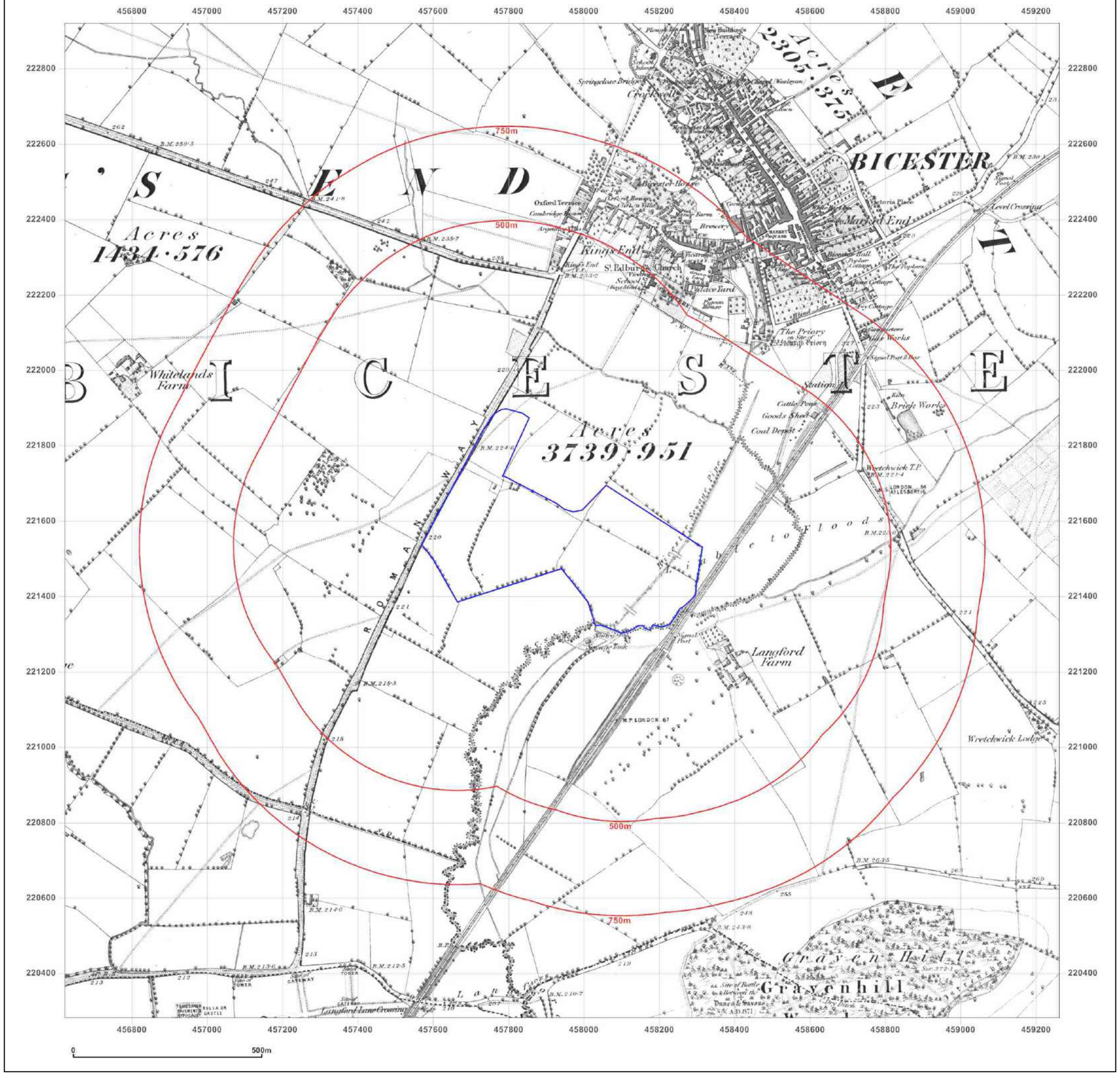

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1880**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1880
Revised 1880
Edition N/A
Copyright N/A
Levelled N/A

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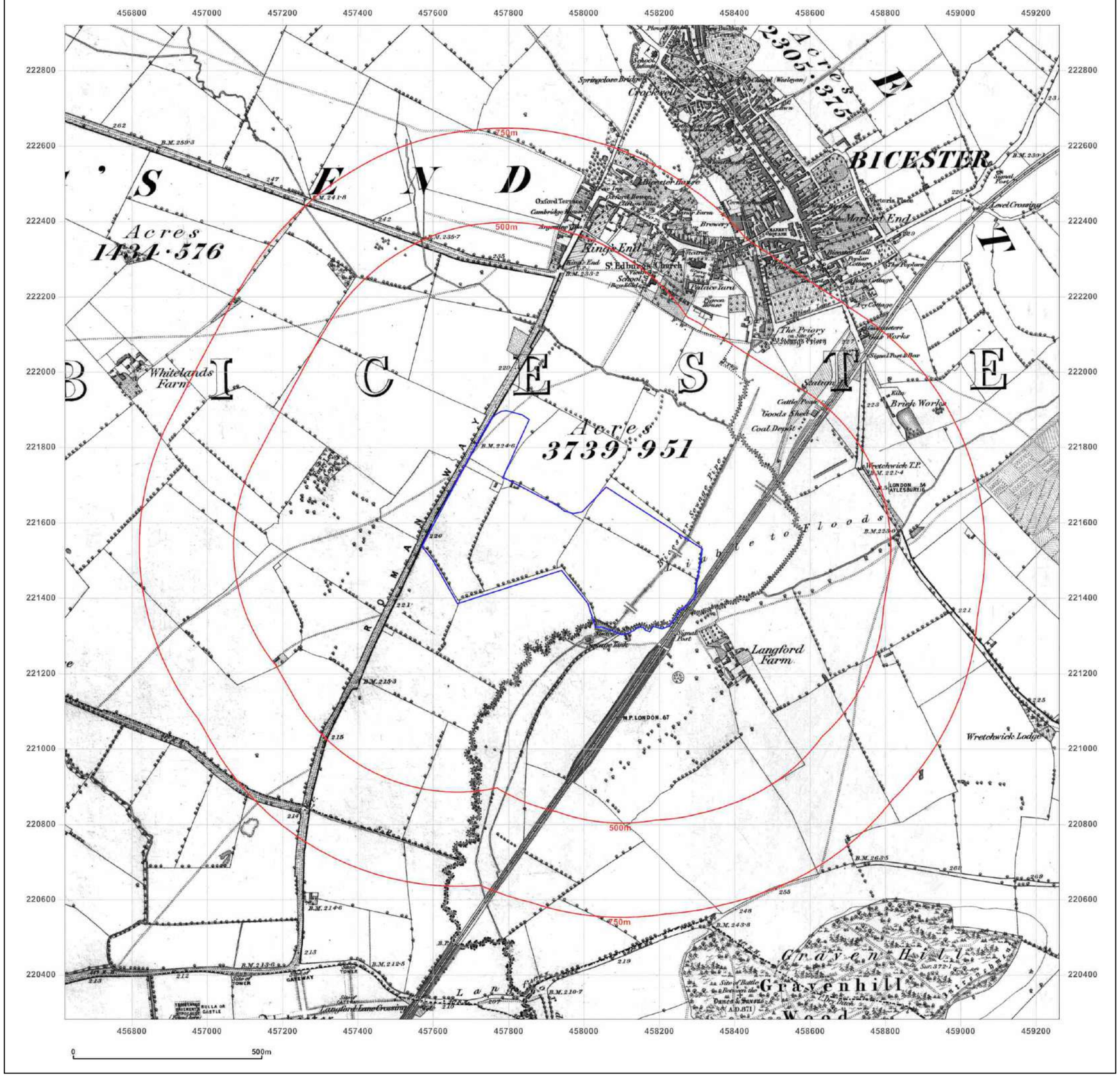

Groundsure INSIGHTS

Site Details:

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Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1885**

Scale: 1:10,560

Printed at: 1:10,560

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Edition 1885
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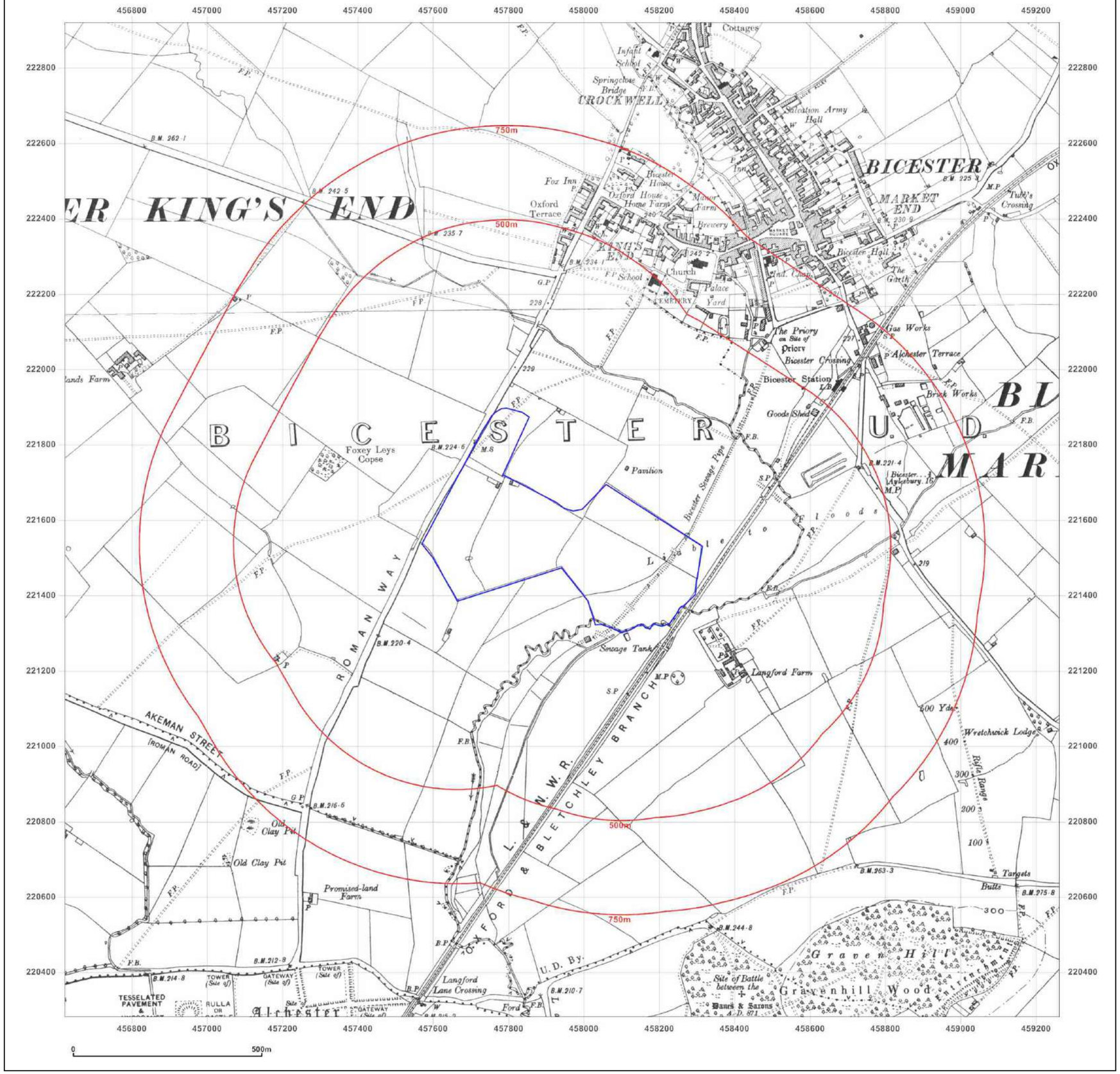

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Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1898**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1875
Revised 1898
Edition N/A
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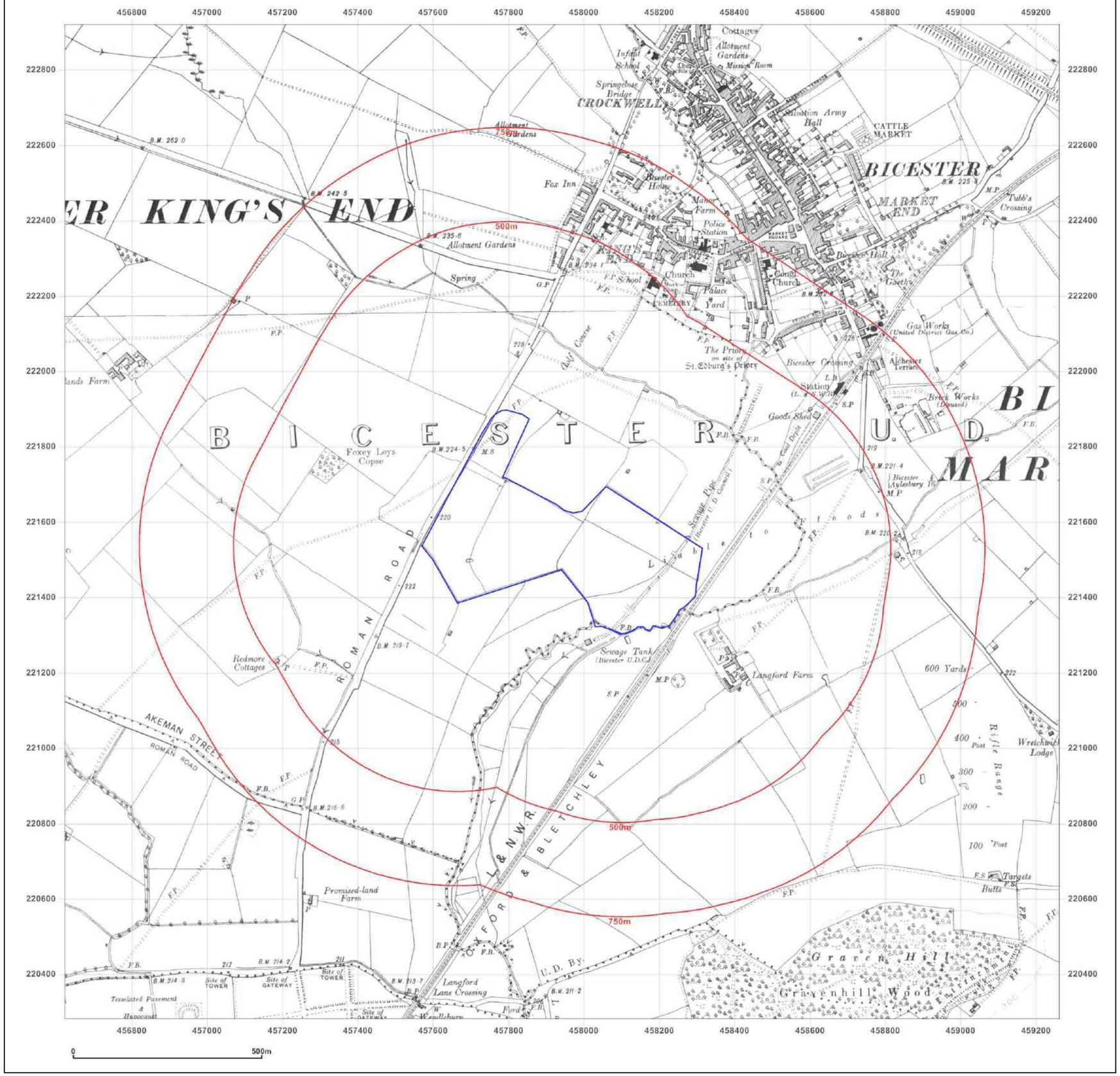

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Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1919-1920**

Scale: 1:10,560

Printed at: 1:10,560

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Levelled N/A

Surveyed 1879
Revised 1919
Edition N/A
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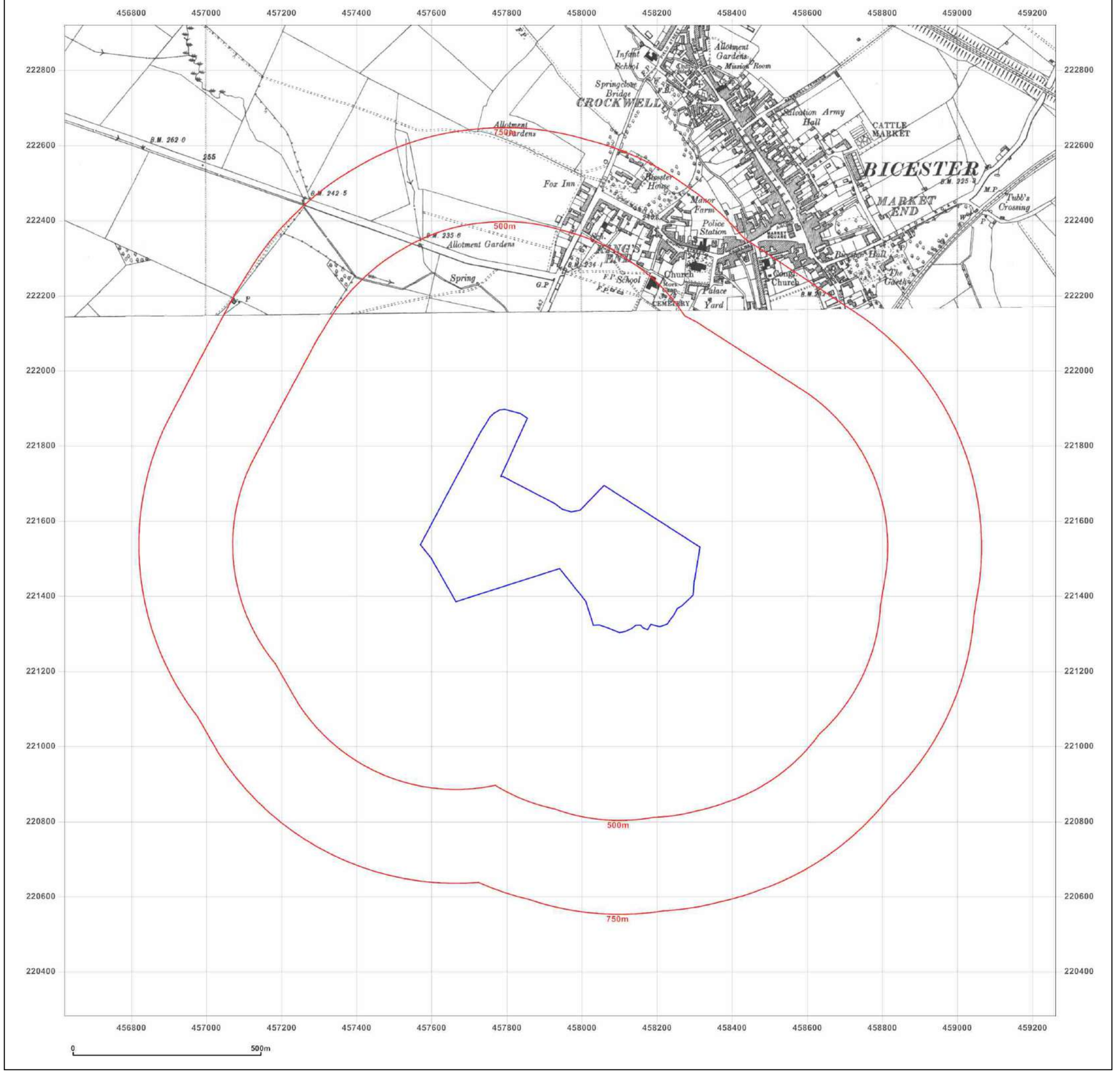

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1938
Edition 1938
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Production date: 13 July 2017

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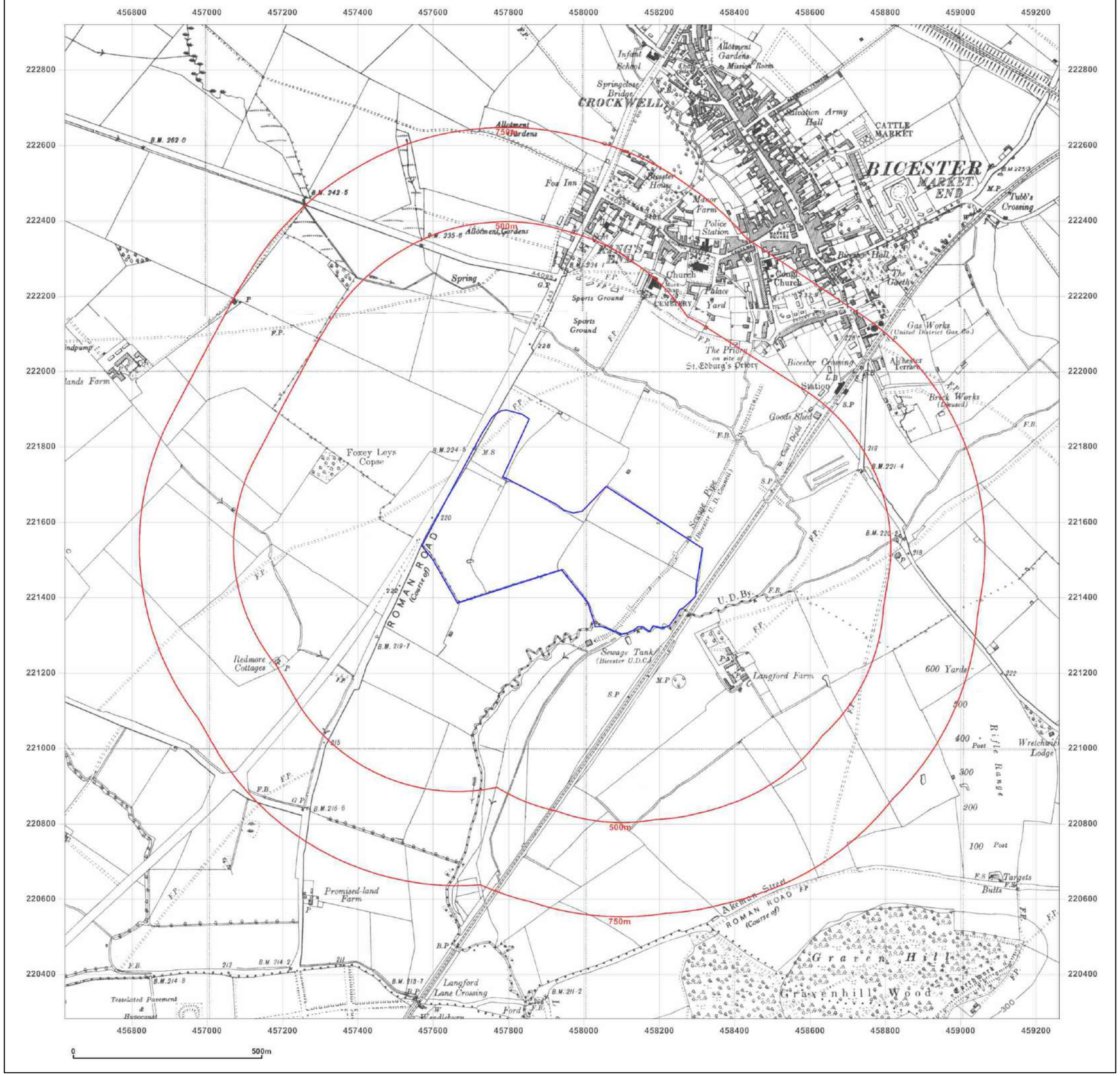

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: County Series

Map date: **1950**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1879
Revised 1950
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Revised 1950
Edition N/A
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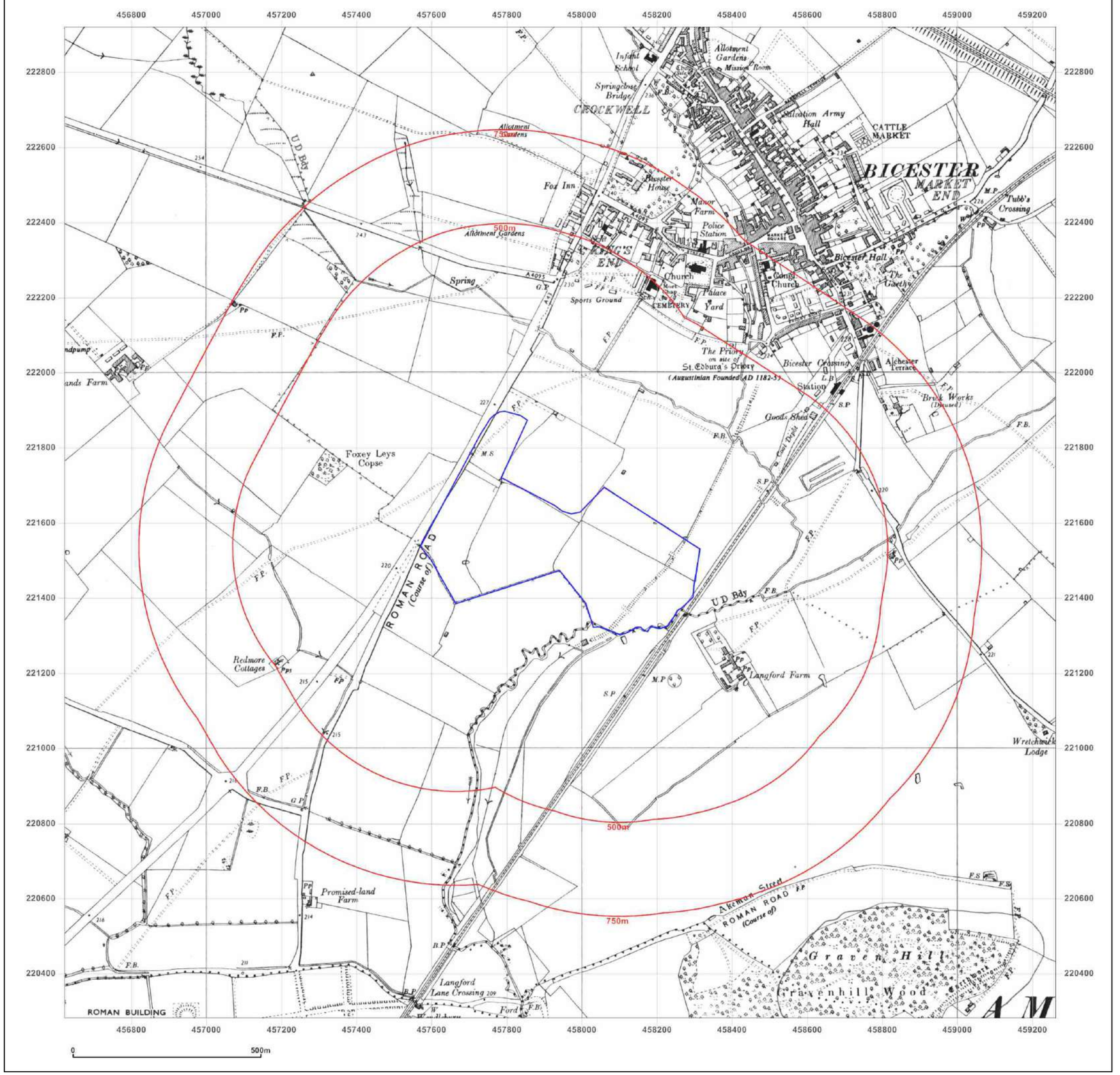

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: Provisional

Map date: **1955**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed N/A
Revised 1954
Edition N/A
Copyright 1955
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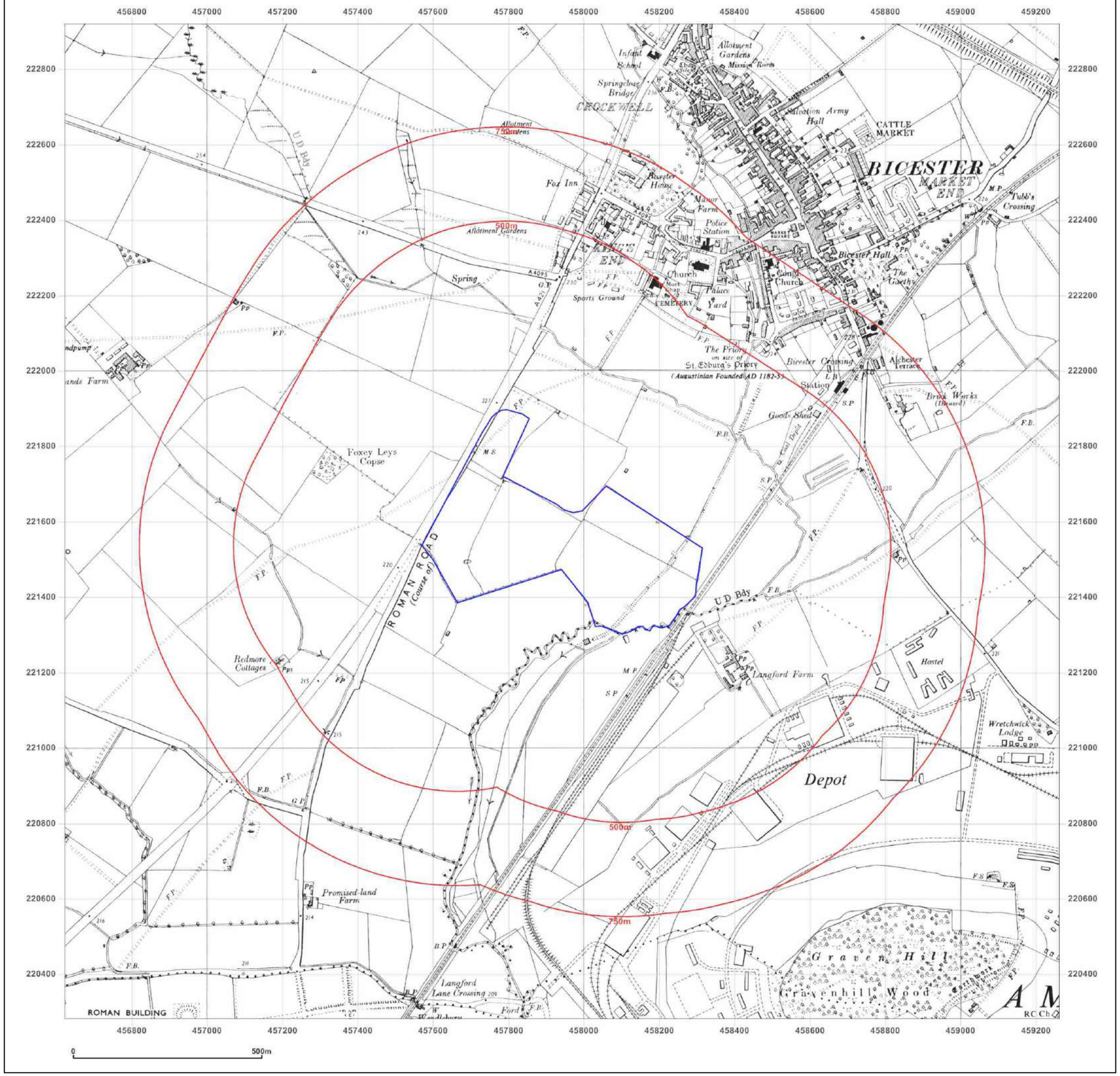

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: Provisional

Map date: **1966**

Scale: 1:10,560

Printed at: 1:10,560

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~~Revised 1966~~
Edition N/A
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Production date: 13 July 2017

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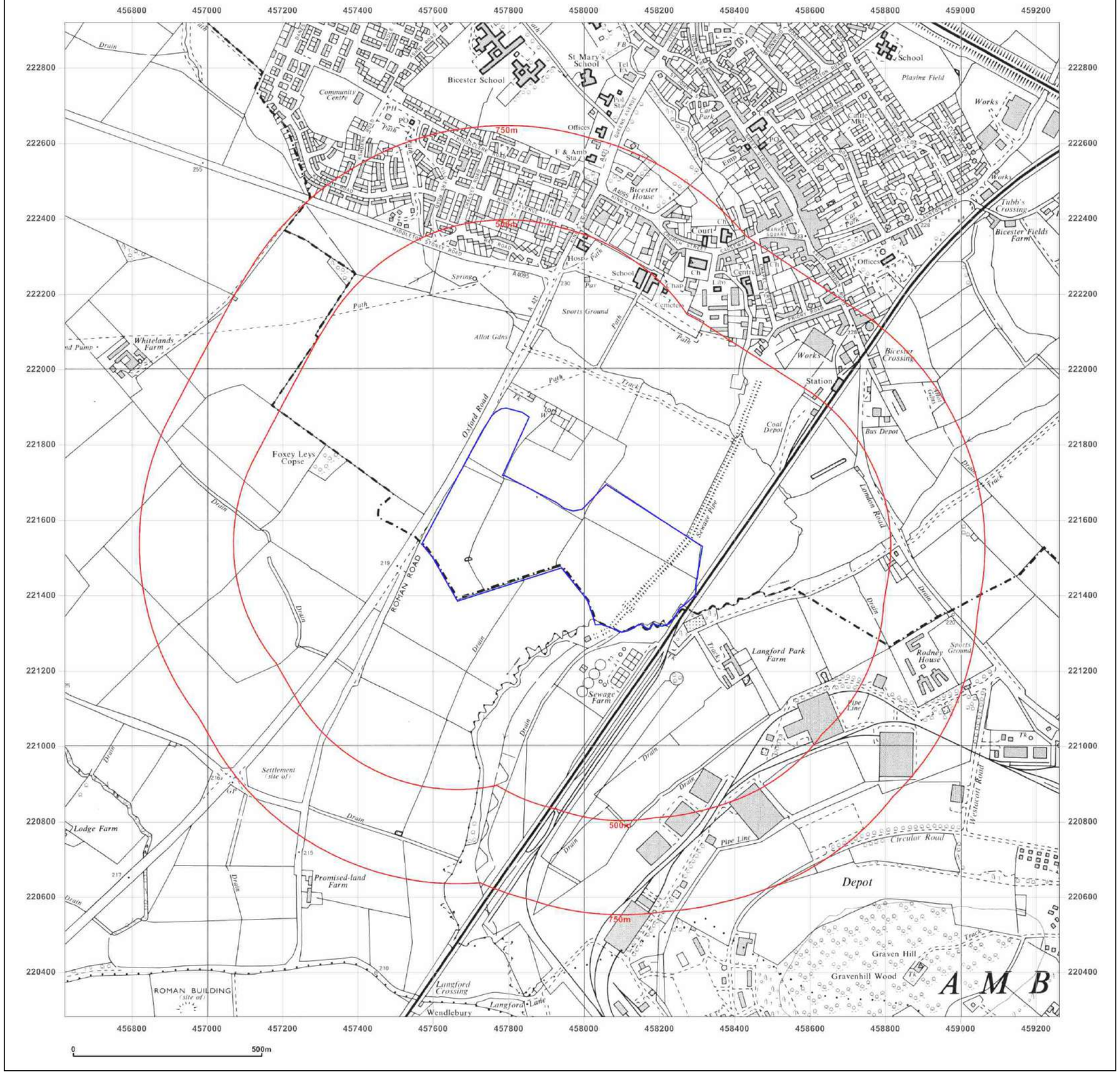

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: Provisional

Map date: **1970**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1970
Edition N/A
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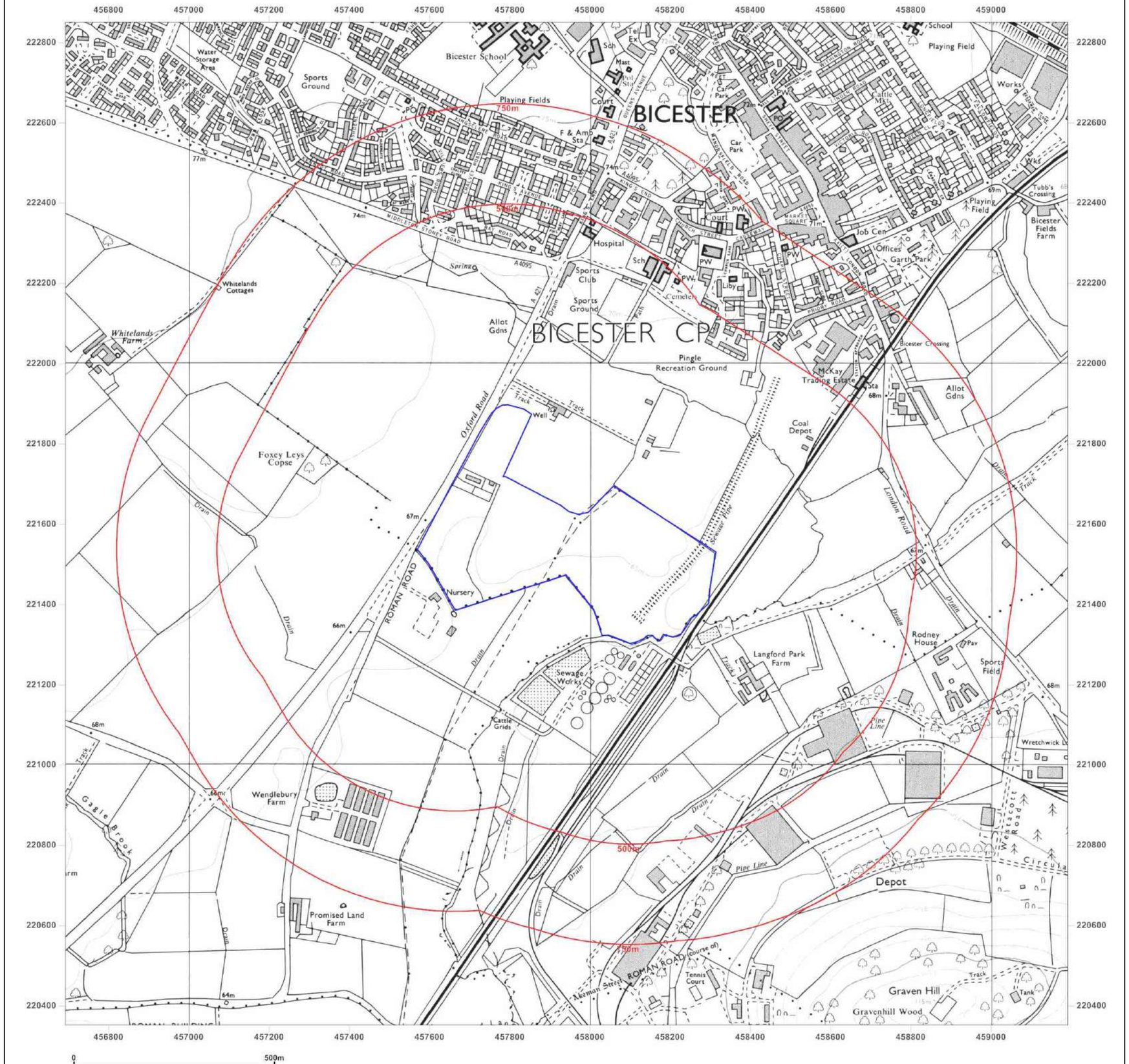

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Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: National Grid

Map date: **1985**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1983
Revised 1985
Edition N/A
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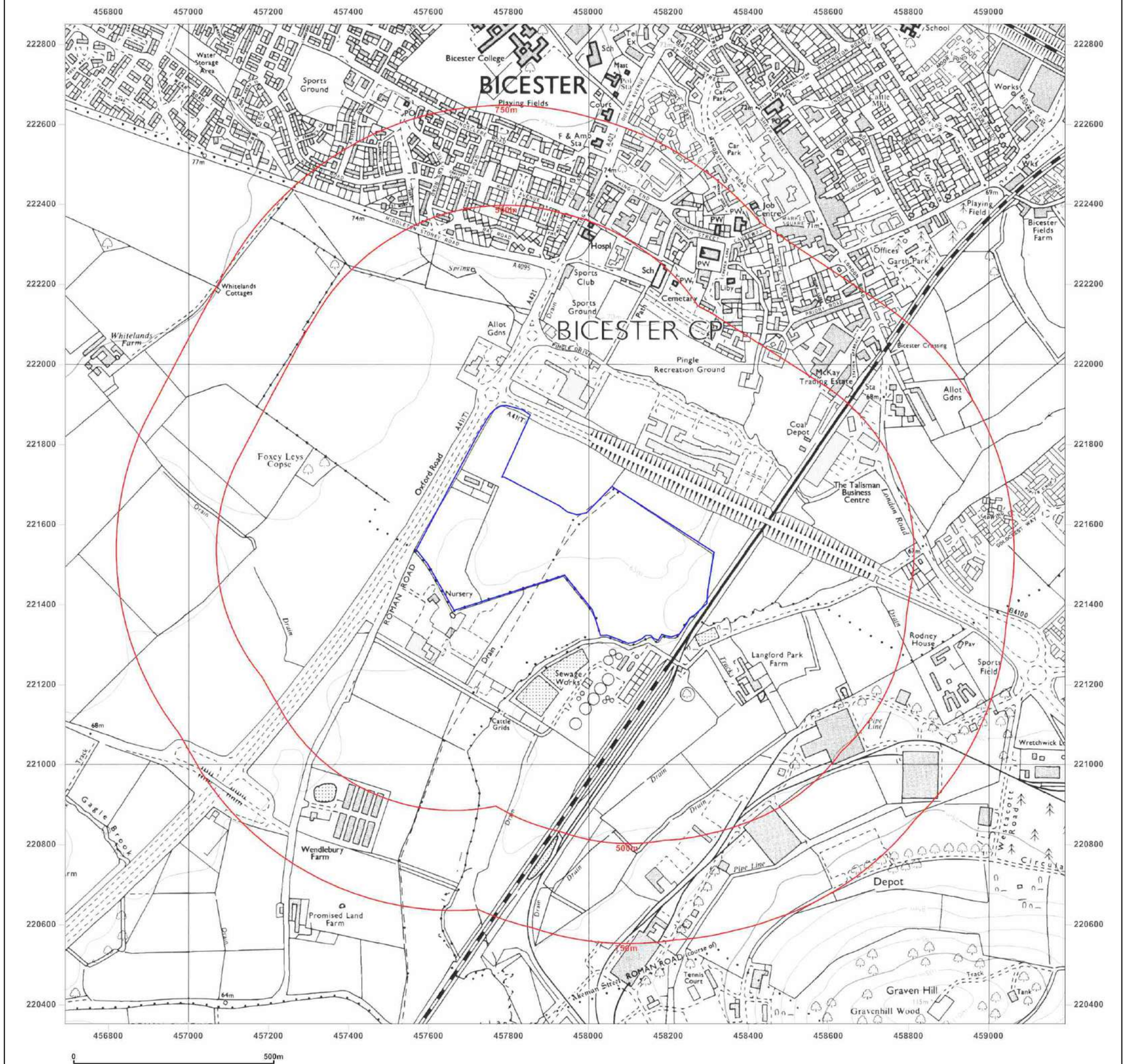

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: National Grid

Map date: **1995**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1983
Revised 1995
Edition N/A
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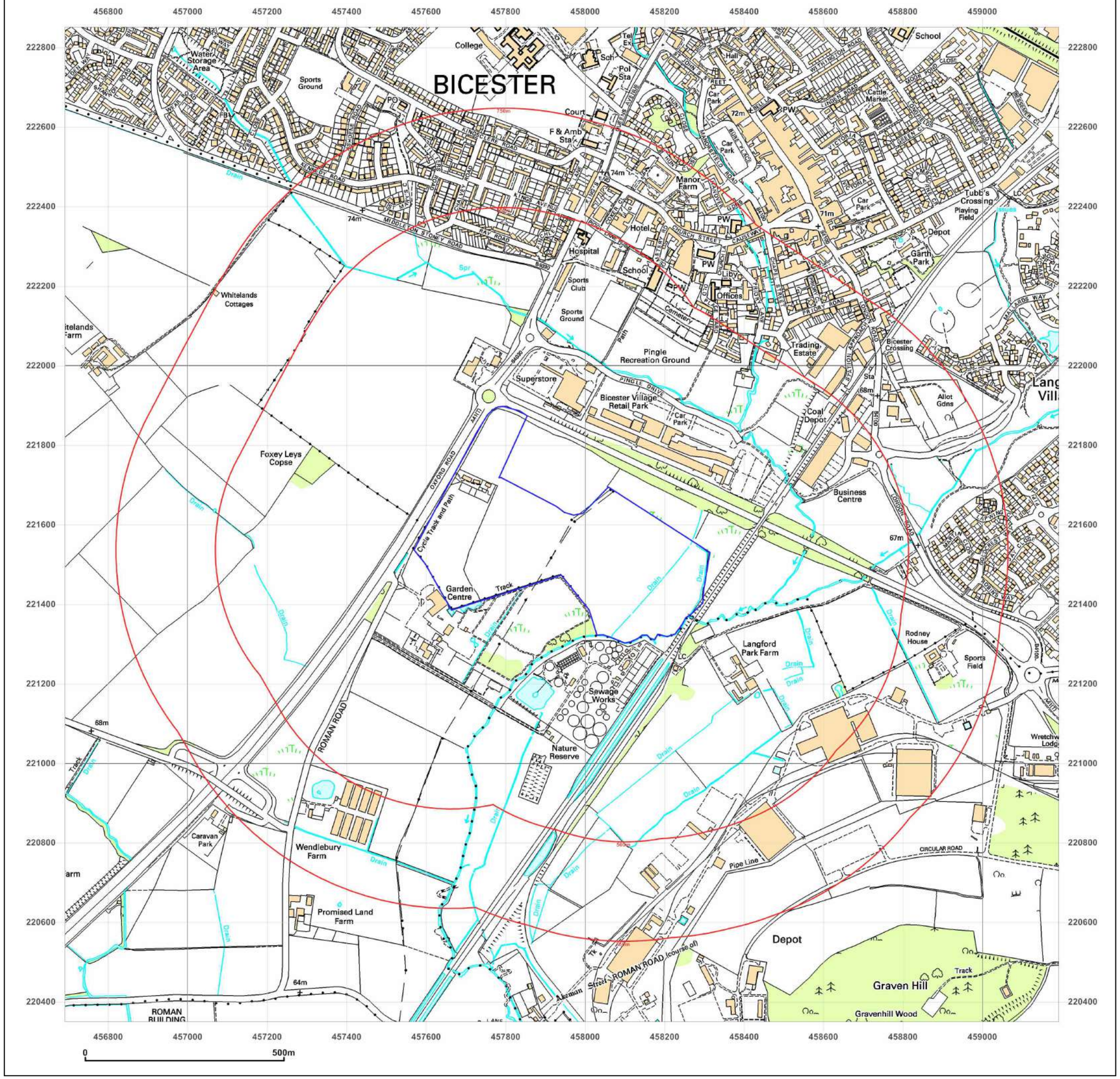

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: 1:10,000 Raster

Map date: **2002**

Scale: 1:10,000

Printed at: 1:10,000

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Production date: 13 July 2017

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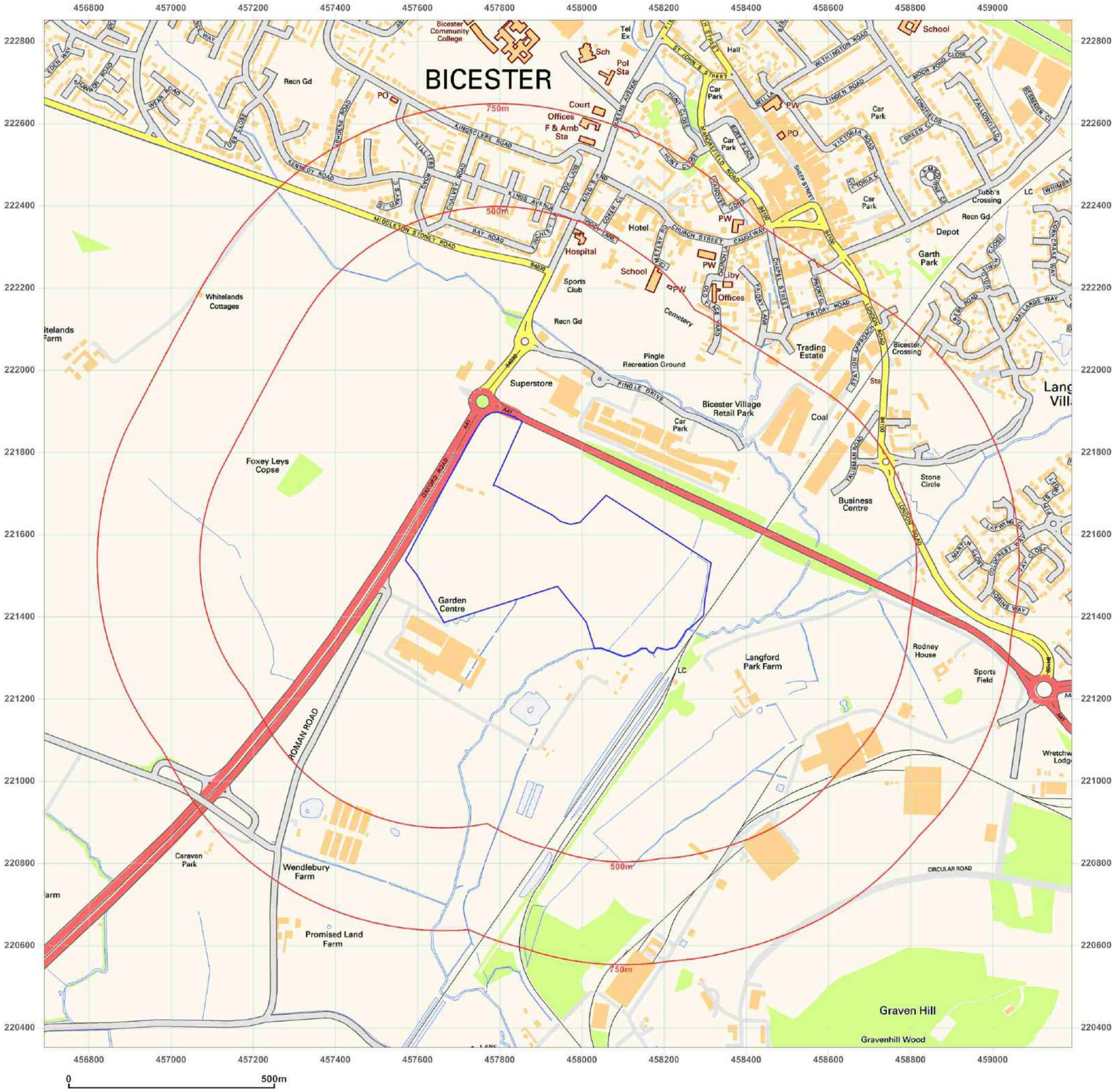

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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Production date: 13 July 2017

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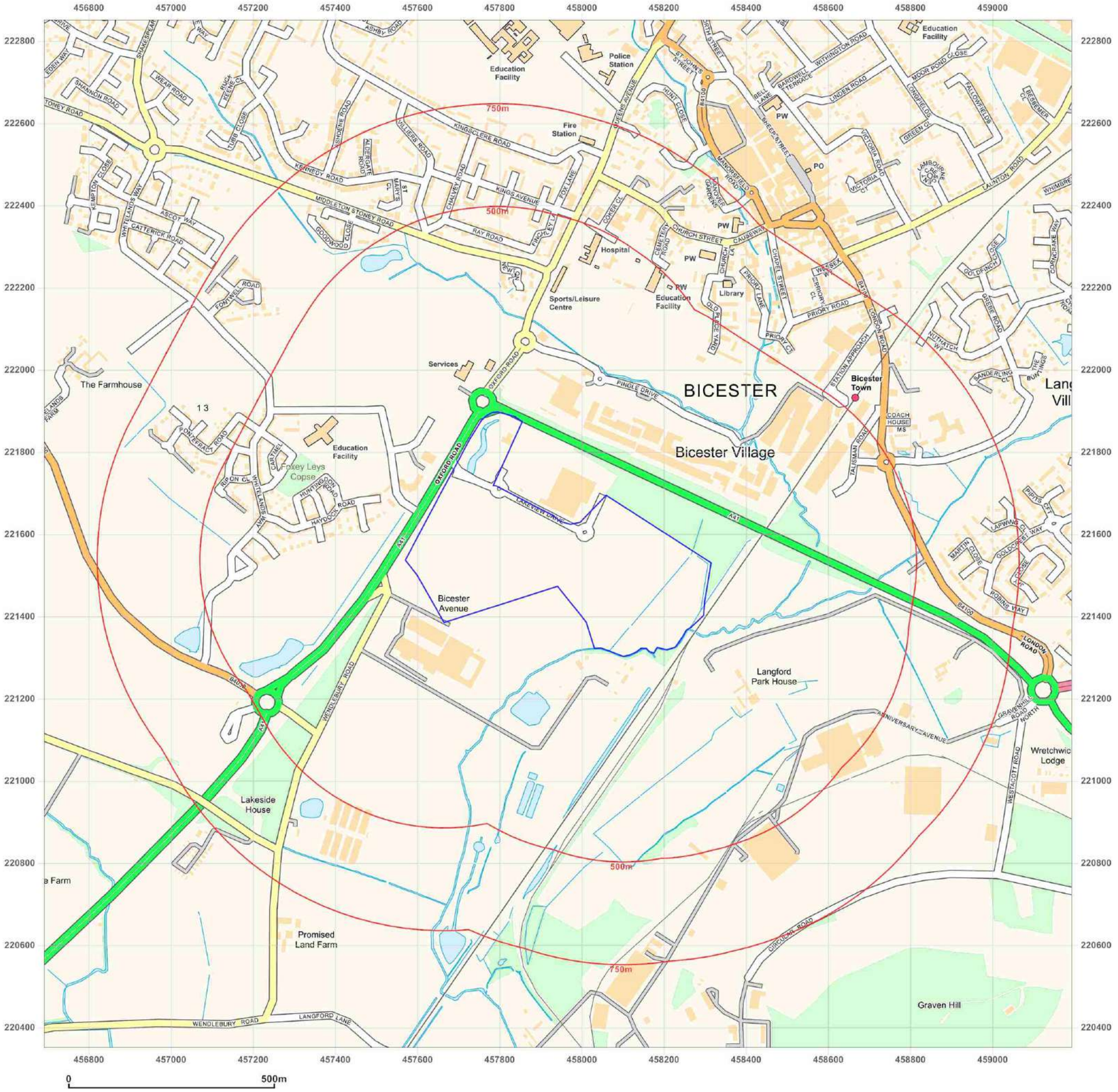

Groundsure INSIGHTS

Site Details:

457789, 221586

Client Ref: NTE2366-POR012085
Report Ref: HMD-214-4080160
Grid Ref: 457941, 221600

Map Name: National Grid

Map date: **2014**

Scale: 1:10,000

Printed at: 1:10,000

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APPENDIX 4

GROUNDSURE REPORT

BWB Consulting Limited

5th Floor, Waterfront House, Station Street,
Nottingham, NG2 3DQ

Groundsure Reference:	HMD-214-4080158
Your Reference:	NTE2366-POR012085
Report Date	13 Jul 2017
Report Delivery Method:	Email - pdf

Enviro Insight

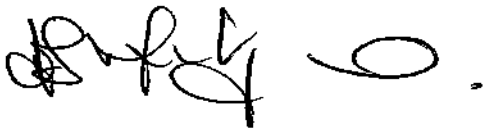
Address: 457789, 221586,

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**457789, 221586,**
Date:	**13 Jul 2017**
Reference:	**HMD-214-4080158**
Client:	**BWB Consulting Limited**

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Aerial Photograph Capture date:	06-Sep-2015
Grid Reference:	457953,221555
Site Size:	20.73ha

Report Reference: HMD-214-4080158
Client Reference: NTE2366-POR012085

Contents Page

Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	3	20	18	48
1.2 Additional Information – Historical Tank Database	0	22	43	4
1.3 Additional Information – Historical Energy Features Database	0	0	6	1
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	5	13	11	12

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	4	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	2	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	11	8
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	4	2	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	1	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	2	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	1	13	Not searched
4.2 Records of Petrol and Fuel Sites	1	0	2	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	Yes
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	1	0	3	5
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	1	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	1	Not searched	Not searched

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	Yes	Yes	No
6.10 Detailed River Network entries within 500m of the site	5	4	11	25	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	High
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	1	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
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	2

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	1	0	0	2
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Moderate
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?	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?	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?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

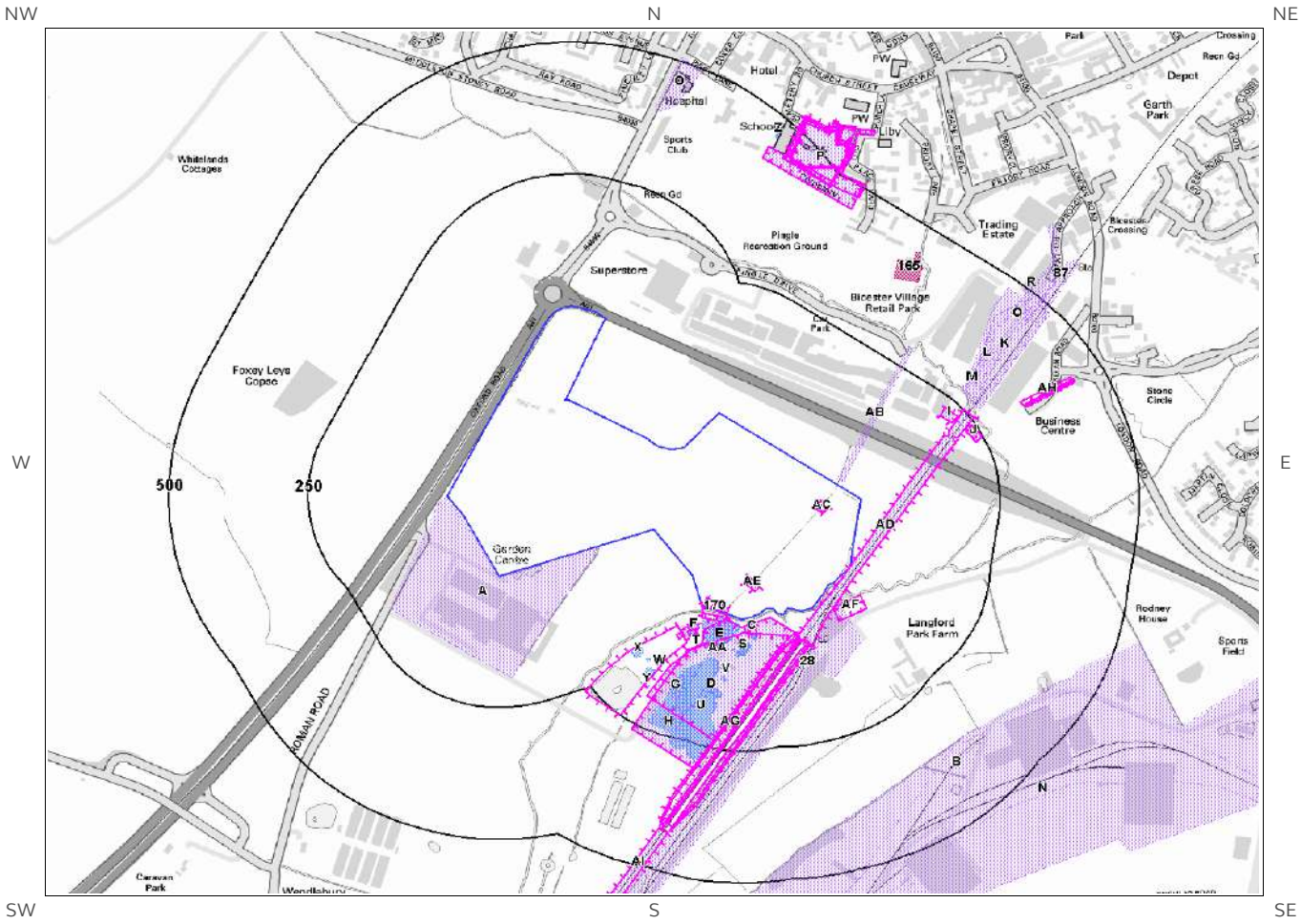
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

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

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



Site Outline

250
500
Search Buffers (m)

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

Industrial Land Use

Potentially Infilled Land

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

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 89

ID	Distance [m]	Direction	Use	Date
1AE	0	On Site	Unspecified Heap	1966
2AC	0	On Site	Unspecified Heap	1966
3AD	0	On Site	Cuttings	1880
4A	1	S	Nursery	1995
5A	1	S	Nursery	1985
6B	3	SE	Railway Sidings	1995
7B	3	SE	Railway Sidings	1970
8B	3	SE	Railway Sidings	1966
9B	3	SE	Railway Sidings	1985
10AB	10	NE	Sewage Pipe	1882
11C	10	SE	Sewage Tank	1898
12C	10	SE	Sewage Tank	1919
13C	10	SE	Sewage Tank	1950
14D	11	S	Sewage Works	1995
15D	11	S	Sewage Works	1985
16D	26	S	Sewage Farm	1970
17E	26	S	Unspecified Tanks	1995
18E	26	S	Unspecified Tanks	1985
19F	28	S	Sewage Tank	1882
20C	30	S	Unspecified Tank	1995
21C	30	S	Unspecified Tank	1985
22F	41	S	Sewage Tank	1880
23S	41	S	Unspecified Tanks	1970
24F	57	SW	Unspecified Heap	1966
25D	87	S	Unspecified Tanks	1970
26D	87	S	Unspecified Tanks	1995
27D	87	S	Unspecified Tanks	1985
28	94	S	Railway Building	1966
29D	138	S	Unspecified Tanks	1970
30D	139	S	Unspecified Tanks	1995
31D	139	S	Unspecified Tanks	1985
32G	145	S	Unspecified Tanks	1995
33G	145	S	Unspecified Tanks	1985
34H	213	S	Unspecified Tanks	1995

35H	213	S	Unspecified Tanks	1985
36I	214	NE	Unspecified Heap	1919
37I	214	NE	Unspecified Heap	1898
38I	214	NE	Unspecified Heap	1950
39J	228	NE	Unspecified Heap	1919
40J	228	NE	Unspecified Heap	1898
41J	228	NE	Unspecified Heap	1950
42K	268	NE	Railway Sidings	1966
43K	272	NE	Railway Sidings	1970
44K	272	NE	Coal Depot	1970
45K	272	NE	Railway Sidings	1985
46K	274	NE	Coal Depot	1880
47K	276	NE	Railway Sidings	1880
48K	277	NE	Railway Sidings	1950
49K	277	NE	Railway Sidings	1919
50K	277	NE	Railway Sidings	1898
51L	277	NE	Coal Depot	1950
52L	277	NE	Coal Depot	1919
53Q	284	NE	Coal Depot	1882
54M	296	NE	Railway Building	1898
55K	297	NE	Railway Sidings	1882
56M	299	NE	Coal Depot	1966
57L	334	NE	Railway Building	1995
58L	334	NE	Railway Building	1985
59N	359	SE	Unspecified Depot	1995
60N	359	SE	Unspecified Depot	1970
61N	359	SE	Unspecified Depot	1966
62N	359	SE	Unspecified Depot	1985
63L	361	NE	Coal Depot	1985
64L	363	NE	Coal Depot	1995
65O	394	N	Hospital	1970
66O	394	N	Hospital	1995
67P	416	NE	Cemetery	1995
68P	416	NE	Cemetery	1970
69AI	425	S	Cuttings	1880
70P	442	NE	Cemetery	1880
71P	448	NE	Cemetery	1938
72P	449	NE	Cemetery	1950
73P	449	NE	Cemetery	1898
74P	449	NE	Cemetery	1882
75Q	450	NE	Goods Shed	1880
76P	450	NE	Cemetery	1985
77P	450	NE	Cemetery	1966
78O	455	N	Hospital	1985
79Q	455	NE	Goods Shed	1950
80Q	455	NE	Goods Shed	1919

81Q	455	NE	Goods Shed	1898
82Q	457	NE	Goods Shed	1882
83Q	458	NE	Goods Shed	1966
84Q	460	NE	Railway Building	1898
85Q	460	NE	Railway Building	1919
86Q	460	NE	Railway Building	1950
87	487	NE	Railway Station	1882
88R	490	NE	Railway Building	1970
89R	496	NE	Cattle Pens	1882

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: 69

ID	Distance (m)	Direction	Use	Date
90E	6	S	Tanks	1996
91E	6	S	Tanks	1995
92E	6	S	Tanks	1996
93E	6	S	Tanks	1995
94E	8	S	Tanks	1992
95E	26	S	Tanks	1986
96C	30	S	Unspecified Tank	1996
97C	30	S	Unspecified Tank	1995
98C	30	S	Unspecified Tank	1996
99C	30	S	Unspecified Tank	1995
100C	31	S	Unspecified Tank	1992
101C	31	S	Unspecified Tank	1986
102F	37	SW	Urban District Council Sewage Tank	1922
103F	37	SW	Sewage Tank	1900
104F	37	SW	Sewage Tank	1881
105S	44	S	Tanks	1966
106S	45	S	Tanks	1996
107S	45	S	Tanks	1995
108S	45	S	Tanks	1995
109S	45	S	Tanks	1996
110S	46	S	Tanks	1992
111S	46	S	Tanks	1986
112F	57	S	Unspecified Tank	1996
113F	57	S	Unspecified Tank	1996
114S	59	S	Unspecified Tank	1995

115S	59	S	Unspecified Tank	1996
116S	59	S	Unspecified Tank	1996
117S	59	S	Unspecified Tank	1995
118T	65	S	Unspecified Tank	1996
119T	65	S	Unspecified Tank	1996
120T	80	S	Unspecified Tank	1996
121T	80	S	Unspecified Tank	1996
122T	80	S	Unspecified Tank	1995
123T	80	S	Unspecified Tank	1995
124U	86	S	Tanks	1996
125U	86	S	Tanks	1995
126U	86	S	Tanks	1996
127U	86	S	Tanks	1995
128D	87	S	Tanks	1966
129D	88	S	Tanks	1992
130V	100	S	Unspecified Tank	1996
131V	111	S	Tanks	1996
132V	115	S	Unspecified Tank	1996
133H	117	S	Tanks	1995
134H	117	S	Tanks	1995
135W	127	SW	Unspecified Tank	1995
136W	127	SW	Unspecified Tank	1995
137G	132	S	Tanks	1983
138X	132	SW	Unspecified Tank	1995
139X	132	SW	Unspecified Tank	1995
140X	135	SW	Unspecified Tank	1995
141X	135	SW	Unspecified Tank	1995
142G	136	S	Tanks	1992
143G	136	S	Tanks	1993
144D	139	S	Tanks	1966
145U	139	S	Tanks	1992
146U	139	S	Tanks	1986
147W	145	SW	Unspecified Tank	1995
148W	145	SW	Unspecified Tank	1995
149H	152	S	Tanks	1992
150H	152	S	Tanks	1993
151Y	170	SW	Unspecified Tank	1995
152Y	170	SW	Unspecified Tank	1995
153Y	176	SW	Unspecified Tank	1995
154Y	176	SW	Unspecified Tank	1995
155Z	460	NE	Tanks	1995
156Z	461	NE	Unspecified Tank	1995
157Z	471	NE	Unspecified Tank	1995
158Z	481	NE	Unspecified Tank	1995

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: 7

ID	Distance (m)	Direction	Use	Date
159AA	71	S	Electricity Substation	1986
160AA	71	S	Electricity Substation	1992
161AB	151	NE	Electricity Substation	1995
162AB	151	NE	Electricity Substation	1996
163AB	151	NE	Electricity Substation	1996
164AB	151	NE	Electricity Substation	1995
165	385	NE	Electricity Substation	1996

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 0

Database searched and no data found.

1.6 Potentially Infilled Land

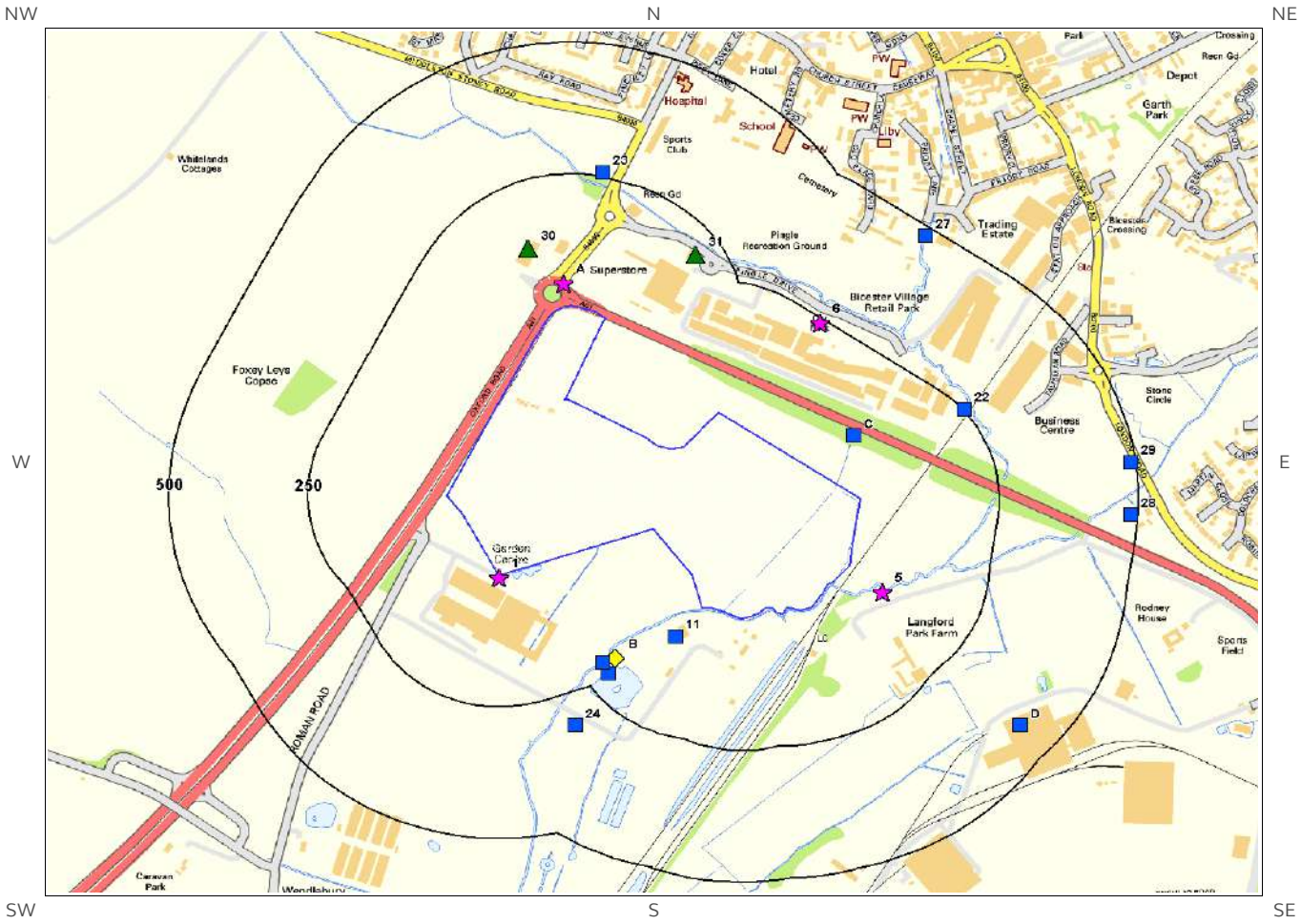
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 41

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

ID	Distance(m)	Direction	Use	Date
166AC	0	On Site	Unspecified Heap	1966
167AD	0	On Site	Cuttings	1880
168AE	0	On Site	Unspecified Heap	1966

169F	0	On Site	Pond	1880
170	0	On Site	Pond	1882
171C	10	SE	Sewage Tank	1898
172C	10	SE	Sewage Tank	1950
173C	10	SE	Sewage Tank	1919
174D	11	S	Sewage Works	1985
175D	11	S	Sewage Works	1995
176V	26	S	Sewage Farm	1970
177F	28	S	Sewage Tank	1882
178AF	29	SE	Pond	1985
179AF	29	SE	Pond	1970
180AF	29	SE	Pond	1995
181AG	40	SE	Water Body	1882
182F	41	S	Sewage Tank	1880
183AG	49	S	Water Body	1880
184AG	53	S	Water Body	1882
185Y	55	SW	Ponds	1995
186Y	55	SW	Ponds	1985
187F	57	SW	Unspecified Heap	1966
188AG	66	S	Pond	1880
189I	214	NE	Unspecified Heap	1898
190I	214	NE	Unspecified Heap	1950
191I	214	NE	Unspecified Heap	1919
192J	228	NE	Unspecified Heap	1919
193J	228	NE	Unspecified Heap	1898
194J	228	NE	Unspecified Heap	1950
195AH	341	NE	Pond	1970
196AH	347	NE	Pond	1880
197P	416	NE	Cemetery	1995
198P	416	NE	Cemetery	1970
199AI	425	S	Cuttings	1880
200P	442	NE	Cemetery	1880
201P	448	NE	Cemetery	1938
202P	449	NE	Cemetery	1898
203P	449	NE	Cemetery	1950
204P	449	NE	Cemetery	1882
205P	450	NE	Cemetery	1985
206P	450	NE	Cemetery	1966

2. Environmental Permits, Incidents and Registers Map



- Site Outline
- 250 / 500 Search Buffers (m)
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/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:

4

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
7B	185	SW	457871 221227	Name: Haul Waste Disposal Ltd Status: Active Receiving Water: Langford Brook	Authorised Substances: Chromium, Copper, Lead, Nickel, Zinc
8B	185	SW	457871 221227	Name: Powdertech (bicester) Ltd Status: Active Receiving Water: -	Authorised Substances: Zinc
9B	185	SW	457871 221227	Name: Hardide Ltd Status: Active Receiving Water: Langford Brook	Authorised Substances: Chromium, Copper, Lead, Nickel, Silver, Zinc
10B	185	SW	457871 221227	Name: Bicester Stw Status: Active Receiving Water: Langford Brook	Authorised Substances: Iron

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

2

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

ID	Distance (m)	Direction	NGR	Details	
30	125	NW	457715 222003	Address: Bicester Service Area (ROC UK Ltd), Oxford Road, Bicester, Oxfordshire, OX6 8BT Process: Gasification, Liquefaction & Refining Activities Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
31	201	NE	458017 221991	Address: Tesco's Bicester, Pingle Drive, Bicester, Oxfordshire, OX16 7LX Process: Service Stations Unloading Petrol Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

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

ID	Distance (m)	Direction	NGR	Details	
11	72	SW	457980 221270	Address: BICESTER SEWAGE TREATMENT WORKS, OXFORD ROAD, BICESTER, OXFORDSHIRE, - Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CAWM.0807 Permit Version: 1	Receiving Water: THE LANGFORD BROOK Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 12/11/2004 Effective Date: 01-Jun-2004 Revocation Date: -
12C	93	NE	458300 221650	Address: PHASE I BICESTER RETAIL PARK, A421, PHASE I BICESTER RETAIL PARK, A4, 21 OXFORD ROAD, BICESTER, OXFORD, SHIRE, - Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CNTW.0555 Permit Version: 2	Receiving Water: TRIB OF THE LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/06/1990 Effective Date: 12-May-1997 Revocation Date: -
13C	93	NE	458300 221650	Address: PHASE I BICESTER RETAIL PARK, A421, PHASE I BICESTER RETAIL PARK, A4, 21 OXFORD ROAD, BICESTER, OXFORD, SHIRE, - Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CNTW.0555 Permit Version: 1	Receiving Water: TRIB OF THE LANGFORD BROOK Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 14/06/1990 Effective Date: 14-Jun-1990 Revocation Date: 11/05/1997
14B	207	SW	457850 221220	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 7	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 28/01/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2010
15B	207	SW	457850 221220	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 5	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 30/03/2006 Effective Date: 30-Mar-2006 Revocation Date: 28/06/2007
16B	207	SW	457850 221220	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 4	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2005 Effective Date: 01-Apr-2005 Revocation Date: 29/03/2006
17B	207	SW	457850 221220	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 6	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 29/06/2007 Effective Date: 29-Jun-2007 Revocation Date: 31/03/2009

ID	Distance (m)	Direction	NGR	Details	
18B	207	SW	457850 221220	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 8	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 01/04/2010 Effective Date: 01-Apr-2010 Revocation Date: -
19B	209	SW	457860 221200	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 2	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 02/11/1989 Effective Date: 01-Apr-1990 Revocation Date: 20/12/2000
20B	209	SW	457860 221200	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 3	Receiving Water: LANGFORD BROOK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 21/12/2000 Effective Date: 21-Dec-2000 Revocation Date: 31/03/2005
21B	209	SW	457860 221200	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: CNTD.0023 Permit Version: 1	Receiving Water: LANGFORD BROOK Status: BY DIRECT. OF SEC OF STATE, (WATER ACT 1989 SCHED 26 & 25(4)(5)) Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 31/03/1990
22	252	NE	458500 221700	Address: TALISMAN BUSINESS CENTRE, LONDON RO, TALISMAN BUSINESS CENTRE, LONDON, ROAD, BICESTER, OXFORDSHIRE, -, - Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CNTW.0314 Permit Version: 1	Receiving Water: TOWN BROOK Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 19/01/1990 Effective Date: 19-Jan-1990 Revocation Date: 01/10/1996
23	258	N	457850 222150	Address: THE SERVICE STATION, OXFORD ROAD, B, THE SERVICE STATION, OXFORD ROAD, , BICESTER, OXFORDSHIRE, -, - Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CNTM.1213 Permit Version: 1	Receiving Water: TRIBUTARY OFTHE TOWN BROOK Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 13/12/1993 Effective Date: 13-Dec-1993 Revocation Date: 01/10/1996
24	314	S	457800 221100	Address: BICESTER STW, BICESTER, OXON, BICESTER STW, BICESTER, OXON, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCR.1293 Permit Version: 1	Receiving Water: LANGFORD BROOK Status: REVOKED - UNSPECIFIED Issue date: 09/10/1972 Effective Date: 31-Jan-1985 Revocation Date: 01/11/1989
25D	430	SE	458600 221100	Address: M.O.D. Site 13E, M.O.D. Site 13E, -, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1423 Permit Version: 1	Receiving Water: LANGFORD BROOK Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 02/09/2010
26D	430	SE	458600 221100	Address: M.O.D. Site 13E, M.O.D. Site 13E, -, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1423 Permit Version: 2	Receiving Water: Langford Brook Status: SURRENDERED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 13/10/2015

ID	Distance (m)	Direction	NGR	Details	
27	483	NE	458430 222030	Address: LAND OFF PRIORY ROAD, BICESTER, OXO, LAND OFF PRIORY ROAD, BICESTER,, OXON., -, - Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.0200 Permit Version: 1	Receiving Water: TRIBUTARY OFLANGFORD BROOK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 22/07/1985 Effective Date: 22-Jul-1985 Revocation Date: 09/11/2009
28	488	E	458800 221500	Address: M.O.D. Rodney House, M.O.D. Rodney House, -, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1419 Permit Version: 1	Receiving Water: LANGFORD BROOK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 26/11/2002
29	491	E	458800 221600	Address: NEW GAS WORKS, EAST SIDE OF LAUNTON, NEW GAS WORKS, EAST SIDE OF LAUN, TON ROAD, BICESTER, OXON, -, - Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: CTCR.0919 Permit Version: 1	Receiving Water: LANGFORD BROOK Status: REVOKED - UNSPECIFIED Issue date: 13/04/1967 Effective Date: 13-Apr-1967 Revocation Date: 01/08/1986

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

6

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

ID	Distance (m)	Direction	NGR	Details	
1	5	S	457662 221381	Incident Date: 09-Dec-2002 Incident Identification: 125299 Pollutant: Other Pollutant Pollutant Description: Microbiological	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	44	N	457778 221940	Incident Date: 01-Oct-2001 Incident Identification: 34098 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	44	N	457778 221940	Incident Date: 01-Oct-2001 Incident Identification: 34098 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Food and Drink	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	44	N	457778 221940	Incident Date: 01-Oct-2001 Incident Identification: 34098 Pollutant: General Biodegradable Materials and Wastes:Oils and Fuel Pollutant Description: Food and Drink:Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5	74	SE	458351 221354	Incident Date: 17-Apr-2002 Incident Identification: 72341 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	241	NE	458239 221865	Incident Date: 13-May-2003 Incident Identification: 157913 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) 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.

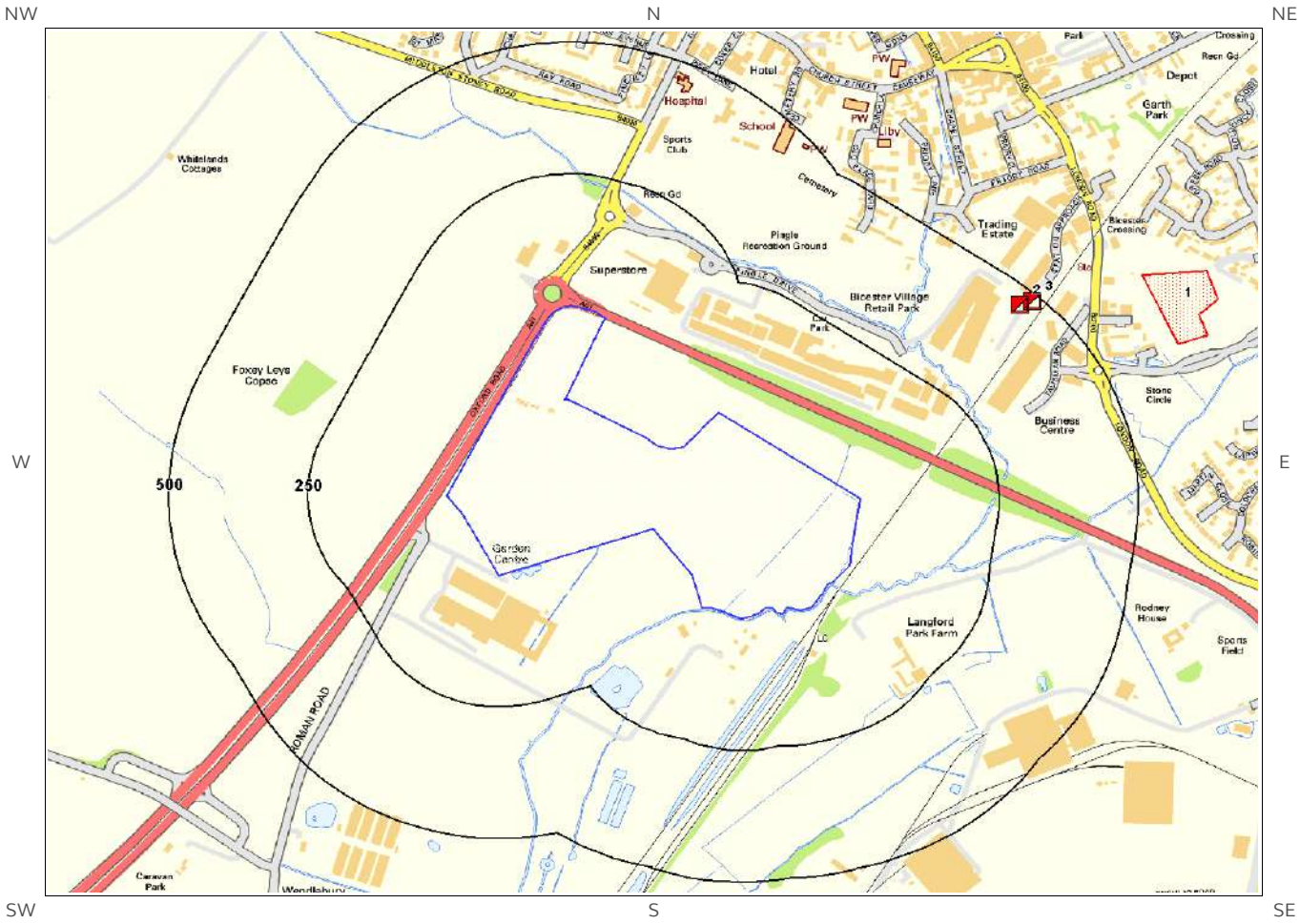
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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.

---

3. Landfill and Other Waste Sites Map



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

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:

1

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

ID	Distance (m)	Direction	NGR	Details	
1	642	NE	458800 221900	Site Address: London Road, Bicester, Oxfordshire Waste Licence: - Site Reference: 13.6.5821, TP0100 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Ploughley Rural District Council Licence Holder: - First Recorded: - Last Recorded: 31-Dec-1969

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details	
2	467	NE	458600 221900	Site Address: McGregor Railway Services Ltd, Station Yard Road, London Road, Bicester, Oxon, OX6 7BZ Type: Metal Recycling Site (mixed MRS's) Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG001 EPR reference: - Operator: McGregor Railway Services Ltd Waste Management licence No: 86100 Annual Tonnage: 74999.0	Issue Date: 27/10/1994 Effective Date: - Modified: 27/07/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: S. M. Mcgregor Correspondence Address: McGregor Railway Services Ltd__, The White Cottage, Lower Road, Blackthorn, Bicester, Oxon, OX6 0TG
3	486	NE	458622 221906	Site Address: McGregor Railway Services Ltd, Station Yard, London Road, Bicester, Oxfordshire, OX26 6HU Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MCG001 EPR reference: EA/EPR/CP3599EP/S003 Operator: McGregor Railway Services Ltd Waste Management licence No: 86100 Annual Tonnage: 0.0	Issue Date: 27/10/1994 Effective Date: - Modified: 28/05/2008 Surrendered Date: 18/11/2009 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: S. M. Mcgregor Correspondence Address: -

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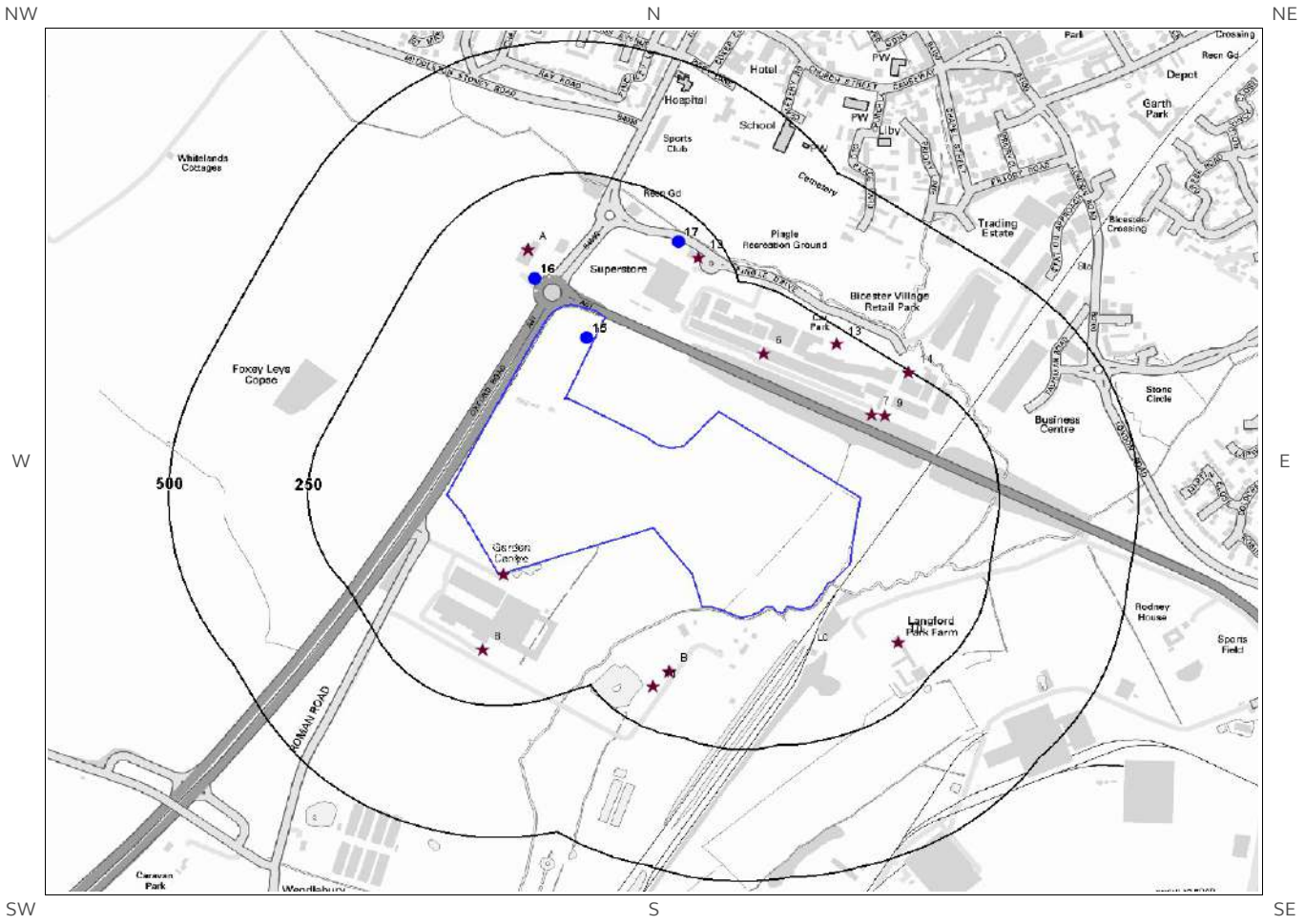
4. Current Land Use Map



Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

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

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	1	S	Electricity Sub Station	457671 221387	Electricity Sub Station, OX25	Electrical Features	Infrastructure and Facilities
2A	125	NW	Esso	457715 222003	Esso, Bicester Services, Oxford Road, Bicester, OX26 1BT	Petrol and Fuel Stations	Road and Rail
3A	125	NW	Bicester Services	457715 222003	Bicester Services, Bicester Services, Oxford Road, Bicester, OX26 1BT	Petrol and Fuel Stations	Road and Rail
4B	134	SW	Sewage Works	457969 221203	Sewage Works, OX25	Waste Storage, Processing and Disposal	Infrastructure and Facilities
5B	136	SW	Sewage Works	457969 221201	Sewage Works, OX25	Waste Storage, Processing and Disposal	Infrastructure and Facilities
6	137	NE	Pandora	458138 221806	Pandora, 51b, Pingle Drive, Bicester Village, Bicester, OX26 6WD	Jewellery, Gems, Clocks and Watches	Consumer Products
7	144	NE	Electricity Sub Station	458333 221690	Electricity Sub Station, OX26	Electrical Features	Infrastructure and Facilities
8	145	S	Electricity Sub Station	457633 221244	Electricity Sub Station, OX25	Electrical Features	Infrastructure and Facilities
9	156	NE	Electricity Sub Station	458357 221688	Electricity Sub Station, OX26	Electrical Features	Infrastructure and Facilities
10	164	SE	Biker Warehouse	458380 221258	Biker Warehouse, Langford Park Farm House, London Road, Bicester, OX26 6HG	New Vehicles	Motoring
11	175	SW	Works	457939 221173	Works, OX25	Unspecified Works Or Factories	Industrial Features
12	203	NE	Tesco Bicester 2	458022 221988	Tesco Bicester 2, Pingle Drive, Bicester, OX26 6WA	Petrol and Fuel Stations	Road and Rail
13	223	NE	Electricity Sub Station	458270 221824	Electricity Sub Station, OX26	Electrical Features	Infrastructure and Facilities
14	248	NE	Electricity Sub Station	458400 221770	Electricity Sub Station, OX26	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 3

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	0	On Site	457820 221835	Tesco	Tesco Bicester Lakeview, Lakeview Drive, Lakeview Drive, Oxford Road, Bicester, Oxfordshire, OX26 1DE	No	Open
16	71	NW	457727 221947	Esso	Bicester Services, Oxford Road, Oxford Road, Bicester, Oxfordshire, OX26 1BT	No	Open
17	195	NE	457986 222017	Tesco	Tesco Bicester 2, Pingle Drive, Pingle Drive, Bicester, Oxfordshire, OX26 6WA	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

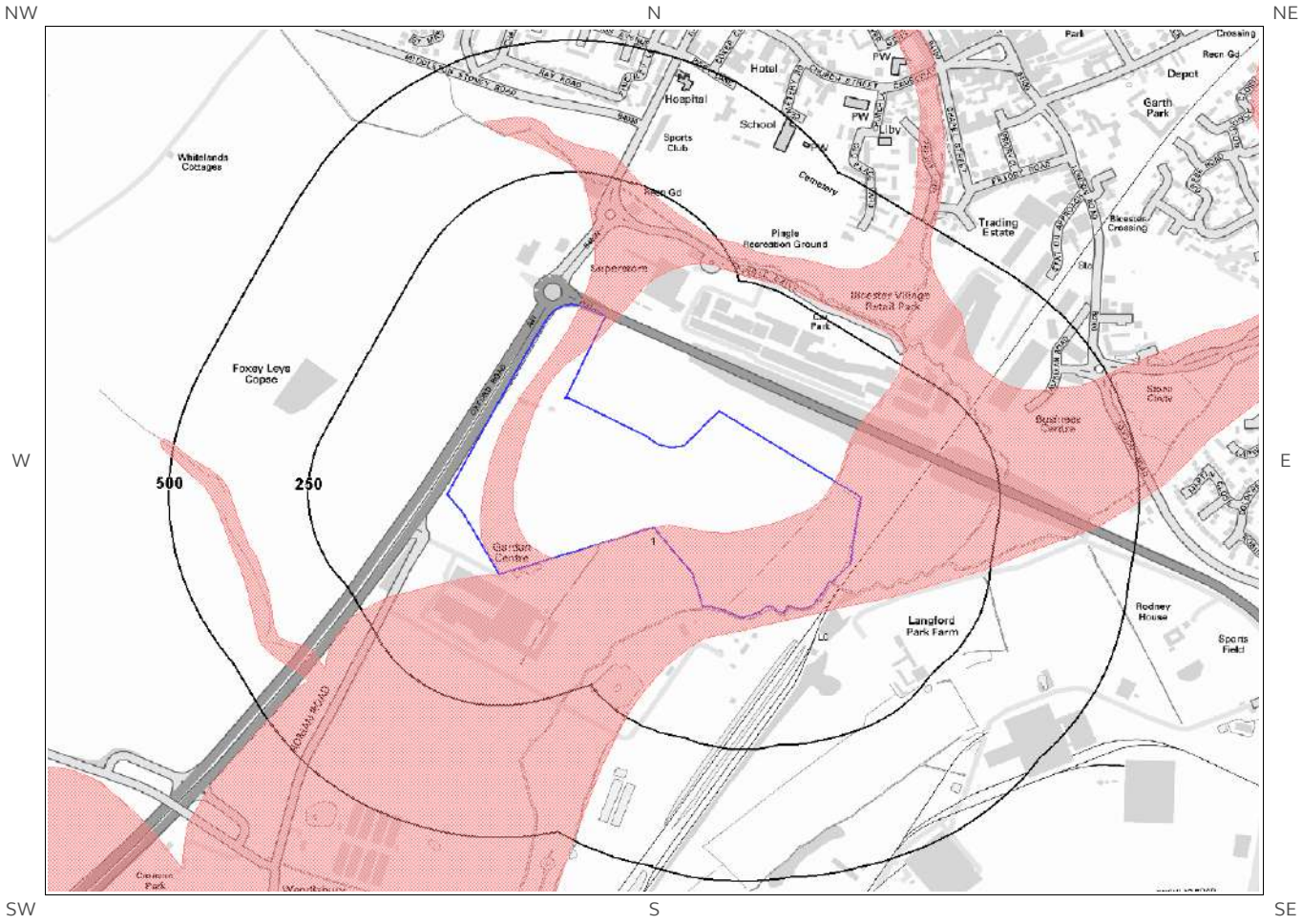
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
KLC-MDST	KELLAWAYS CLAY MEMBER	MUDSTONE
CB-LMST	CORNBRASH FORMATION	LIMESTONE
KLS-SDSL	KELLAWAYS SAND MEMBER	SANDSTONE AND SILTSTONE, INTERBEDDED

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

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

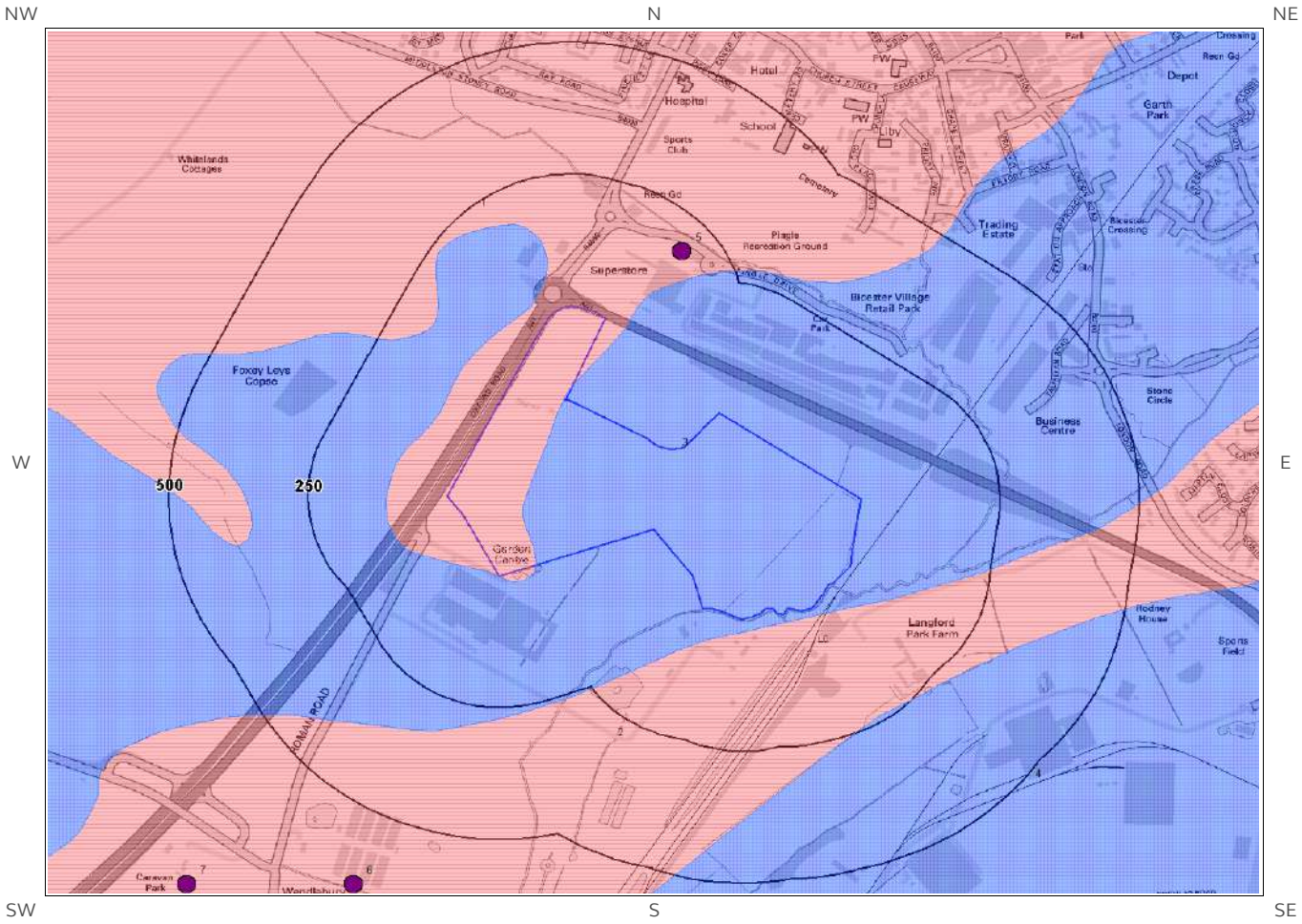
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

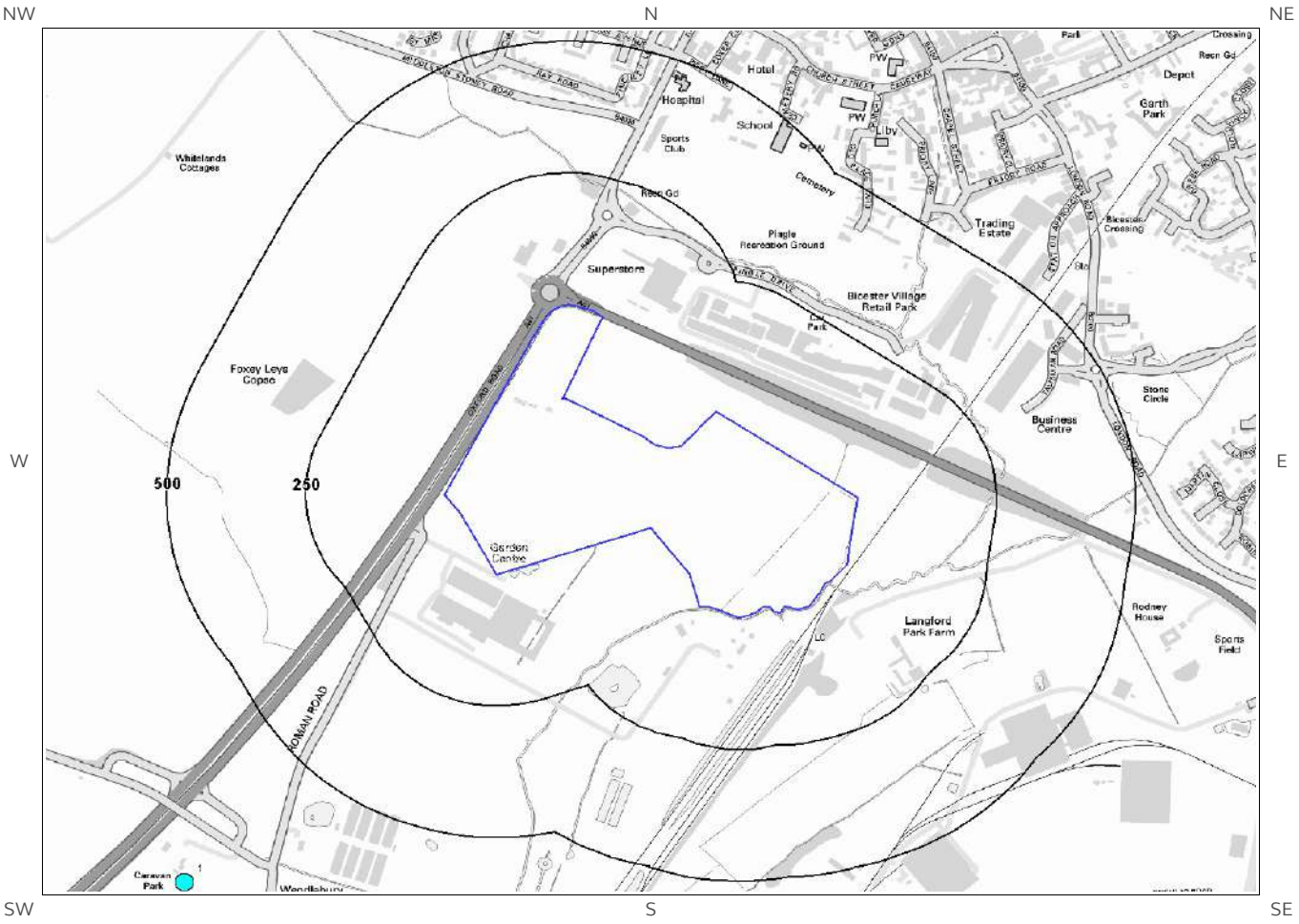
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

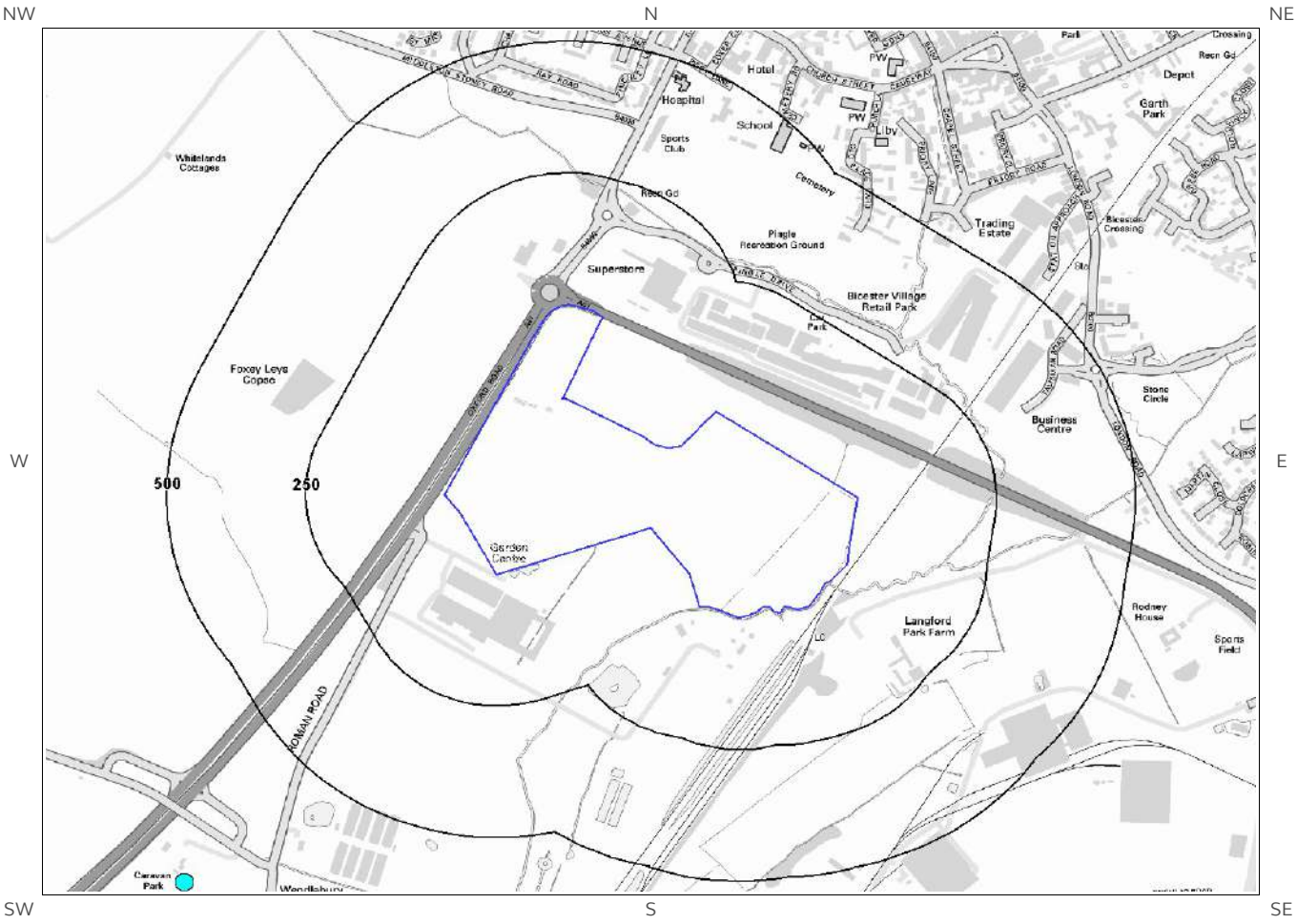
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

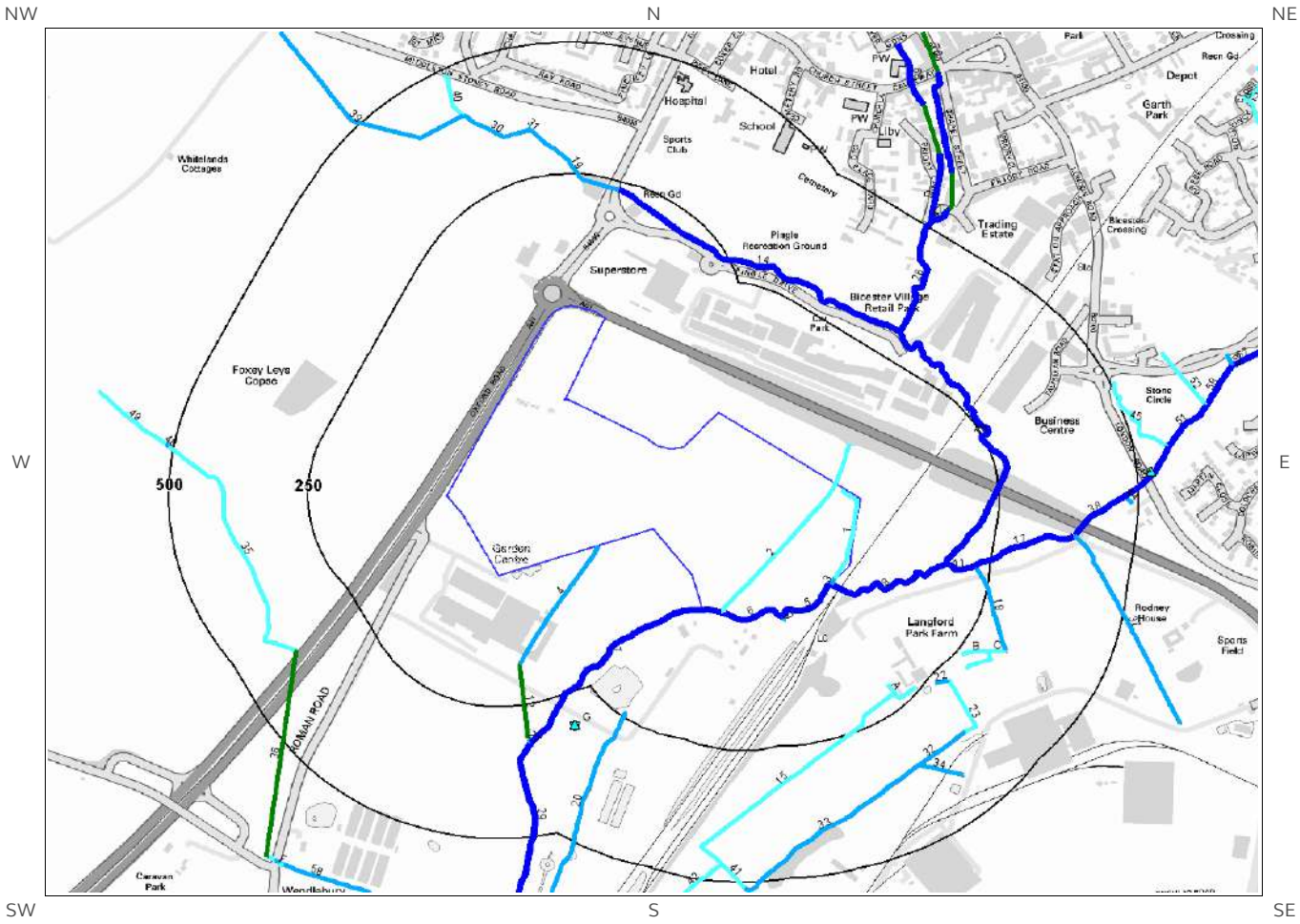
Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

Site Outline

250
500
Search Buffers (m)

6e. Hydrology – Detailed River Network and River Quality



Site Outline

250
500
Search Buffers (m)

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

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

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

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

6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	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	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	14	S	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	238	SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? 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	
5	186	NE	457990 222000	Status: Historical Licence No: 28/39/14/0349 Details: Pollution Remediation Direct Source: Thames Groundwater Point: Pringle Drive Filling Station Bicester Oxon Data Type: Point Name: ARCADIS GERAGHTY & MILLER INT INC.	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRW/A/1145 Original Start Date: 28/9/2004 Expiry Date: 31/3/2018 Issue No: 1 Version Start Date: 28/9/2004 Version End Date:
6	642	SW	457400 220800	Status: Active Licence No: 28/39/14/0295 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Wendlebury Lane, Bicester (a) Data Type: Point Name: FACCENDA CHICKEN LTD	Annual Volume (m^3): 16593 Max Daily Volume (m^3): 68.2 Original Application No: WRA/5248 Original Start Date: 8/7/1983 Expiry Date: - Issue No: 100 Version Start Date: 8/7/1983 Version End Date:
7	813	SW	457100 220800	Status: Historical Licence No: 28/39/14/0300 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Bicester Trailer Park, Oxford Road, Wendlebury Data Type: Point Name: M & L ROSSITER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA./5517 Original Start Date: 19/3/1987 Expiry Date: - Issue No: 100 Version Start Date: 19/3/1987 Version End Date:
Not shown	912	SW	457200 220600	Status: Historical Licence No: 28/39/14/0329 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Promised Land Farm, Bicester (a) Data Type: Point Name: PROMISED LAND FARM	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/6293 Original Start Date: 16/11/1994 Expiry Date: - Issue No: 100 Version Start Date: 16/11/1994 Version End Date:
Not shown	1031	NW	456700 222100	Status: Historical Licence No: 28/39/14/0123 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Whitelands, Bicester (a) Data Type: Point Name: A D WOODLEY LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/1071 Original Start Date: 9/1/1967 Expiry Date: - Issue No: 100 Version Start Date: 9/1/1967 Version End Date:
Not shown	1666	SW	456400 220300	Status: Historical Licence No: 28/39/14/0326 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Bowlers Copse, Wendlebury (a) Data Type: Point Name: PAIN	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/6034 Original Start Date: 29/12/1993 Expiry Date: - Issue No: 100 Version Start Date: 29/12/1993 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1773	N	458500 223530	Status: Historical Licence No: 28/39/14/0333 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Buckingham Road, Bicester, Oxon Data Type: Point Name: GIBBS HOLDINGS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA./6332 Original Start Date: 26/7/1996 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 26/7/1996 Version End Date:
Not shown	1795	N	458510 223550	Status: Historical Licence No: 28/39/14/0034 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Buckingham Road, Bicester, - Borehole 'a' Data Type: Point Name: SUNLIGHT SERVICE GROUP LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA./1978 Original Start Date: 13/6/1966 Expiry Date: - Issue No: 100 Version Start Date: 4/12/1996 Version End Date:
Not shown	1929	E	460200 221100	Status: Historical Licence No: 28/39/14/0035 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Little Wretchwick Farm, Bicester (a) Data Type: Point Name: MARLOW	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WR.A/1307 Original Start Date: 13/6/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/7/1966 Version End Date:

6.4 Surface Water Abstraction Licences

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

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1633	S	457560 219140	Status: Active Licence No: 28/39/14/0350 Details: Make-Up Or Top Up Water Direct Source: Thames Surface Water - Non Tidal Point: Langford Brook At Merton Grounds Farm, Merton Data Type: Line Name: Jennings	Annual Volume (m^3): 16256 Max Daily Volume (m^3): 145.47 Application No: NPS/WR/020119 Original Start Date: 6/5/2005 Expiry Date: 31/3/2018 Issue No: 2 Version Start Date: 22/7/2015 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	
1	813	SW	457100 220800	Status: Historical Licence No: 28/39/14/0300 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Bicester Trailer Park, Oxford Road, Wendlebury Data Type: Point Name: M & L ROSSITER	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA./5517 Original Start Date: 19/3/1987 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

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

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

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

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
336	N	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.

6.9 River Quality

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

6.9.1 Biological Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
83G	314	S	457800 221100	River Name: Langford Brook Reach: Bicester Stw - Ray End/Start of Stretch: Start of Stretch NGR	B	B	B	B	B
84G	314	S	457800 221100	River Name: Langford Brook Reach: Stratton Audley - Bicester Stw End/Start of Stretch: End of Stretch NGR	B	B	B	B	B

6.9.2 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 (6e):

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
85G	314	S	457800 221100	River Name: Langford Brook Reach: Bicester Stw - Ray End/Start of Stretch: Start of Stretch NGR	C	C	C	C	B
86G	314	S	457800 221100	River Name: Langford Brook Reach: Stratton Audley - Bicester Stw End/Start of Stretch: End of Stretch NGR	C	C	C	C	C
87H	526	E	458837 221580	River Name: Langford Brook Reach: Stratton Audley - Bicester Stw End/Start of Stretch: Sample Point NGR	C	C	C	C	C

6.10 Detailed River Network

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

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

ID	Distance (m)	Direction	Details	
1	0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	0	On Site	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
4	0	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5	0	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
6	1	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
7	1	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
8	3	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
9	3	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
10	171	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
11	171	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
12	172	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
13A	200	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
14	212	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
15	221	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
16A	222	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
17	223	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
18	223	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
19	235	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
20	242	SW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
21B	261	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
22	265	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
23	278	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
24B	283	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
25C	296	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
26	306	NE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
27	316	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
28C	321	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
29	323	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
30	339	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
31	341	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
32	356	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
33	357	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
34	357	SE	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
35	377	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
36	388	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
37	390	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
38	390	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
39	404	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
40	404	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
41	466	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
42	466	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
43H	476	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
44	476	E	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
45	500	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

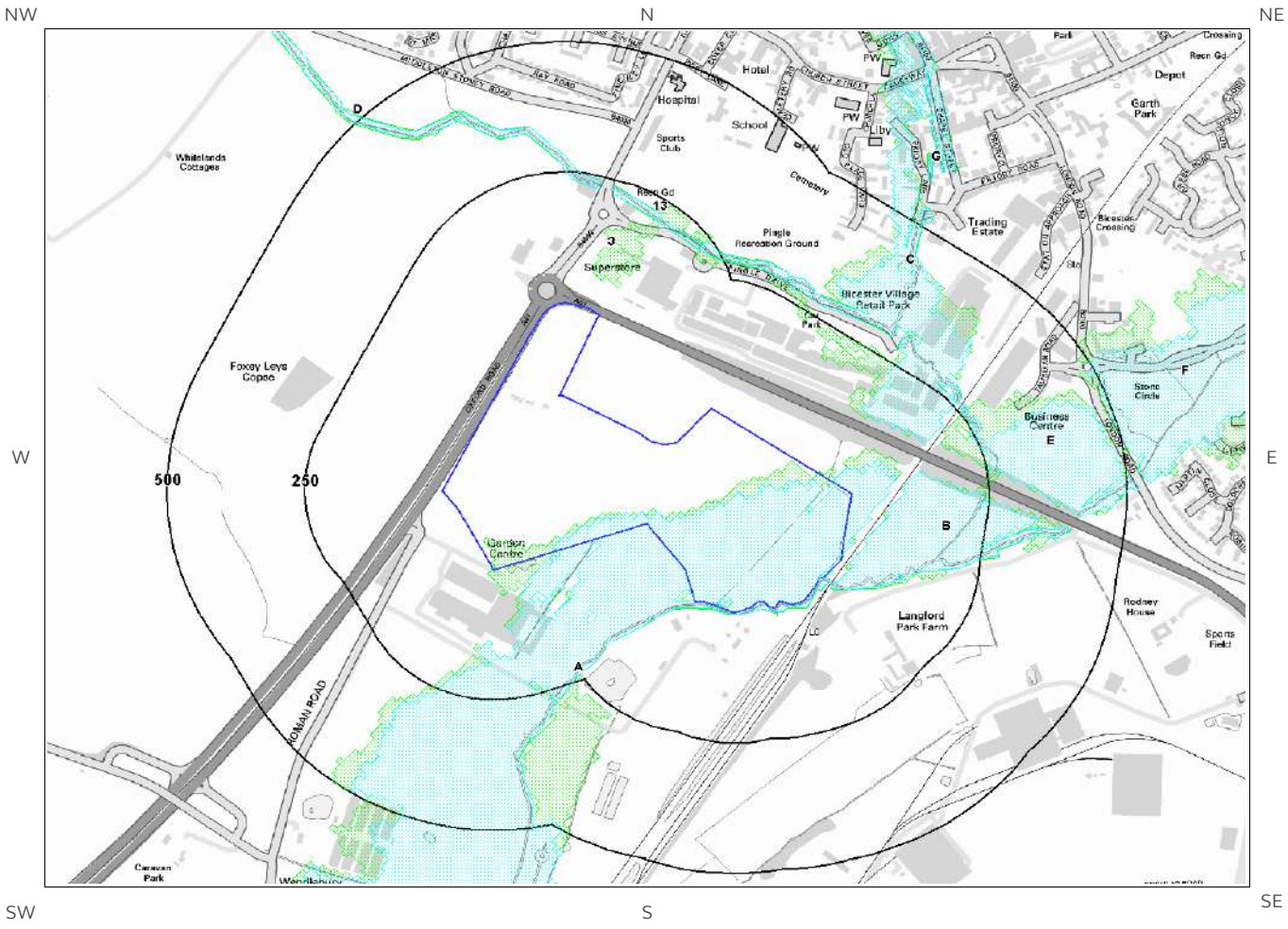
6.11 Surface Water Features

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

The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
0	On Site
0	On Site
0	On Site
0	On Site
4	NE
18	SE
51	S
55	NW
68	S
109	E
174	SW
200	SE
211	NE
221	SE
222	SE
231	NE
233	N
237	E
244	NE

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



Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

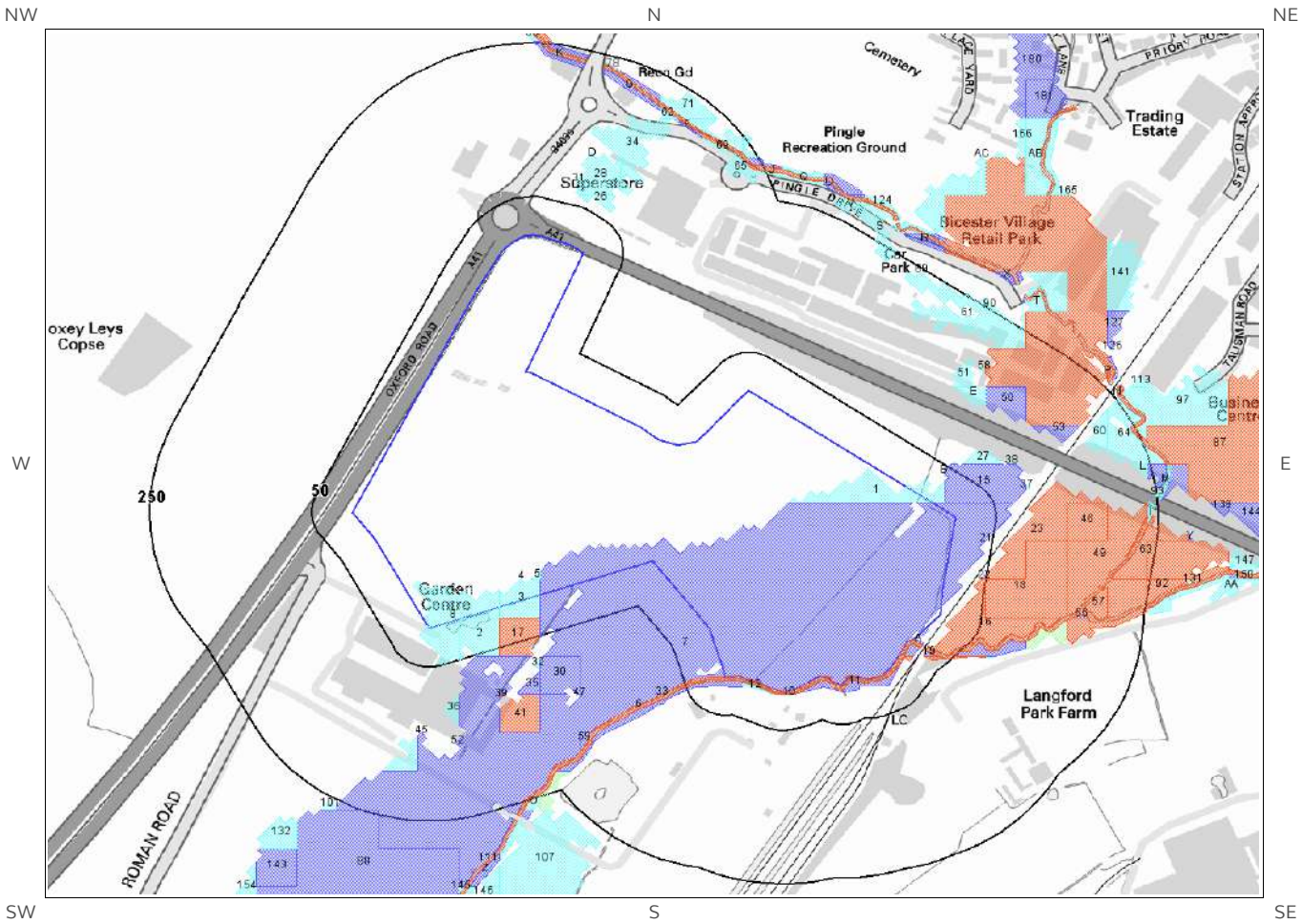
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



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
1A	0	On Site	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
2B	13	SE	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
3	59	NE	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
4C	134	NE	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
5E	187	NE	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
6D	225	N	19-Jun-2017	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? Yes

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

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	19-Jun-2017	Zone 3 - (Fluvial Models)
2B	14	E	19-Jun-2017	Zone 3 - (Fluvial Models)
3	140	NE	19-Jun-2017	Zone 3 - (Fluvial Models)
4C	208	NE	19-Jun-2017	Zone 3 - (Fluvial Models)
5E	222	NE	19-Jun-2017	Zone 3 - (Fluvial Models)
6D	225	N	19-Jun-2017	Zone 3 - (Fluvial Models)

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

What is the highest risk of flooding onsite? High

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 High (1 in 30 or greater) chance of flooding in any given year.

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

ID	Distance (m)	Direction	RoFRas flood Risk
1	0.0	On Site	Low
2	0.0	On Site	Low
3	0.0	On Site	Low
4	0.0	On Site	Low
5	0.0	On Site	Low
6	0.0	On Site	High
7	0.0	On Site	Medium
8	0.0	On Site	Low
9A	0.0	On Site	Medium
10	3.0	S	Low
11	3.0	S	Medium
12	4.0	S	Low
13	5.0	S	Medium
14A	5.0	SE	Medium
15	9.0	NE	Medium
16	13.0	SE	High
17	13.0	S	High
18	18.0	SE	High
19	21.0	SE	Medium
20B	39.0	NE	Low
21	41.0	E	Medium
22	43.0	E	Medium
23	48.0	E	High
24C	49.0	SE	Medium

7.4 Flood Defences

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

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

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

7.6 Areas benefiting from Flood Storage

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

7.7 Groundwater Flooding Susceptibility Areas

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

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

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

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

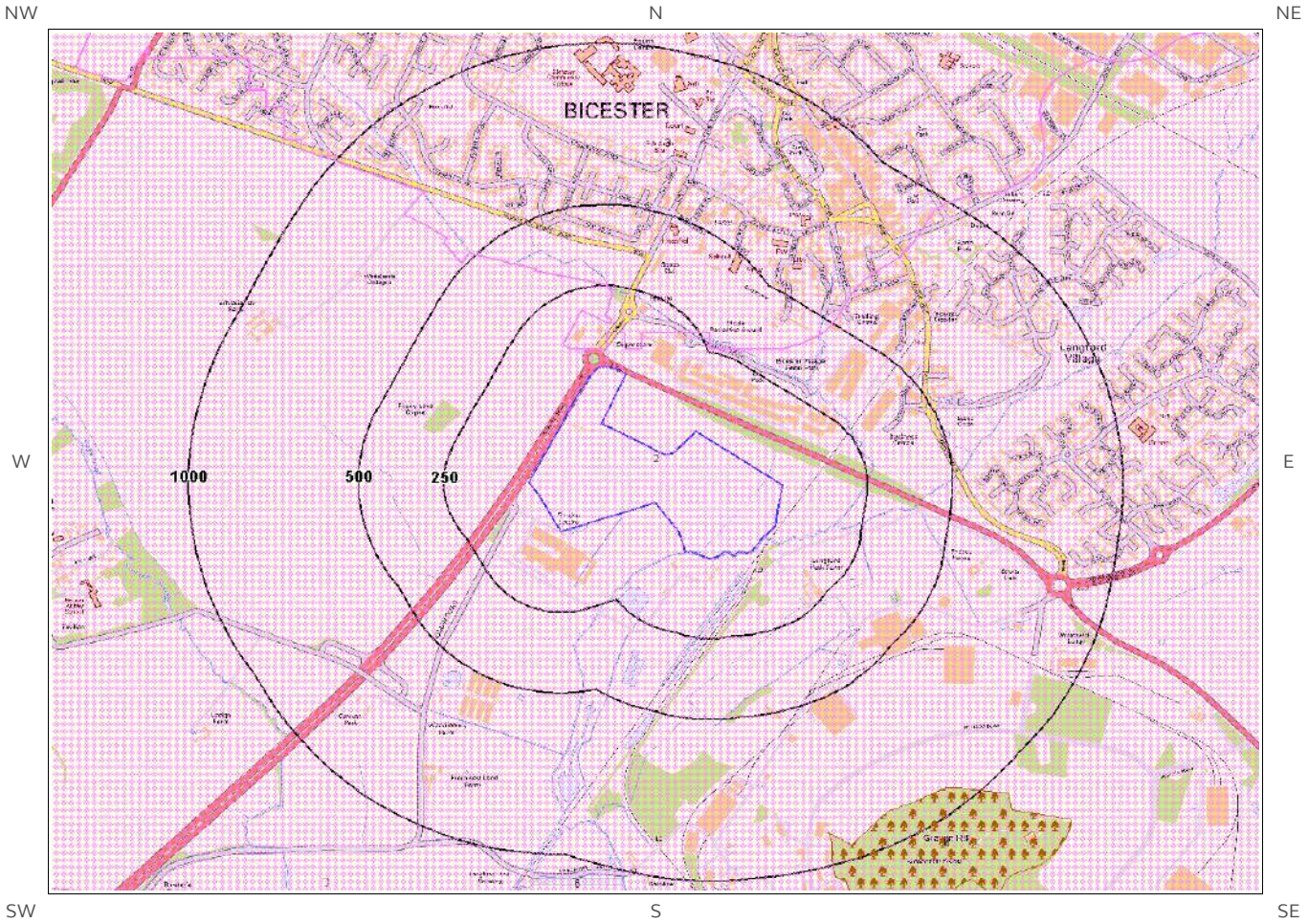
7.8 Groundwater Flooding Confidence Areas

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

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

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

8. Designated Environmentally Sensitive Sites Map



Site Outline

100
250
Search Buffers (m)

AONB
National Park
SSSI
Special Protection Areas
Nitrate Vulnerable Zones
Green Belt
Environmentally Sensitive Areas
Special Areas of Conservation
World Heritage Sites
Nitrate Sensitive Areas
Ancient Woodland
National Nature Reserve
Local Nature Reserves
Ramsar Sites

8. Designated Environmentally Sensitive Sites

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

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
8	897	S	UNKNOWN	Ancient and Semi-Natural Woodland

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

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1578	N	Bure Park	Natural England

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:

2

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

ID	Distance (m)	Direction	ESA Name	Data Source
6	1016	S	Upper Thames Tributaries	Natural England
Not shown	1312	S	Upper Thames Tributaries	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Existing	DEFRA
3	52	N	New	DEFRA
Not shown	1303	S	Existing	DEFRA
Not shown	1687	E	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

Hazard
Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. 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 probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

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

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

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

9.1.3 Soluble Rocks

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

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

Hazard
Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property possible increase in insurance risk due to soluble rocks.

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

9.1.4 Compressible Ground

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

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

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

9.1.5 Collapsible Rocks

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

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

Database searched and no data found.

10.2 Non-Coal Mining

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

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

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

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: **www.environment-agency.gov.uk**
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Cherwell District Council
Phone: 01295 252 535
Web: http://www.cherwell-dc.gov.uk/
Address: Bodicote House, Bodicote, Banbury, Oxfordshire, OX15 4AA

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

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-sept-2016

Groundsure
LOCATION INTELLIGENCE

BWB Consulting Limited

5th Floor, Waterfront House, Station Street,
Nottingham, NG2 3DQ

Groundsure Reference:	HMD-214-4080159
Your Reference:	NTE2366-POR012085
Report Date	13 Jul 2017
Report Delivery Method:	Email - pdf

Geo Insight

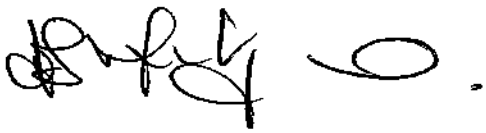
Address: 457789, 221586,

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Geo Insight

Address:	**457789, 221586,**
Date:	**13 Jul 2017**
Reference:	**HMD-214-4080159**
Client:	**BWB Consulting Limited**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	06-Sep-2015
Grid Reference:	457953,221555
Site Size:	20.73ha

Contents Page

Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	No

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

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?	Yes
	2.3.3 Are there any records of faults within 500m of the study site boundary?	No

Section 3: Radon

3. Radon	3.1Is 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.
	3.2Radon Protection	No radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	4	11	10	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	4

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non–Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

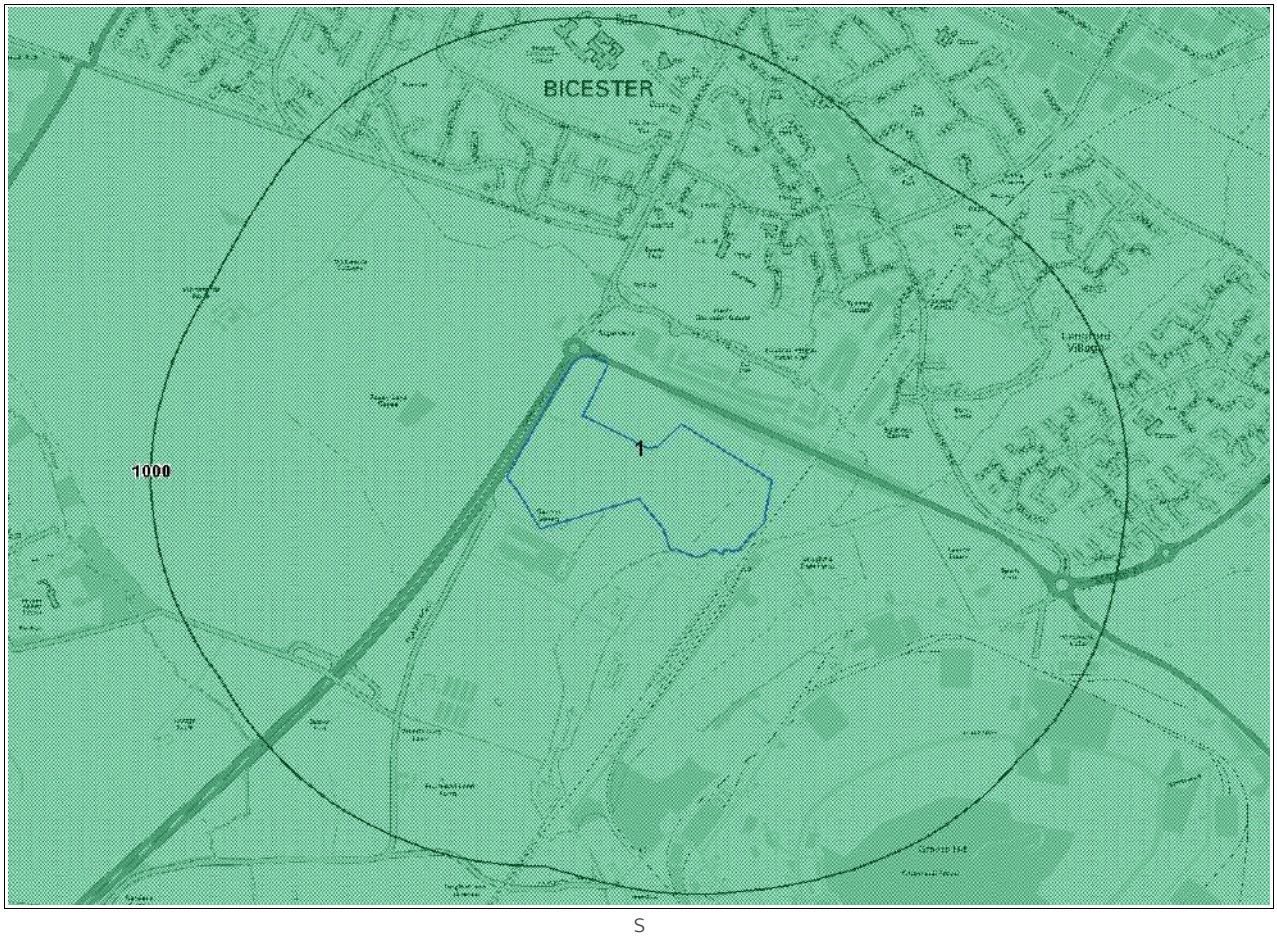
Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Moderate
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Low
6.4 Compressible Deposits	Moderate
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	8	2	10

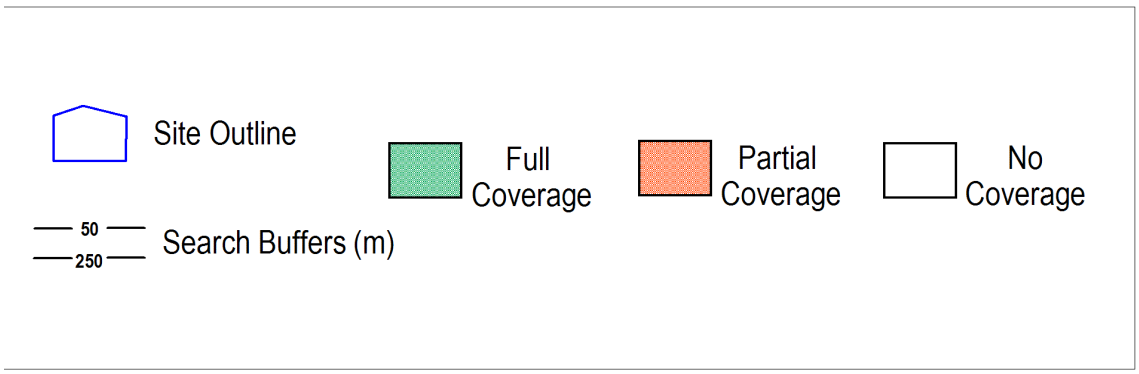
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	13	5	0

Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	10	7	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	10	6	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability



1_10,000 Availability Legend



Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
N2	1303.0	Some deposits are mapped	Full	Full	No coverage
N3	1687.0	No deposits are mapped	No coverage	No coverage	No coverage

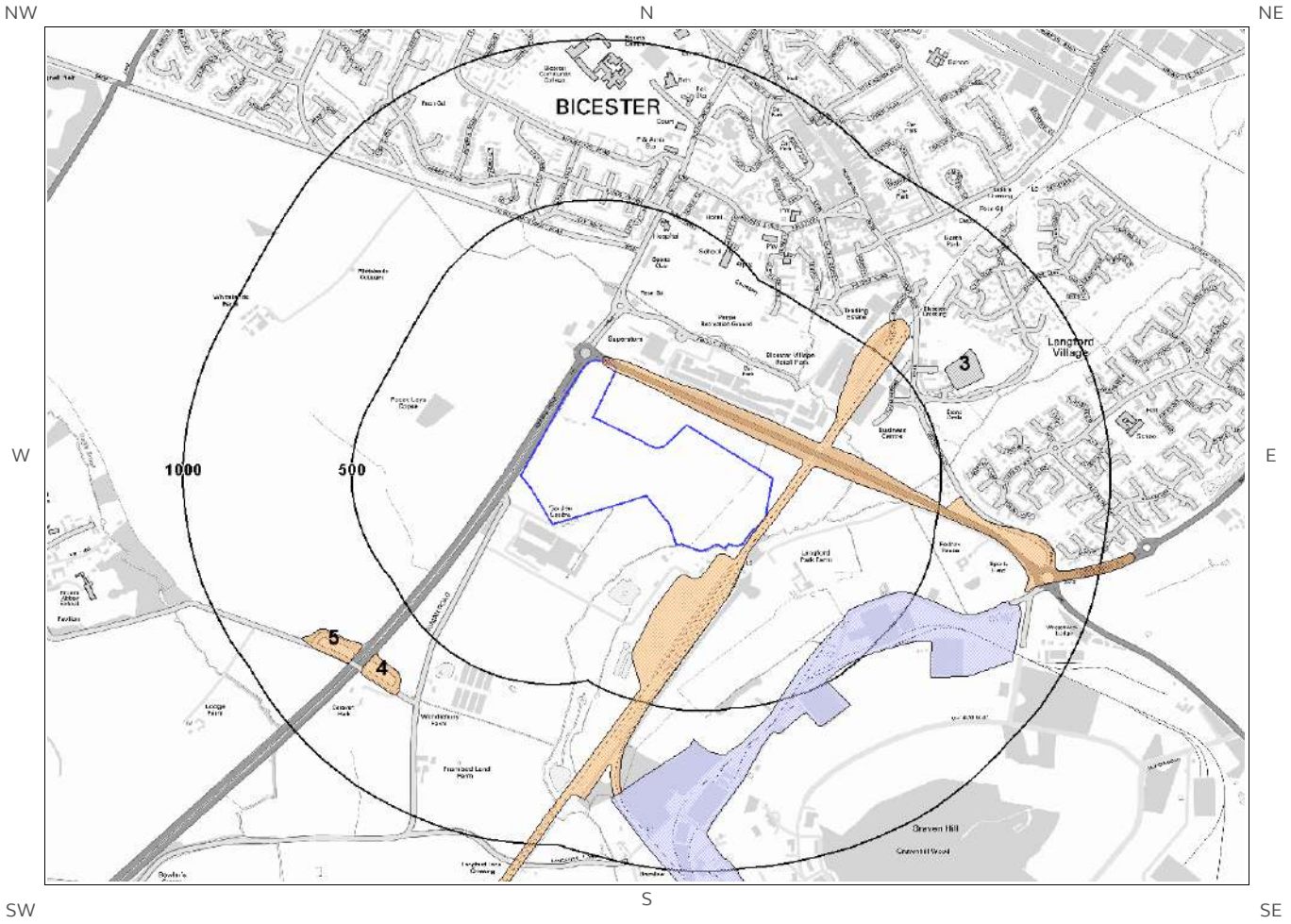
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

1. Geology 1:10,000 scale

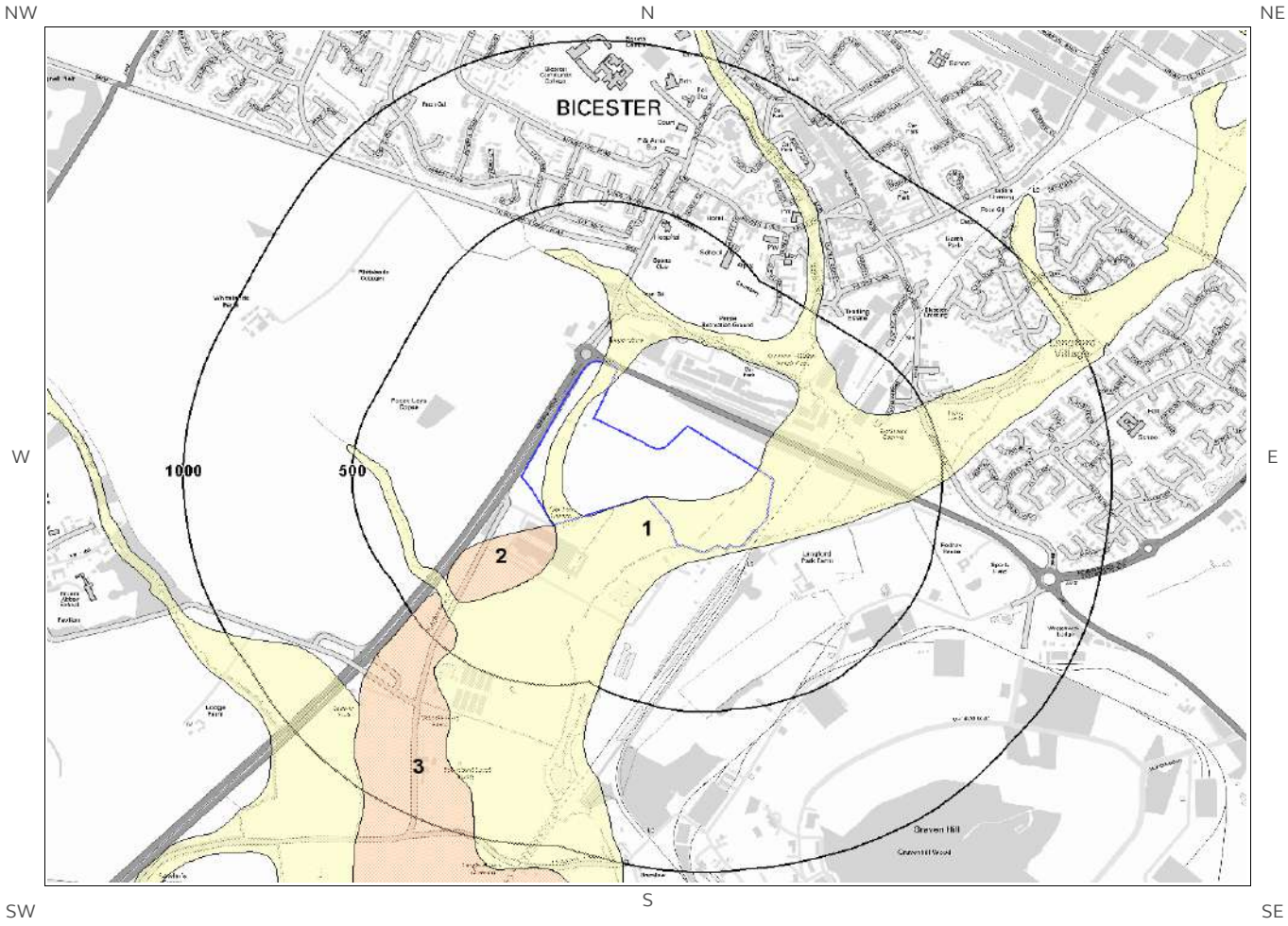
1.1 Artificial Ground

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

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	375.0	SE	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry

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



Artificial Ground Legend

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-CSV	Alluvium - Sandy Gravelly Clay	Clay, Sandy, Gravelly
2	4.0	S	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel
3	401.0	SW	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

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

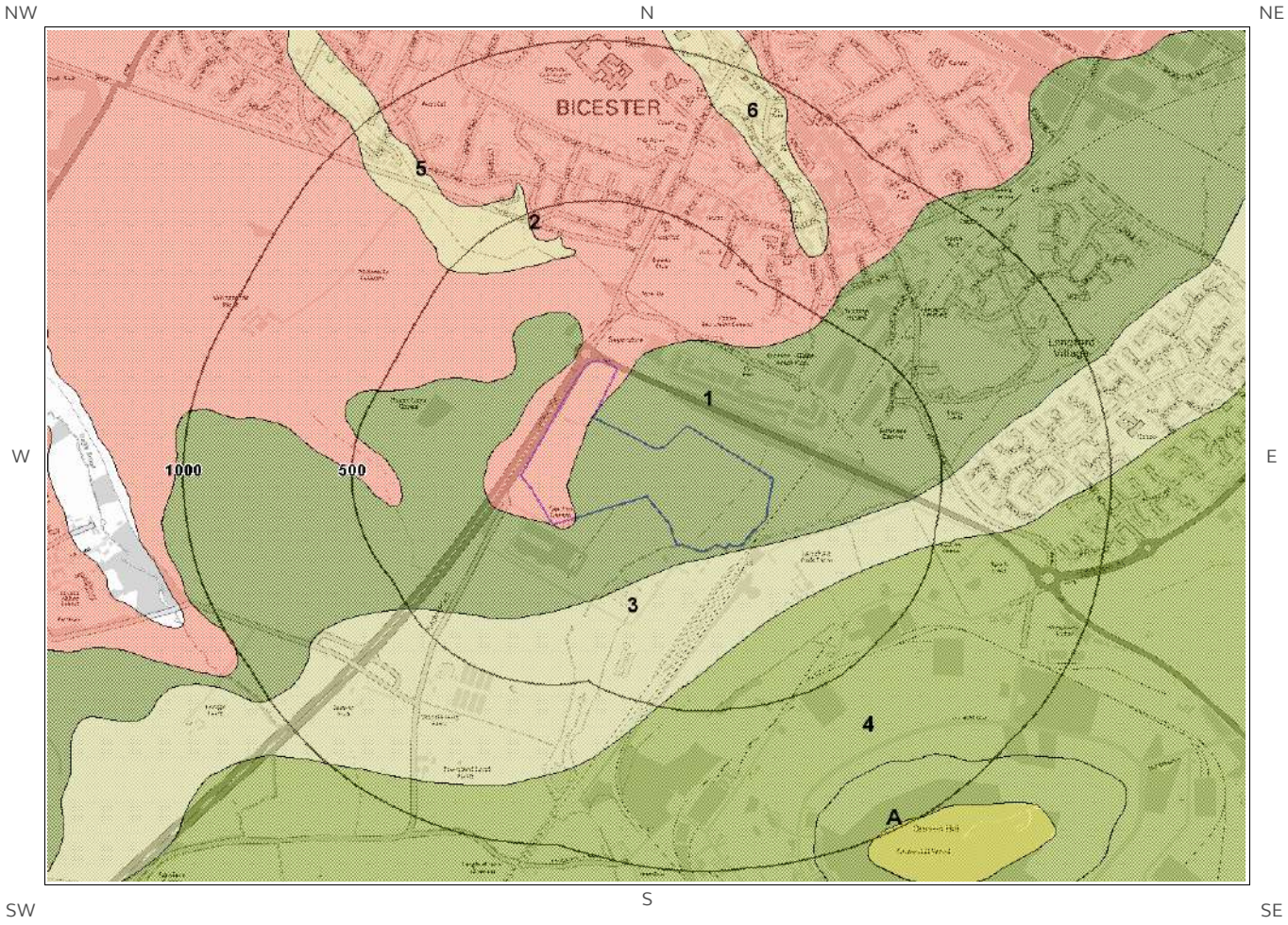
No

Database searched and no data found.

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

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

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



Bedrock and Faults Legend

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and Faults

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	KLC-MDST	Kellaways Clay Member - Mudstone	Callovian Age
2	0.0	On Site	CB-LMST	Cornbrash Formation - Limestone	Callovian Age - Bathonian Age
3	13.0	S	KLS-SDSL	Kellaways Sand Member - Sandstone And Siltstone, Interbedded	Callovian Age
4	240.0	SE	PET-MDST	Peterborough Member - Mudstone	Callovian Age
5	334.0	N	FMB-LSMD	Forest Marble Formation - Interbedded Limestone And Mudstone	Bathonian Age

1.3.2 Faults

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

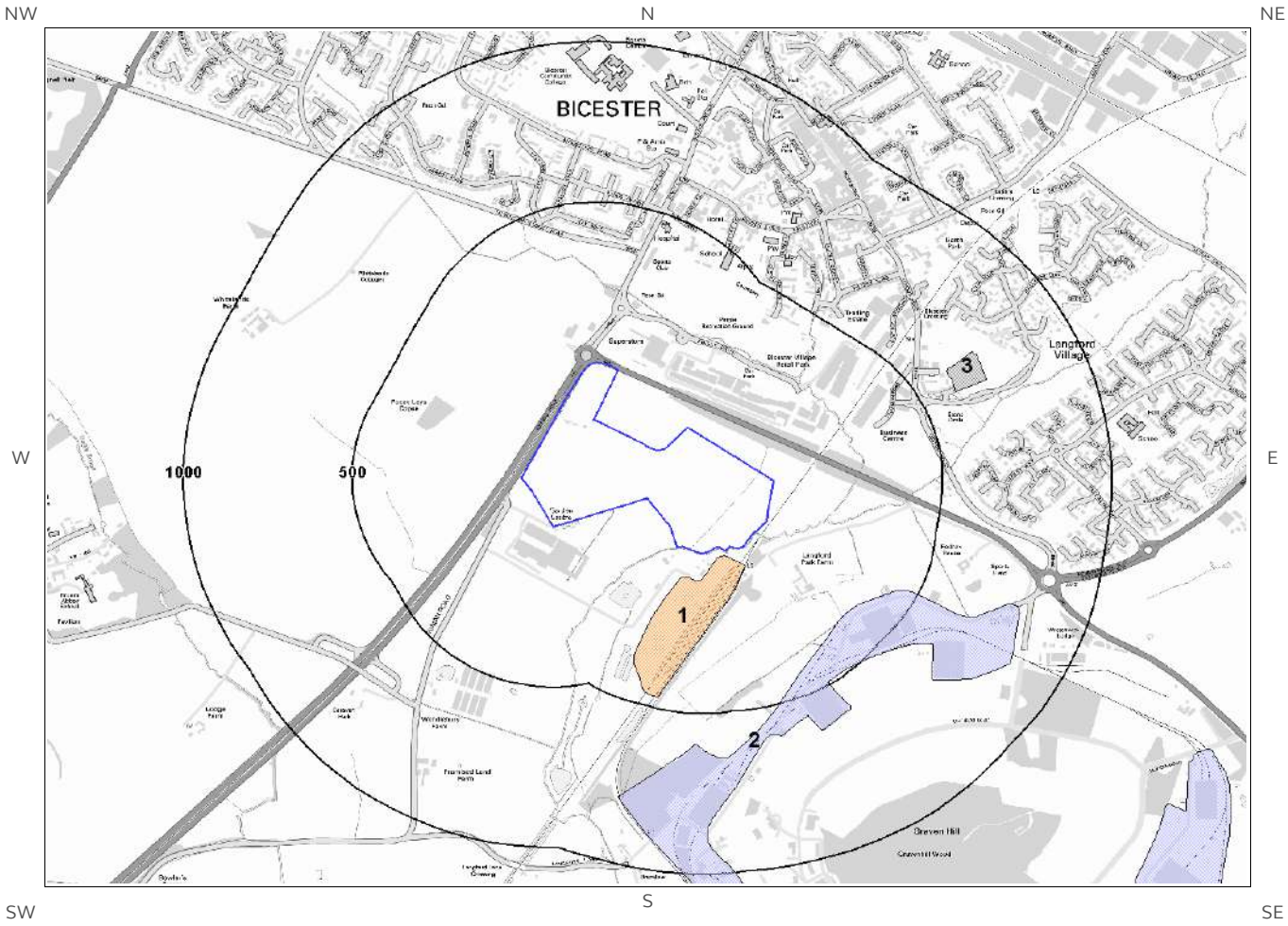
Database searched and no data found at this scale.

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

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground Map



Ground Workings Legend

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 219

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

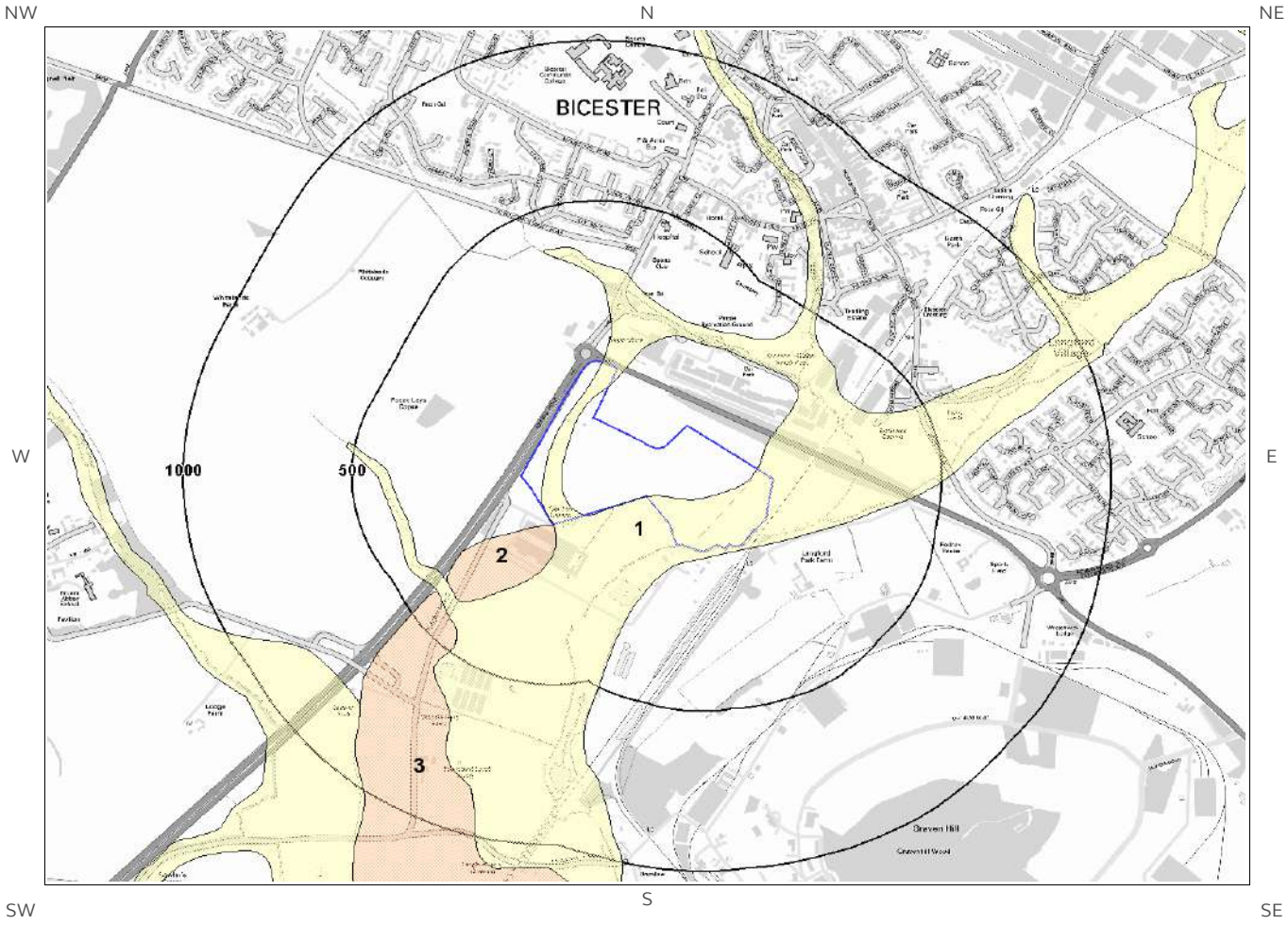
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	15.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	365.0	SE	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND

2.1.2 Permeability of Artificial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
15.0	S	Mixed	Very High	Low

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



Ground Workings Legend

Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	1.0	S	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
3	399.0	SW	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

Database searched and no data found.

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

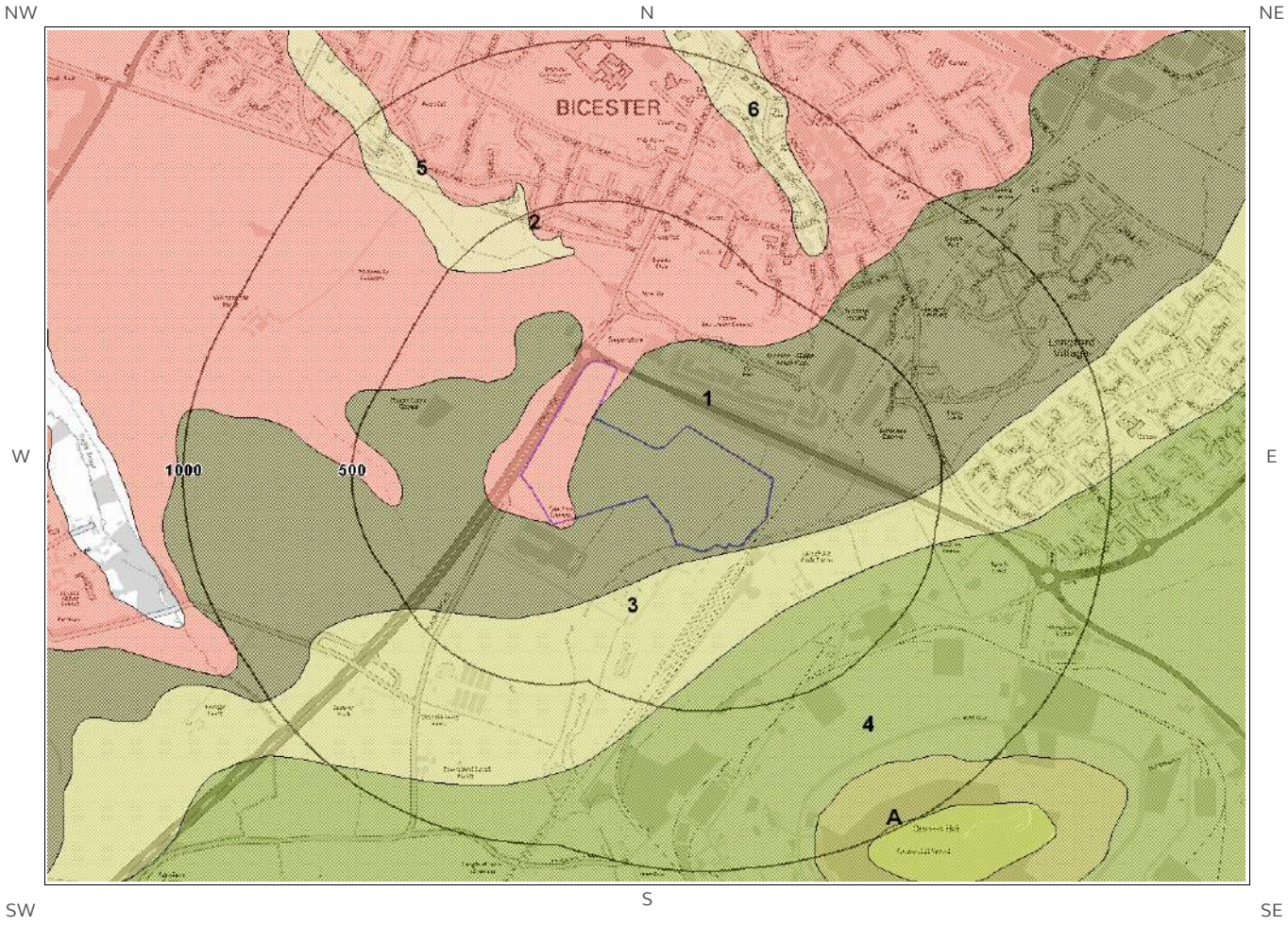
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)



Ground Workings Legend

Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 219

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	KLC-MDST	KELLAWAYS CLAY MEMBER - MUDSTONE	CALLOVIAN
2	0.0	On Site	CB-LMST	CORNBRASH FORMATION - LIMESTONE	BATHONIAN
3	14.0	S	KLS-SDSL	KELLAWAYS SAND MEMBER - SANDSTONE AND SILTSTONE, INTERBEDDED	CALLOVIAN
4	238.0	SE	PET-MDST	PETERBOROUGH MEMBER - MUDSTONE	CALLOVIAN
5	336.0	N	FMB-LSMD	FOREST MARBLE FORMATION - LIMESTONE AND MUDSTONE, INTERBEDDED	BATHONIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Very Low
0.0	On Site	Fracture	Very High	High
14.0	S	Mixed	Moderate	Moderate

2.3.3 Faults

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

Database searched and no data found.

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

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

3 Radon Data

3.1 Radon Affected Areas

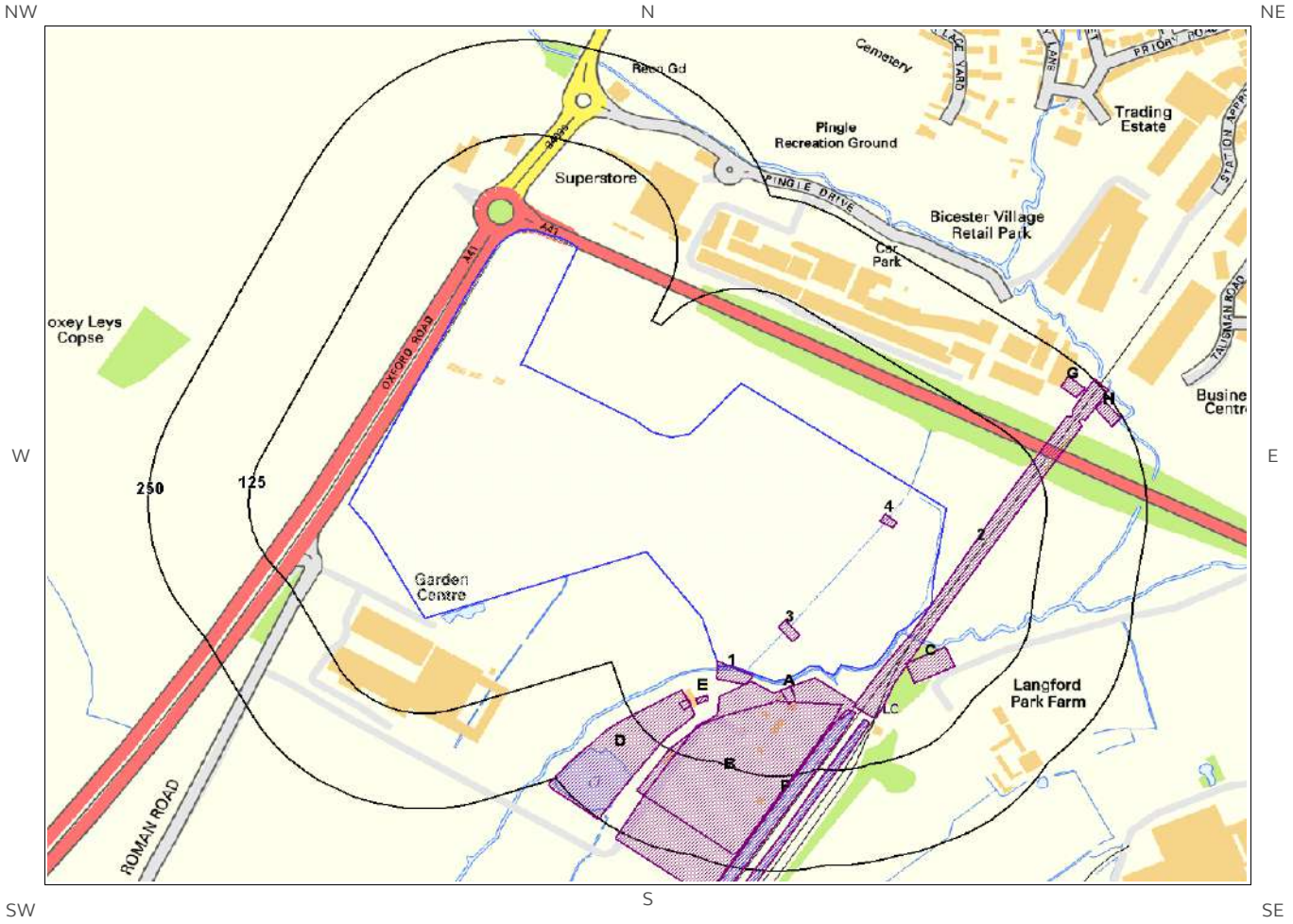
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

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

---

4 Ground Workings Map



Ground Workings Legend

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	458049 221314	Pond	1880
2	0.0	On Site	458371 221492	Cuttings	1880
3	0.0	On Site	458117 221369	Unspecified Heap	1950
4	0.0	On Site	458241 221515	Unspecified Heap	1950
5A	10.0	SE	458117 221286	Sewage Tank	1898
6A	10.0	SE	458117 221286	Sewage Tank	1919
7A	10.0	SE	458117 221286	Sewage Tank	1879
8B	11.0	S	458051 221163	Sewage Works	1995
9B	11.0	S	458051 221163	Sewage Works	1985
10B	26.0	S	458056 221176	Sewage Farm	1970
11C	29.0	SE	458293 221325	Pond	1985
12C	29.0	SE	458293 221325	Pond	1995
13C	29.0	SE	458293 221325	Pond	1970
14E	41.0	S	458009 221279	Sewage Tank	1880
15F	49.0	S	458075 221086	Water Body	1880
16D	55.0	SW	457909 221207	Ponds	1985
17D	55.0	SW	457909 221207	Ponds	1995
18E	57.0	SW	457988 221272	Unspecified Heap	1950
19F	66.0	S	458093 221079	Pond	1880
20G	214.0	NE	458472 221691	Unspecified Heap	1879
21G	214.0	NE	458472 221691	Unspecified Heap	1919

ID	Distance (m)	Direction	NGR	Use	Date
22G	214.0	NE	458472 221691	Unspecified Heap	1898
23H	228.0	NE	458515 221656	Unspecified Heap	1879
24H	228.0	NE	458515 221656	Unspecified Heap	1898
25H	228.0	NE	458515 221656	Unspecified Heap	1919

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

4.3 Current Ground Workings

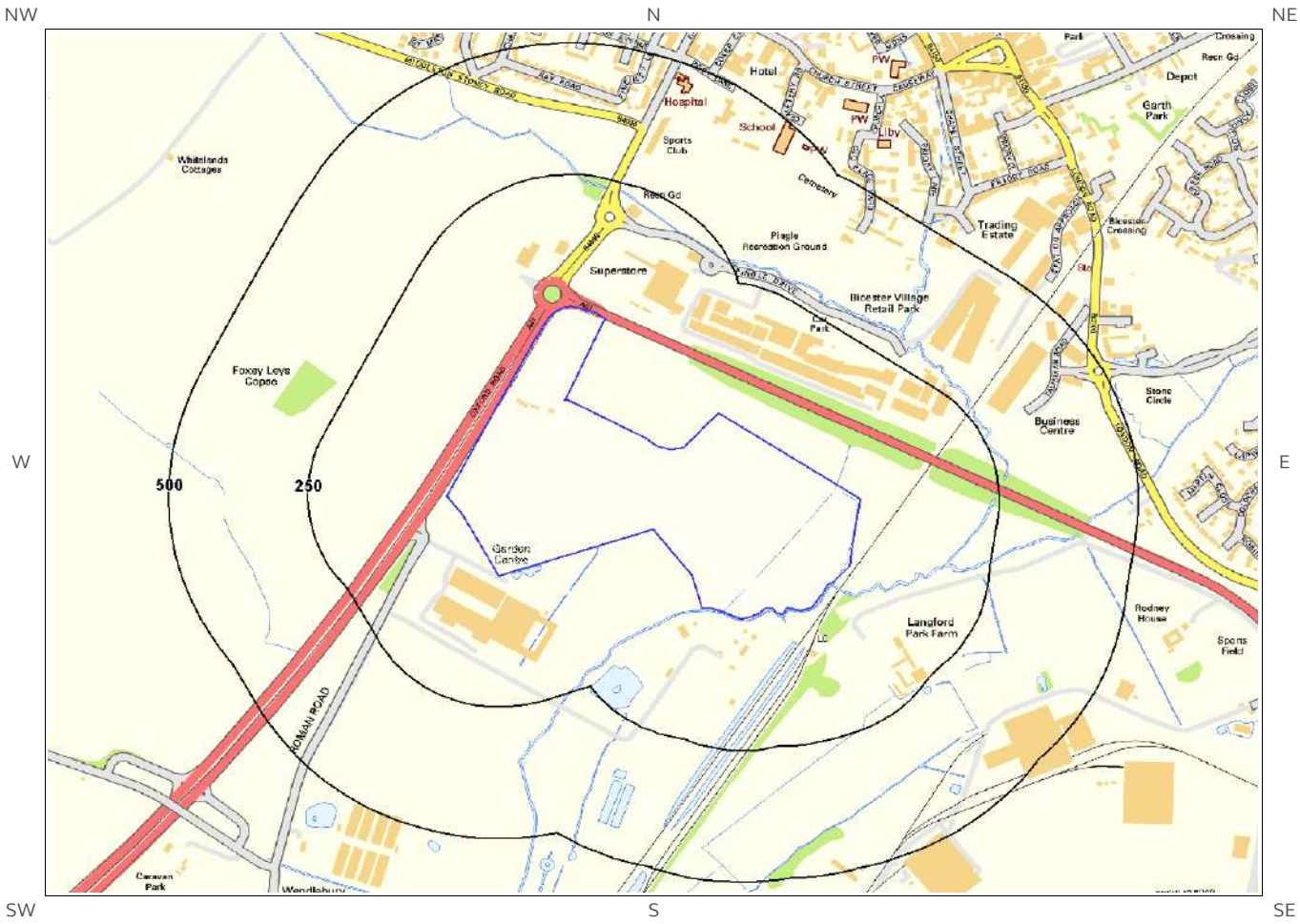
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	713.0	NE	458929 221890	Clay & Shale	The Priory	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	808.0	SW	457118 220789	Clay & Shale	Promised-land Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	878.0	S	457965 220435	Limestone	Langford Lane	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	920.0	SW	457051 220699	Clay & Shale	Promised-land Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

Site Outline

250
500
Search Buffers (m)

Historical Mining

Non-Coal Mining Cavities

Natural Cavities

Non-Coal Mining

Highly likely

Likely

Unlikely

Highly unlikely

Rare

5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

Database searched and no data found.

5.2 Coal Mining

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

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

Database searched and no data found.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

Database searched and no data found.

5.5 Non-Coal Mining Cavities

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

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

Database searched and no data found.

5.6 Natural Cavities

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

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

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Tin Mining

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

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

Database searched and no data found.

5.10 Clay Mining

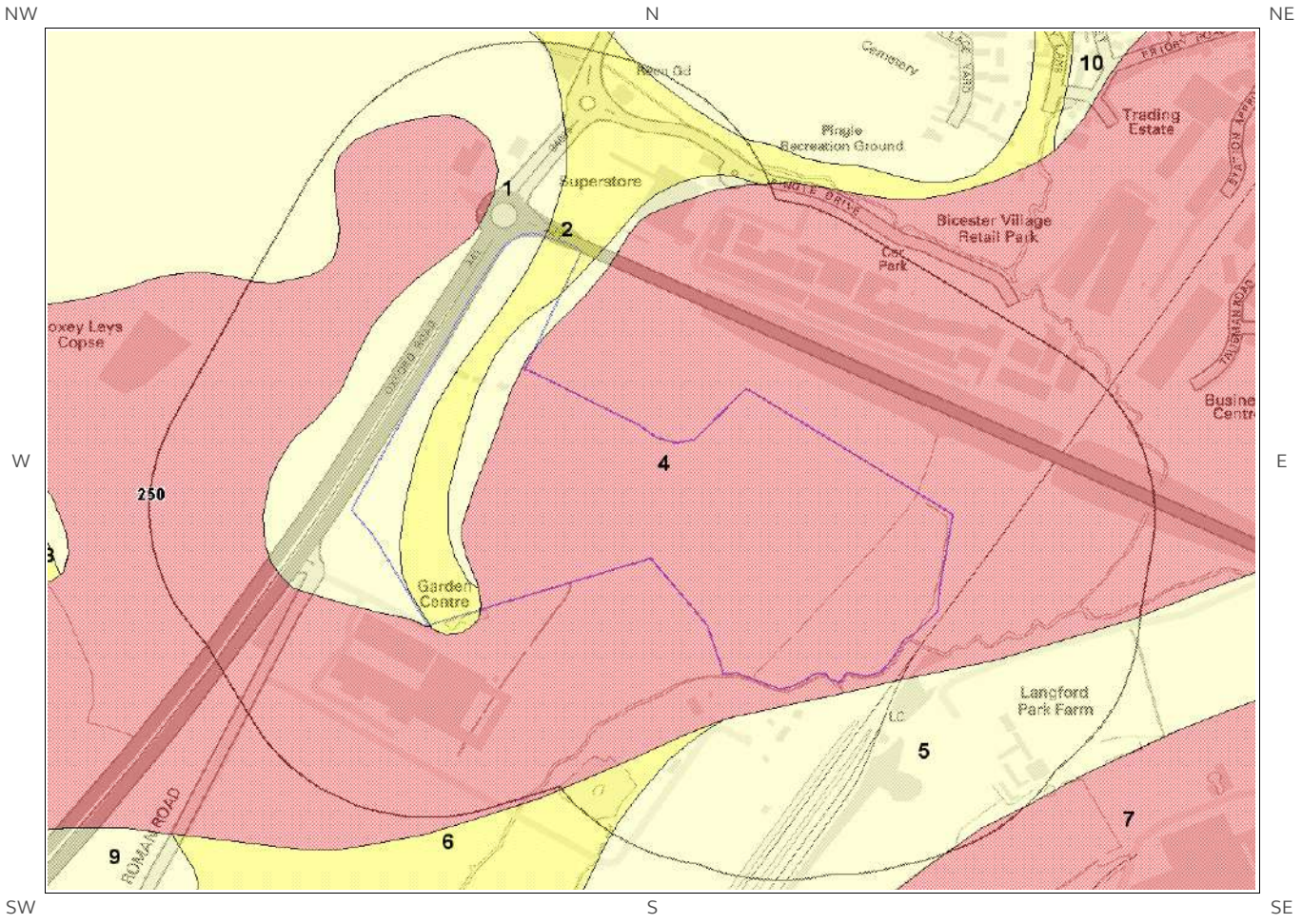
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map



Shrink Swell Clay Legend

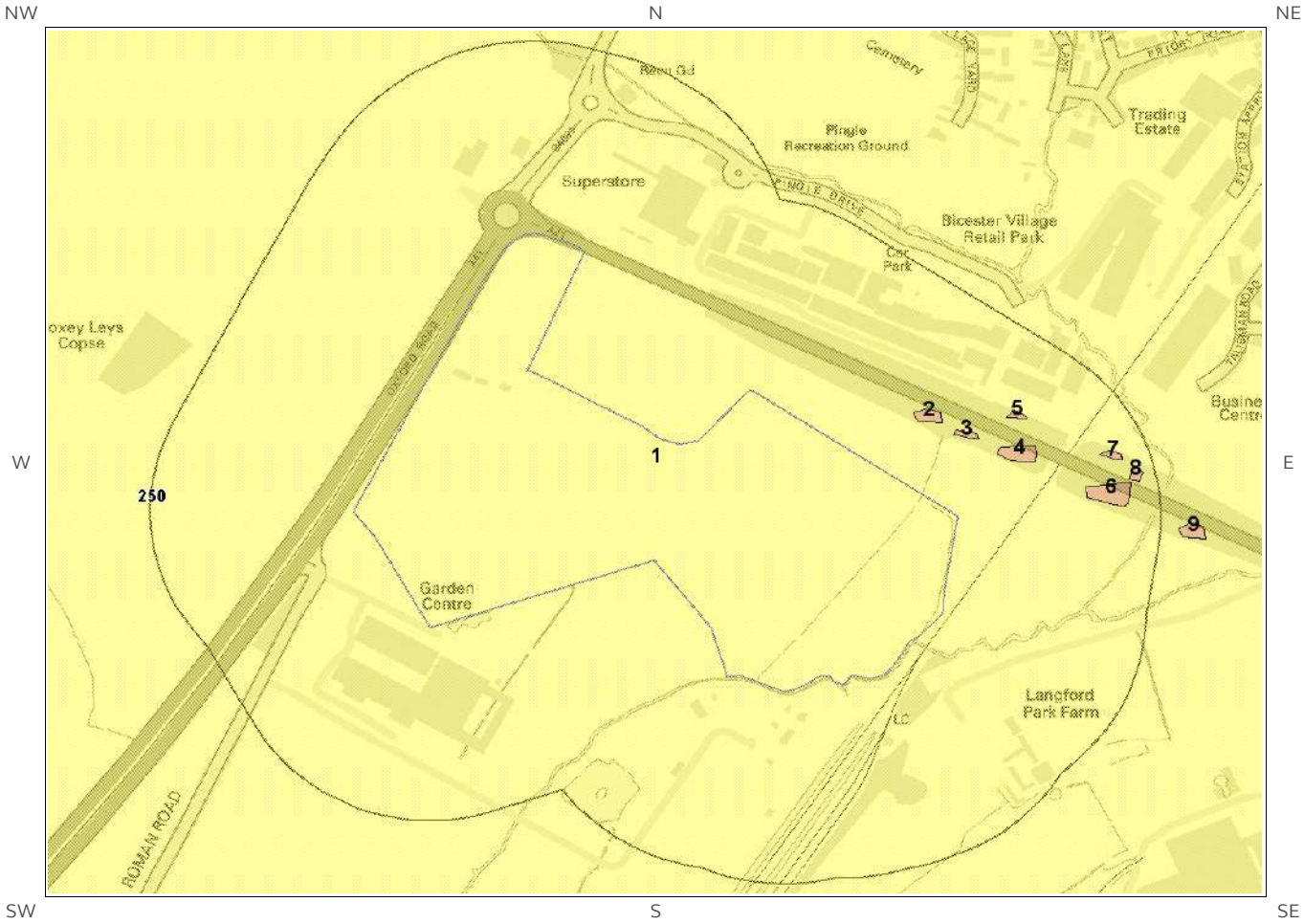
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6.2 Landslides Map



Landslides Legend

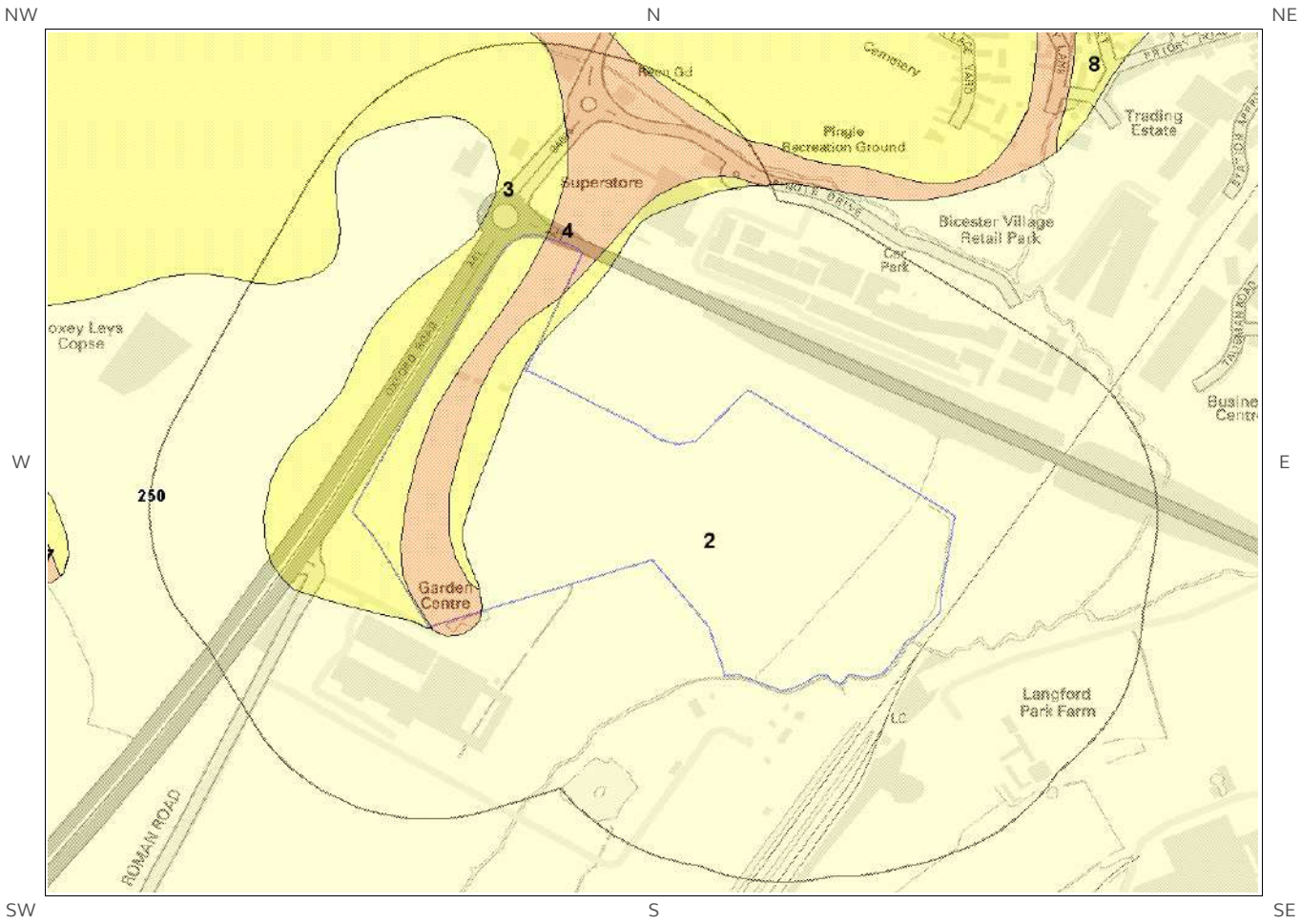
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

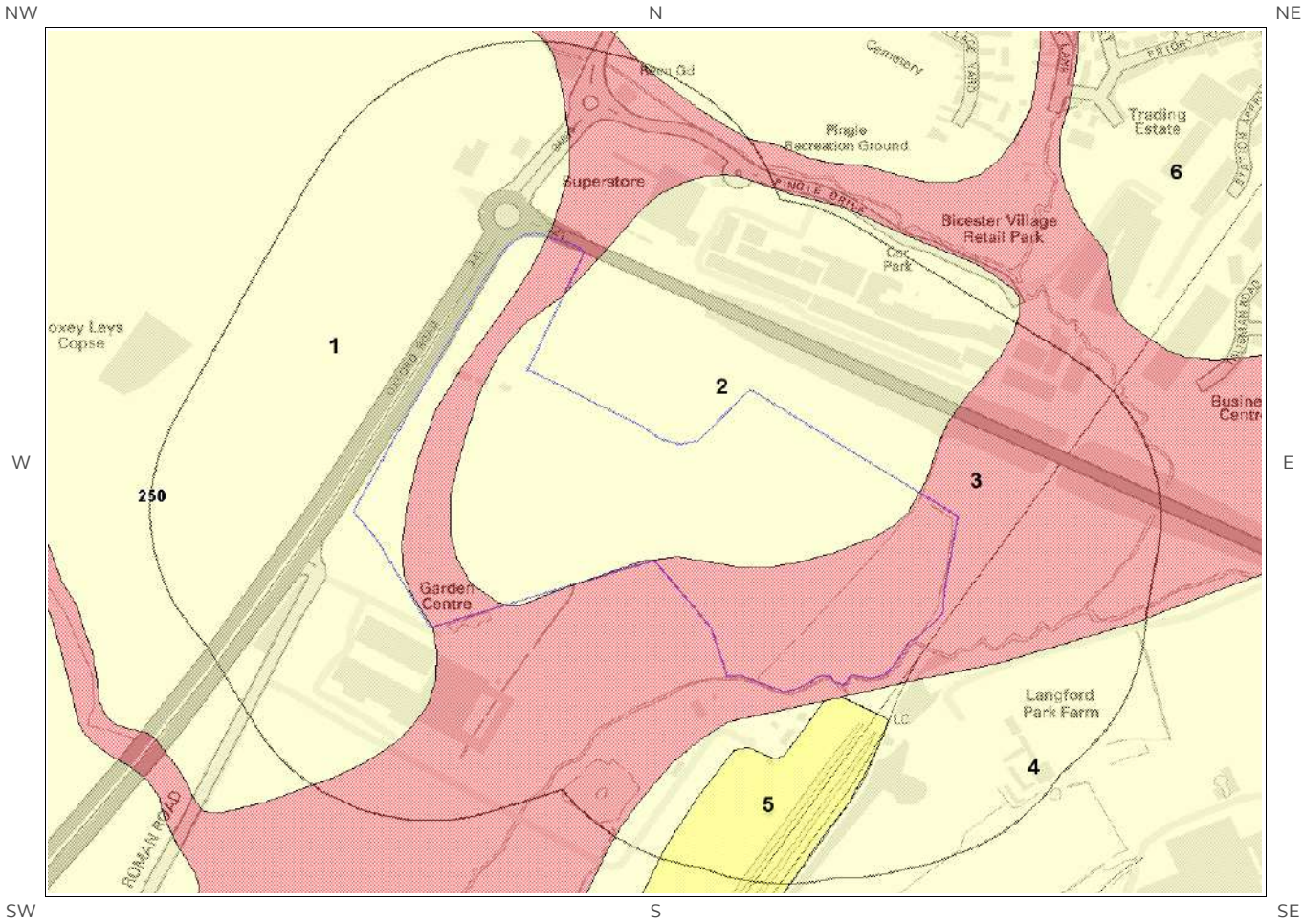
Low
Moderate
High

6.3 Ground Dissolution of Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend

6.4 Compressible Deposits Map



Compressible Deposits Legend

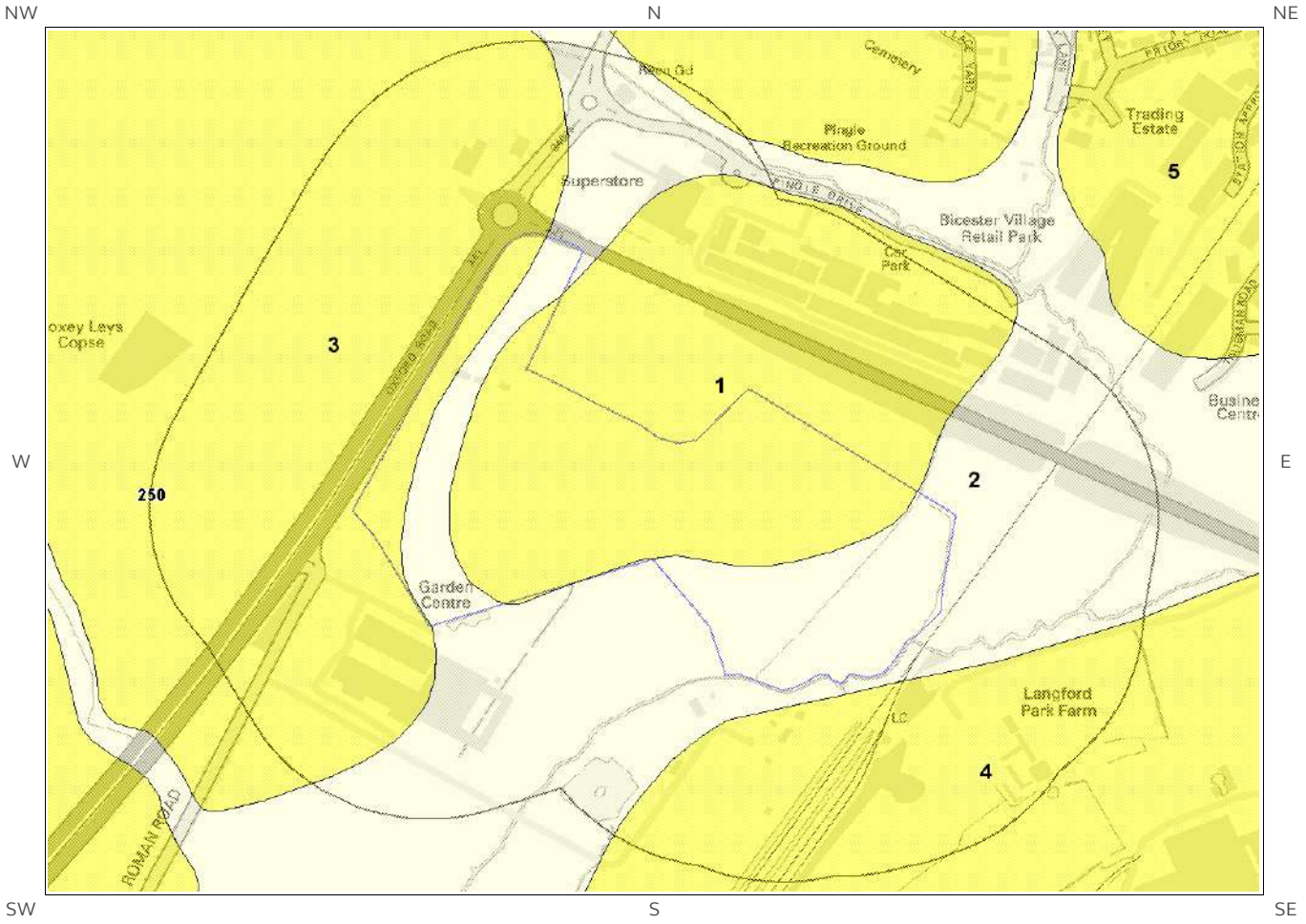
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6.5 Collapsible Deposits Map



Collapsible Deposits Legend

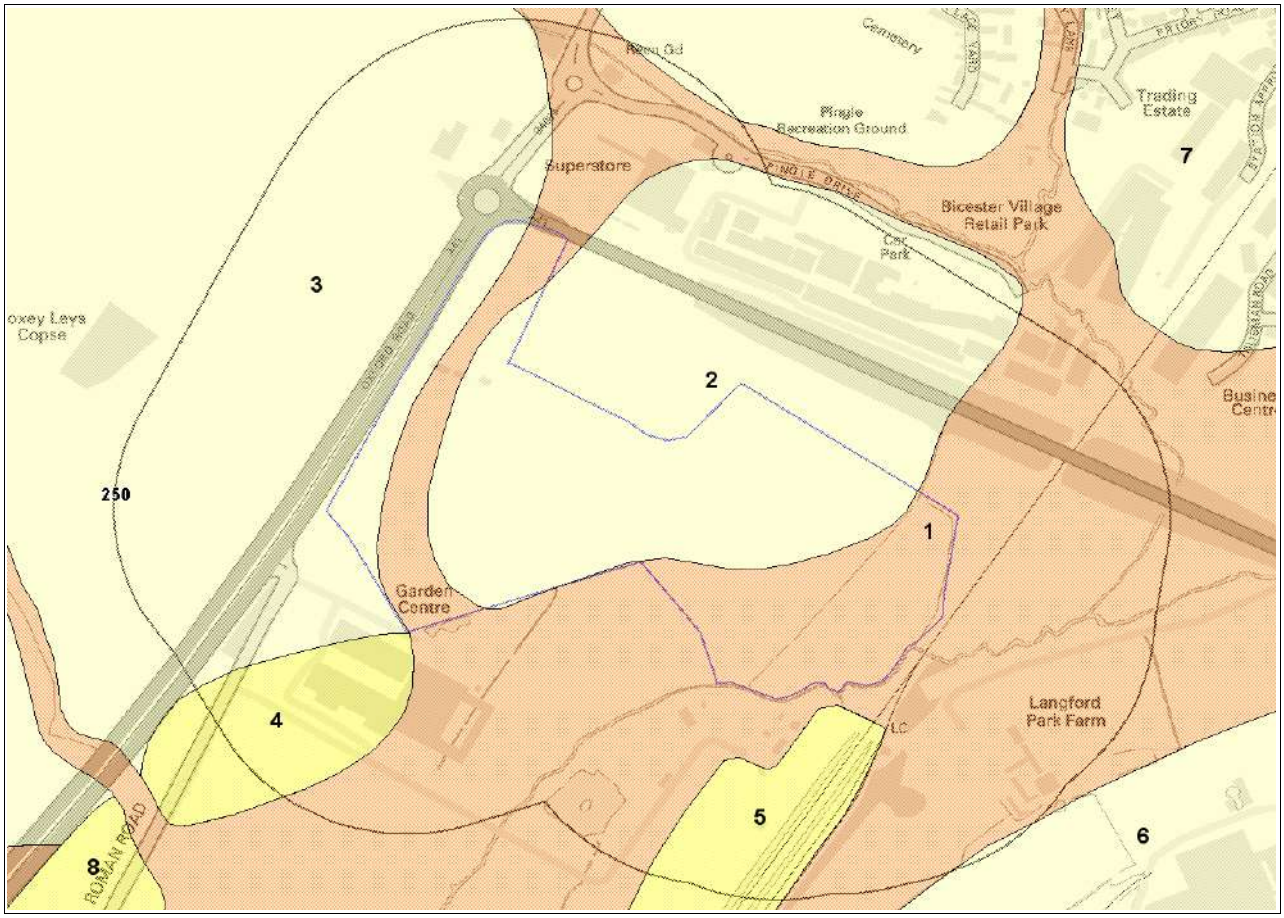
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6.6 Running Sand Map



Running Sand Legend

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6 Natural Ground Subsidence

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

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

What is the maximum hazard rating of natural subsidence within the study site*[*] boundary? Moderate

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
4	0.0	On Site	Moderate	Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. 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 probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.
5	14.0	S	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

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

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.
2	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
3	0.0	On Site	Very Low	Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.
4	0.0	On Site	Low	Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build - site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property - possible increase in insurance risk due to soluble rocks.

6.4 Compressible Deposits

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

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

ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
3	0.0	On Site	Moderate	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.
4	14.0	S	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
5	15.0	S	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
3	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
4	14.0	S	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

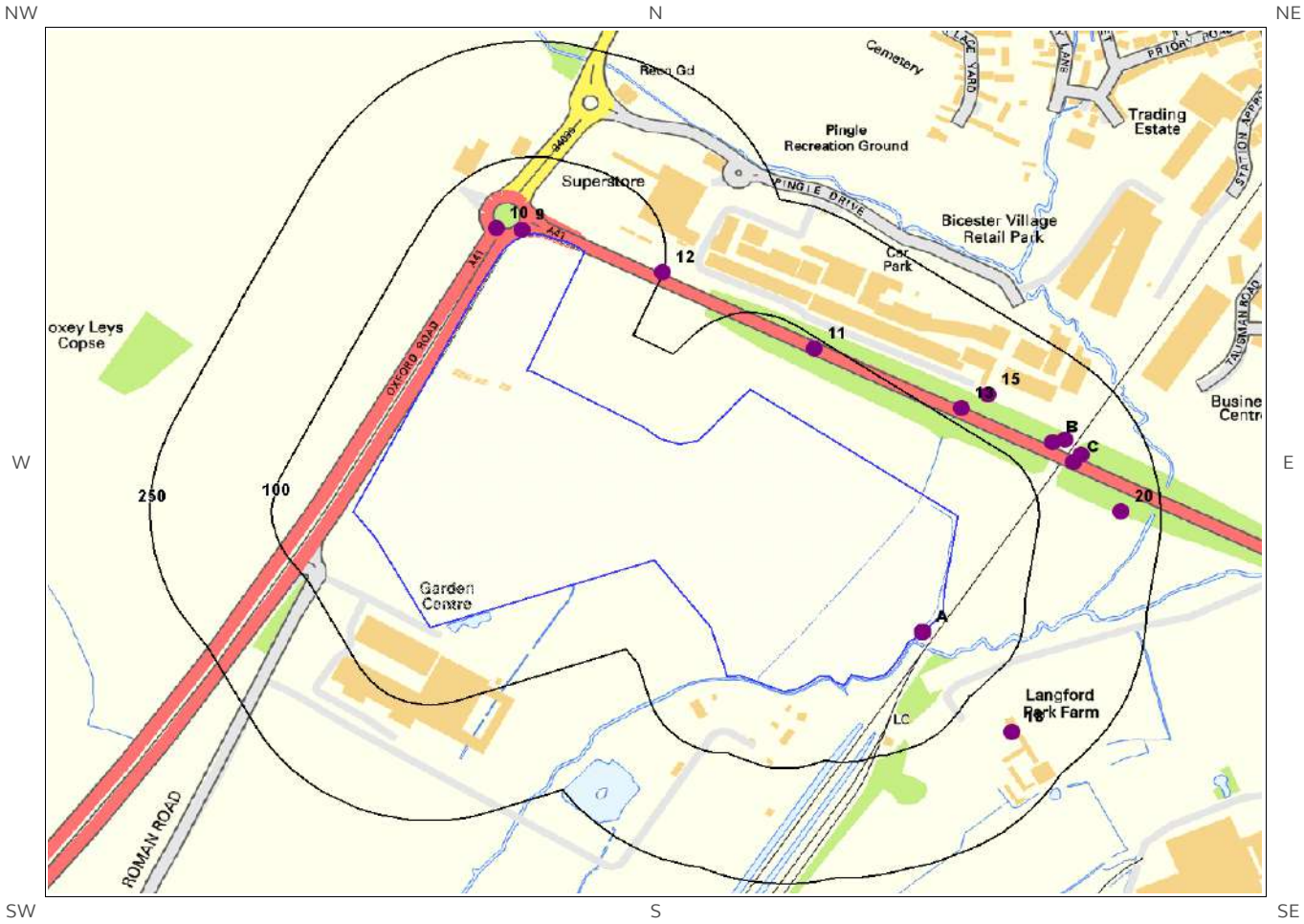
6.6 Running Sands

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

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

ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
4	1.0	S	Very Low	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.
5	15.0	S	Very Low	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.

7 Borehole Records Map



Borehole Records Legend

Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

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

Records of boreholes within 250m of the study site boundary: 20

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	0.0	On Site	458270 221380	SP52SE81	10.0	SEWAGE TREATMENT WORKS BH421/7
2A	0.0	On Site	458270 221380	SP52SE78	11.0	SEWAGE TREATMENT WORKS BH421/4
3A	0.0	On Site	458270 221380	SP52SE80	9.0	SEWAGE TREATMENT WORKS BH421/6
4A	0.0	On Site	458270 221380	SP52SE77	7.2	SEWAGE TREATMENT WORKS BH421/3
5A	0.0	On Site	458270 221380	SP52SE76	6.0	SEWAGE TREATMENT WORKS BH421/2
6A	0.0	On Site	458270 221380	SP52SE82	8.0	SEWAGE TREATMENT WORKS BH421/8
7A	0.0	On Site	458270 221380	SP52SE75	6.0	SEWAGE TREATMENT WORKS BH421/1
8A	0.0	On Site	458270 221380	SP52SE79	10.2	SEWAGE TREATMENT WORKS BH421/5
9	6.0	NW	457777 221902	SP52SE88	0.0	BICESTER SOUTHERN BYPASS TP 2
10	26.0	NW	457745 221904	SP52SE87	1.0	BICESTER SOUTHERN BYPASS TP 1
11	87.0	NE	458136 221748	SP52SE90	5.0	BICESTER SOUTHERN BYPASS 4
12	99.0	E	457949 221847	SP52SE89	1.0	BICESTER SOUTHERN BYPASS TP 3
13	120.0	NE	458318 221670	SP52SE91	6.2	BICESTER SOUTHERN BYPASS 5
14B	150.0	NE	458430 221626	SP52SE93	7.4	BICESTER SOUTHERN BYPASS 7
15	152.0	NE	458350 221688	SP52SE92	6.0	BICESTER SOUTHERN BYPASS 6
16C	158.0	NE	458456 221600	SP52SE95	25.0	BICESTER SOUTHERN BYPASS 9
17B	165.0	NE	458445 221630	SP52SE94	15.45	BICESTER SOUTHERN BYPASS 8
18	169.0	SE	458380 221250	SP52SE162	39.62	LANGFORD FARM BICESTER
19C	171.0	NE	458465 221610	SP52SE96	7.95	BICESTER SOUTHERN BYPASS 10
20	201.0	E	458514 221536	SP52SE98	8.35	BICESTER SOUTHERN BYPASS 12

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

#1A: scans.bgs.ac.uk/sobi_scans/boreholes/336781
#2A: scans.bgs.ac.uk/sobi_scans/boreholes/336778
#3A: scans.bgs.ac.uk/sobi_scans/boreholes/336780
#4A: scans.bgs.ac.uk/sobi_scans/boreholes/336777
#5A: scans.bgs.ac.uk/sobi_scans/boreholes/336776
#6A: scans.bgs.ac.uk/sobi_scans/boreholes/336782
#7A: scans.bgs.ac.uk/sobi_scans/boreholes/336775
#8A: scans.bgs.ac.uk/sobi_scans/boreholes/336779
#9: scans.bgs.ac.uk/sobi_scans/boreholes/336788
#10: scans.bgs.ac.uk/sobi_scans/boreholes/336787
#11: scans.bgs.ac.uk/sobi_scans/boreholes/336790
#12: scans.bgs.ac.uk/sobi_scans/boreholes/336789
#13: scans.bgs.ac.uk/sobi_scans/boreholes/336791
#14B: scans.bgs.ac.uk/sobi_scans/boreholes/336793
#15: scans.bgs.ac.uk/sobi_scans/boreholes/336792
#16C: scans.bgs.ac.uk/sobi_scans/boreholes/336795
#17B: scans.bgs.ac.uk/sobi_scans/boreholes/336794
#18: scans.bgs.ac.uk/sobi_scans/boreholes/336862
#19C: scans.bgs.ac.uk/sobi_scans/boreholes/336796
#20: scans.bgs.ac.uk/sobi_scans/boreholes/336798

8 Estimated Background Soil Chemistry

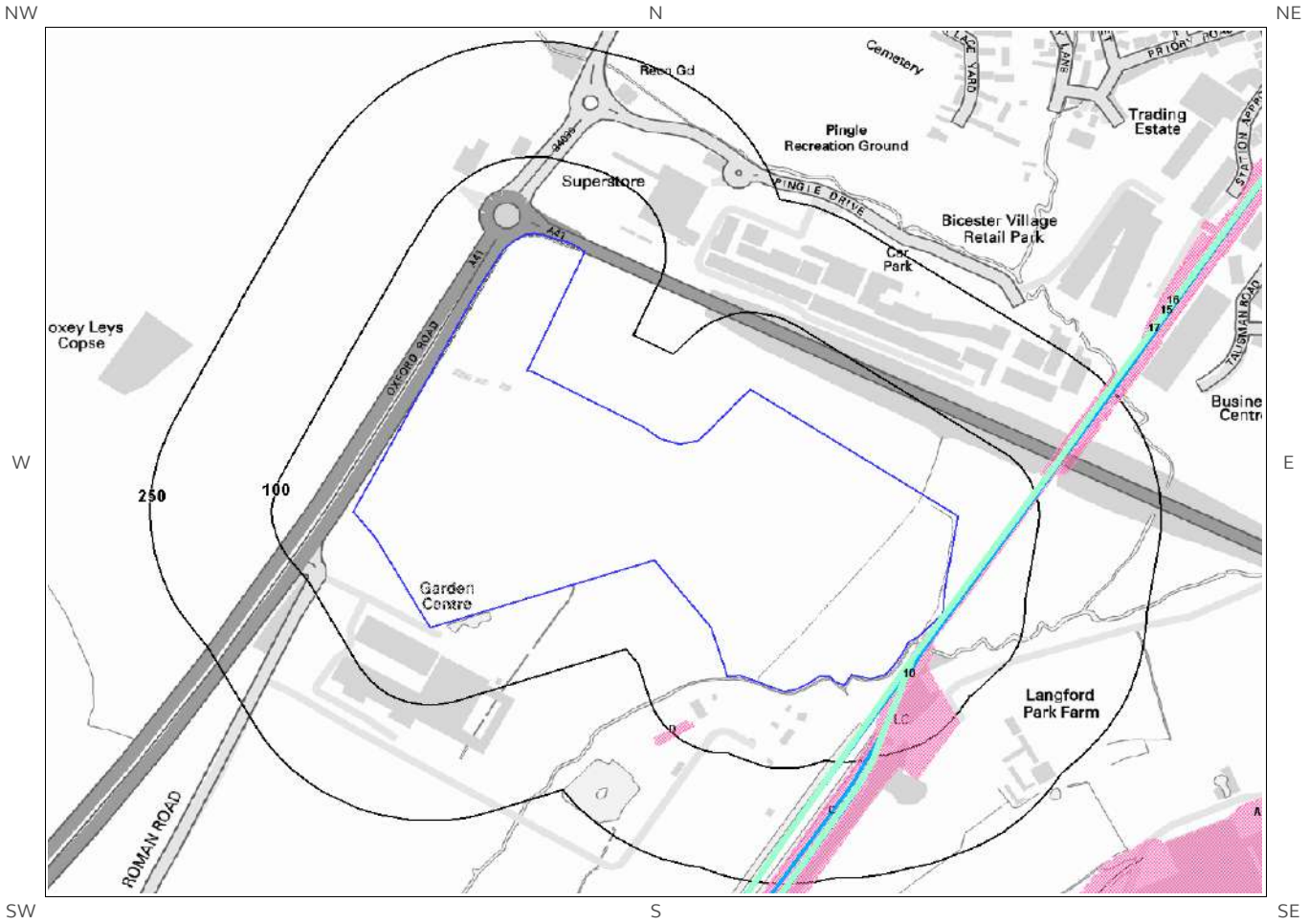
Records of background estimated soil chemistry within 250m of the study site boundary: 18

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
1.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
1.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
2.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
14.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
39.0	NW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

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

9 Railways and Tunnels Map



Railways and Tunnels Legend

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

9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

ID	Distance (m)	Direction	NGR	Details	Date
1A	3	SE	457851 220688	Railway Sidings	1985
2A	3	SE	457851 220688	Railway Sidings	1966
3A	3	SE	457851 220688	Railway Sidings	1970
4A	3	SE	457851 220688	Railway Sidings	1995
5B	6	SE	458371 221497	Railway Sidings	1995
6B	6	SE	458371 221497	Railway Sidings	1996

ID	Distance (m)	Direction	NGR	Details	Date
7B	6	SE	458371 221497	Railway Sidings	1996
8C	21	SE	458177 221166	Railway Sidings	1992
9C	21	SE	458177 221166	Railway Sidings	1986
10	22	SE	458253 221322	Railway Sidings	1966
11C	51	S	458156 221136	Railway Sidings	1995
12C	51	S	458155 221136	Railway Sidings	1966
13D	74	SW	457963 221249	Railway Sidings	1995
14D	74	SW	457963 221249	Railway Sidings	1995
15	114	NE	n/a	Railway	1922
16	148	NE	n/a	Railway	1881
17	150	NE	n/a	Railway	1875

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

9.3 Historical Railways

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

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

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

Database searched and no data found.

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

9.4 Active Railways

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

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

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

Distance (m)	Direction	Name	Type
2	SE	Not given	Rail
2	SE	Not given	Rail
6	SE	Not given	Multi Track
6	SE	Not given	Multi Track
14	SE	Bicester Military Railway	Rail
14	SE	Bicester Military Railway	Rail
18	SE	Not given	Multi Track
18	SE	Not given	Multi Track

Distance (m)	Direction	Name	Type
20	SE	Not given	Multi Track
20	SE	Not given	Multi Track
56	S	Not given	Multi Track
56	S	Not given	Multi Track
56	S	Not given	Multi Track
56	S	Not given	Multi Track
158	NE	Not given	Multi Track
158	NE	Not given	Multi Track

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

9.5 Railway Projects

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

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

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

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

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

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

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www.coal.gov.uk

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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-sept-2016/

APPENDIX 5

CIRIA RISK CLASSIFICATION SCHEME

BWB RISK ASSESSMENT CLASSIFICATION (AFTER CIRIA REPORT C552, CONTAMINATED LAND RISK ASSESSMENT: A GUIDE TO GOOD PRACTICE, 2001)

CIRIA Report C552, Contaminated Land Risk Assessment A Guide to Good Practice, 2001 sets out a methodology for estimating risk. The methodology for risk evaluation is a qualitative method for interpreting the output for the risk estimation stage of the assessment. It involves the classification of the:

- Magnitude of the potential consequence (severity) of risk occurring
- Magnitude of the probability (likelihood) of the risk occurring

The classification of consequence and probability are set out in table A1 and A2 below

Table A1 Classification of Consequence

Classification	Definition	Examples
Severe (Sv)	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 controlled waters. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem	High concentrations of cyanide on the surface of an informal recreation area Major spillage of contaminants from site into controlled water. Explosion causing building collapse (can also equate to a short term human health risk if buildings are occupied.)
Medium (Md)	Chronic damage to Human Health ("significant harm"). Pollution of controlled waters. A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of contaminants from site exceeding generic or site specific screening criteria Leaching of contaminants into a major or minor aquifer. Death of species within a designated nature reserve.
Mild (Mi)	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment	Pollution of non-classified groundwater Damage to building rendering it unsafe to occupy. (e.g. foundation damage resulting in instability)
Minor (Mr)	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by measures such as protective clothing etc). Easily reparable effects of damage to buildings, structures and services	The presence of contaminants at such concentration that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discolouration of concrete.

The classification of consequence does not take into account the probability of the consequence being realised. Therefore there may be more than one consequence for a particular pollutant linkage. Both a severe and medium classification can result in death. Severe relates to short term (acute) risk while medium relates to long term (chronic) risk. Mild relates to significant harm but to less sensitive receptors. Minor classification relates to harm which is not significant but could have a financial cost.

Table A2 Classification of Probability

Classification	Definition
High likelihood (Hi)	There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable in the long term, or there is evidence at the receptor or harm or pollution
Likely (Li)	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood (Lw)	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the short term.
Unlikely (Ul)	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

The classification gives a guide as to the severity and consequence of identified risk when compared with other risk presented on the site. It should be noted that if a risk is identified it cannot be classified as "no risk" but as "very low risk". Differing stakeholders may have a different view on the acceptability of a risk.

Once the consequence and probability have been classified these can be compared using a matrix(Table A3) to identify an overall risk category. These categories and the actions required are categorised in Table A4

Table A3 Risk Evaluation Matrix

		Consequence			
		Severe (Sv)	Medium (Md)	Mild (Mi)	Minor (Mr)
Probability	High likelihood (Hi)	Very high risk (VH)	High Risk (H)	Moderate Risk (M)	Mod/low risk (M/L)
	Likely (Li)	High risk (H)	Moderate risk (M)	Mod/low risk (M/L)	Low risk (L)
	Low likelihood (Lw)	Moderate risk (M)	Mod/low risk (M/L)	Low risk (L)	Very low risk (VL)
	Unlikely (Ul)	Mod/low risk (M/L)	Low risk (L)	Very low risk (VL)	Very low risk (VL)

Table A4 Risk Categorisations

Very high risk (VH)	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 to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk (H)	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 (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate risk (M)	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 is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk (L)	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 risk (VL)	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.

Reference

Rudland, D J, Lancefield, R M, Mayell, P N; 2001; Contaminated land Risk Assessment. A guide to Good Practice; CIRIA Report C552.

BWB

www.bwbconsulting.com