifer within Superficial Geology Map (5a):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	254.0	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

5.2 Aquifer within Bedrock Deposits

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

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

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	Designation	Description
1	0.0	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	254.0	E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

5.3 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 (5b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1439.0	NW	492870 102440	Licence No: 10/41/541004 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: At Shripney Farm, Bognor Regis Data Type: Point Annual Volume (m ³): 45460 Max Daily Volume (m ³): 547.2 Original Application No: WR.0009 Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 10/6/2009 Version End Date:
Not shown	1460.0	E	496080 101450	Licence No: 10/41/542002 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: At Flansham Farm, Flansham Data Type: Point Annual Volume (m ³): 9092 Max Daily Volume (m ³): 27.2 Original Application No: WR.0265 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 7/12/1992 Version End Date:
Not shown	1720.0	E	496440 101760	Licence No: 10/41/541002 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: Point 2 At Shripney Farm & Flansham Farm Data Type: Point Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.0009 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 21/3/2001 Version End Date:
Not shown	1858.0	NW	492580 102760	Licence No: 10/41/541002 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: Point 1 At Shripney Farm & Flansham Farm Data Type: Point Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: WR.0009 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 21/3/2001 Version End Date:

5.4 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 (5b):

ID	Distance (m)	Direction	NGR	Details
7	0.0	On Site	494950 102740	Licence No: 10/41/542102 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Between Points C&D At Lidsey, Bersted Data Type: Line Annual Volume (m ³): 19639 Max Daily Volume (m ³): 909.2 Application No: WR.0714 Original Start Date: 20/5/1966 Expiry Date: 31/3/2016 Issue No: 101 Version Start Date: 10/6/2009 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
8	616.0	SW	492920 101610	Licence No: 10/41/541001 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Aldingbourne Rife At Whitehouse Farm. Data Type: Line	Annual Volume (m³): - Max Daily Volume (m³): - Application No: WR 1265 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 7/12/1996 Version End Date:
Not shown	786.0	N	494310 103260	Licence No: 10/41/542010 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Lidsey Rife Reach A-b,lidsey Data Type: Line	Annual Volume (m³): 14092 Max Daily Volume (m³): 227.3 Application No: 169/0197 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 10/6/2009 Version End Date:
Not shown	1086.0	N	494930 103540	Licence No: 10/41/542010 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Lidsey Rife Reach C-d, Lidsey Data Type: Line	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 169/0197 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 10/5/1995 Version End Date:
Not shown	1115.0	E	495837 102285	Licence No: SO/041/0024/005 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Ryebank Rife - Stakers Farm, Yapton Data Type: Point	Annual Volume (m³): 295053 Max Daily Volume (m³): 7800 Application No: NPS/WR/006679 Original Start Date: 23/6/2011 Expiry Date: 31/3/2028 Issue No: 1 Version Start Date: 23/6/2011 Version End Date:
Not shown	1342.0	N	494380 104320	Licence No: 10/41/542102 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Between Points A&b At Lidsey,bersted Data Type: Line	Annual Volume (m³): 19639 Max Daily Volume (m³): 909.2 Application No: WR.0714 Original Start Date: 20/5/1966 Expiry Date: 31/3/2016 Issue No: 101 Version Start Date: 10/6/2009 Version End Date:
Not shown	1350.0	N	494281 103329	Licence No: SO/041/0024/007 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Lidsey Rife (west Branch) At Headhone Farm Data Type: Point	Annual Volume (m³): 125000 Max Daily Volume (m³): 2400 Application No: NPS/WR/014692 Original Start Date: 7/2/2014 Expiry Date: 31/3/2028 Issue No: 1 Version Start Date: 7/2/2014 Version End Date:
Not shown	1358.0	N	494290 103340	Licence No: 27/208 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: West Branch Of The Lidsey Rife Data Type: Point	Annual Volume (m³): 45000 Max Daily Volume (m³): 600 Application No: 1695/0020 Original Start Date: 31/5/2007 Expiry Date: 31/3/2016 Issue No: 1 Version Start Date: 16/6/2009 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1408.0	N	494930 103540	Licence No: 10/41/542010 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Lidsey Rife Reach C-d, Lidsey Data Type: Line	Annual Volume (m³): 14092 Max Daily Volume (m³): 227.3 Application No: 169/0197 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 10/6/2009 Version End Date: -
Not shown	1449.0	E	496190 101940	Licence No: 10/41/411016 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Ryebank Rife - New Reach Data Type: Line	Annual Volume (m³): 27272 Max Daily Volume (m³): 2182 Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 8/6/2009 Version End Date: -
Not shown	1660.0	E	496390 101830	Licence No: 27/209 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Ryebank Rife, Point A - Billsham Data Type: Point	Annual Volume (m³): 250402 Max Daily Volume (m³): 7800 Application No: 1695/0025 Original Start Date: 18/12/2007 Expiry Date: 31/3/2016 Issue No: 1 Version Start Date: 16/6/2009 Version End Date: -
Not shown	1870.0	NW	492430 102540	Licence No: 10/41/541001 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Left Bank Of The Aldingbourne Rife Looking Downstream Data Type: Point	Annual Volume (m³): 9092 Max Daily Volume (m³): 545.5 Application No: WR. 265 Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 10/6/2009 Version End Date: -
Not shown	1870.0	NW	492430 102540	Licence No: 10/41/541309 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Left Bank Of The Aldingbourne Rife Looking Downstream Data Type: Point	Annual Volume (m³): 12274 Max Daily Volume (m³): 909.2 Application No: WR.714 Original Start Date: - Expiry Date: 31/3/2016 Issue No: 101 Version Start Date: 10/6/2009 Version End Date: -
Not shown	1870.0	NW	492430 102540	Licence No: 27/186 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Left Bank Of The Aldingbourne Rife Looking Downstream Data Type: Point	Annual Volume (m³): 90920 Max Daily Volume (m³): 1440 Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 16/6/2009 Version End Date: -
Not shown	1870.0	NW	492430 102540	Licence No: 10/41/542102 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: Left Bank Of The Aldingbourne Rife Looking Downstream Data Type: Point	Annual Volume (m³): 19639 Max Daily Volume (m³): 909.2 Application No: WR.0714 Original Start Date: 20/5/1966 Expiry Date: 31/3/2016 Issue No: 101 Version Start Date: 10/6/2009 Version End Date: -

ID	Distance (m)	Direction	NGR	Details
Not shown	1978.0	NW	492490 102840	Licence No: 27/185 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: Right Bank Of The Aidingbourne Rife Looking Downstream. Data Type: Point Annual Volume (m³): 61371 Max Daily Volume (m³): 1440 Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 16/6/2009 Version End Date:
Not shown	1984.0	S	494560 99410	Licence No: 27/201 Details: Make-Up Or Top Up Water Direct Source: Southern Region Surface Waters Point: Aidingbourne Rife At Butlins Holiday Village, Point 'a' Data Type: Point Annual Volume (m³): 40000 Max Daily Volume (m³): 360 Application No: 169/1783 Original Start Date: 23/12/2002 Expiry Date: 31/3/2016 Issue No: 1 Version Start Date: 23/12/2002 Version End Date:

5.5 Potable Water Abstraction Licences

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

Database searched and no data found.

5.6 Source Protection Zones

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

Database searched and no data found.

5.7 River Quality

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

5.7.1 Biological Quality:

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

The following Biological Quality records are shown on the Hydrology Map (5d):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	871.0	S	494270 100500	River Name: Aldingbourne Rife Reach: Coast - Barnham Rife Conf End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C
Not shown	871.0	S	494270 100500	River Name: Lidsey Rife Reach: Aldingbourne/barnham Rifes - Westergate End/Start of Stretch: End of Stretch NGR	C	C	C	C	C

5.7.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (5d):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	871.0	S	494270 100500	River Name: Aldingbourne Rife Reach: Coast - Barnham Rife Conf End/Start of Stretch: Start of Stretch NGR	E	E	E	E	E

5.8 Detailed River Network

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

Yes

The following Detailed River Network records are represented on the Hydrology Map (5d):

ID	Distance (m)	Direction	Details	
1	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
2	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
3	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
7	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
8	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	0.0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
10	57.0	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
11	76.0	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
12	130.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
13	136.0	E	River Name: Ryebank Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
14	144.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
15	144.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
16	166.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
17	206.0	E	River Name: Ryebank Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
18	207.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
19	207.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
20	231.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
21	233.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
22	243.0	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
23	253.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
24	270.0	E	River Name: Lidsey Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
25	310.0	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
26	336.0	N	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
27	343.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
28	350.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
29	351.0	SE	River Name: Lidsey Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
30	355.0	E	River Name: Ryebank Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
31	372.0	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
32	404.0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
33	404.0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
34	404.0	S	River Name: Lidsey Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
35	413.0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
36	433.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
37	437.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
38	437.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
39	445.0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
40	450.0	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
41	456.0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
42	470.0	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
43 A	475.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
44	476.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
45 A	479.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
46	480.0	S	River Name: Lidsey Rife Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
47	481.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
48	481.0	SW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
49	484.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
50	485.0	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
51	486.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
52	488.0	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
53	489.0	N	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
54	489.0	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

5.9 Surface Water Features

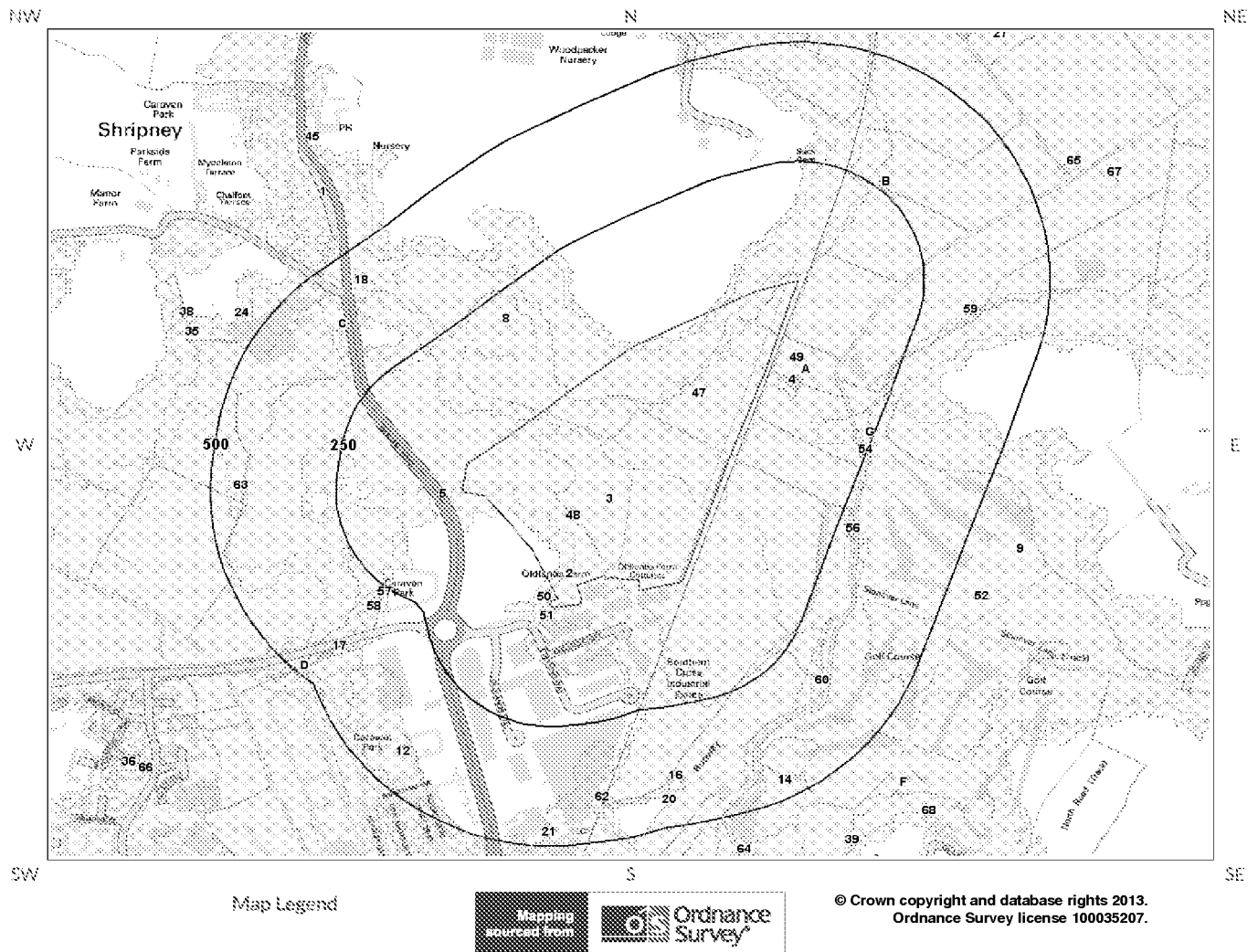
Are there any surface water features within 250m of the study site?

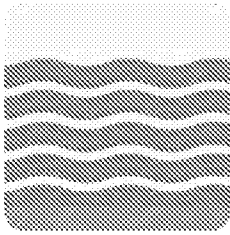
Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
0.0	On Site
24.0	E
49.0	E
67.0	NW
189.0	E
218.0	NW

6. Environment Agency Flood Map for planning (from rivers and the sea)





6. Flooding

6.1 Zone 2 Flooding

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

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

The following floodplain records are represented as green shading on the Flood Map:

ID	Distance (m)	Direction	Update	Type
1	0.0	On Site	27-Feb-2014	Zone 2 - (Tidal Models)
2	0.0	On Site	27-Feb-2014	Zone 2 - (Tidal Models)
3	0.0	On Site	27-Feb-2014	Zone 2 - (Fluvial / Tidal Models)
4	30.0	E	27-Feb-2014	Zone 2 - (Tidal Models)
5	53.0	SW	27-Feb-2014	Zone 2 - (Tidal Models)
6A	64.0	E	27-Feb-2014	Zone 2 - (Tidal Models)
7A	65.0	E	27-Feb-2014	Zone 2 - (Tidal Models)
8	104.0	NW	27-Feb-2014	Zone 2 - (Tidal Models)
9	121.0	E	27-Feb-2014	Zone 2 - (Tidal Models)
10B	246.0	NE	27-Feb-2014	Zone 2 - (Tidal Models)

6.2 Zone 3 Flooding

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 1 – Environment Agency Flood Map for Planning.

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

The following floodplain records are represented as blue shading on the Flood Map:

ID	Distance (m)	Direction	Update	Type
47	0.0	On Site	27-Feb-2014	Zone 3 - (Fluvial / Tidal Models)
48	0.0	On Site	27-Feb-2014	Zone 3 - (Tidal Models)

ID	Distance (m)	Direction	Update	Type
49	7.0	E	27-Feb-2014	Zone 3 - (Fluvial / Tidal Models)
50	13.0	W	27-Feb-2014	Zone 3 - (Tidal Models)
51	35.0	SW	27-Feb-2014	Zone 3 - (Tidal Models)
52	212.0	E	27-Feb-2014	Zone 3 - (Tidal Models)
53G	226.0	E	27-Feb-2014	Zone 3 - (Tidal Models)
54	238.0	E	27-Feb-2014	Zone 3 - (Tidal Models)
55G	245.0	E	27-Feb-2014	Zone 3 - (Tidal Models)

6.3 Flood Defences

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

Database searched and no data found.

6.4 Areas benefiting from Flood Defences

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

6.5 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

6.6 Groundwater Flooding Susceptibility Areas

6.6.1 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).

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

Potential below Surface

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

6.7 Groundwater Flooding Confidence Areas

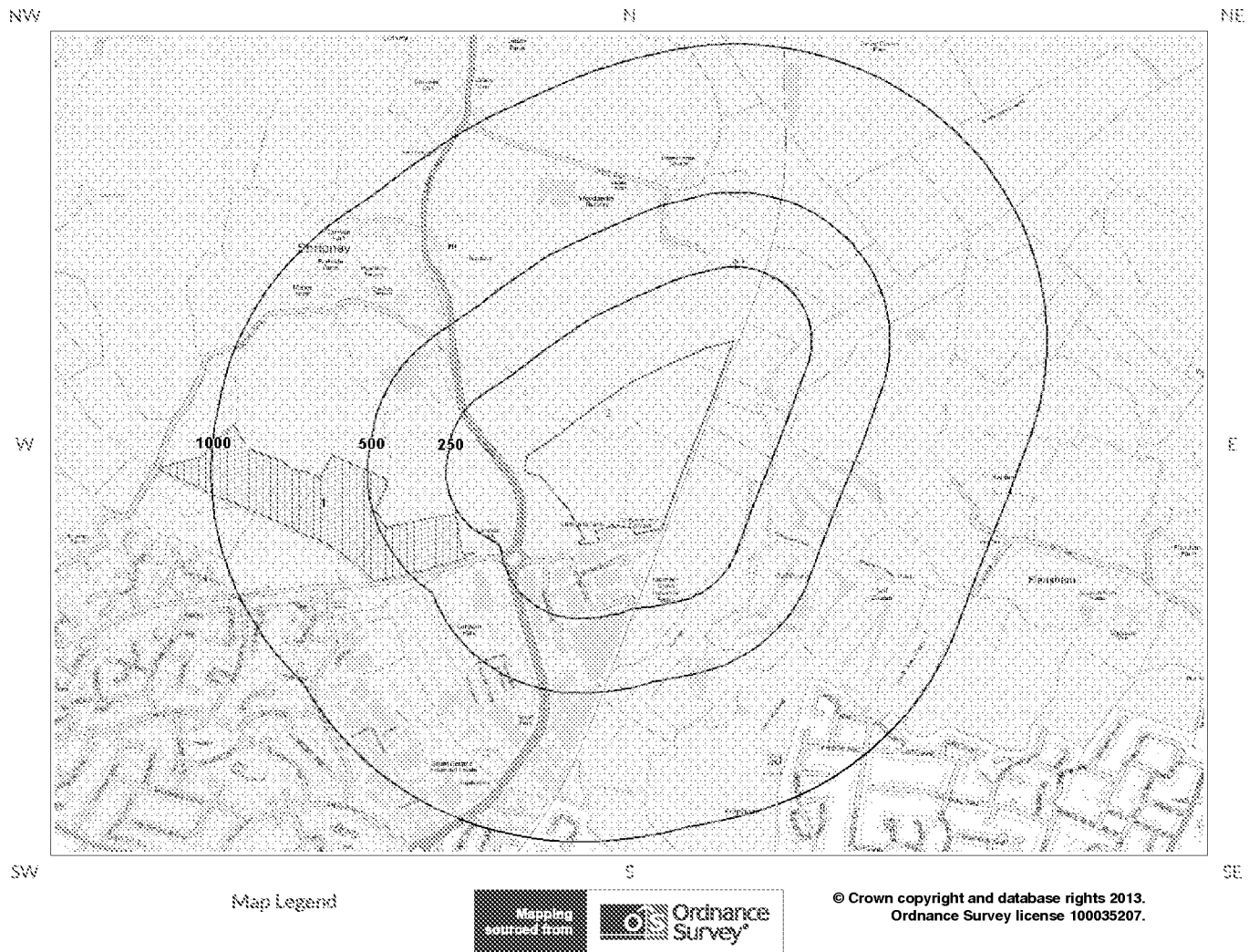
What is the British Geological Survey confidence rating in this result?

High

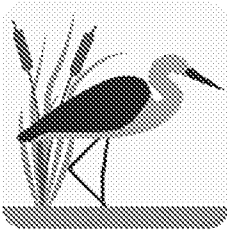
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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.

7. Designated Environmentally Sensitive Sites Map



 Site Outline	 SAC	 SSSI	 NNR	 World Heritage Sites
 Areas of Outstanding Natural Beauty	 SPA	 Ramsar	 LNR	 Environmentally Sensitive Areas
	 Nitrate Vulnerable Zones	 Nitrate Sensitive Areas	 National Parks	 Ancient Woodlands



7. Designated Environmentally Sensitive Sites

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

7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: 0

Database searched and no data found.

7.2 Records of National Nature Reserves (NNR) within 2000m of the study site: 0

Database searched and no data found.

7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site: 0

Database searched and no data found.

7.4 Records of Special Protection Areas (SPA) within 2000m of the study site: 0

Database searched and no data found.

7.5 Records of Ramsar sites within 2000m of the study site: 0

Database searched and no data found.

7.6 Records of Ancient Woodland within 2000m of the study site: 0

Database searched and no data found.

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

1

The following Local Nature Reserve (LNR) records provided by Natural England/Countryside Council for Wales and Scottish Natural Heritage are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	260.0	SW	The Brooks	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

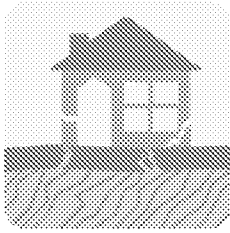
Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0.0	On Site	NVZ Area	DEFRA
Not shown	1371.0	S	NVZ Area	DEFRA
Not shown	1371.0	S	NVZ Area	DEFRA
Not shown	1904.0	SW	NVZ Area	DEFRA



8. Natural Hazards Findings

8.1 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 GeolInsight**, available from [our website](#). The following information has been found:

8.1.1 Shrink Swell

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

Low

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

Hazard

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

8.1.2 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.

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

8.1.3 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.

8.1.4 Compressible Ground

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

Negligible

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

Hazard

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

8.1.5 Collapsible Rocks

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

Low

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

Hazard

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

8.1.6 Running Sand

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

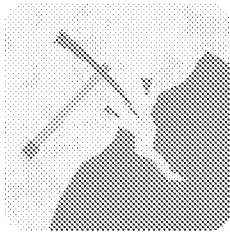
Low

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

Hazard

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

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



9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

No

Database searched and no data found.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*?

Low

*Please note this data is searched with a 150m buffer.

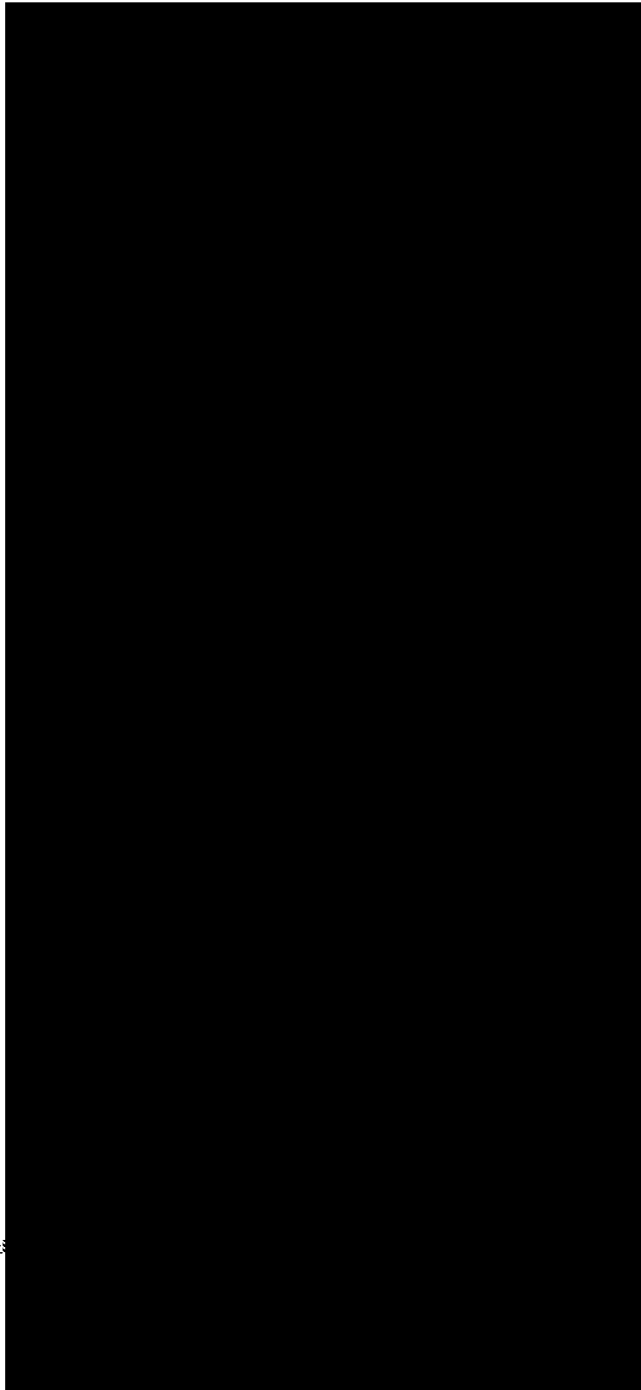
9.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

Contact Details



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, English Nature who retain the Copyright and Intellectual Property Rights for the data. PointX © Database Right/Copyright, Thomson Directories Limited © Copyright. Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with GroundSure.

"Commercial" means any building or property which is not Residential.

"Confidential information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to GroundSure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028.

"GroundSure Materials" means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

"Services" means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.GroundSure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions

implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by GroundSure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure's acceptance of an Order shall be binding only when made in writing and signed by GroundSure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents:

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of GroundSure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey.

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7 Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death

or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of GroundSure's internet ordering service.

7.5 GroundSure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure's right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9 Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure's acceptance of the Order; and

- (ii) the Reports and/or Mapping provided under this Contract are
 - (a) supplied to the Client's specification(s) and in any event
 - (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in

GroundSure's possession or control; and

(ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of GroundSure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond GroundSure's reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English

law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © GroundSure Limited June 2013

SU 90 SW 54	9428 8141	Oldlands Farm	Sheet 8
Surface level +3.2 m	Water not struck	September 1981	Waste 2.8 m Bedrock 1.2 m*

LOG

Geological classification	Lithology	Thickness m	Depth m
Soil	Soil	0.4	0.4
Brickearth	Clay, brown, silty near top, sandier near base	1.5	1.9
Raised Beach Deposits (younger)	'Very clayey' pebbly sand Gravel: coarse and fine; silt with chalk Sand: fine with traces of medium and coarse Fines: silt	0.9	2.8
Upper Chalk	Chalk, rubbly, silty near top	1.2*	4.0

*Based on borehole log

*Based on borehole log

*Based on borehole log

GRADING

Mean for deposit percentages			Depth below surface (m)	Percentages						
Fines	Sand	Gravel		Fines	Sand		Gravel			
				-½	+½ - 1	+1 - 2	+2 - 4	+4 - 16	+16 - 64	+64 mm
39	48	13	1.9-2.8	39	42	3	3	6	7	0

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log

*Based on borehole log



Appendix E

Previous Site Investigation

30 June 2013

Your ref:

Planning ref:

Our ref: J12134/DB/c01a

Mr J Godfrey
Hanbury Properties Ltd
17 Northgate
Chichester
PO19 1BJ

Dear Mr Godfrey,

RE: OLDLANDS FARM SITE< BOGNOR REGIS

**DESK STUDY REVIEW & PRELIMINARY GROUND APPRAISAL LETTER
REPORT FOR THE PROPOSED COMMERCIAL REDEVELOPMENT**

Further to instruction from Hanbury Properties Limited, we have carried out desk study research and have subsequently attended site to carry out a site walkover survey and preliminary ground investigation to determine the current status of the site and assess the prevailing ground conditions. It is understood that consideration is being given to the commercial development of this site through the construction of a number of light industrial, commercial and retail units, together with associated access roads, car parking and areas of ancillary soft landscaping.

The comments made in this letter are limited to those that can be made on the basis of the information obtained by Wilson Bailey Partnership as part of the limited research and site walkover visit carried out to date. Our comments should be viewed in the context of the limited scope of the investigation, the locations of the accessible sampling points and the range of data sources consulted, no liability can be accepted for information in other data sources. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate; no independent validation of such information has been made by Wilson Bailey Partnership.

Scope of Work

A desk study has been carried out in accordance with current guidelines for best practice to establish the environmental site setting and history of the site and the surrounding area. The desk study has been followed by a preliminary ground investigation to provide information to determine the prevailing ground conditions and provide an initial assessment of their implications with regards to the proposed redevelopment scheme

The ground investigation has been carried out in a single phase comprising a walkover survey together with a series of seven small diameter boreholes drilled by means of an open drive percussive soil sampling rig to a depth of up to 5.45 m, together with a series of 15 trial pits excavated using a JCB across the site. Combined soil gas and groundwater monitoring standpipes have been installed into a number of the boreholes located across the site to facilitate future monitoring.

It should be noted that at the time of the preliminary ground investigation, consideration was being given to the redevelopment of a slightly different site area, such that the ground investigation does not now provide a complete coverage of the site, although it still establishes an appropriate preliminary assessment of the prevailing ground conditions within the site and immediately surrounding area.

The soils encountered in the trial pits and boreholes were inspected by a Chartered Geologist and representative soil samples were recovered, although the scope of investigation was limited and did not include laboratory testing for geotechnical properties or contaminated land purposes.

As part of the ground investigation work, temporary soil samples of any materials that were assessed by visual inspection or olfactory means to be contaminated were screened using a photo-ionisation detector (PID) to determine the presence of any detectable concentrations of volatile organic compounds (VOCs) which may be an indication of the presence of fuel related hydrocarbons. No detectable concentrations of VOCs were recorded.

In accordance with current best practice, the findings of the desk study and ground investigation have been used to formulate a conceptual model for the site and facilitate a preliminary qualitative risk assessment and discussion of the implications of any identified issue of potential concerns with regards to ground contamination. On the basis of this assessment, the requirement for any further assessment or remedial action as part the redevelopment of this site for commercial purposes has been determined.

Site Description

The site comprises an irregularly shaped area that measures approximately 400 m by 400m and is currently occupied by open agricultural land. The southern boundary to the site is formed by the northerly extent of the Southern Cross Trading Estate, with the eastern part of the southern boundary formed by the rear of various commercial / light industrial units. The western part of the southern boundary is formed by a single track rough surfaced lane which leads to a derelict concrete portal frame barn and a pair of semi-detached former farm workers houses, which adjoin the rear of the Trading Estate.

The eastern site boundary is formed by the single track railway branch line than carried trains from Barnham mainline station to the Bognor Regis terminus. Adjacent to the site this railway is formed on an embankment formed of track ballast.

The western site boundary and the majority of the northern site boundary are formed by the extent of further open agricultural land, with the majority of the northern site boundary marked by the presence of an overgrown field drainage ditch. The western part of the northern site boundary is formed by the extent of the landscaping works associated with the new Bognor Northern Relief Road (BNRR), which is currently under construction. Access to the site is to be provided from the new roundabout that has been constructed on the A259 at the western end of the BNRR.

The site is sensibly levelled, which is consistent with the local topography, with a slight fall downwards to the east. The site is currently used for agriculture and has been planted with a range of arable crops.

As part of the site walkover survey a shallow well has been identified within the southwestern part of the site. This well appears to have been partially backfilled and to be brick lined, with a stone capping stone. The depth to the top of the in filled soil and rubble within the well is 2.20 m below ground level. In addition a former cattle drinking trough and water supply pipe was identified within the central southern part of the site.

Site History

The site history has been determined through a review of publically available historical Ordnance Survey maps together with a search of publically available environmental information sourced from the Envirocheck database, copies of the search results and selected historical maps and aerial photographs are enclosed with this letter report.

The earliest map studied, dated 1879, indicates the site to have been occupied by open fields within a predominantly rural setting, although by that time the railway line and the buildings of Oldlands Farm are shown to have been constructed. At that time, within the extreme southwestern corner of the site a pond is shown to have been present, presumably associated with the adjoining farm yard buildings adjoining the southern boundary to the site.

Subsequent maps studied indicate that the site and surrounding area remained essentially unchanged to the present day, although by 1979 the trading estate and commercial estates to the south and southwest of the site are shown to have become constructed, and by 1992, they are shown to have been fully constructed and occupied. The map dating 1992 also indicates that by that time the pond within the southwestern corner of the site is no longer shown to have been present, having presumably been infilled.

It is understood from local knowledge that Oldlands Farm was a mixed arable and dairy farm and that the dilapidated concrete portal frame barn that is located to the south of the site was used as the main barn for housing dairy cattle. There are no known details of the location of any slurry pits or lagoon that may have been associated with the former dairy farm. It is also understood that the former pond was backfilled in the early 1980s with arisings from the excavation works carried out as part of the reconstruction of the farm access track to the south of the site. It is understood that dairy farming ceased shortly after and the farm became purely arable prior to the closure of the farm and amalgamation of the land to form part of the larger farm based at Lidsey Lodge Farm to the north.

Site Environmental Setting

Information provided by the British Geological Survey indicates the site to be underlain by River Terrace Deposits overlying Raised Beach Deposits and subsequently the Lewes Nodular Chalk of the Upper White Chalk Group. Locally outcrops of Brickearth Clay are shown to be present, together with tracks of alluvium associated with the Lidsey Rife, located approximately 250 m to the east of the site.

Information provided by the Environment Agency indicates the superficial soils to be classified as a Secondary A Superficial Aquifer, whilst the underlying chalk is shown to be classified as a Principal Bedrock Aquifers, although the site is not shown to be located within any class of Source Protection Zone associated with any licensed groundwater abstraction points.

Further information provided by the Environment Agency indicates the presence of two historical landfill sites approximately 430 m and 550 m to the south of the site, which were formerly operated by LEC Refrigeration, a fridge and white goods manufacturer formerly based on Shripney Road to the south of the site, prior to closure and redevelopment of the site as a supermarket. These landfills are understood to have been licensed to accept a range of wastes and are understood to have closed prior to 1981.

Information provided by the Health Protection Agency in searches indicate the site to be located in an area where less than 1% of houses are affected by radon, such that radon protective measures are not required to be incorporated into the design of any new buildings to be constructed at this site.

Preliminary Conceptual Site Model Summary and Risk Assessment

The use of the majority of the site as open agricultural land from at least 1879 to the present day is not considered to pose a risk of contamination. It is likely that a range of pesticides and herbicides may have been used at this site as part of routine agricultural practice, although it is not likely that these would be biologically persistent and their use is understood to have been limited due to the close proximity of a number of ditches and the Lidsey Rife.

The presence of a former dairy farm barn directly to the south of the site presents a potential risk of the presence of a former slurry lagoon, although it is understood that the adjacent farm ceased dairy farming in the 1980s, such that this is not likely to now present a risk of potentially putrescible material.

The infilling of the former pond that is located within the extreme southwestern part of the site may present a potential risk of ground contamination as the material used to infill the pond may not have been controlled and segregated and may not have been geotechnically suitable. It is however considered likely that the time that has elapsed since infilling will have reduced the potential risks posed by any unsuitable materials placed within this pond backfill.

The former landfill sites located approximately 500 m to the south of the site are understood to have closed in 1980, with a range of open space and occupied buildings located within the intervening land. As a result of the distance from these landfill sites, the time that has elapsed since their closure and the anticipated flow direction of the nearby Lidsey Rife towards the south, these landfills are not considered to pose a risk to this site.,

Ground Conditions

Across the majority of the site a variable depth of topsoil has been encountered to depths of between 0.25 m and locally up to 0.70 m below ground level, although across the majority of the site topsoil has been proved to a depth of about 0.40 m below ground level.

Within the southwestern corner of the site, within the location of the former backfilled pond, made ground comprising reworked topsoil and brown clay with occasional fragments of metal, rope, timber and gravel was encountered to a depth of 1.80 m below ground level.

Underlying the topsoil and made ground where encountered, across the western part of the site the ground conditions were found to be relatively consistent; a locally desiccated but generally soft and very soft orange-brown sandy clay was encountered to depths of between 0.90 m and 2.30 m below ground level, below which a pale brown and off-white chalk derived silt with occasional and locally abundant flint gravel was encountered to depths of between 3.00 m and 3.80 m, below which completely weathered chalk was encountered to the maximum depth of investigation. These soils are consistent with the published geological records indicating the presence of River Terrace Deposits and Brickearth Clay overlying Raised Beach Deposits and subsequently Chalk.

Within the eastern part of the site, the near surface soils were found to comprise a very soft variably dark and pale bluish grey alluvium with occasional bands and layers of fibrous peat. These soils are consistent with the local presence of alluvium associated with the Lidsey Rife overlying Chalk.

Groundwater was encountered within a number of the exploratory positions. Within the western part of the site occasional groundwater seepages were noted at depths of about 1.50 m to 2.00 m, with a shallower inflow of perched water encountered within the backfilled former pond area at a depth of 1.00 m below ground level. Within the alluvium present within the eastern part of the site more substantial inflows of groundwater were identified at a depth of about 2.00 m in a number of locations.

Monitoring standpipes have been installed within the three of the boreholes in order to monitor for the presence of groundwater and soil gasses, although a programme of soil gas and groundwater monitoring has not been established to date.

Preliminary Contaminated Land Discussion

The site is not considered to have a potentially contaminative history other than the potential presence of unsuitable materials within the backfill to the former pond within the southwestern corner of the site

and the potential presence of a slurry lagoon or similar, which may be present on or near to the site and associated with the former farm complex directly to the south of the site.

The preliminary ground investigation carried out to date has not indicated the presence of visual or olfactory indications of ground contamination across the site in general and where sampled, the material use to backfill the former pond does not show visual or olfactory indications of gross contamination. No indications of the presence of a former dairy cattle slurry lagoon have been identified on site as part of the limited ground investigation works carried out to date.

It is considered that further ground investigation will need to be carried out in due course, including soil sampling and testing for a wide range of potential soil contaminants. As part of this work it may also be beneficial to carry out a limited number of soil pesticide analyses to confirm the anticipated absence of elevated concentrations of pesticides and herbicides. Soil samples should be recovered from the near surface topsoil in order to determine their suitability for reuse on or off site. Samples should also be recovered from the underlying natural soils to determine the potential requirement for mitigation measures as part of the proposed commercial redevelopment, although the potential requirement for mitigation measures due to ground contamination at this site is considered likely to be low.

Further ground characterization across the site will be necessary, together with further assessment of the soils used to infill the former pond.

Whilst detailed discussions will need to be held with the regulatory authorities in due course, it is considered likely that it would be appropriate to maintain a watching brief for ground contamination as part of the ground works for the proposed development in order that should any localised pockets of suspicious soils be encountered, they may be dealt with in accordance with best practice by a suitably qualified and experienced geo-environmental engineer in conjunction with the Local Authority Contaminated Land Officer.

Preliminary Geotechnical Discussion

Within the western part of the site, where River Terrace Deposits have been found to overly Raised Beach Deposits and subsequently chalk strata, very lightly loaded spread foundations, may be viable at shallow depth.

Within this part of the site it is considered likely that all but very lightly loaded floor slabs would require vibro-ground improvement to prevent unpredictable and variable ground settlements that may occur. If vibro ground improvement were to be selected for the ground floor slabs, it is considered likely that it would be economically viable to improve the ground below foundations as well in order that smaller foundations sizes may be adopted with a bearing capacity in the region of 120 kPa following ground improvement.

Consideration could also be given to lime stabilisation of near surface soils to mitigate the potential for settlements. Structures may then be constructed as a rigid raft that would be expected to have a very low bearing capacity.

Within the eastern part of the site, where a potentially significant of assumed compressible alluvium with layers and bands of peat have been encountered, the compressibility and presence of peat within these soils may prevent the use of ground improvement techniques. Whilst further ground investigation and assessment should be carried out within this part of the site, recourse to a piled foundation solution may be required to support structures and any particularly sensitive of heavily loaded ground floor slabs.

The use of lime and potentially cement stabilisation may still be viable within this part of the site providing buildings can be designed as relatively lightweight structures founding upon a relatively rigid raft foundation.

There is a potential that the presence of peat within this part of the site may present a source of ground gasses that could require gas protection measures to be incorporated into buildings, although soil gas monitoring would be necessary to determine long term flow of any soil gasses to robustly assess this issue.

The presence of variable bands and layers of peat within this part of the site could also result in differential settlements over unpredictable times for external areas of hard standing, although this could be mitigated through a combination of methods including vibro ground improvement and lime stabilisation to areas of external hardstanding.

Within the southwestern corner of the site where an in filled former pond has been identified, should the location of this pond correspond with any areas of buildings or sensitive hard landscaping, consideration may need to be given to excavating and replacing the backfill, or potentially some form of ground improvement or stabilisation. Should this area be located within a less sensitive area of hard landscaping or within soft landscaping, then it is not likely that further work would be required, subject to the findings of a more detailed contaminated land assessment of this area.

Conclusions

This investigation has achieved its intended goal of providing an initial assessment and appraisal of the site development history, environmental site setting and prevailing ground conditions at this site.

Whilst this greenfield development site is not considered to have a potentially contaminative history, further work including a more detailed ground investigation, monitoring of groundwater and soil gasses, and potentially a watching brief during ground works may be required in order to facilitate a robust assessment of this site with regards to ground contamination.

Further geotechnical focused ground investigation should also be carried out in due course, once the design layout for the proposed development has been finalised, in order to determine the most suitable design of foundations and floor slabs.

We trust that this letter provides sufficient information although please do not hesitate to contact me should you have any queries or questions.

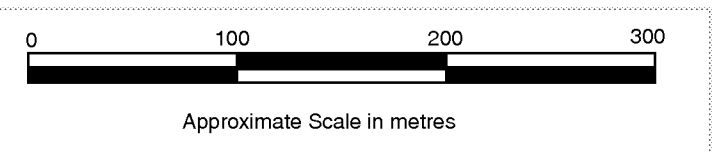
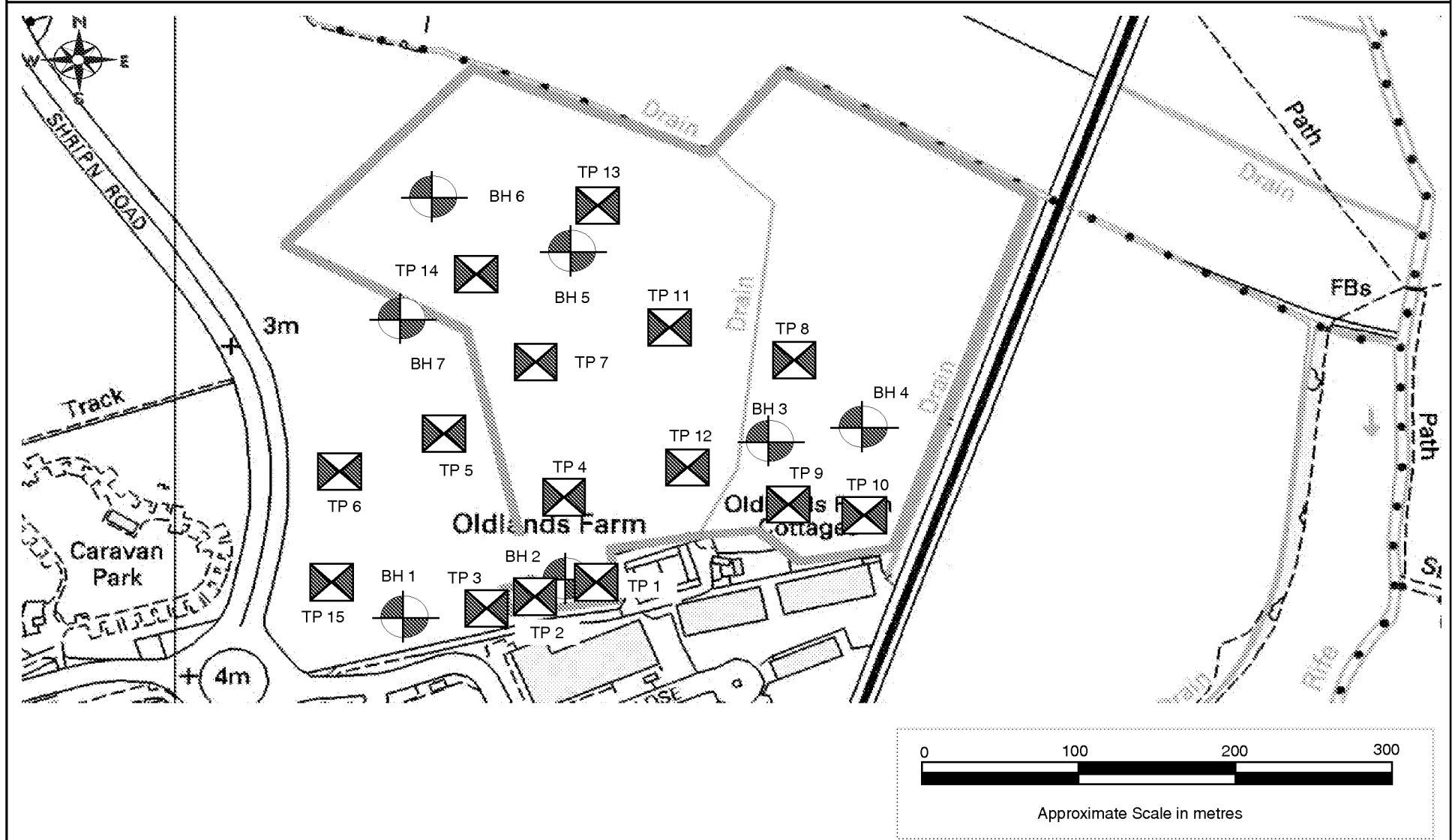
Yours sincerely
Wilson Bailey Partnership

Dominic Brightman
BSc MSc DIC FGS CGeol ARSM

Encs

Site Oldlands Farm, Bognor Regis, West Sussex

Client Hanbury Properties



Project Name
Oldlands Farm

Project No.
J12134

Co-ords: -

Hole Type
WLS

Location: Bognor Regis, West Sussex

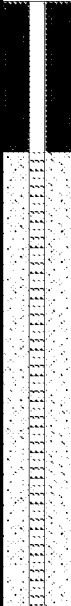
Level: -

Scale
1:50

Client: Hanbury Properties

Dates: 06/09/2012

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.45			TOPSOIL	
		0.50	D					Stiff brown sandy silty CLAY - desiccated soil	
		1.00	SPT	N=4	1.10			Soft pale yellowish brown and occasionally pale grey mottled fine sandy SILT with occasional fine to medium flint gravel	1
		1.00	D	(1,1,1,1,1,1)					
		1.50	D						
		2.00	SPT	N=4					2
		2.00	D	(1,0,1,1,1,1)					
		2.50	D						
		3.00	SPT	N=12					3
		3.00	D	(1,2,3,3,3,3)	3.30				
		3.50	D					CHALK: Recovered as white chalk	
		4.00	SPT	N=11					4
		4.00	D	(2,2,2,3,3,3)	4.45				
								End of Borehole at 4.45 m	5
									6
									7
									8
									9

Remarks: Groundwater seepage at 1.70 m. Standpipe installed with a response zone from 1.00 m to 4.00 m.



Project Name Oldlands Farm	Project No. J12134	Co-ords: -	Hole Type WLS
Location: Bognor Regis, West Sussex		Level: -	Scale 1:50
Client: Hanbury Properties		Dates: 06/09/2012	Logged By DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D	2/150mm 150mm - Abandoned	0.80			MADE GROUND (topsoil)	1
		1.00 1.00	SPT D					MADE GROUND (brown sandy clay with abundant flint, metal fragments, bailing twine) - refused on possible timber at 1.60 m.	
		1.50	D		1.60			End of Borehole at 1.60 m	2
									3
									4
									5
									6
									7
									8
									9
			Type	Results					

Remarks: Groundwater encountered at 1.00
m.Borehole terminated on obstruction possible timber.



Project Name
Oldlands Farm

Project No.
J12134

Co-ords: -

Hole Type
WLS

Location: Bognor Regis, West Sussex

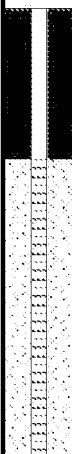
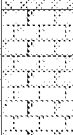
Level: -

Scale
1:50

Client: Hanbury Properties

Dates: 06/09/2012

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.50	D	N=4 (1,1,1,1,1,1)	0.70			TOPSOIL - "desiccated"	1		
		1.00	SPT		0.90			Stiff grey very silty CLAY - "desiccated"			
		1.00	D		1.10			Soft and very soft pale grey silty CLAY			
		1.50	D	N=6 (1,1,1,1,2,2)	2.30			Very soft locally soft pale brown very silty CLAY with occasional fine medium chalk gravel	2		
		2.00	SPT								
		2.00	D								
		2.50	D	N=1 (1,0,1,0,0,0)	3.60			Soft off white and pale grey clayey sandy SILT with chalk gravel	3		
		3.00	SPT								
		3.00	D								
		3.50	D	4.45			CHALK: Recovered as white chalk	4			
		4.00	D								
		End of Borehole at 4.45 m							5		
								6			
								7			
								8			
								9			

Remarks: Groundwater not encountered. Standpipe installed with a response zone from 1.00 m to 3.00 m.



Project Name
Oldlands Farm

Project No.
J12134

Co-ords: -

Hole Type
WLS

Location: Bognor Regis, West Sussex

Level: -

Scale
1:50

Client: Hanbury Properties

Dates: 06/09/2012

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40			TOPSOIL	
		0.50	D					Soft pale brown silty CLAY	
		1.00 1.00	SPT D	N=4 (1,1,1,1,1,1)					1
		1.50	D		1.60			PEAT - (fibrous)	
		2.00 2.00	SPT D	N=6 (1,1,1,1,2,2)	2.00			Very soft grey and dark grey CLAY with black organic flecks and occasional fine flint gravel	2
		2.50	D						
		3.00 3.00	SPT D	N=5 (1,1,1,1,1,2)					3
		3.50	D						
		4.00	D		3.90			CHALK: Recovered as white chalk	4
					4.45			End of Borehole at 4.45 m	
									5
									6
									7
									8
									9

Remarks: Groundwater encountered at 2.20 m.



Project Name
Oldlands Farm

Project No.
J12134

Co-ords: -

Hole Type
WLS

Location: Bognor Regis, West Sussex

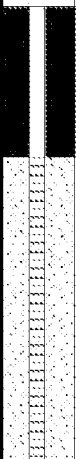
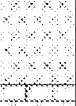
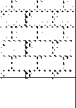
Level: -

Scale
1:50

Client: Hanbury Properties

Dates: 06/09/2012

Logged By
DPB

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.35			TOPSOIL	
		0.50	D					Firm locally soft rown silty sandy CLAY with occasional fine flint gravel	1
		1.00 1.00	SPT D	N=7 (1,1,1,2,2,2)	1.10			Very soft pale yellowish brown and off white clayey sandy SILT with occasional chalk and flint gravel	
		1.50	D						
		2.00 2.00	SPT D	N=1 (1,0,1,0,0,0)					2
		2.50	D						
		3.00 3.00	SPT D	Error					3
		3.50	D						
		4.00 4.00	SPT D	N=11 (1,1,2,2,3,4)	3.80			CHALK: Recovered as white chalk	4
					4.45			End of Borehole at 4.45 m	
									5
									6
									7
									8
									9

Remarks: Groundwater encountered at 2.00m. Standpipe installed with a reponse zone from 1.00 m to 3.00 m.





Appendix F

Hydrock Methodology

Hydrock desk study report appendix on Hydrock Methodology, version 02 updated 19-09-13 applies to this report.

This appendix may not be included in the printed report to reduce the document size.

It is presented in the PDF version of the report on the CD enclosed with the printed report. Alternatively, it can be supplied on request by quoting the version number and date.

