

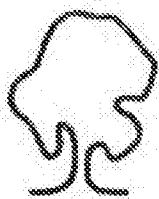
MR MARTIN OSBORNE-SHAW



LAND TO THE REAR OF THE SPIRES, CROSS ROAD, EAST PRESTON
WEST SUSSEX, BN16 2ST

Preliminary Contamination Risk Assessment

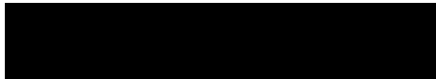
March 2020



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Environmental Assessment Services Ltd

REPORT DATA SHEET

Requirement	Data
Report Reference	MartinOsborne-Shaw/CrossRoad/PCRA
Date	March 2020
Client	Mr Martin Osborne-Shaw
Report type	Preliminary Contamination Risk Assessment
Purpose	Planning
Revisions	-
Prepared by	Emily Cooper BSc (Hons) PGCert  Signed
Approved by	Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MIEAust, MCIWEM, MIEEnvSc Signed 

MR MARTIN OSBORNE-SHAW

LAND TO THE REAR OF THE SPIRES, CROSS ROAD, EAST PRESTON
WEST SUSSEX, BN16 2ST

Preliminary Contamination Risk Assessment

March 2020

CONTENTS

1. CAUTION
2. THE SITE & PROPOSED DEVELOPMENT
3. GEOLOGY & HYDROGEOLOGICAL CONSIDERATIONS
4. SITE DEVELOPMENT HISTORY
5. THE EXISTING SITE
6. RECORD DATA SEARCH RESULTS
7. RISK ASSESSMENT
8. CONCLUSIONS
9. RECOMMENDATIONS

FIGURES

- FIGURE 1: **Site Location Plan**
FIGURE 2: **Existing Site Layout**
FIGURE 3: **Proposed Site Layout**

APPENDICES

- APPENDIX A: **Historic maps**
APPENDIX B: **Photographs**
APPENDIX C: **GroundSure EnviroInsight Report**

MR MARTIN OSBORNE-SHAW

**LAND TO THE REAR OF THE SPIRES, CROSS ROAD, EAST PRESTON
WEST SUSSEX, BN16 2ST**

Preliminary Contamination Risk Assessment

March 2020

1. CAUTION

- 1.1 This investigation relies largely on a superficial examination of the site plus a review of information from Arun District Council Planning Department, plus the Environment Agency (EA). Even where no previous contaminating activity has been identified, it is possible that the site could be contaminated due to fly tipping or other unrecorded events. The age of a building may indicate probability but cannot be treated as proof of the absence or presence of asbestos. This report does not attempt to comment on the commercial value or viability of the site.

2. THE SITE & PROPOSED DEVELOPMENT

- 2.1 The site comprises a plot of land accessible from Cross Road, East Preston, approx. 3km East of the town of Littlehampton, West Sussex. The site was formally part of the gardens of 'The Spires' a property on Springfield Road, East Preston. The site area is approximately 0.3 ha. The Ordnance Survey (OS) map reference for the site is TQ 06301 02121. The site elevation is approximately + 7.5 m OD. See Figure 1 for Site Location Plan and Figure 2 for the Existing Site Layout.
- 2.2 It is proposed to develop the site into a five-bedroom family home, with double garage and utility storage. The site will feature a large basement and thus will require extensive groundworks. There will be an access road from Cross Road. See Figure 3 for the Proposed Site Layout.

3. GEOLOGY & HYDROGEOLOGICAL CONSIDERATIONS

- 3.1 According to the British Geological Survey (available online), the site lies on Brickearth, mostly comprised of unconsolidated silt and sand, overlying a bedrock formation of the white chalk sub-group.
- 3.2 The Department for Environment, Food and Rural Affairs (Defra) online mapping (MAGIC) shows the site to lie on a superficial Secondary A Aquifer, overlying a bedrock Principle aquifer.

- 3.3 The site does not lie within a groundwater Source Protection Zone (SPZ). The site is deemed to be of medium risk groundwater vulnerability (MAGIC Map).
- 3.4 According to the EA's online Flood map for planning, the site lies within Flood Zone 1 (low risk of flooding from rivers and/or the sea). The site does not lie within 500 m of a watercourse classified as a main river by the EA.

4. SITE DEVELOPMENT HISTORY

- 4.1 The site development history is derived from a review of historic maps and other references. Historic maps centred on the site are provided in Appendix A, and a summary of the relevant information provided in these maps is given in Table 4.1 below.

TABLE 4.1
SITE DEVELOPMENT HISTORY

Map date	Features on site	Features within surrounding area (<250 m)
1878	• Vacant land/fields with some trees	The area of East Preston is shown as a rural area, there is a Manor House to the North of the site, and Pigeonhouse Lane to the West.
1898	• The site now forms parkland for the Manor House. There is a P marked on the map in the middle of the parkland	• Some buildings have been constructed to the north-west of the site, along Pigeonhouse Lane.
1911	• No change	• Angmering Lane has been constructed to the East
1932	• A path is now shown down the centre of the site, it remains parkland associated with the Manor House.	• The periphery of the area is becoming more populated as both East Preston and Rustington grow. The immediate area of land, now known as the Willowhayne Estate has been bought by a private company for the development of residential properties.
1943	• The site is now part of gardens attached to The Spires and no longer classed as parkland, the path has now gone.	• The parkland is now shown as vacant land (the Manor House was converted to a school in 1933, the land has been bought by developers). The Spires and another large house to the south-east have been built. Cross Road and Springfield Close have been developed. The area is still relatively undeveloped, though East Preston and Rustington continue to develop either side of the site.

1959	The site remains part of gardens, with trees lining the East, West and Southern boundaries, as well as the entrance lane.	Three further residential properties have been built on the block, to the North of the site. More residential properties have been constructed on Angmering Lane to the East. East Preston and Rustington have become more urban with increased housing and commercial infrastructure. Land to the North of Cross Road is now a playing field.
1962	No Change	An increasing number of residential properties have been built on Angmering Lane. A drainage ditch is shown to the West of Angmering Lane, drains have appeared along a section which now forms Michel Grove.
1969	No Change	More residential properties have been built on the East side of Pigeonhouse Lane. A pool has been constructed at The Spires.
1984	No Change	The site is now clearly defined as being the garden for The Spires.
2003	No Change	The gardens for The Spires are starting to be split into separate plots, to the West of the site, a residential property has been constructed.

- 4.2 The post war development history may also be traced from the planning history of the site. The significant applications relating to the site are summarised in Table 4.2 below.

TABLE 4.2
A SUMMARY OF RECENT PLANNING APPLICATIONS

Ref. Nos.	Description	Decision & Date
R/172/19/T	Works to Trees	Granted 17/9/19

5. THE EXISTING SITE

- 5.1 The site was visited on 18 March 2020. Photographs of the site are provided in Appendix B.

- 5.2 The site is classified as a brownfield (previously developed) site. It was formerly the rear garden to 'The Spires', which is accessible from Springfield Close. The gardens and land surrounding 'The Spires' have been subdivided into three plots comprising the existing dwelling and two further plots, one to the west and one to the North of the property. The site to the west is currently being developed, the plot to the North is the site under examination in this report.
- 5.3 The site comprises a vacant plot of land of approx. 0.3 ha. Access is via Cross Road to the north of the site. The site is within a private estate and the access is gated at Cross Road. The site is primarily laid to grass, the perimeter is timber fenced, with trees on the East and West boundaries, and some shrub species.
- 5.4 In the south-east corner of the plot there is a garage of breezeblock and pebble dash construction, with a tin roof. Date of construction unknown. In the south-west corner of the plot there is a metal framed greenhouse, with a plastic based insulating material covering the frame. Both due to be removed as part of the site development.
- 5.5 Next to the garage, there is a concrete block structure which is probably the remains of a plinth used to support a tank for heating oil. There is no evidence of the tank, and no oil spills that could be seen. Within this area there are some old pieces of tarpaulin.
- 5.6 There is a concrete block structure in the middle of the north side, now largely overgrown. This is believed to have been a base and enclosure for a compost heap.
- 5.7 There are various piles of inert rubble and building waste on the site, from where landscaping from the gardens has been removed as the site is redeveloped (circa 2018).

6. RECORD DATA SEARCH RESULTS

- 6.1 Land history at the site has comprised
- Parkland attached to a manor house
 - Vacant land/fields
 - Gardens
- 6.2 There is minimal contamination potential associated with the past and current land use at the site. Potential contamination associated with the current land use is potential use of domestic garden products such as fertilisers, pesticides and herbicides.
- 6.3 In the long term the site will remain residential, meaning the potential contaminant risk will not be dissimilar to its current state.

- 6.4 An environmental records search (Enviro-Insight Report) has been prepared for the site. The GroundSure EnviroInsight Report is provided in Appendix C and any items of potential contamination significance highlighted below.

6.4.1 *Historical Land Use*

There is 1 record of potentially contaminative land uses recorded from standard 1:10,560 and 1:10,000 scale historic mapping within 500 m of the site. This is a graveyard at St Mary's Church, 334 m North.

There are no records of tanks, petrol and fuel sites from 1:1,250 and 1:2,500 scale historic maps within 500 m of the site.

Records for historical energy features from 1:1,250 and 1:2,500 scale historic maps within 500 m of the site include 16 records for electricity sub stations, the closest of which is recorded some 119 m east of the site. The historic use of Polychlorinated biphenyl (PCB) within these installations is a potential source of contamination.

6.4.2 *Environmental Permits, Incidents and Registers*

There is one record of historic discharge consent within 500 m of the site. This is for miscellaneous discharge to freshwater, approx. 400m north of the site. No other records of industrial sites holding licences and/or authorisations have been identified within 500 m of the site.

There is one record of licenced pollutant release within 500 m of the site, this is a Service Station approx. 400m north-west of the site.

There are no records of significant water pollution incidents.

The site has not been determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990, and there are no records of such designation within 500 m of the site.

6.4.3 *Landfill and other Waste Sites*

There are no records of landfills within 500m of the site.

6.4.4 *Current Land Uses*

There are two electricity substations close to the site, 124 m east, and 183 m north. These are not thought to pose significant contamination risk to the site as any use of PCB based cooling oils would have ceased several years ago.

There is one other industrial site within 250m of the site. The plot next to the site sells industrial coatings and finishings, this however is a residential property and it is not thought that any manufacturing is occurring on site.

There are no records of underground high-pressure oil or gas pipelines within 500 m of the site.

6.4.5 *Hydrology and Flood Risk*

There are no drinking water abstraction licences within 500m of the site. There are six Groundwater abstraction licences between 500 m and 2km from the site.

The site does not lie within a groundwater Source Protection Zone.

The site lies within Flood Zone 1 (low risk of flooding).

The site does not lie within 20 m of a Main River (as identified by the EA).

The British Geological Survey (BGS) identifies the site to be within moderate risk of groundwater flooding.

6.4.6 *Designated Environmentally Sensitive Sites*

The site does not lie within, or have any environmentally sensitive areas within 2km.

The site does not lie within a Nitrate Vulnerable Zone. The closest Nitrate Vulnerable Zone is 995m north of the site. Nitrate Vulnerable Zones are designated as being at risk from agricultural nitrate pollution and were introduced in order to reduce the levels of nitrates in water. The proposed development, from garden to residential use, is not considered likely to increase the risk of nitrate pollution.

6.4.7 *Natural Hazards Findings and Mining*

There is a low risk rating for the natural hazards of shrink swell, running sands, and collapsible deposits within 50 m of the site as identified from BGS.

There is a very low risk rating for the natural hazards of landslides and ground dissolution of soluble rocks within 50 m of the site as identified from BGS.

There is a negligible risk rating for the natural hazard of compressible ground within 50 m of the site as identified from BGS.

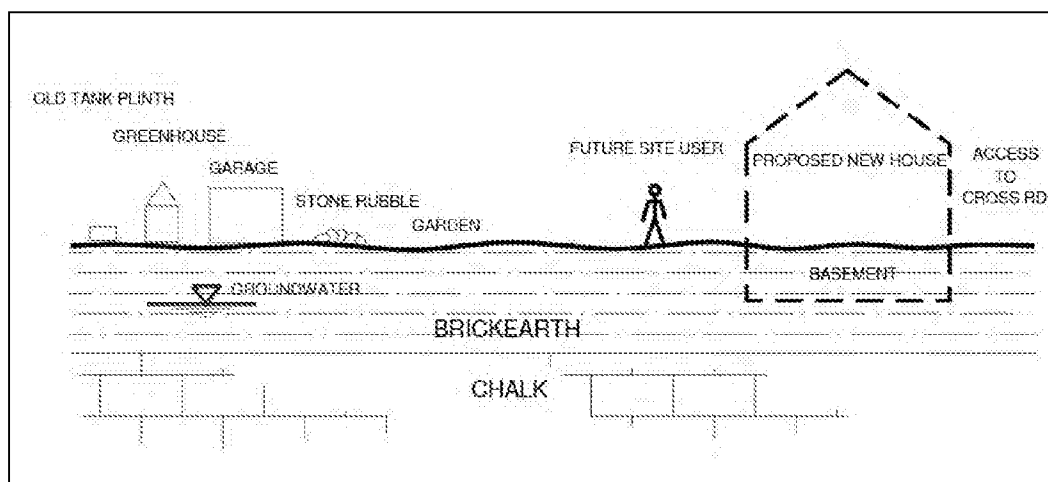
There are no records held of historic or current mining activities within 500m of the site. The site and the surrounding area has potential for sporadic mining of restricted extent, which would occur for chalk.

An estimated 1% to 3% of properties are affected by Radon with proximity of the site. No radon protective measures are considered necessary.

7. RISK ASSESSMENT

- 7.1 The risk to future site users can be assessed using the Conceptual Model. This comprises three elements, all of which must be present for there to be a risk. The three elements of the model are; a *source* of a potentially hazardous contaminant, a *pathway* by which the contaminant can be transmitted and a *receptor* on which the contaminant may have a harmful effect. A conceptual model for the site is given in Diagram 7.1 below:

DIAGRAM 7.1
CONCEPTUAL MODEL



- 7.2 Potential contaminant linkages between source, pathway and receptor for the site are shown in Table 7.1 below.

TABLE 7.1
POTENTIAL CONTAMINANT LINKAGES

Source		Pathway	Receptor	Risk
Contaminated soil	Contaminated groundwater			
No significant risks identified	No significant risks identified	Contact with contaminated soil, groundwater or soil gas	Existing and future site users	×
		Ingestion of or skin contact with contaminated soil, dust or groundwater	Maintenance or construction workers engaged in groundworks on the site	×
		Contact with contaminated soil or ground water	Building & services	×
		Leeching of site contaminants into groundwater	Wider environment	×

Key: ✓ Significant risk × No significant risk ? Uncertain risk

7.3 From a review of available information and observation at the site, it is considered that there is negligible potential for contamination at the site.

7.4 It is proposed to redevelop the site for a residential dwelling and associated amenities including parking and storage, and soft landscaping. In this case, potential *receptors* may include site workers (during the development and future maintenance of the site), future site users (considered to include children), buildings and services (including underground water mains) and the wider environment (considered *not* to be particularly hydrogeologically sensitive).

7.5 *Source-Pathway Receptor*

7.5.1 No specific contaminants have been identified, however site workers (notably ground workers) should take appropriate industrial hygiene measures, to reduce the risk of exposure to workers of any unidentified contamination potential during the development phase.

7.5.2 The new building will have a mains water connection, soil conditions within the site are not considered likely to pose a significant risk to water mains.

8. CONCLUSIONS

8.1 The site lies on Brickearth, a Secondary A Aquifer at this location, over white chalk. The site does not lie within a groundwater Source Protection Zone and groundwater vulnerability is of medium risk.

8.2 The site is not considered to be at significant risk of ground gas at this time. The site does not lie within 250 m of waste disposal landfill.

8.3 The land use history at the site does not identify activities with a significant contamination risk. The risk of adjacent current and historic activities adversely affecting the site is considered to be fairly low.

8.4 Further quantitative data is therefore not required from on site sampling as there have been no significant contamination sources identified.

8.5 The risk of the site owner becoming liable for historic contamination related impacts on third parties is considered to be low, as there have been no identified causes of significant contamination from historic land uses

8.6 The site is not within a radon-affected area.

8.7 The overall environmental risk for the site is rated according to the risk assessment matrix in Table 8.1 below:

TABLE 8.1
RISK ASSESSMENT MATRIX

PROBABILITY OF IMPACT	CONTAMINATION POTENTIAL		
	SEVERE	MODERATE OR UNCERTAIN	MINIMAL
High	4	3	2
Medium	3	2	1
Low	2	1	1

1 = low risk, 2 = low to moderate risk, 3 = moderate to high risk, 4 = high risk.

- 8.8 In this case, no contamination has been identified. The probability of impact for residential use is low due to there being no historical land use other than park/gardens. The overall risk rating for the site is 1, low.

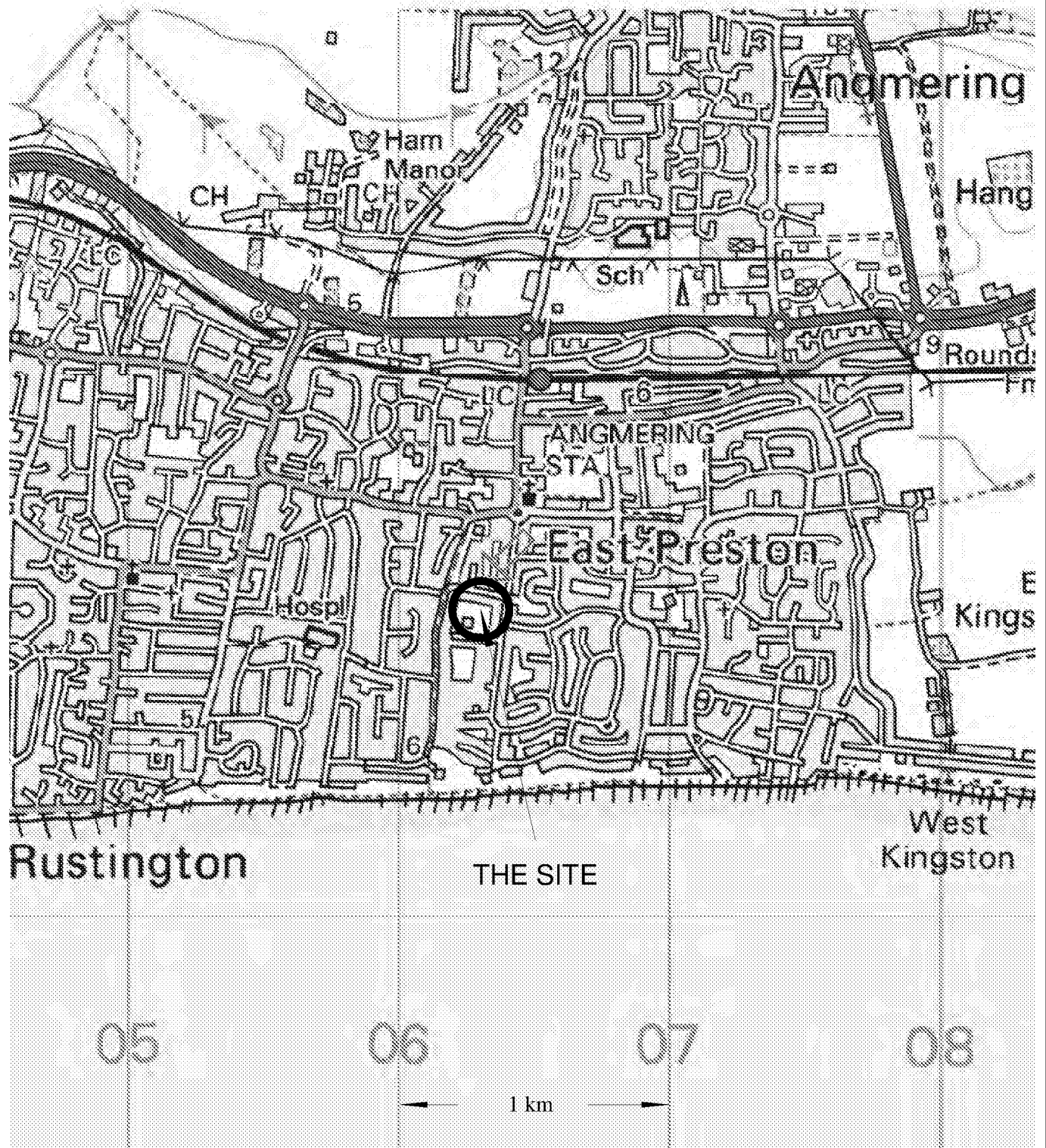
9. RECOMMENDATIONS

- 9.1 Should any unexpected contamination be identified during the development phase, the Council will be notified and any necessary remediation work carried out as required.
- 9.2 No further intrusive site investigation is required in this case
- 9.3 Groundworkers engaged in the development site should use appropriate industrial hygiene measures to reduce and potential risks.

☆☆☆☆☆☆

FIGURES

- FIGURE 1: Site Location Plan**
FIGURE 2: Existing Site Layout
FIGURE 3: Proposed Site Layout



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Scale as shown

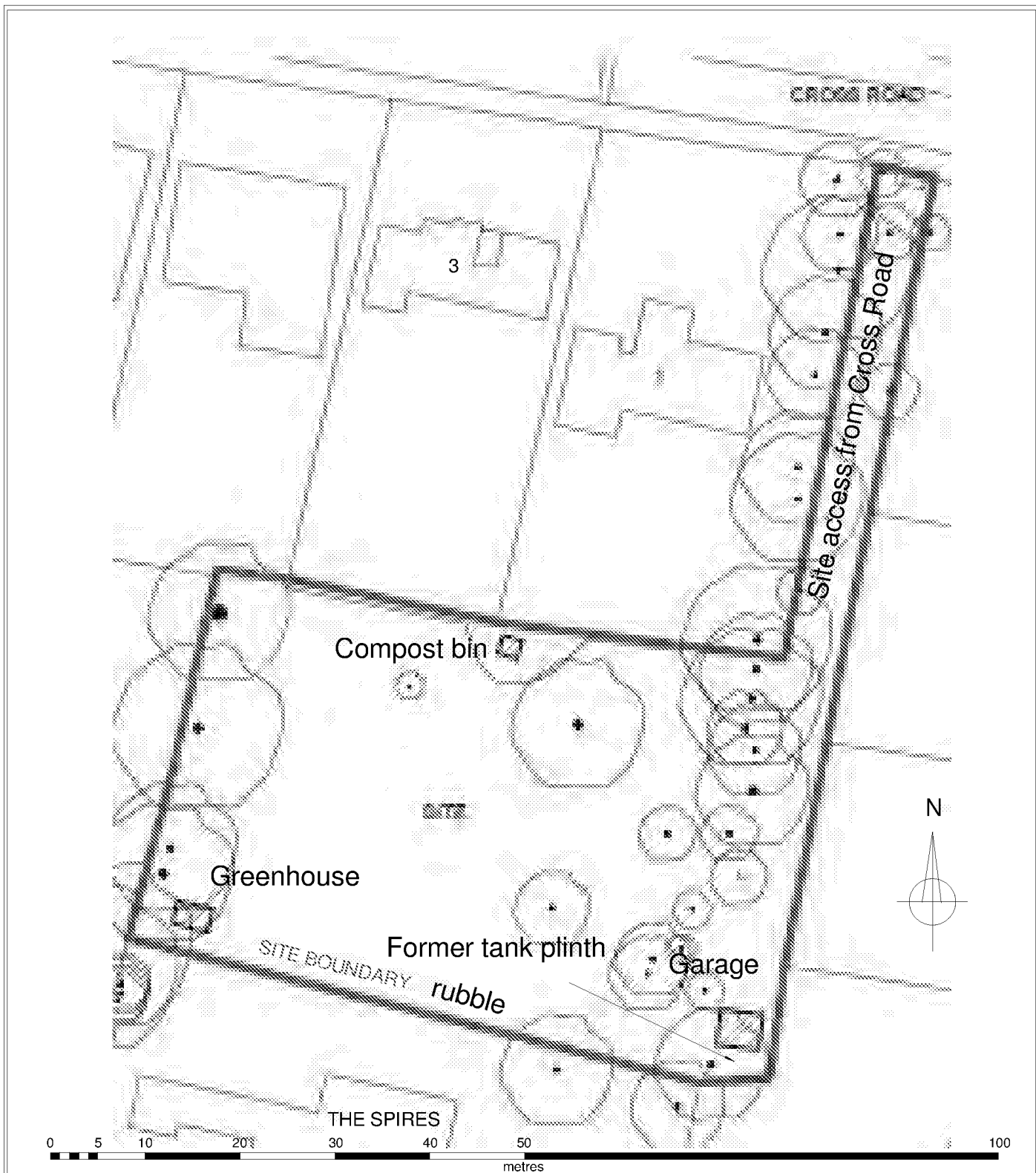


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LAND TO THE REAR OF THE SPIRES, EAST PRESTON

Figure 1: Site Location

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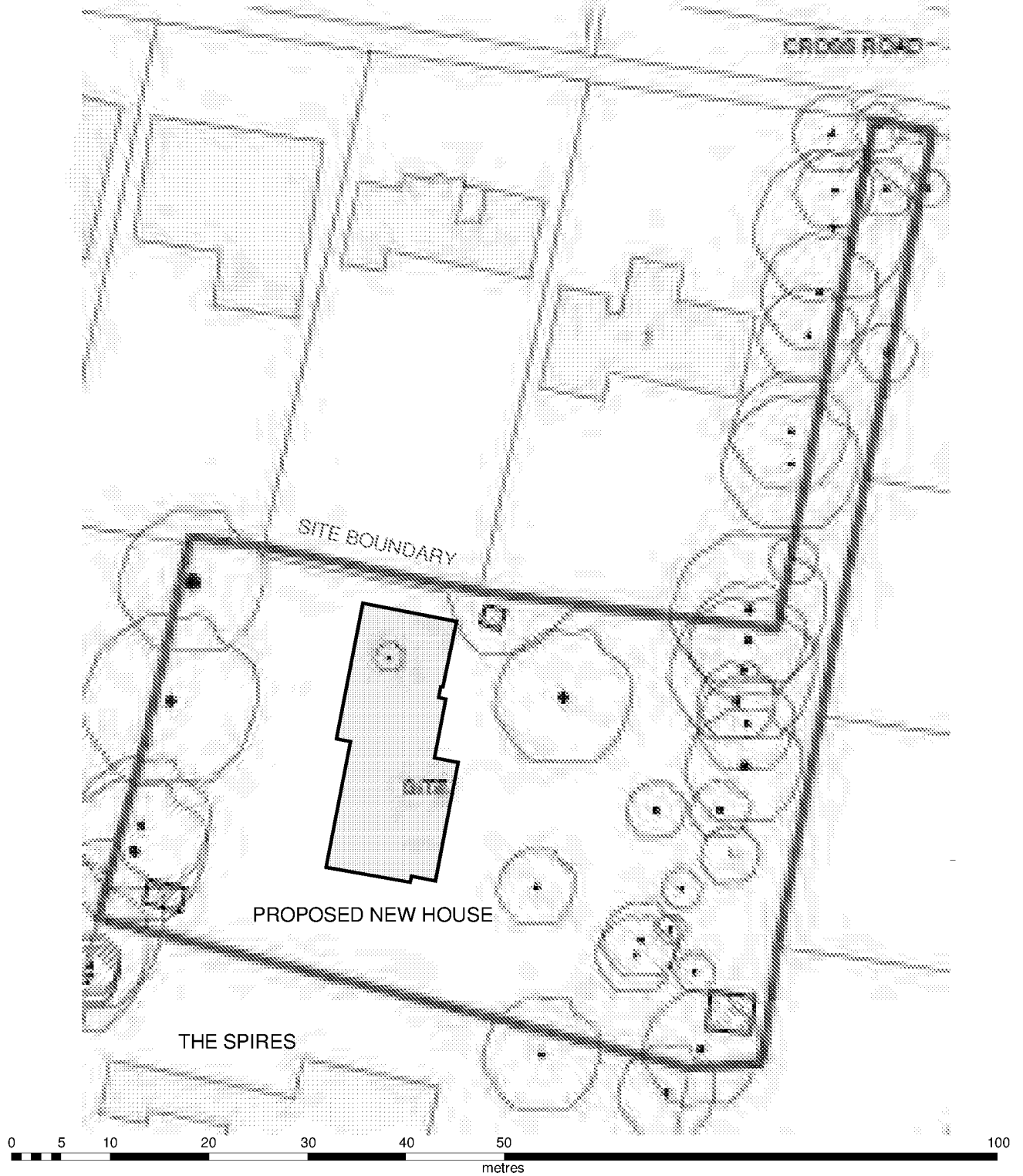
Scale as shown



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Figure 2: Existing Site Layout

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Scale as shown

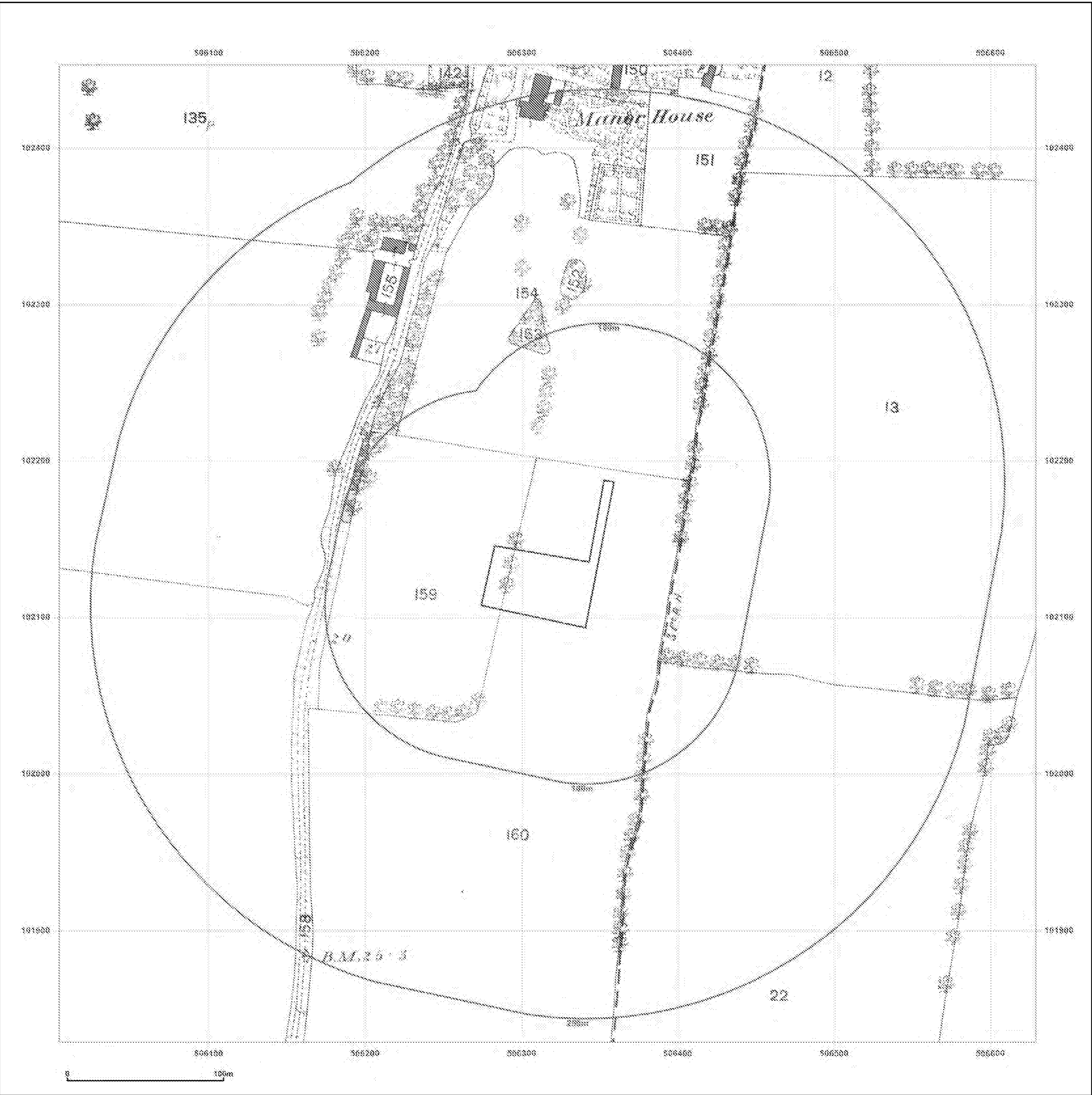


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Figure 3: Proposed Site Layout

March 2020

APPENDIX A **Historic Maps**



Site Details:

2 MANOR MEAD, CROSS ROAD,
RUSTINGTON, BN16 2ST

Client Ref: Rear_of_the_Spires
Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

Map Name: County Series
Map date: 1878
Scale: 1:2,500
Printed at: 1:2,500

Surveyed 1878
Revised 1878
Edition N/A
Copyright N/A
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Site Details:

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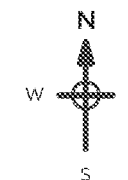
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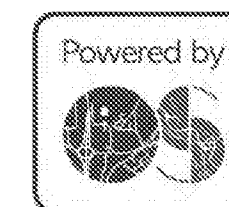
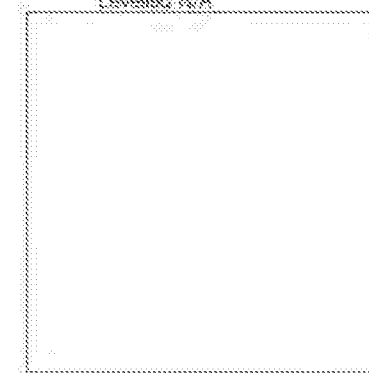
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Printed at: 1:2,500



Surveyed 1888
Revised 1998
Edition N/A
Copyright N/A
Levelled N/A

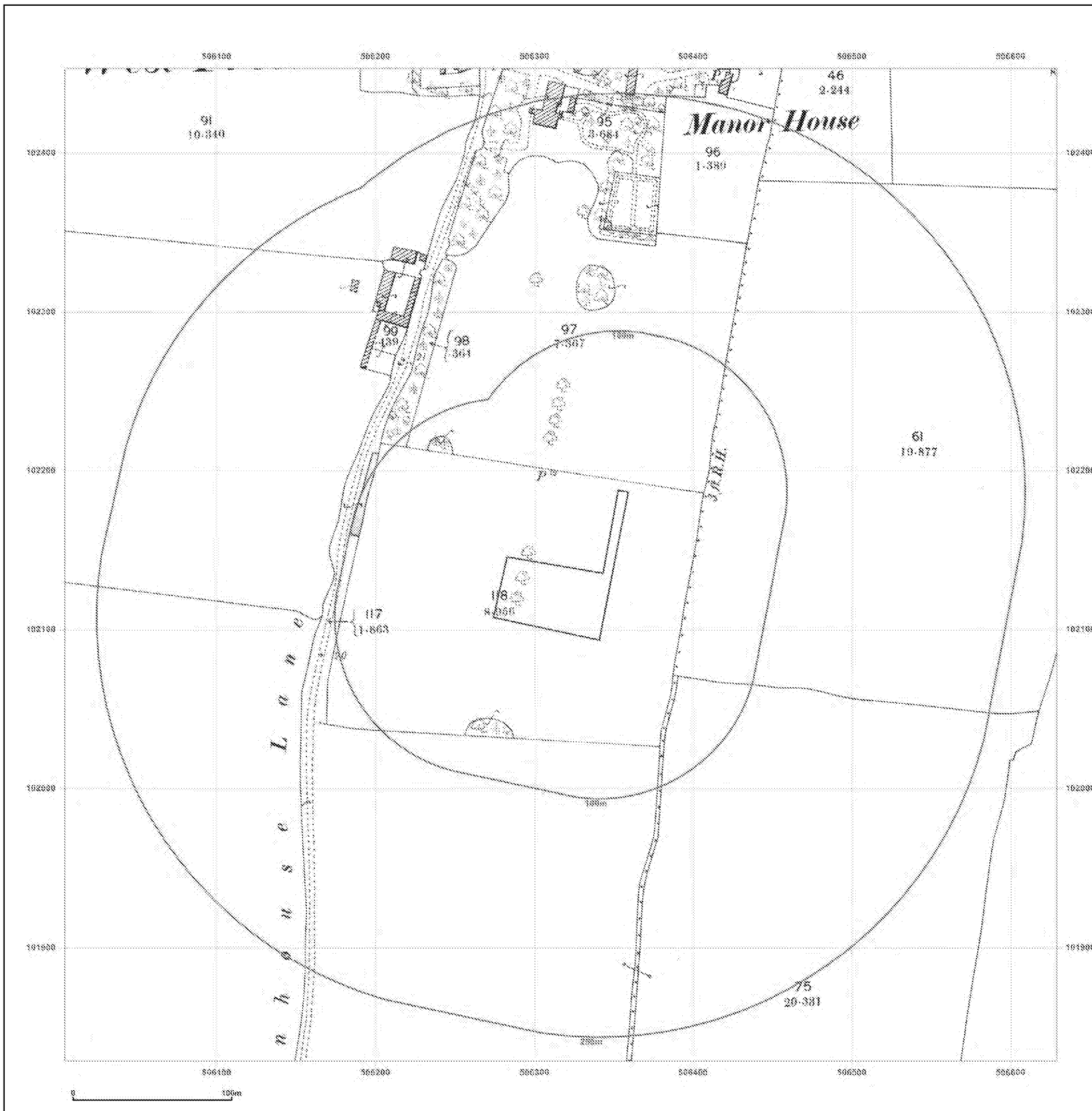


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Site Details:

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Client Ref: Rear_of_the_Spires
Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

Map Name: County Series
Map date: 1911
Scale: 1:2,500
Printed at: 1:2,500

Surveyed 1811
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Client Ref: Rear_of_the_Spires
Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

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Map date: 1932

Scale: 1:2,500

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Surveyed 1832
Revised 1932
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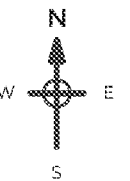
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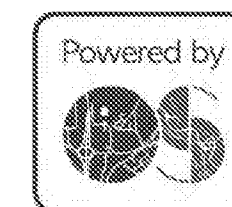
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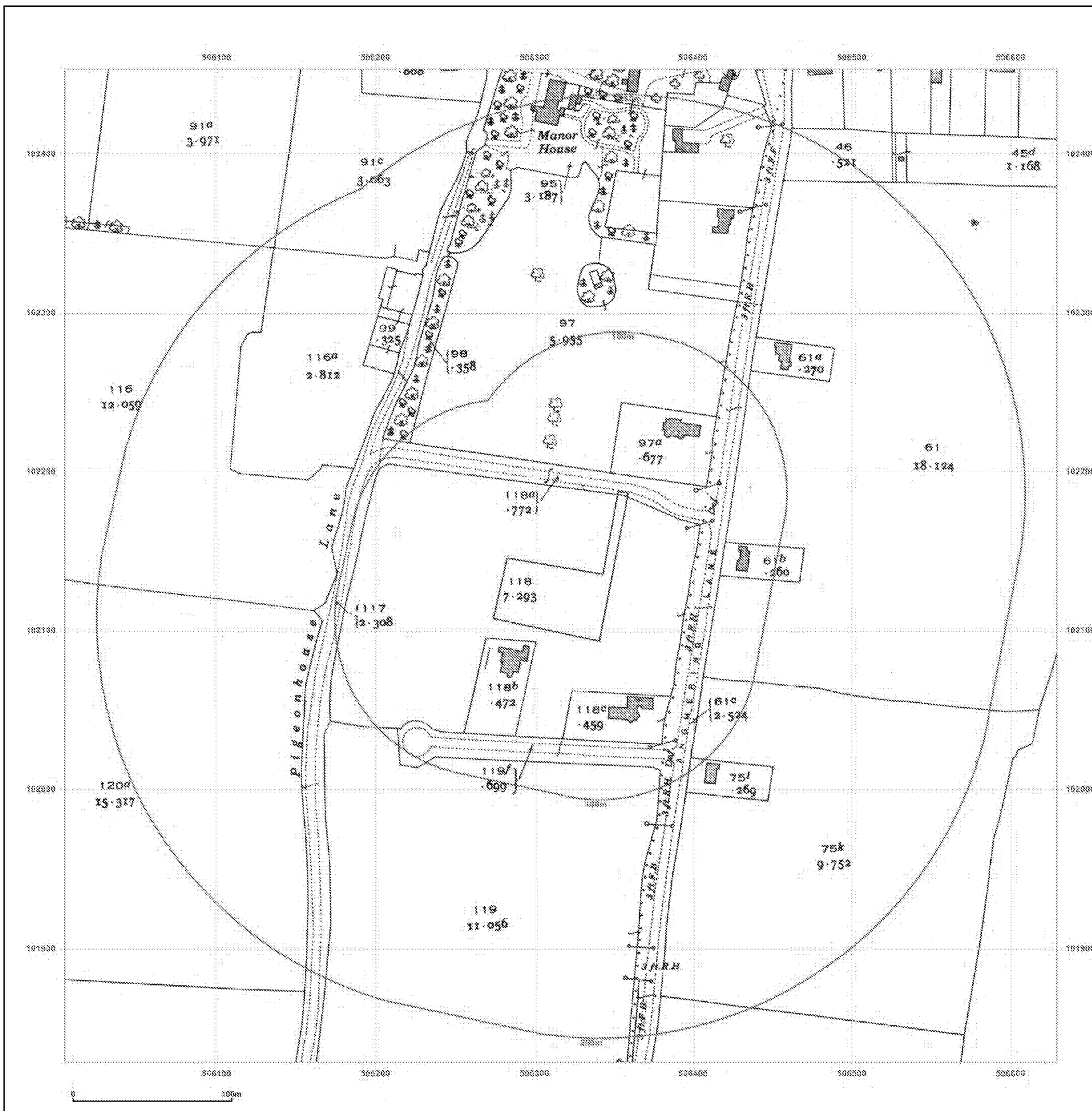


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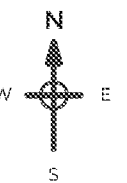
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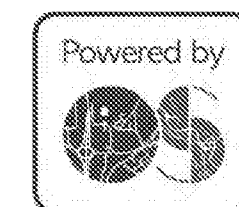
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Edition 1960
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Revised 1959
Edition N/A
Copyright 1961
Levelled 1950

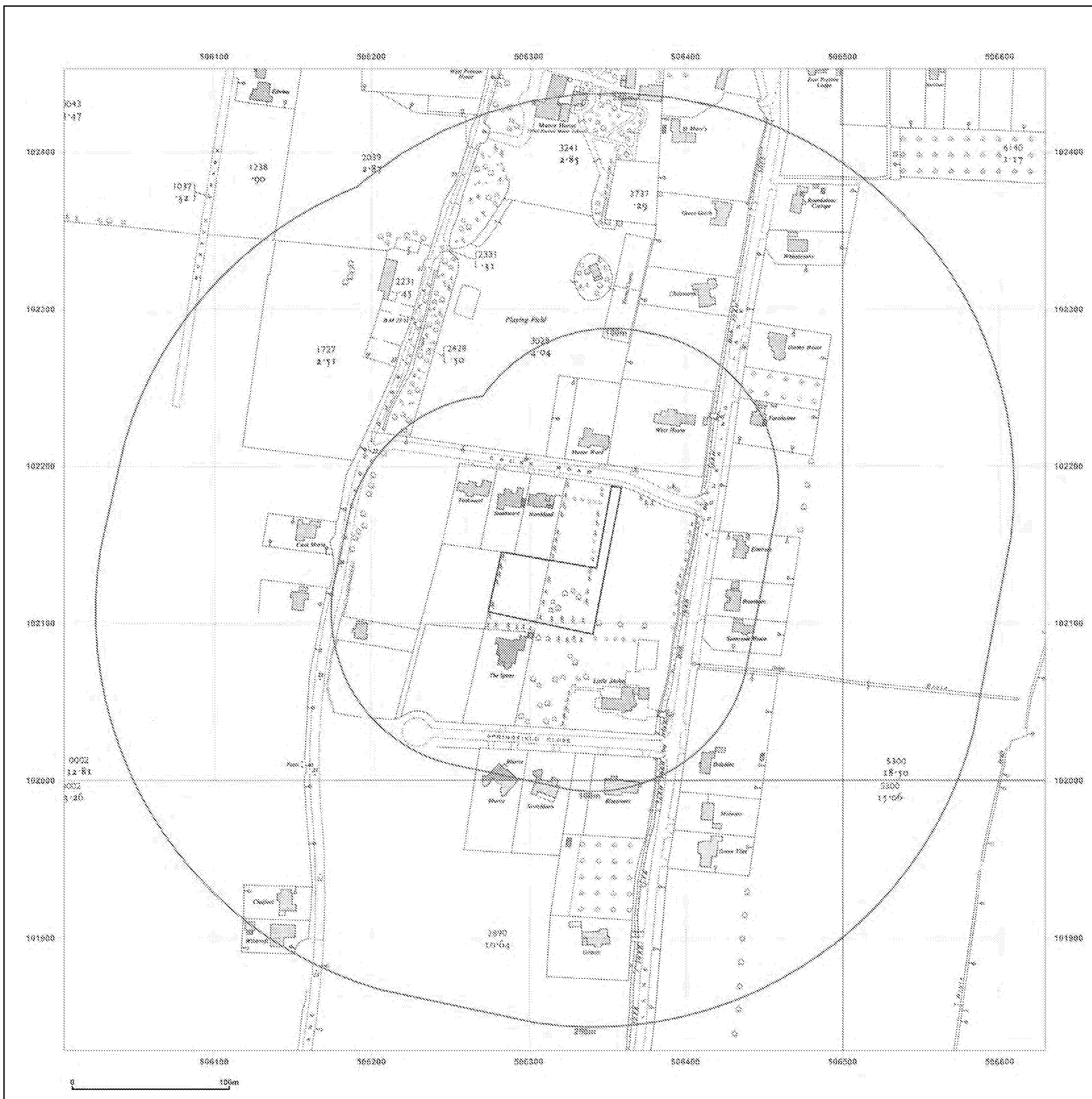


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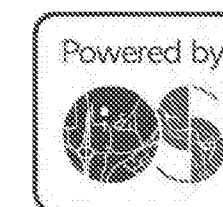
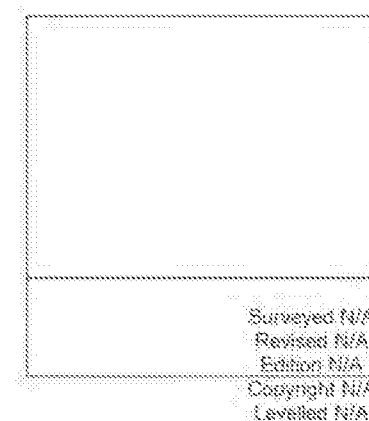
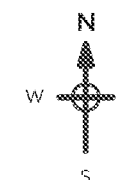
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Grid Ref: 506317, 102141

Map Name: National Grid

Map date: 1961

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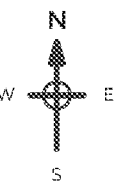
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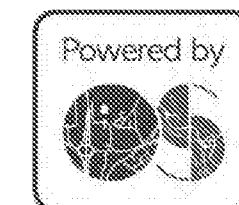
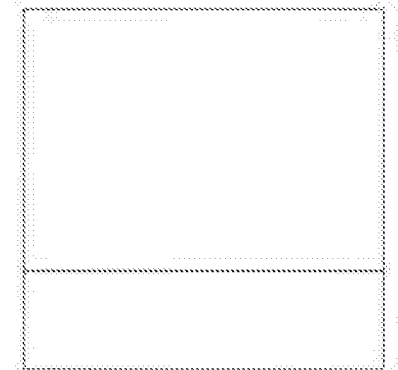
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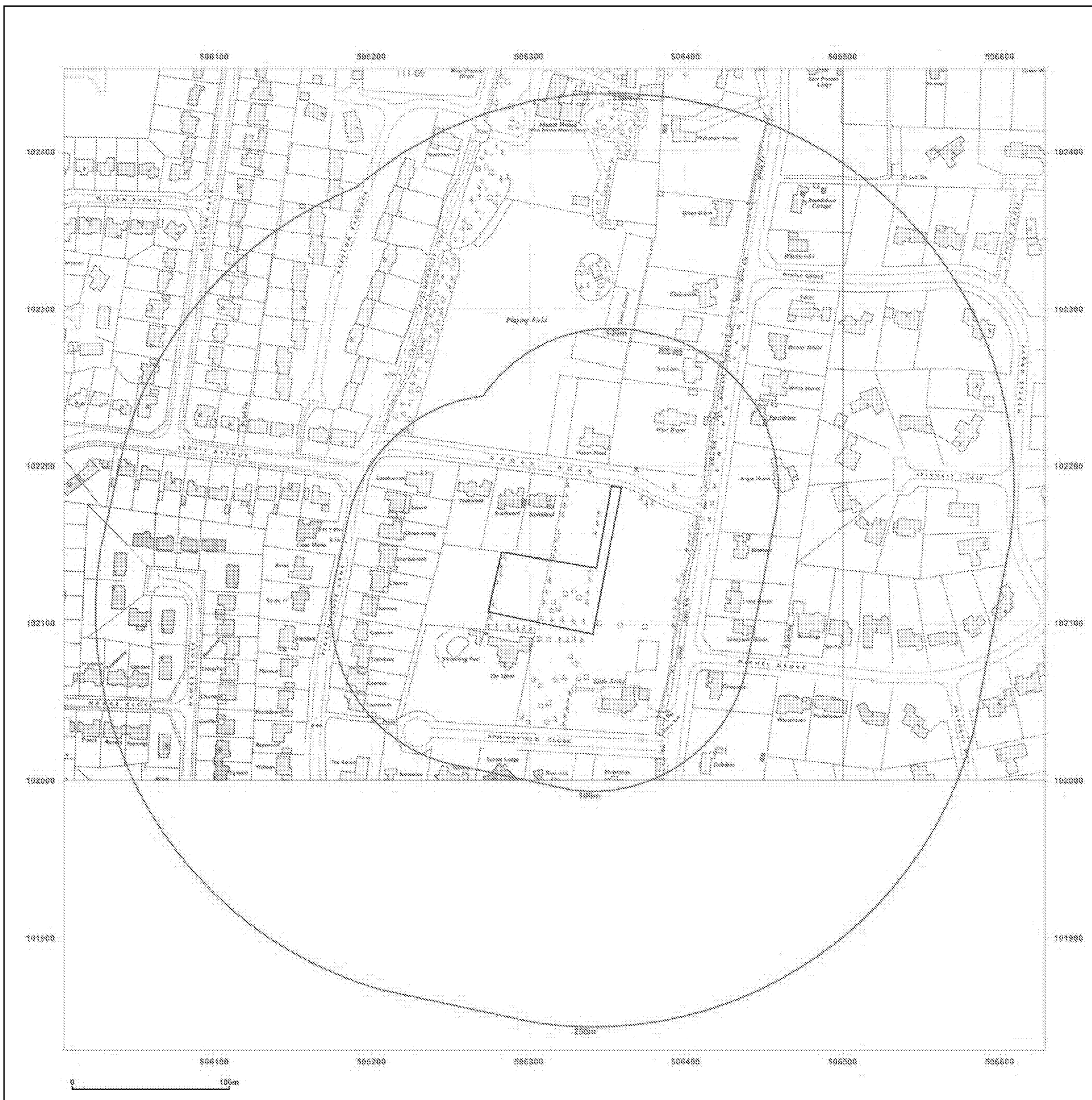


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Site Details:

2 MANOR MEAD, CROSS ROAD,
RUSTINGTON, BN16 2ST

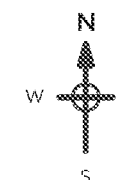
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Map Name: National Grid

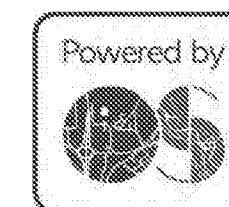
Map date: 1968-1970

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1969 Revised 1969 Edition N/A Copyright 1970 Levelled 1966	Surveyed 1968 Revised 1969 Edition N/A Copyright 1970 Levelled 1966
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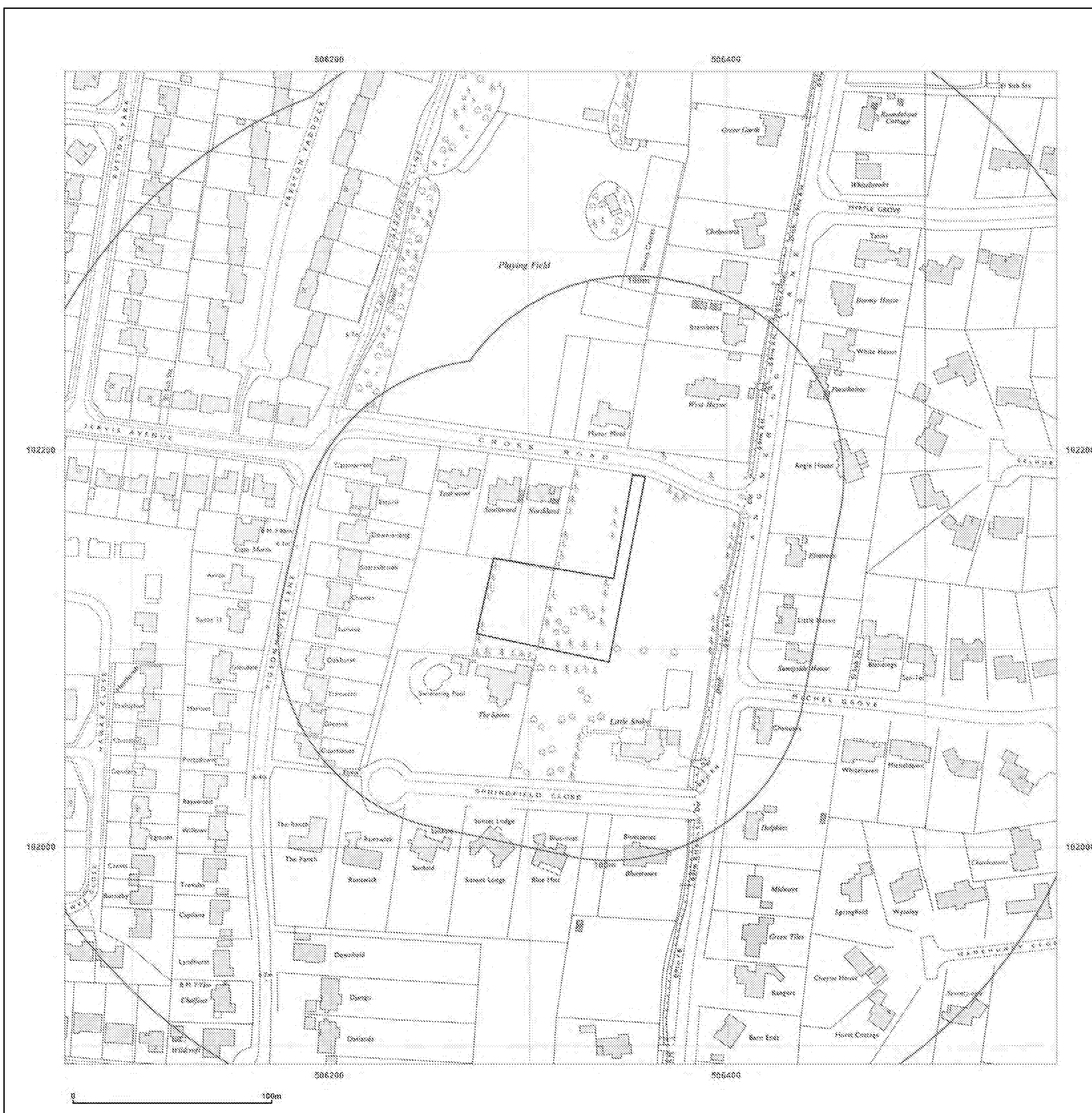


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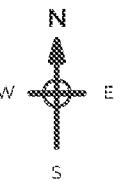
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Grid Ref: 506317, 102141

Map Name: National Grid

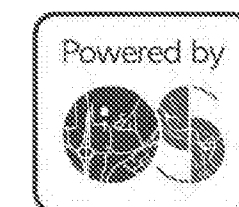
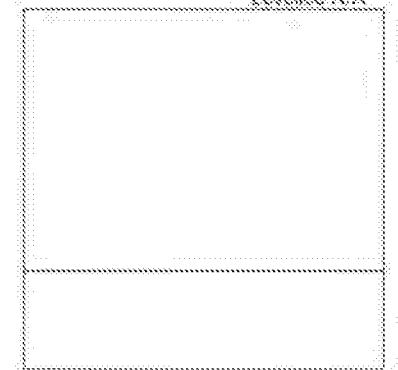
Map date: 1971

Scale: 1:2,500

Printed at: 1:2,500



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RUSTINGTON, BN16 2ST

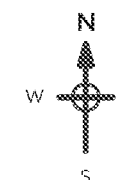
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Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

Map Name: National Grid

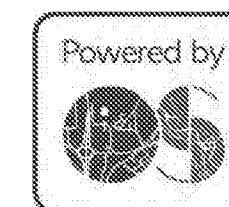
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Printed at: 1:2,000



Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A
Surveyed 1958 Revised 1978 Edition N/A Copyright 1978 Levelled 1988	Surveyed 1958 Revised 1978 Edition N/A Copyright 1979 Levelled 1988



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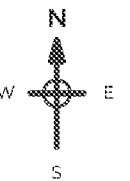
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Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

Map Name: National Grid

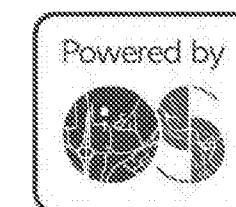
Map date: 1993-1994

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Printed at: 1:2,000



Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed 1994 Revised N/A Edition N/A Copyright 1994 Levelled N/A
Surveyed 1984 Revised N/A Edition N/A Copyright 1994 Levelled N/A	Surveyed 1984 Revised N/A Edition N/A Copyright 1994 Levelled N/A



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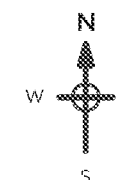
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Map Name: National Grid

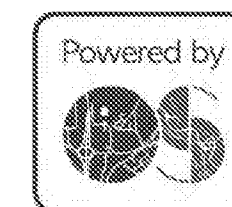
Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

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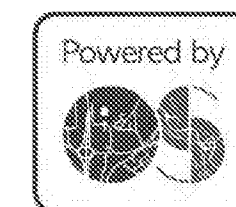
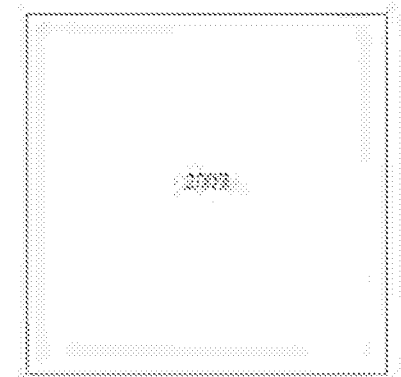
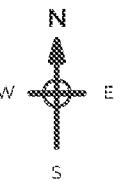
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Report Ref: HMD-47-6701974
Grid Ref: 506317, 102141

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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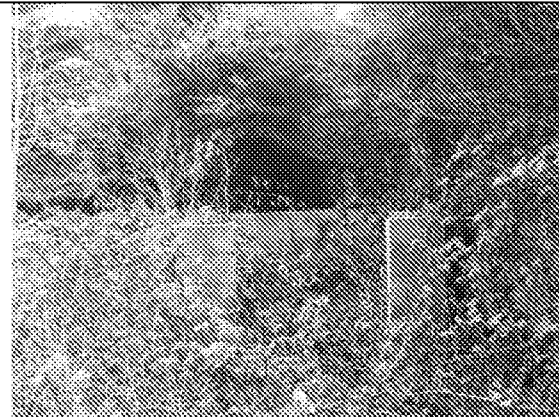


APPENDIX B

Photographs



Site Entrance, taken from Cross Road



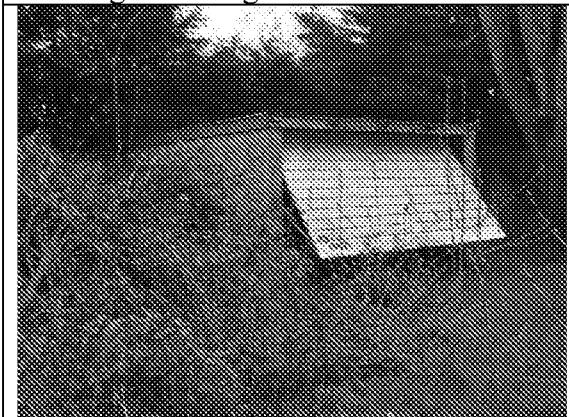
Brickwork housing for tank



Looking towards greenhouse in SW Corner



Looking towards garage in SE Corner



Garage in SE corner



Tarpaulin remnants

APPENDIX C

GroundSure EnviroInsight Report



Groundsure
LOCATION INTELLIGENCE

Enviro+Geo
Insight

2 MANOR MEAD, CROSS ROAD, RUSTINGTON, BN16 2ST

Order Details

Date: 17/03/2020
Your ref: Rear_of_the_Spires
Our Ref: HMD-47-6701975
Client: Environmental Assessment Services Ltd

Site Details

Location: 506308 102122
Area: 0.31 ha



Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.13

Contact us with any questions at:

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	<u>Historical industrial land uses</u>	0	0	0	1	-
15	1.2	Historical tanks	0	0	0	0	-
15	1.3	<u>Historical energy features</u>	0	0	6	10	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
17	2.1	<u>Historical industrial land uses</u>	0	0	0	1	-
18	2.2	Historical tanks	0	0	0	0	-
18	2.3	<u>Historical energy features</u>	0	0	7	30	-
19	2.4	Historical petrol stations	0	0	0	0	-
20	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22	3.5	Historical waste sites	0	0	0	0	-
22	3.6	Licensed waste sites	0	0	0	0	-
22	3.7	<u>Waste exemptions</u>	0	0	0	2	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
24	4.1	<u>Recent industrial land uses</u>	0	1	2	-	-
25	4.2	Current or recent petrol stations	0	0	0	0	-
25	4.3	Electricity cables	0	0	0	0	-
25	4.4	Gas pipelines	0	0	0	0	-
25	4.5	Sites determined as Contaminated Land	0	0	0	0	-

25	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
26	4.7	Regulated explosive sites	0	0	0	0	-
26	4.8	Hazardous substance storage/usage	0	0	0	0	-
26	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
26	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
26	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	0	1	-
27	4.12	Radioactive Substance Authorisations	0	0	0	0	-
27	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	1	-
27	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
28	4.15	Pollutant release to public sewer	0	0	0	0	-
28	4.16	List 1 Dangerous Substances	0	0	0	0	-
28	4.17	List 2 Dangerous Substances	0	0	0	0	-
28	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
28	4.19	Pollution inventory substances	0	0	0	0	-
29	4.20	Pollution inventory waste transfers	0	0	0	0	-
29	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
30	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
31	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
32	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
33	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
33	5.5	Groundwater vulnerability- local information	None (within 0m)				
34	5.6	<u>Groundwater abstractions</u>	0	0	0	0	6
36	5.7	<u>Surface water abstractions</u>	0	0	0	0	2
37	5.8	<u>Potable abstractions</u>	0	0	0	0	1
37	5.9	Source Protection Zones	0	0	0	0	-
37	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
38	6.1	<u>Water Network (OS MasterMap)</u>	0	0	12	-	-



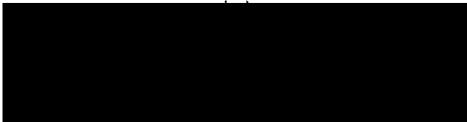
40	6.2	Surface water features	0	0	0	-	-
40	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
40	6.4	WFD Surface water bodies	0	0	0	-	-
41	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
42	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
42	7.2	Historical Flood Events	0	0	0	-	-
42	7.3	Flood Defences	0	0	0	-	-
42	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
43	7.5	Flood Storage Areas	0	0	0	-	-
44	7.6	Flood Zone 2	None (within 50m)				
44	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
45	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
47	9.1	<u>Groundwater flooding</u>	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
48	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
48	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
48	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
48	10.4	Special Protection Areas (SPA)	0	0	0	0	0
49	10.5	National Nature Reserves (NNR)	0	0	0	0	0
49	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
49	10.7	Designated Ancient Woodland	0	0	0	0	0
49	10.8	Biosphere Reserves	0	0	0	0	0
50	10.9	Forest Parks	0	0	0	0	0
50	10.10	Marine Conservation Zones	0	0	0	0	0
50	10.11	Green Belt	0	0	0	0	0
50	10.12	Proposed Ramsar sites	0	0	0	0	0

50	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
51	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
51	10.15	Nitrate Sensitive Areas	0	0	0	0	0
51	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	0	0	1
52	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
53	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
54	11.1	World Heritage Sites	0	0	0	-	-
55	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
55	11.3	National Parks	0	0	0	-	-
55	11.4	<u>Listed Buildings</u>	0	0	1	-	-
56	11.5	<u>Conservation Areas</u>	0	0	1	-	-
56	11.6	Scheduled Ancient Monuments	0	0	0	-	-
56	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
57	12.1	<u>Agricultural Land Classification</u>	Urban (within 250m)				
58	12.2	Open Access Land	0	0	0	-	-
58	12.3	Tree Felling Licences	0	0	0	-	-
58	12.4	Environmental Stewardship Schemes	0	0	0	-	-
58	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
59	13.1	Priority Habitat Inventory	0	0	0	-	-
59	13.2	Habitat Networks	0	0	0	-	-
59	13.3	Open Mosaic Habitat	0	0	0	-	-
59	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
60	14.1	<u>10k Availability</u>	Identified (within 500m)				
61	14.2	Artificial and made ground (10k)	0	0	0	0	-
62	14.3	<u>Superficial geology (10k)</u>	1	0	0	0	-



63	14.4	Landslip (10k)	0	0	0	0	-
64	14.5	<u>Bedrock geology (10k)</u>	1	0	1	0	-
65	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
66	15.1	<u>50k Availability</u>	Identified (within 500m)				
67	15.2	Artificial and made ground (50k)	0	0	0	0	-
67	15.3	Artificial ground permeability (50k)	0	0	-	-	-
68	15.4	<u>Superficial geology (50k)</u>	1	0	0	0	-
69	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
69	15.6	Landslip (50k)	0	0	0	0	-
69	15.7	Landslip permeability (50k)	None (within 50m)				
70	15.8	<u>Bedrock geology (50k)</u>	1	1	1	0	-
71	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
71	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
72	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
73	17.1	<u>Shrink swell clays</u>	Low (within 50m)				
74	17.2	<u>Running sands</u>	Low (within 50m)				
75	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
76	17.4	<u>Collapsible deposits</u>	Low (within 50m)				
77	17.5	<u>Landslides</u>	Very low (within 50m)				
78	17.6	<u>Ground dissolution of soluble rocks</u>	Very low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
80	18.1	Natural cavities	0	0	0	0	-
81	18.2	BritPits	0	0	0	0	-
81	18.3	Surface ground workings	0	0	0	-	-
81	18.4	Underground workings	0	0	0	0	0
81	18.5	Historical Mineral Planning Areas	0	0	0	0	-

81	18.6	<u>Non-coal mining</u>	1	0	0	0	0
82	18.7	Mining cavities	0	0	0	0	0
82	18.8	IPB mining areas	None (within 0m)				
82	18.9	Coal mining	None (within 0m)				
82	18.10	Brine areas	None (within 0m)				
83	18.11	Gypsum areas	None (within 0m)				
83	18.12	Tin mining	None (within 0m)				
83	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
84	19.1	<u>Radon</u>	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
85	20.1	<u>BGS Estimated Background Soil Chemistry</u>	1	1	-	-	-
85	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
85	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
86	21.1	Underground railways (London)	0	0	0	-	-
86	21.2	Underground railways (Non-London)	0	0	0	-	-
86	21.3	Railway tunnels	0	0	0	-	-
86	21.4	Historical railway and tunnel features	0	0	0	-	-
86	21.5	Royal Mail tunnels	0	0	0	-	-
87	21.6	Historical railways	0	0	0	-	-
87	21.7	Railways	0	0	0	-	-
87	21.8	Crossrail 1	0	0	0	0	-
87	21.9	Crossrail 2	0	0	0	0	-
87	21.10	HS2	0	0	0	0	-



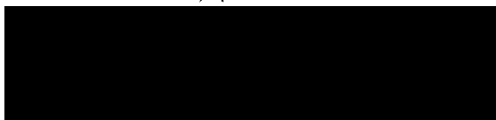
Recent aerial photograph



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Capture Date: 28/06/2018

Site Area: 0.31ha

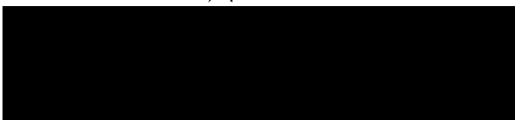


Recent site history - 2015 aerial photograph



Capture Date: 07/06/2015

Site Area: 0.31ha



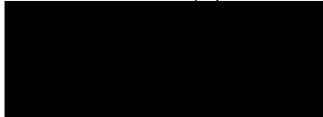
Recent site history - 2012 aerial photograph



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Capture Date: 13/09/2012

Site Area: 0.31ha



Recent site history - 2010 aerial photograph



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Capture Date: 24/04/2010

Site Area: 0.31ha



Recent site history - 1999 aerial photograph



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Capture Date: 06/09/1999

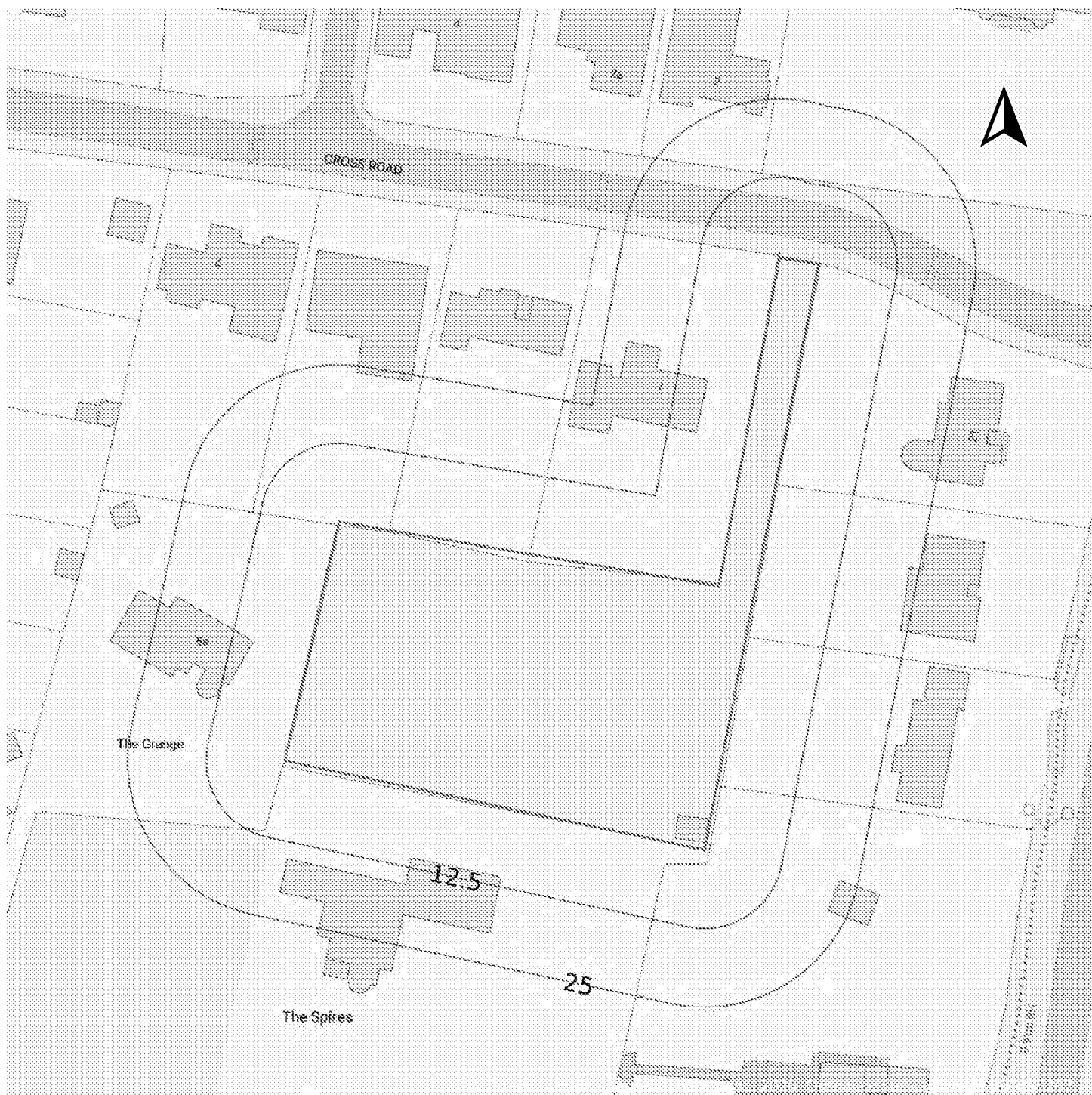
Site Area: 0.31ha



Contact us with any questions at:

Date: 17 March 2020

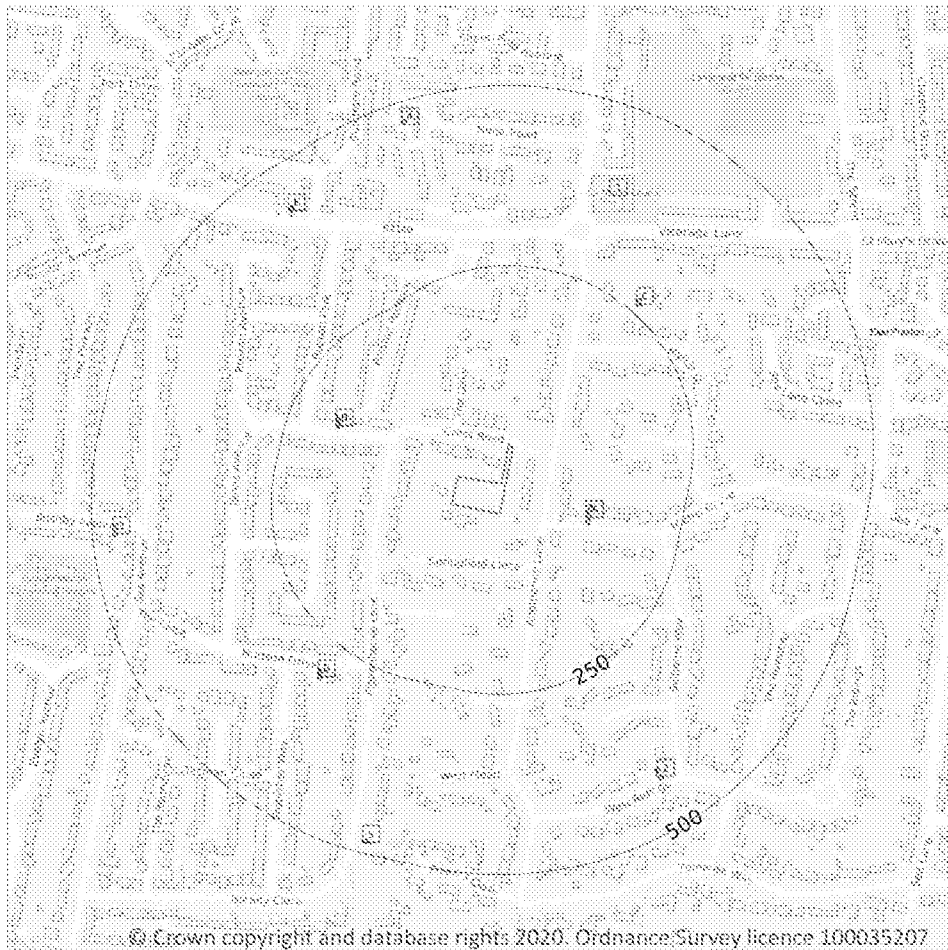
OS MasterMap site plan



Site Area: 0.31ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical energy features

1.1 Historical industrial land uses

Records within 500m

1

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14](#)

ID	Location	Land use	Dates present	Group ID
1	344m N	Grave Yard	1876	2145501



This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

0

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

16

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	119m E	Electricity Substation	1969 - 1985	288286
A	120m E	Electricity Substation	1994	257756
B	177m W	Electricity Substation	1969	252642
B	179m W	Electricity Substation	1985	258614
B	180m NW	Electricity Substation	1970	255654
B	181m NW	Electricity Substation	1994	253220
C	261m NE	Electricity Substation	1970 - 1994	257155
C	261m NE	Electricity Substation	1969	261597
D	291m SW	Electricity Substation	1984 - 1994	286213
D	296m SW	Electricity Substation	1970 - 1978	260270
2	415m SE	Electricity Substation	1968 - 1979	278835
E	428m NW	Electricity Substation	1969	289318

ID	Location	Land use	Dates present	Group ID
E	435m NW	Electricity Substation	1970 - 1995	262133
3	464m W	Electricity Substation	1970 - 1994	259431
4	468m N	Electricity Substation	1969 - 1995	279460
5	480m S	Electricity Substation	1978 - 1994	289140

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
----------------------------	----------

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0
----------------------------	----------

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

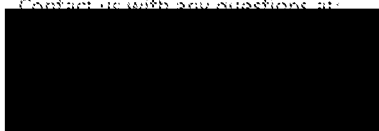
This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

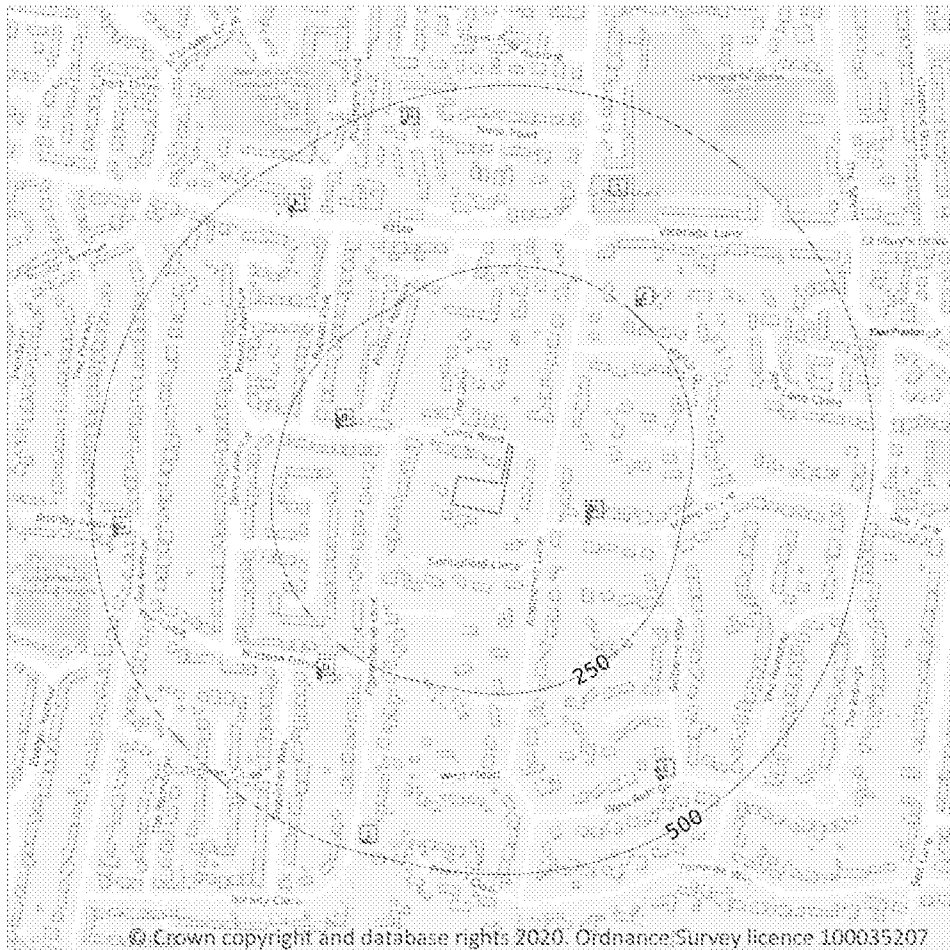
Records within 500m	0
----------------------------	----------

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical energy features

2.1 Historical industrial land uses

Records within 500m

1

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 17](#)

ID	Location	Land Use	Date	Group ID
1	344m N	Grave Yard	1876	2145501

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	0
----------------------------	----------

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	37
----------------------------	-----------

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
A	119m E	Electricity Substation	1985	288286
A	120m E	Electricity Substation	1994	257756
A	120m E	Electricity Substation	1969	288286
B	177m W	Electricity Substation	1969	252642
B	179m W	Electricity Substation	1985	258614
B	180m NW	Electricity Substation	1970	255654
B	181m NW	Electricity Substation	1994	253220
C	261m NE	Electricity Substation	1989	257155
C	261m NE	Electricity Substation	1969	261597
C	261m NE	Electricity Substation	1994	257155
C	262m NE	Electricity Substation	1970	257155
C	262m NE	Electricity Substation	1978	257155
D	291m SW	Electricity Substation	1994	286213
D	295m SW	Electricity Substation	1984	286213
D	296m SW	Electricity Substation	1978	260270
D	296m SW	Electricity Substation	1970	260270

ID	Location	Land Use	Date	Group ID
E	415m SE	Electricity Substation	1968	278835
E	415m SE	Electricity Substation	1979	278835
F	428m NW	Electricity Substation	1969	289318
F	435m NW	Electricity Substation	1995	262133
F	435m NW	Electricity Substation	1985	262133
F	435m NW	Electricity Substation	1989	262133
F	435m NW	Electricity Substation	1991	262133
F	435m NW	Electricity Substation	1970	262133
F	435m NW	Electricity Substation	1973	262133
G	464m W	Electricity Substation	1994	259431
G	465m W	Electricity Substation	1970	259431
H	468m N	Electricity Substation	1970	279460
H	468m N	Electricity Substation	1973	279460
H	469m N	Electricity Substation	1995	279460
H	469m N	Electricity Substation	1985	279460
H	469m N	Electricity Substation	1989	279460
H	469m N	Electricity Substation	1991	279460
H	469m N	Electricity Substation	1969	279460
I	480m S	Electricity Substation	1994	289140
I	480m S	Electricity Substation	1984	289140
I	481m S	Electricity Substation	1978	289140

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0
----------------------------	----------

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

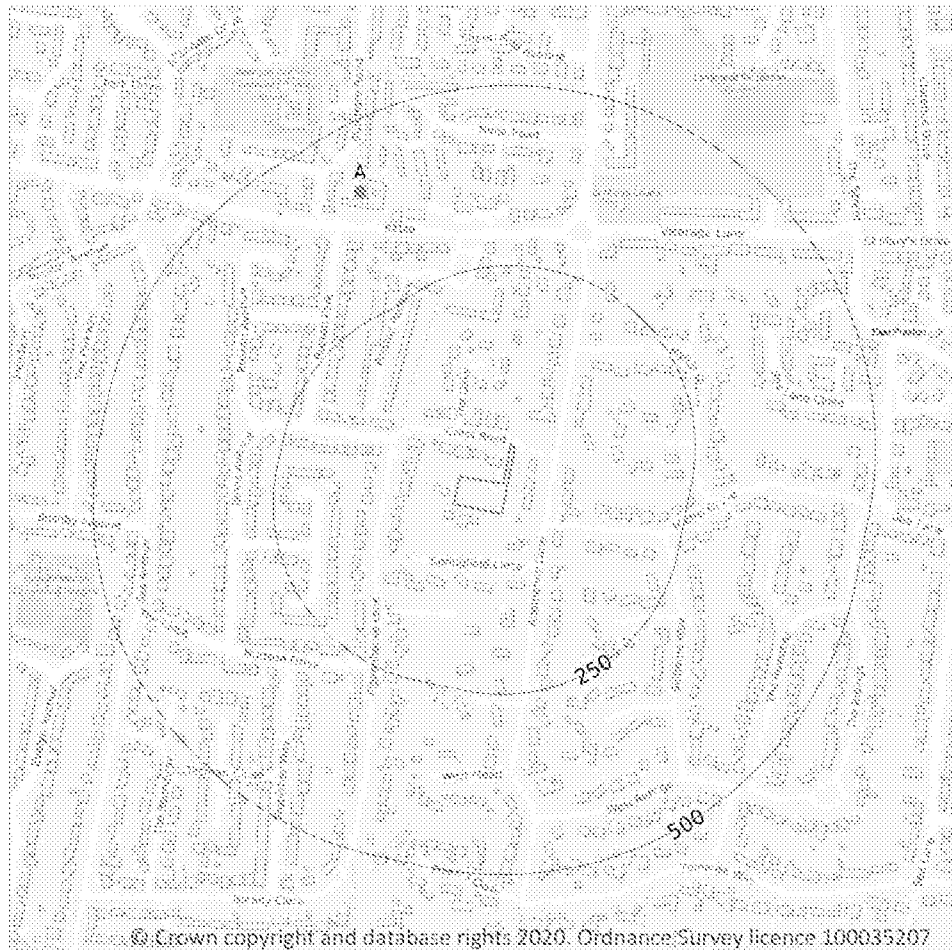
0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m**0**

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m**0**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

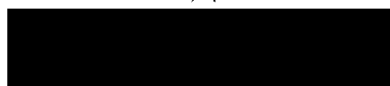
Records within 500m**2**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

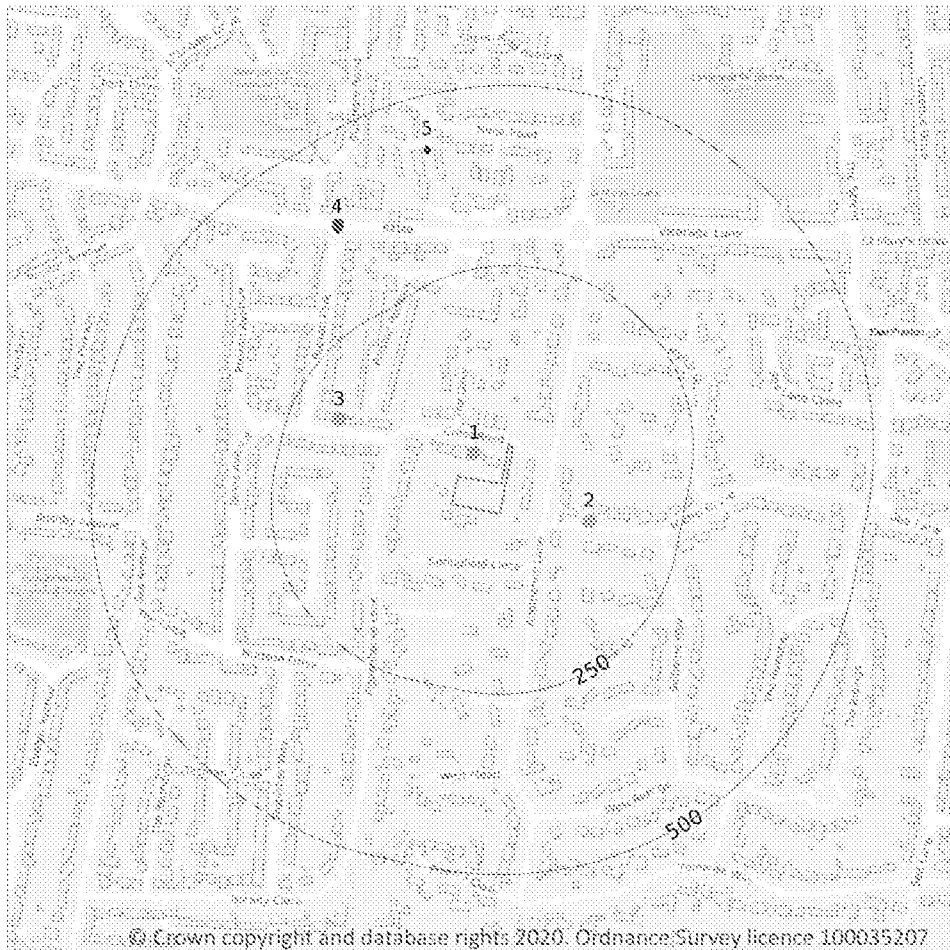
Features are displayed on the Waste and landfill map on **page 21**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	408m NW	STATION ROAD, RUSTINGTON, LITTLEHAMPTON, BN16 3AY	WEX089702	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	410m NW	Rustington Hall Station Road LITTLEHAMPTON West Sussex BN16 3AY	EPR/GE54820 L/A001	Disposing of waste exemption	Non-Agricultural Waste Only	Burning waste in the open

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m

3

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 24**

ID	Location	Company	Address	Activity	Category
1	36m N	Eureco Systems	3, Cross Road, Rustington, Littlehampton, West Sussex, BN16 2ST	Industrial Coatings and Finishings	Industrial Products
2	124m E	Electricity Sub Station	West Sussex, BN16	Electrical Features	Infrastructure and Facilities
3	183m NW	Electricity Sub Station	West Sussex, BN16	Electrical Features	Infrastructure and Facilities



Contact us with any questions at:

Date: 17 March 2020

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

1

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 24**

ID	Location	Address	Details	
4	384m NW	Texaco Ltd, Star Service Station, Station Road, Littlehampton, BN16 2RB	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0
----------------------------	----------

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	1
----------------------------	----------

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 24**

ID	Location	Address	Details	
5	427m N	OAKHURST GARDENS, RUSTINGTON, LITTLEHAMPTON, WEST SUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: P01797 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 01/08/1988 Effective Date: 01/08/1988 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
----------------------------	----------

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m**0**

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m**0**

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m**0**

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m**0**

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



4.20 Pollution inventory waste transfers

Records within 500m
0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

1

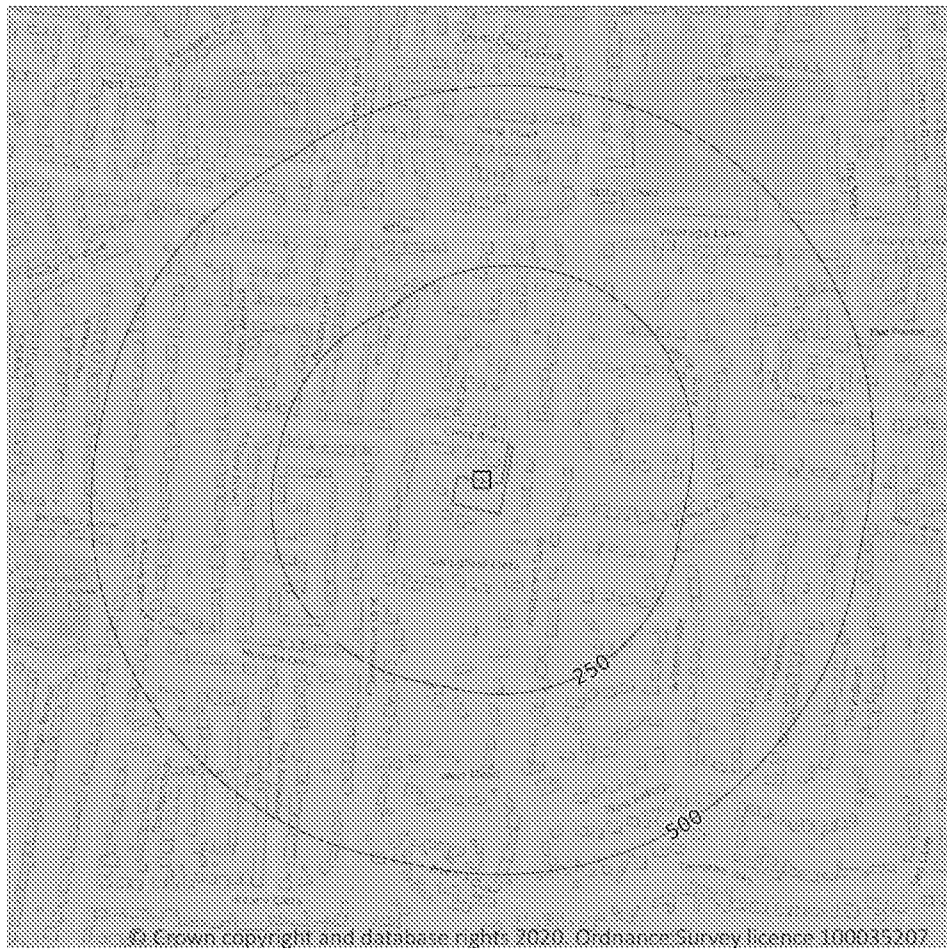
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 30](#)

ID	Location	Designation	Description
1	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

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

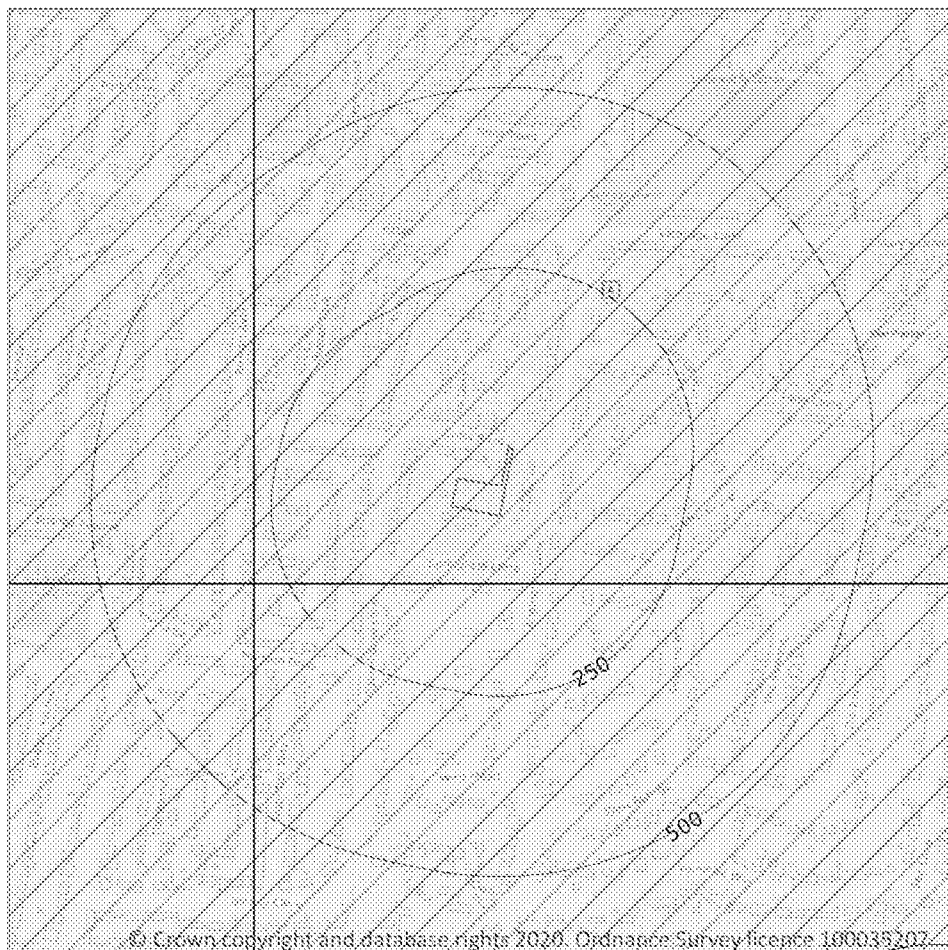
Features are displayed on the Bedrock aquifer map on [page 31](#)

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

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 32**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	1
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.	27.0%

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

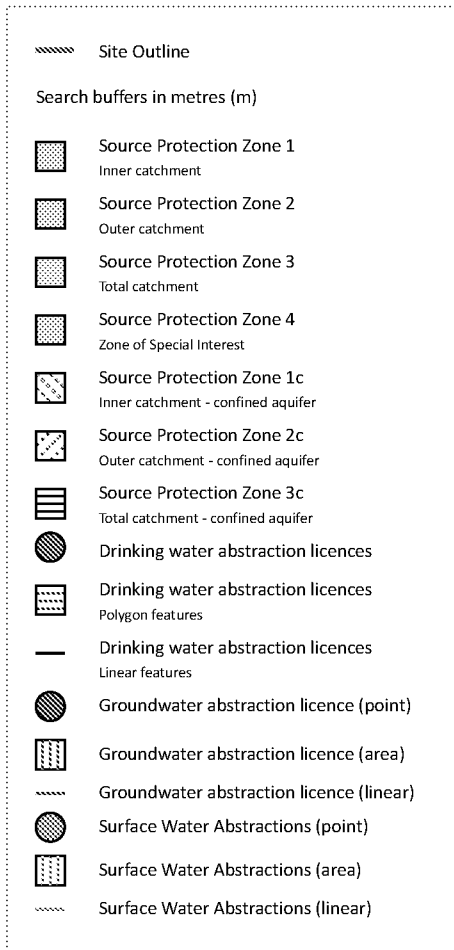
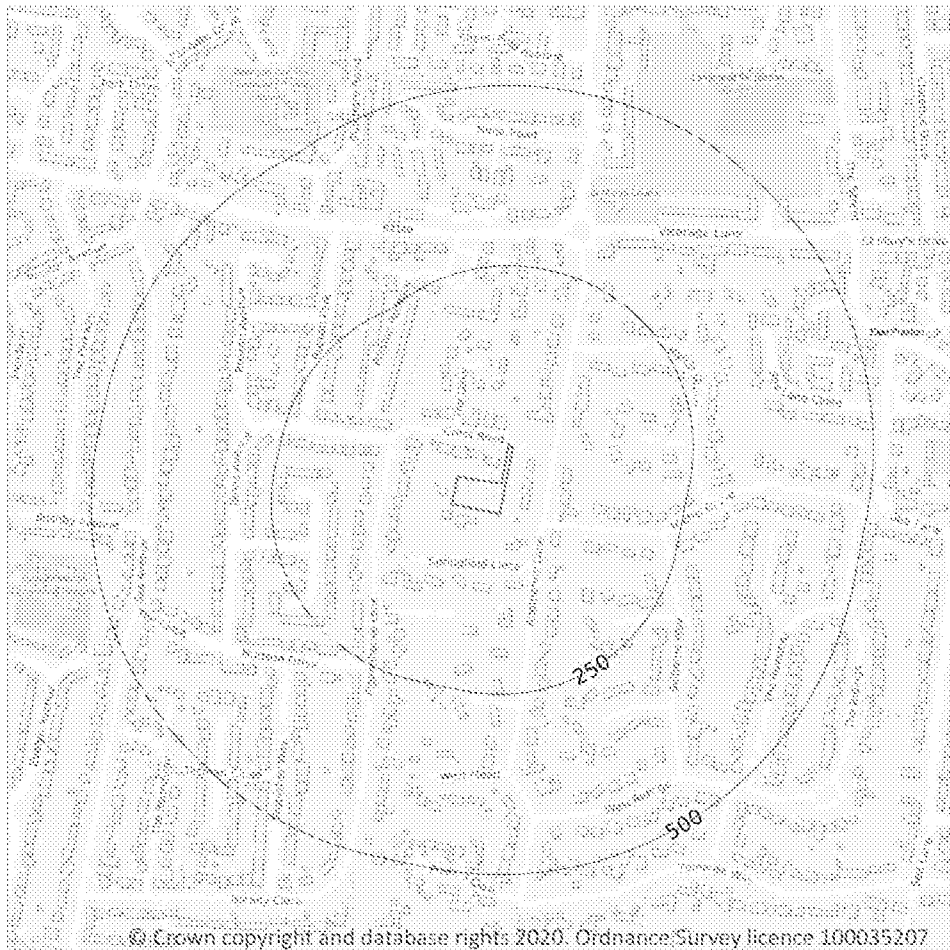
Records on site	0
------------------------	----------

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.



Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m	6
----------------------	---

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 34](#)

ID	Location	Details	
-	720m NW	Status: Historical Licence No: 10/41/310009 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: AQUADOM STATION ROAD RUSTINGTON BOREHOLE 1 Data Type: Point Name: Southern Water Services Ltd Easting: 505630 Northing: 102450	Annual Volume (m³): 150018 Max Daily Volume (m³): 636.4 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 08/06/2009 Version End Date: -
-	720m NW	Status: Historical Licence No: 10/41/310009 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: AQUADOM STATION ROAD RUSTINGTON BOREHOLE 2 Data Type: Point Name: Southern Water Services Ltd Easting: 505630 Northing: 102450	Annual Volume (m³): 150018 Max Daily Volume (m³): 636.4 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 08/06/2009 Version End Date: -
-	1658m NE	Status: Active Licence No: 10/41/310106 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: ROUNDSTONE NURSERY Data Type: Point Name: Roundstone Garden Centre Ltd Easting: 507640 Northing: 103240	Annual Volume (m³): 18,200 Max Daily Volume (m³): 191 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 08/05/2015 Version End Date: -
-	1769m N	Status: Active Licence No: 10/41/414009 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: BLACK DITCH AT HAM MANOR GOLF CLUB Data Type: Point Name: Ham Manor Golf Club Ltd Easting: 505870 Northing: 103890	Annual Volume (m³): 11,783 Max Daily Volume (m³): 109.10 Original Application No: - Original Start Date: 07/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/03/2016 Version End Date: -
-	1788m NE	Status: Historical Licence No: 10/41/414002 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: WEST END NURSERIES Data Type: Point Name: Van Heyningen Bros. Ltd Easting: 507540 Northing: 103530	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 11/01/1966 Version End Date: -

ID	Location	Details	
-	1810m NE	Status: Historical Licence No: 10/41/414018 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: FRESH ACRES NURSERIES Data Type: Point Name: Fresh Acres Nurseries Ltd Easting: 507140 Northing: 103820	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 19/07/1967 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	2
-----------------------------	----------

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 34**

ID	Location	Details	
-	1192m NW	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT HAM MANOR FARM RUSTINGTON Data Type: Line Name: Rustington Golf Centre Ltd Easting: 505620 Northing: 104190	Annual Volume (m³): 31,822 Max Daily Volume (m³): 1,500 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -
-	1192m NW	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT HAM MANOR FARM RUSTINGTON Data Type: Line Name: Rustington Golf Centre Ltd Easting: 505620 Northing: 104190	Annual Volume (m³): 31,822 Max Daily Volume (m³): 1,500 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



5.8 Potable abstractions

Records within 2000m

1

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 34](#)

ID	Location	Details	
-	720m NW	Status: Historical Licence No: 10/41/310009 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: AQUADOM STATION ROAD RUSTINGTON BOREHOLE 1 Data Type: Point Name: Southern Water Services Ltd Easting: 505630 Northing: 102450	Annual Volume (m³): 150018 Max Daily Volume (m³): 636.4 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 08/06/2009 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

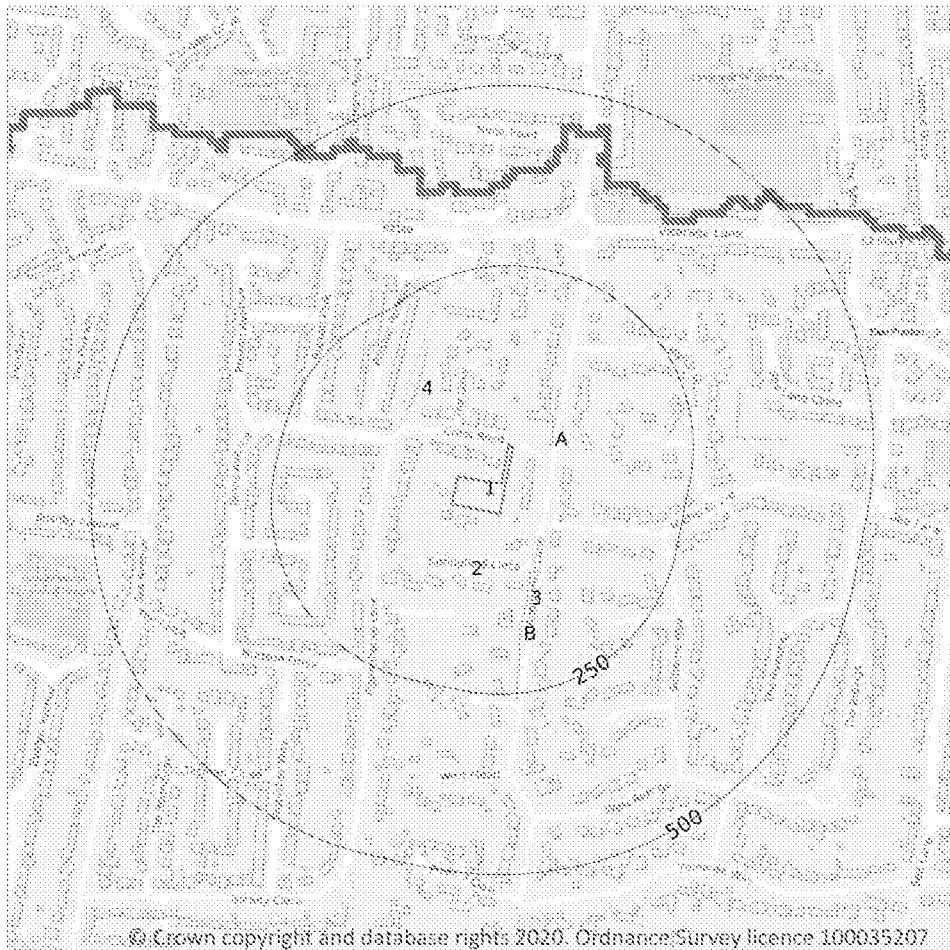
Records within 500m

0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

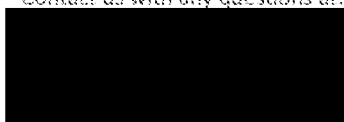
Records within 250m

12

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 38**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	53m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
A	76m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	85m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
3	90m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	90m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	114m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	133m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	182m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	194m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	198m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	234m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	239m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m	0
----------------------------	----------

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
------------------------	----------

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 38**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	Coastal Catchment	Not part of a river WB catchment	318	Lower Arun	Arun and Western Streams

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	0
---------------------------	----------

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

This data is sourced from the Environment Agency and Natural Resources Wales.



6.5 WFD Groundwater bodies

Records on site	1
-----------------	---

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 38](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Littlehampton Anticline East	GB40701G503400	Good	Good	Good	2015

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m**0**

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m**0**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m**0**

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0
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Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

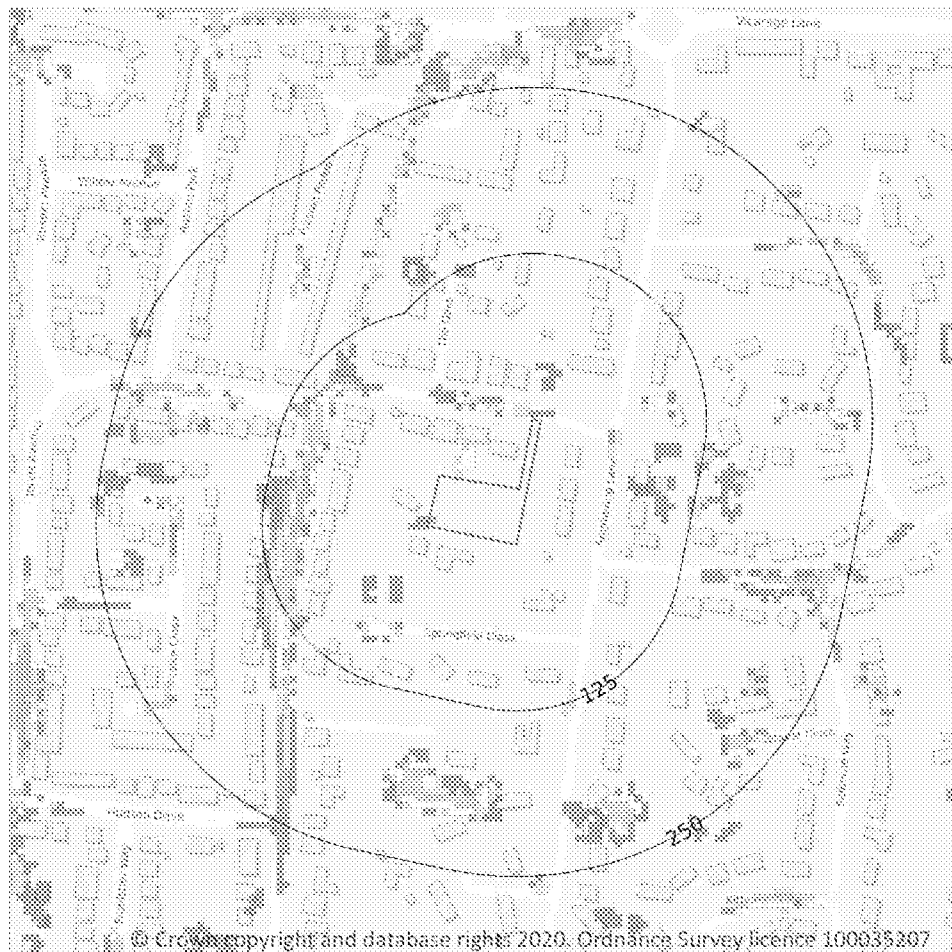
7.7 Flood Zone 3

Records within 50m	0
--------------------	---

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 1000 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 45](#)

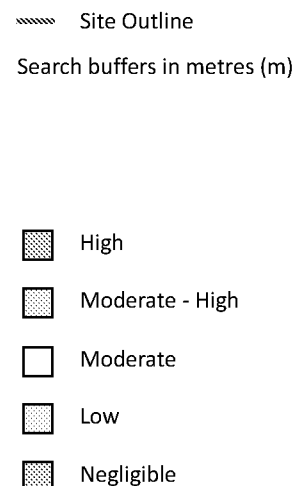
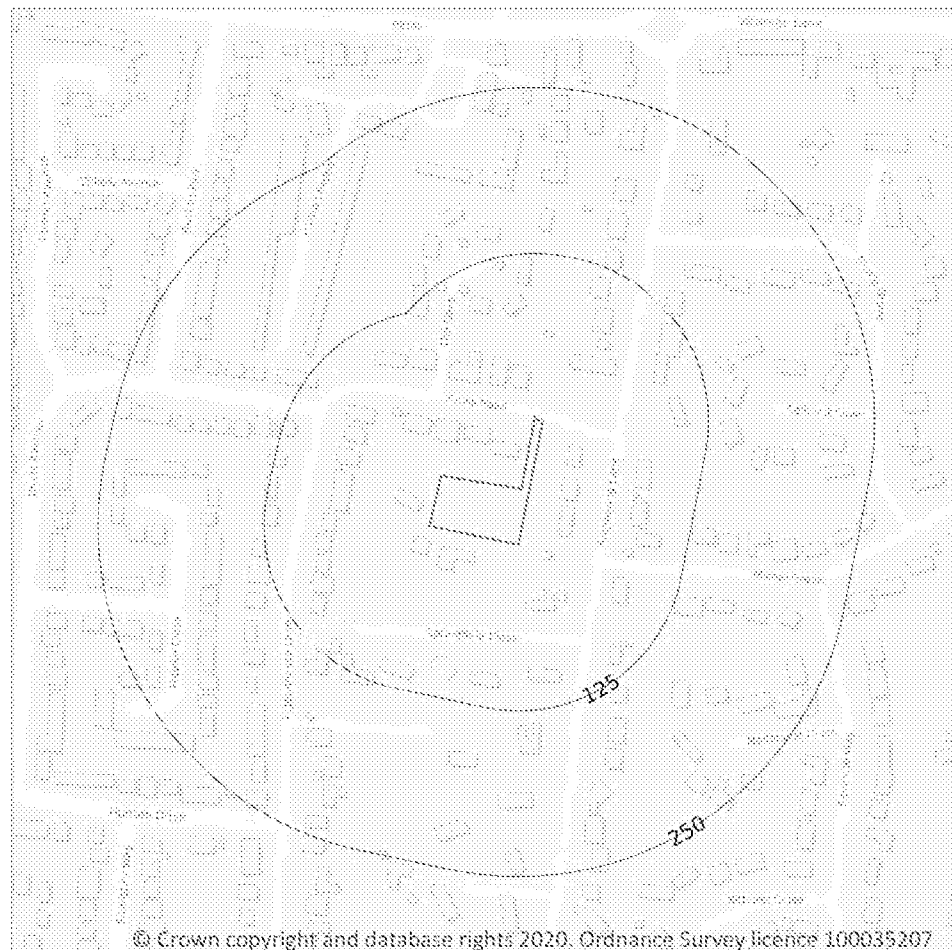
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambienta Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 47](#)

This data is sourced from Ambienta Risk Analytics.

10 Environmental designations

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

1

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
995m N	Sussex Chalk	Groundwater	G56	Changed

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

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10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 52](#)

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m ² , slurry lagoons > 750m ² & manure stores > 3500t.

This data is sourced from Natural England.

10.18 SSSI Units

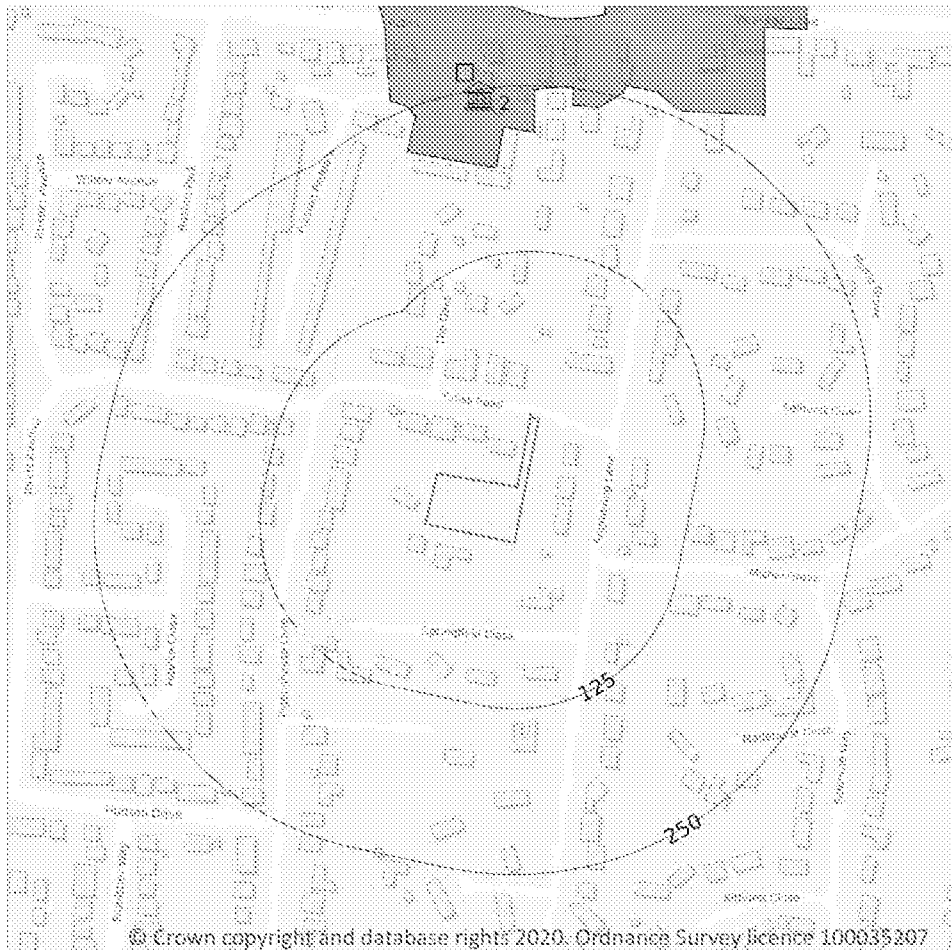
Records within 2000m
0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

1

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on [page 54](#)

ID	Location	Name	Grade	Reference Number	Listed date
2	246m N	West Preston Manor School, Rustington, Arun, West Sussex, BN16	II	1027552	20/09/1984

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m

1

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on [page 54](#)

ID	Location	Name	District	Date of designation
1	189m N	East Preston/Rustington (Station Road)	Arun	27/07/1994

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

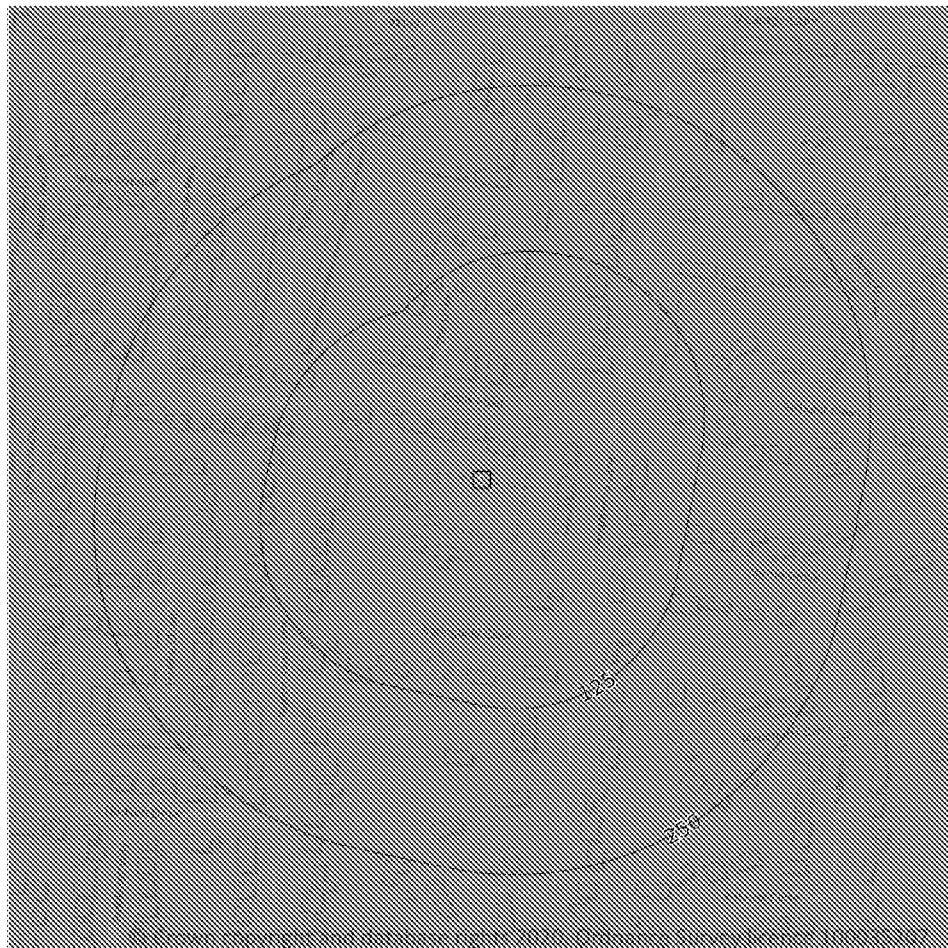
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

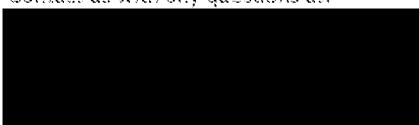
1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 57](#)

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m**0**

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m**0**

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m**0**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England

12.5 Countryside Stewardship Schemes

Records within 250m**0**

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

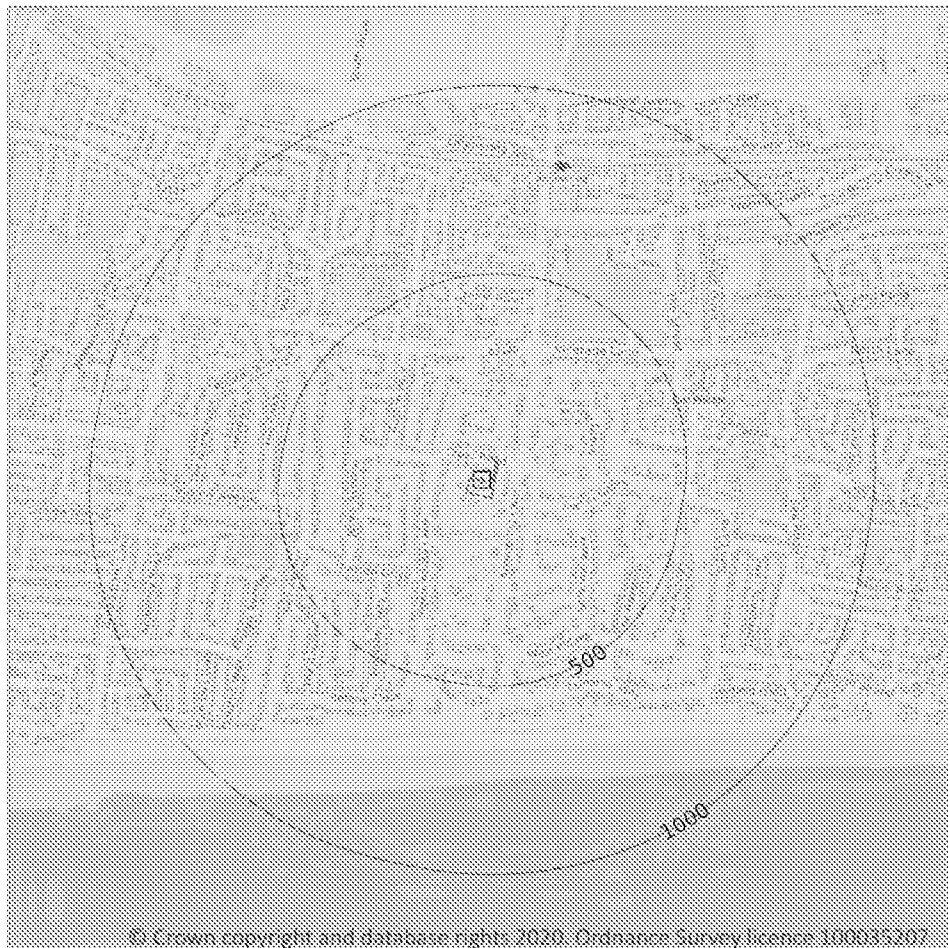
0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- ☒ Full coverage
 - ☒ Partial coverage
 - ☐ No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 60](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	TQ00SE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- ☒ Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 62](#)

ID	Location	LEX Code	Description	Rock description
1	On site	BRK-Z	Brickearth - Silt	Silt

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

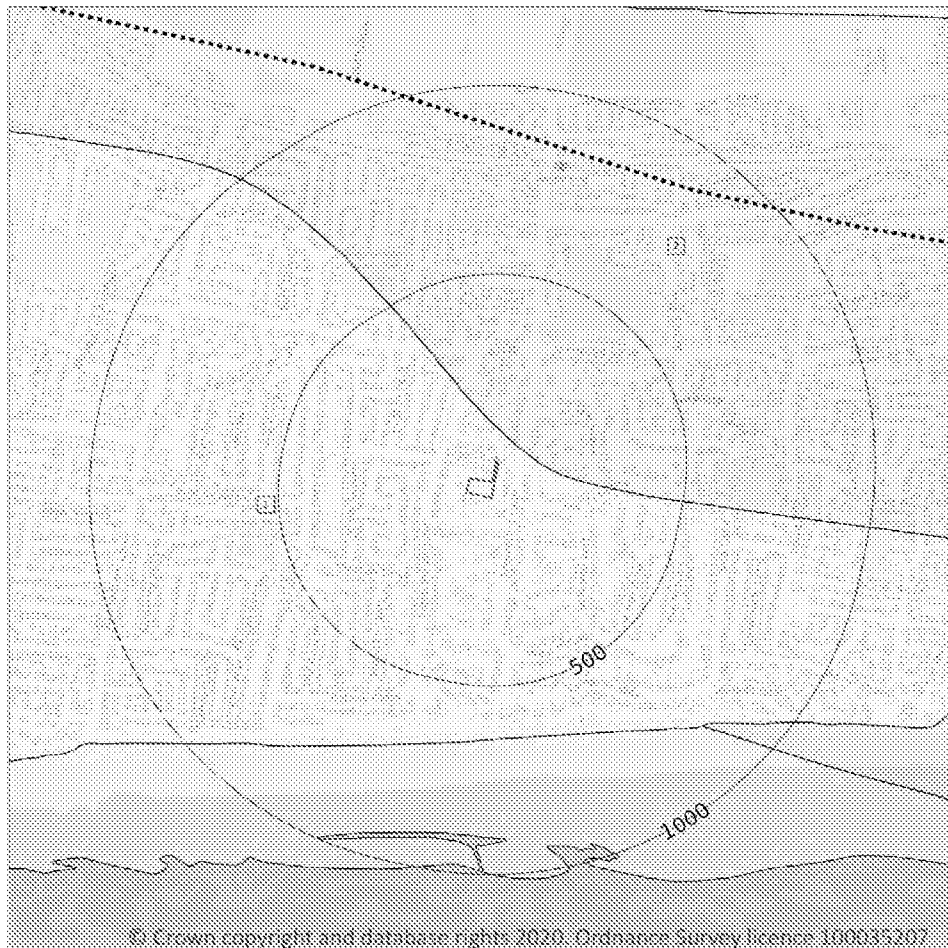
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

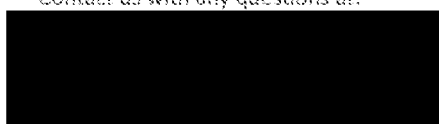
Records within 500m

2

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 64](#)

ID	Location	LEX Code	Description	Rock age
1	On site	LPCK-CHLK	Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portsdown Chalk Formation (undifferentiated) - Chalk	Campanian Age - Turonian Age
2	67m NE	NPCH-CHLK	New PR Chalk Formation - Chalk	Turonian Age



This data is sourced from the British Geological Survey.

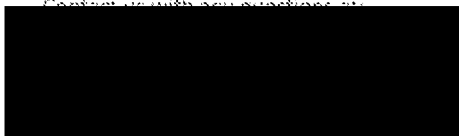
14.6 Bedrock faults and other linear features (10k)

Records within 500m

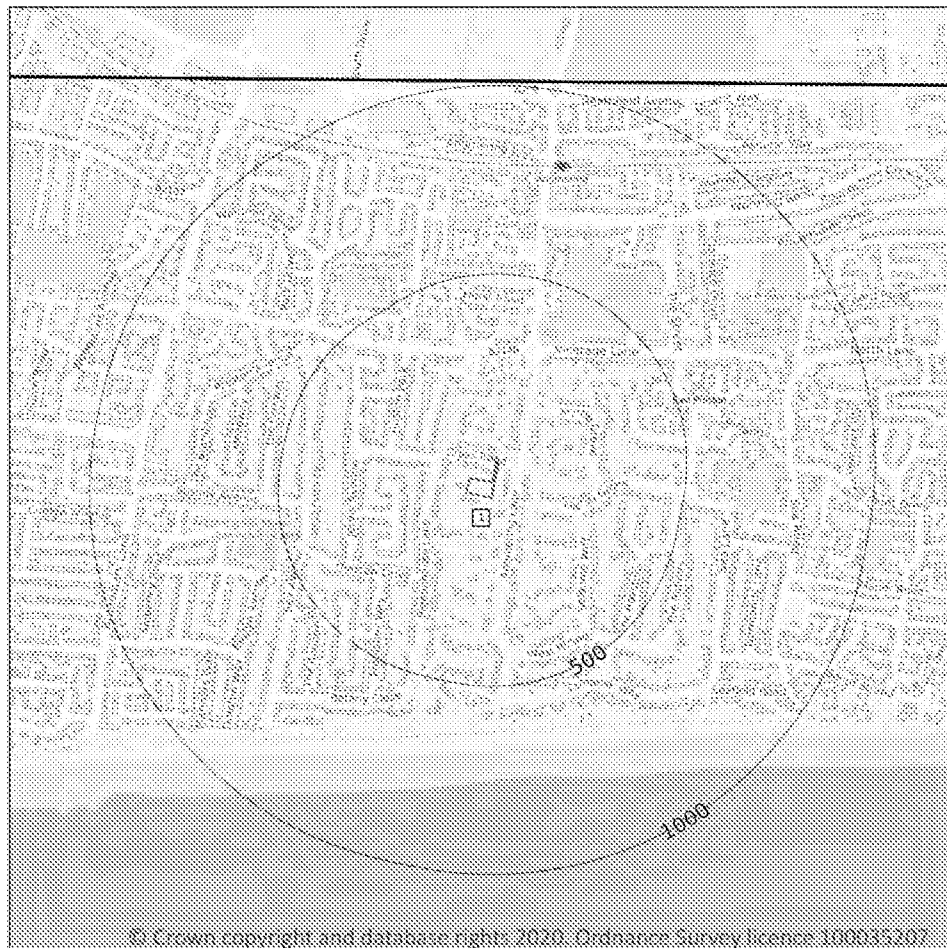
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- ☐ Geological map tile

15.1 50k Availability

Records within 500m

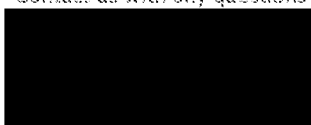
1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 66](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW317_332_chichester_and_

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

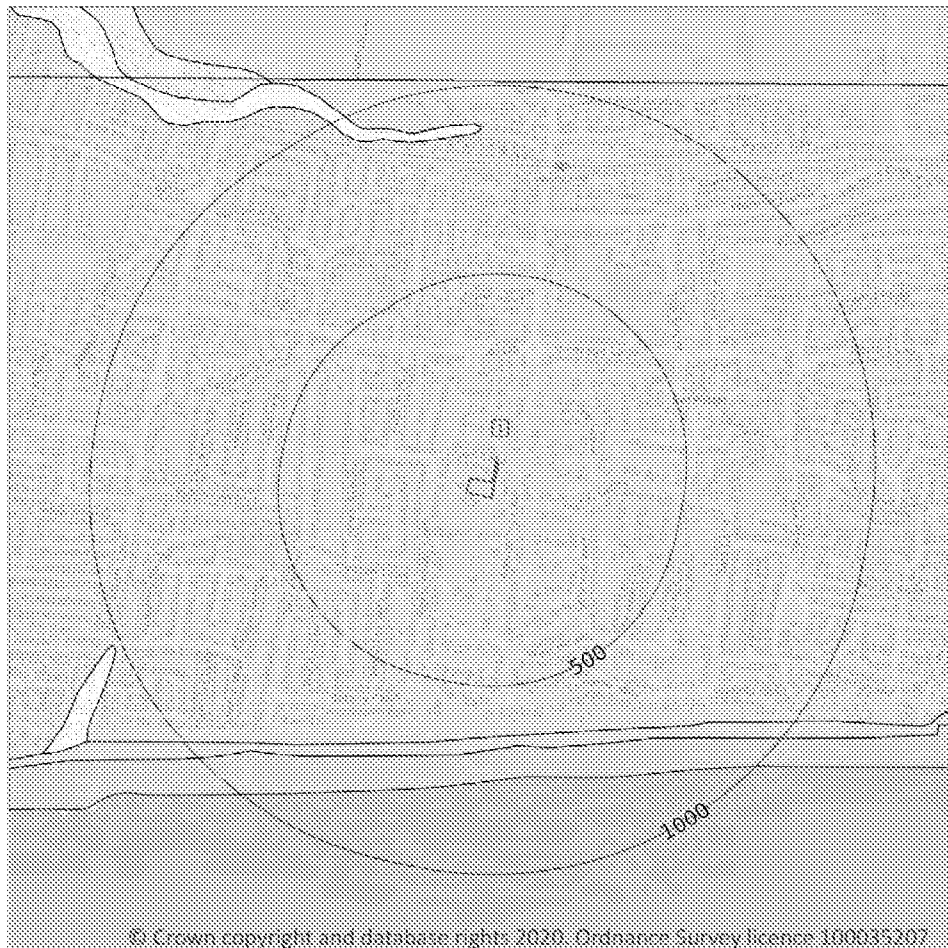
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline
Search buffers in metres (m)

Landslip (50k)
Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 68

ID	Location	LEX Code	Description	Rock description
1	On site	RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
----------------------------	----------

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

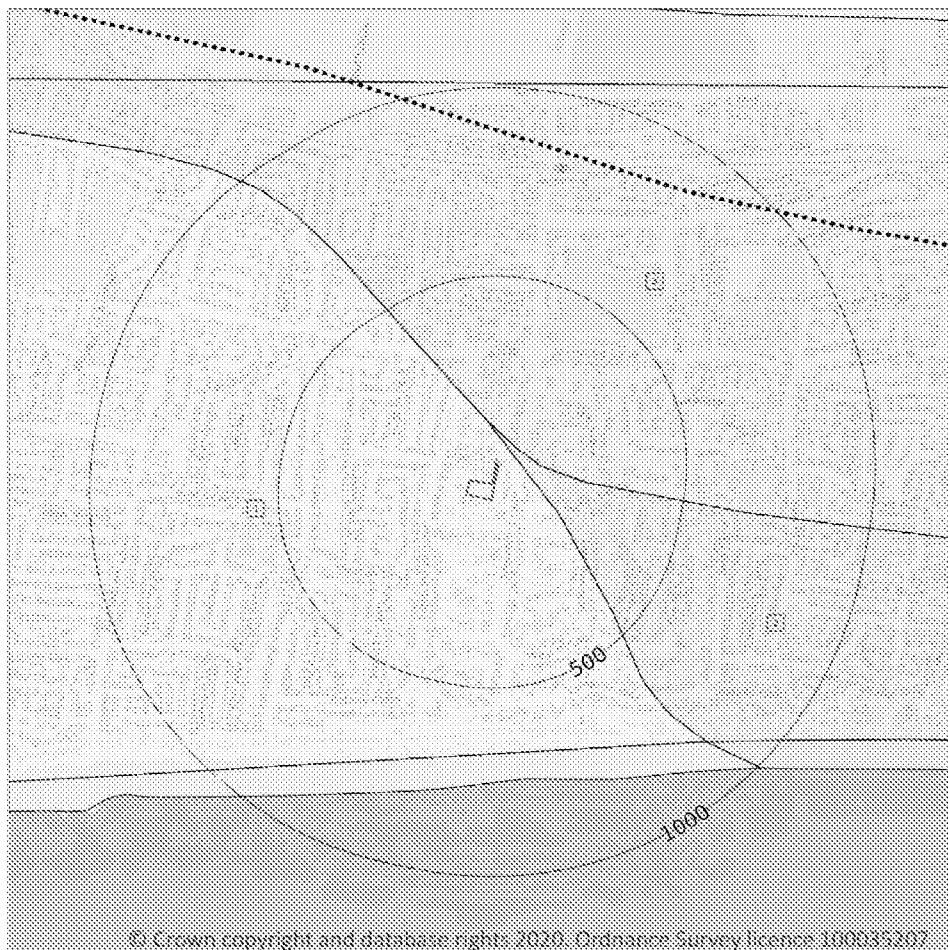
Records within 50m	0
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



Site Outline
Search buffers in metres (m)
Bedrock faults and other linear features (50k)
Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

3

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 70](#)

ID	Location	LEX Code	Description	Rock age
1	On site	LPCK-CHLK	LEWES NODULAR CHALK FORMATION, SEAFORD CHALK FORMATION, NEWHAVEN CHALK FORMATION, CULVER CHALK FORMATION AND PORTSDOWN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	TURONIAN
2	47m NE	LECH-CHLK	LEWES NODULAR CHALK FORMATION - CHALK	TURONIAN

ID	Location	LEX Code	Description	Rock age
3	65m NE	NPCH-CHLK	NEW PIT CHALK FORMATION - CHALK	TURONIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Very High	Very High
47m E	Fracture	Very High	Very High

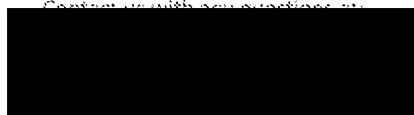
This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0
----------------------------	----------

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes

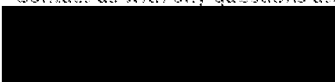
16.1 BGS Boreholes

Records within 250m

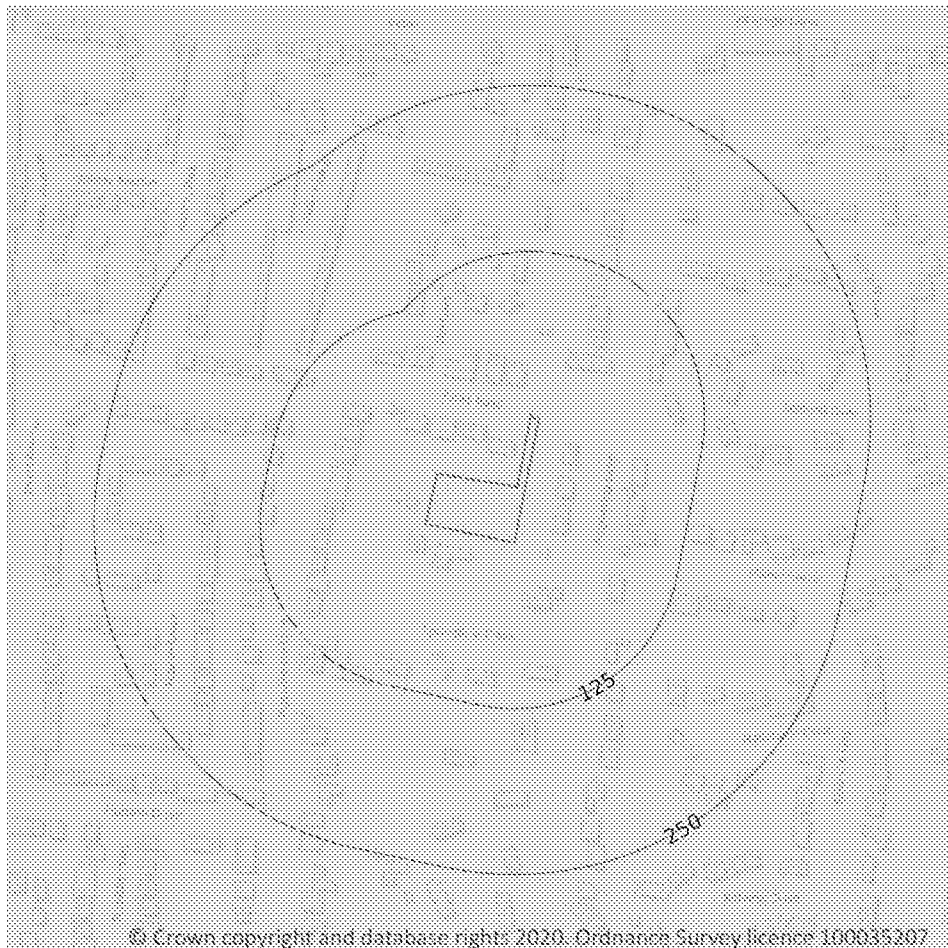
0

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

1

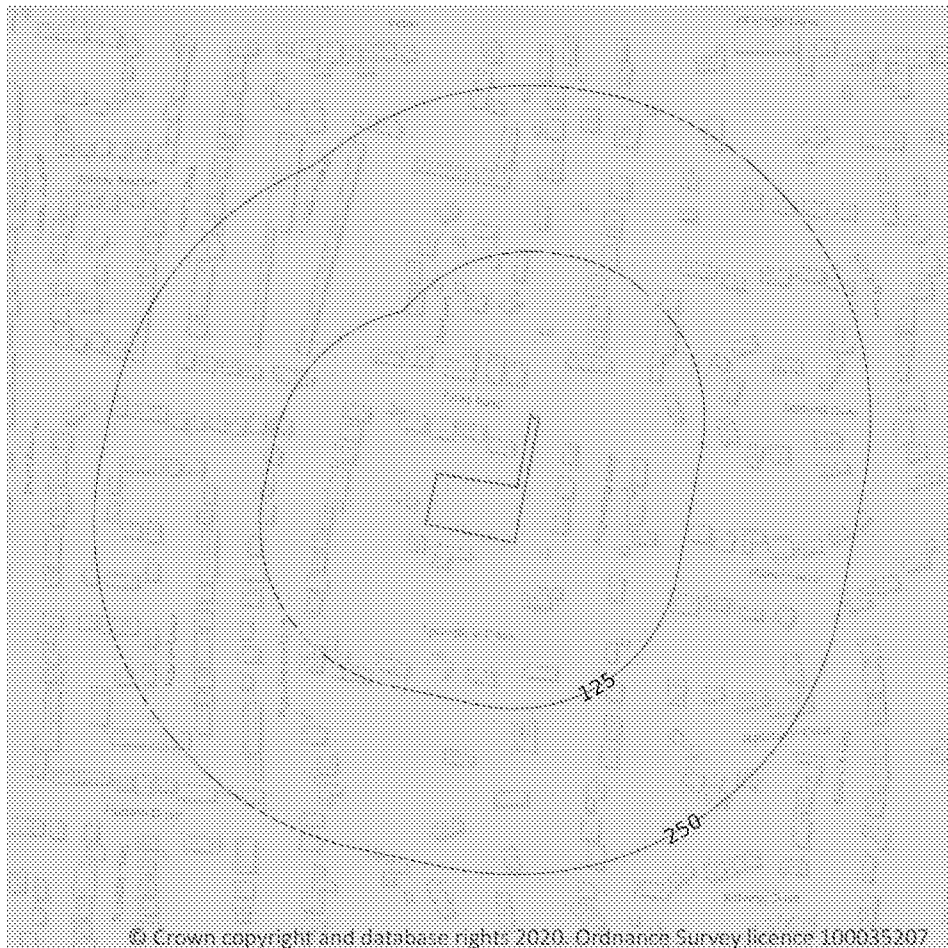
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 73**

Location	Hazard rating	Details
On site	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

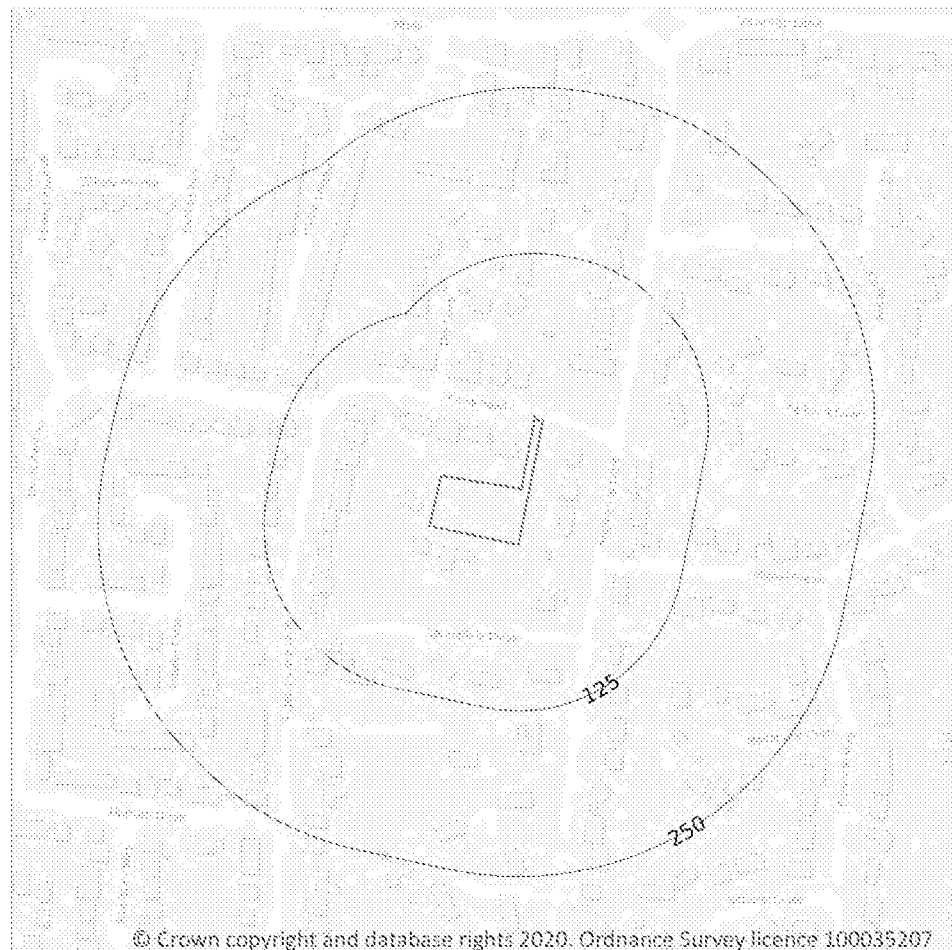
Features are displayed on the Natural ground subsidence - Running sands map on [page 74](#)

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

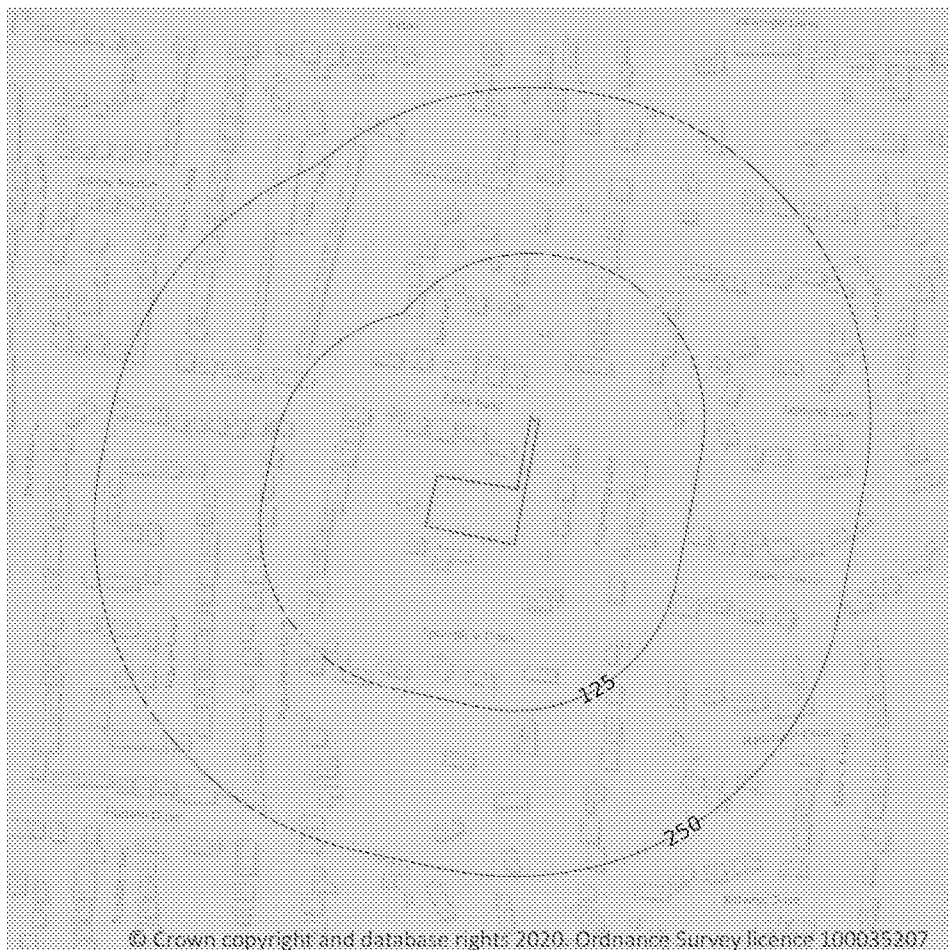
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 75](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

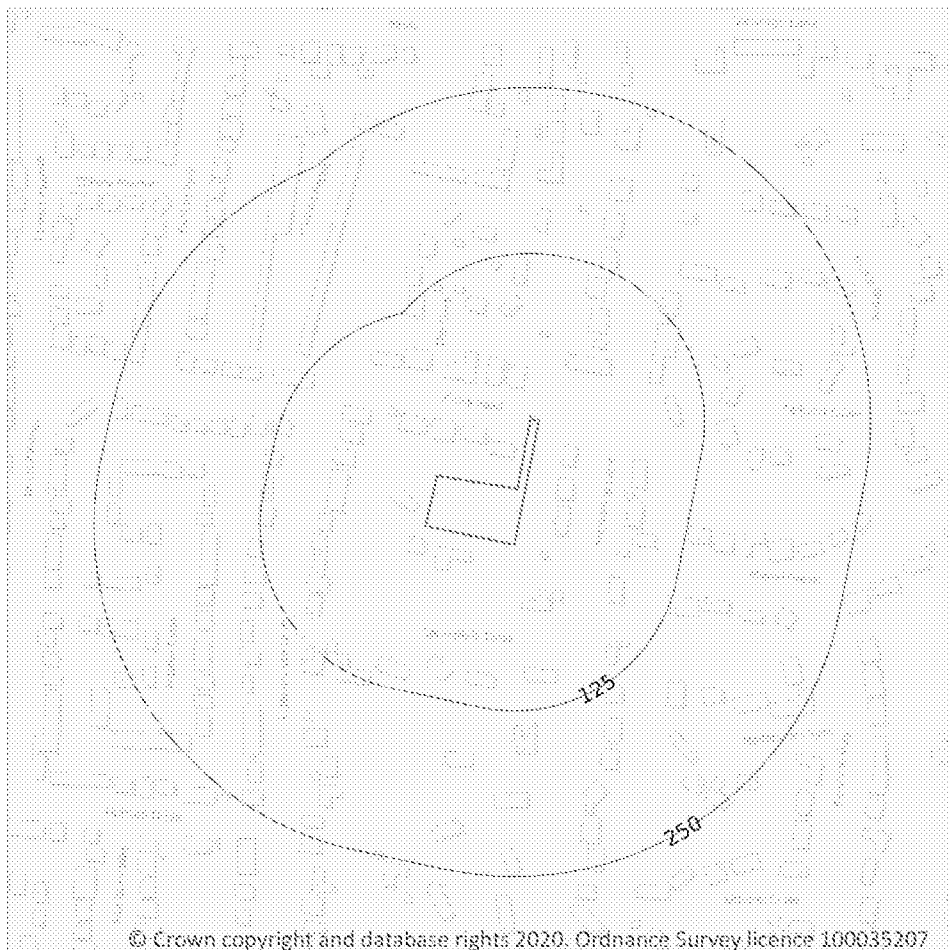
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 76](#)

Location	Hazard rating	Details
On site	Low	Deposits with potential to collapse when loaded and saturated are possibly present in places.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 77**

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.

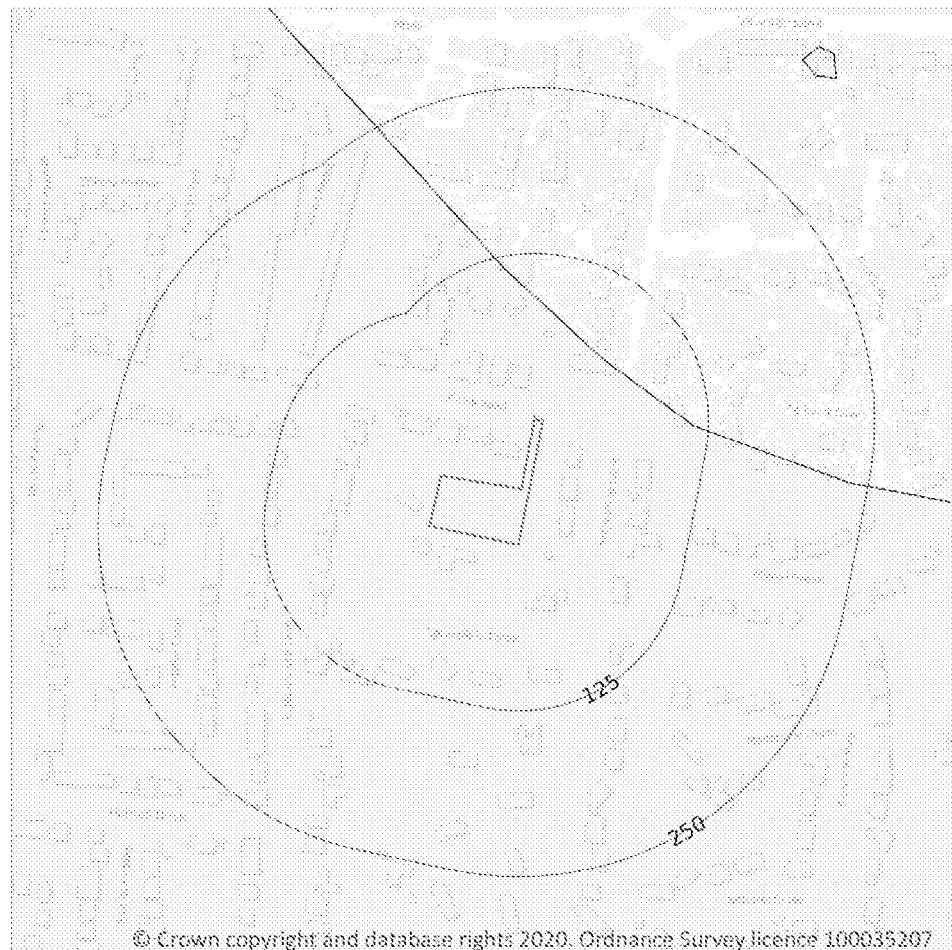


Contact us with any questions at:

Date: 17 March 2020



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

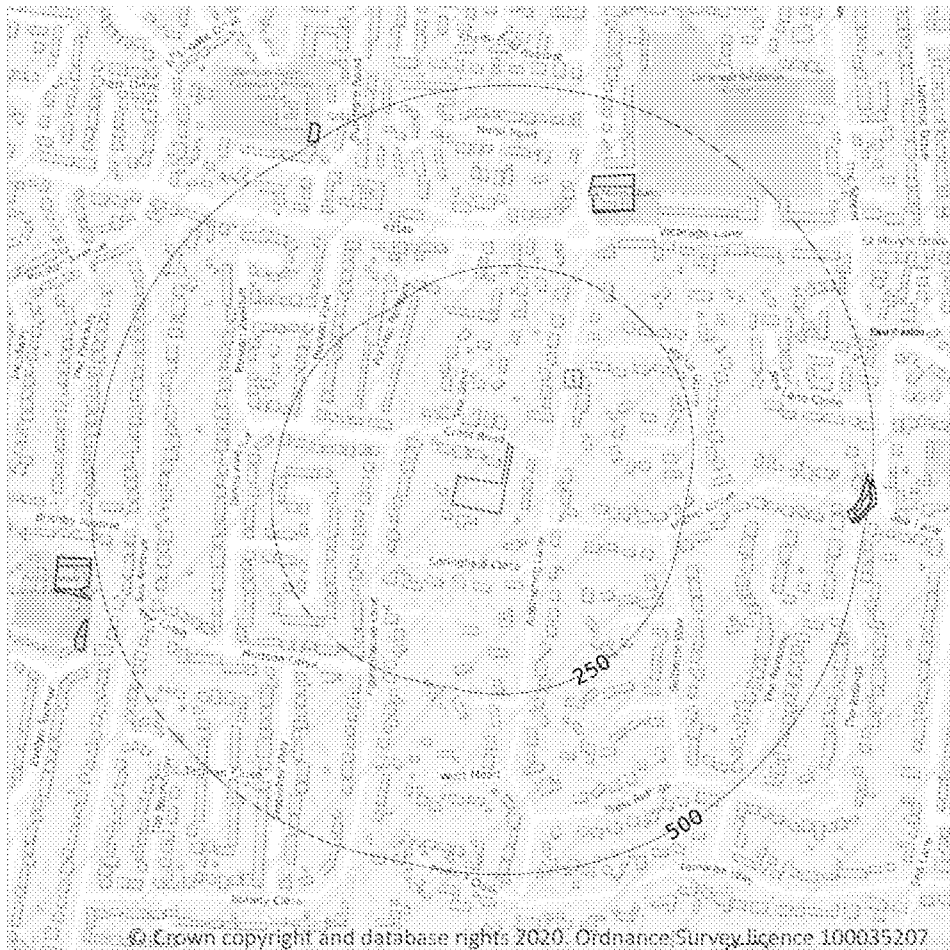
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 78](#)

Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Peter Brett Associates (PBA).



18.2 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

0

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

1

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on [page 80](#)

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0
-----------------------------	----------

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site	0
------------------------	----------

Areas which could be affected by former coal mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0
------------------------	----------

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
------------------------	----------

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.



18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

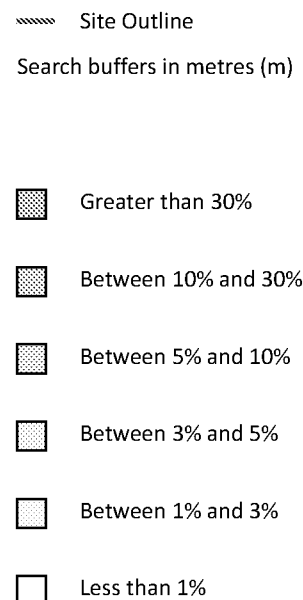
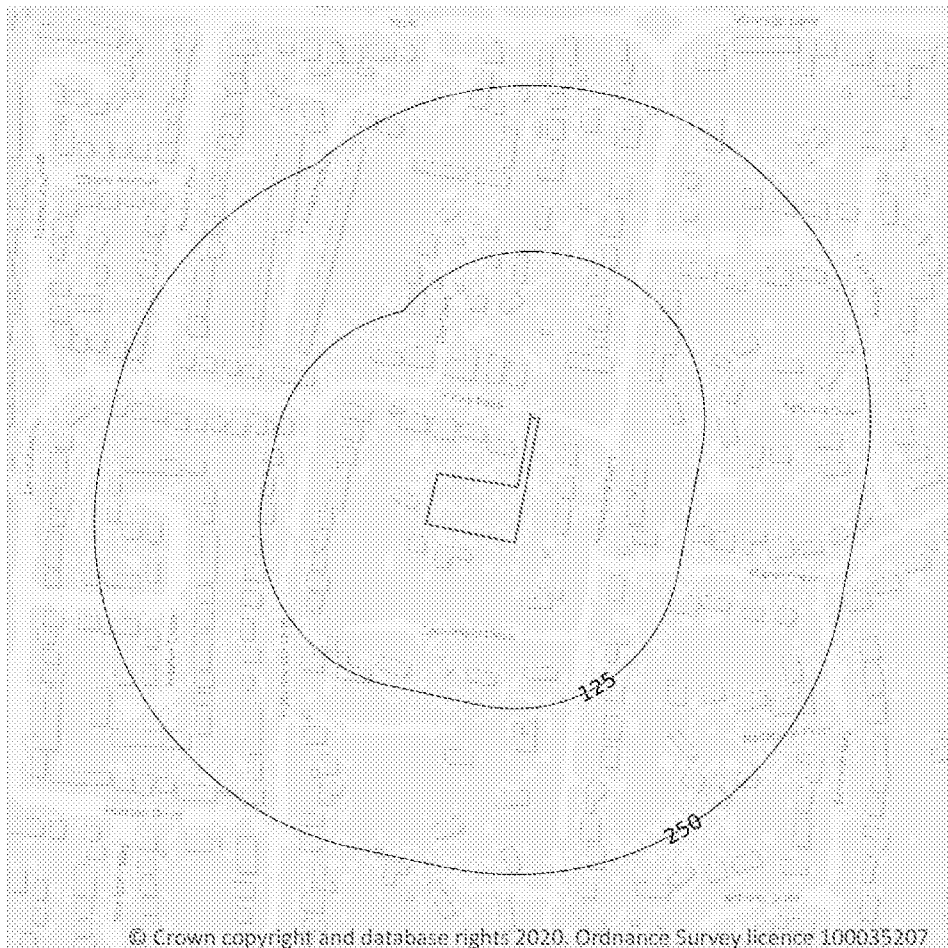
Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on [page 84](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0
---------------------	---

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0
---------------------	---

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0
---------------------	---

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0
---------------------	---

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0
---------------------	---

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0
----------------------------	----------

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0
----------------------------	----------

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0
----------------------------	----------

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0
----------------------------	----------

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0
----------------------------	----------

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.

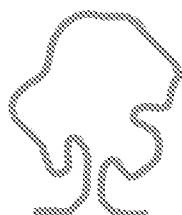
Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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eas ltd

Environmental Assessment Services Ltd

London Road, Hildesheim, Hampshire, Hants, RG26 2AA, UK