

A PHASE I CONTAMINATION ASSESSMENT FOR THE RE-DEVELOPMENT OF A SITE AT:

WATERING FARM, NETTLESTEAD, IPSWICH, SUFFOLK



CLIENT: Blakenham Farms
AGENT: HAT Projects
REFERENCE: JAH/20.125/Phase1
DATE: 16 April 2020

A F Howland Associates Limited
The Old Exchange
Newmarket Road
Cringleford
Norwich
NR4 6UF

Tel: 01603 250754
Email: admin@howland.co.uk
Website: www.howland.co.uk



CONTENTS

1.	TERMS OF REFERENCE	1
2.	LOCATION	1
3.	GEOLOGY	2
4.	HYDROLOGY AND HYDROGEOLOGY	2
5.	HISTORICAL INFORMATION	3
6.	CURRENT LAND USES	5
7.	WALKOVER SURVEY	6
8.	HAZARDOUS GASES	8
9.	DISCUSSION OF ENVIRONMENTAL ISSUES	9
10.	PRELIMINARY CONCEPTUAL MODEL	9
11.	SUMMARY AND RECOMMENDATIONS	12

APPENDICES

APPENDIX A: REFERENCES

APPENDIX B: ENVIRONMENTAL DATA REPORT AND HISTORICAL MAPS

APPENDIX C: DRAWINGS

APPENDIX D: RISK ASSESSMENT CLASSIFICATION



1. TERMS OF REFERENCE

A F Howland Associates Limited was instructed by Blakenham Farms (the “Client”) via HAT Projects (the “Agent”) to carry out a Phase I Contamination Assessment for a development at Watering Farm, Nettlestead, Ipswich, Suffolk (Drawing 20.125/Phase I/01). It is understood that the exact development proposals are yet to be finalised. However, discussions with the Agent indicate that the development is likely to comprise the construction of three new dwellings and a new access route off Ipswich Road. The historic barns in the remainder of the site are to be converted to a residential end use, with the more modern barns, in the north-east corner of the site, being retained for agricultural use.

This report presents the background environmental and historical data and gives details of a walkover survey undertaken to confirm the current condition of the site and surrounding area. The information is used to develop a conceptual model using the *source-pathway-receptor* principle and provides a qualitative assessment of land contamination.

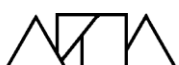
The report has been carried out in general accordance with accepted best practice and methodologies (BSI, 2017) (DEFRA and EA, 2004) (DCLG, 2010) and was prepared for the sole and exclusive use of the Client and its advisors. Other parties using the contained information do so at their own risk and any duty of care to those parties is specifically excluded subject to copyright as detailed below.

The copyright of any proposal or any data presented in the report, including without exclusion all text and all procedures and methods developed by A F Howland Associates Limited is held by A F Howland Associates Limited and all rights to such are reserved.

No part of the content of, procedures described, or other facets of the report will be copied or used by others outside of the immediate context for which the work was commissioned without the express and specific request and approval to do so in writing.

2. LOCATION

The site is located on the outskirts of the village of Nettleshead, to the north of the village of Somersham, centred at National Grid reference 608237, 248971 and at an approximate elevation of 26 m above Ordnance Datum (aOD).



The site and surrounding area were noted to slope down to the south.

3. GEOLOGY

The regional geology is mapped for the area by the British Geological Survey (BGS, 2020). The geology comprises superficial deposits of River Terrace Deposits underlain by bedrock of the Newhaven Chalk Formation. Superficial Alluvial deposits were mapped to the south of the site from the southern site boundary, and no superficial deposits are mapped to the north of the site from the northern site boundary.

A historic borehole was mapped at the centre of the site (ref. TM04NE18), which proved the following geological succession.

Base depth (m below ground level) ¹	Strata	Description
0.91	Drift Deposits	"Topsoil"
2.74		"Loamy sand"
7.62		"Loamy gravel"
9.14		"Red sand and stone"
10.97	Upper Chalk	"Yellow chalk"
60.96		"White chalk"

Table 1 – Summary of the historic borehole record (TM04NE18)

4. HYDROLOGY AND HYDROGEOLOGY

A small pond and stream was noted approximately 50 m to the south of the site. No surface water abstraction licences are reported within 1 km of the site.

The historic borehole (ref. TM04NE18) on site recorded a groundwater level of 15.54 m below ground level.

The bedrock of the Newhaven Chalk Formation is designated a principal aquifer status, and the superficial River Terrace Deposits and Alluvium are designated a secondary A aquifer status.

¹ Originally report in feet, converted using a conversion factor of 0.3048



The site is recorded to be within a groundwater source protection zone (zone 2 - outer catchment).

A groundwater abstraction licence is mapped 13 m to the south-east of the site². It is believed to be abstracting through the borehole that was drilled on site. This abstraction is licensed for use in general farming and domestic supply, with a maximum daily abstraction volume of 91.5 m³. Due to this discrepancy of the mapped locations of the borehole and abstraction licence it is unclear whether it is located on or off site³. Assuming that accuracy of recording locations has improved over time, it is therefore probable that the abstraction licence dataset is more accurate.

5. HISTORICAL INFORMATION

5.1 Historical Maps

A review of historical maps shows site to be a farm with various buildings and structures.

From the earliest available map (1882), the site comprised a collection of four buildings, occupying the centre of the site, see Figure 1 below. Further buildings were noted to extend beyond the site boundary to the south-east. All of the buildings were collectively labelled as *Waterrun Farm*. The northern and western half of the site was mapped as an open field, with a track bisecting the northern and western fields, running from the buildings to the north-west corner of the site, and extending off site.



Figure 1 – Historic site layout (1882)

² Licence No. 7/35/088/*G/0135

³ The borehole was dated as drilled in June 1946 and the current licence for the groundwater abstraction has been active since January 1967

By 1902, the buildings on site were labelled as *Watering Farm*. Additional buildings were noted at the centre of the site and off site to the south-east.

By 1967-1970, the location and orientation of the buildings at the centre of the site were more accurately mapped, depicted in Figure 2 below. The site was labelled as both *Watering Farm* and *Tudor Grange*, with six silos mapped within the site boundary.

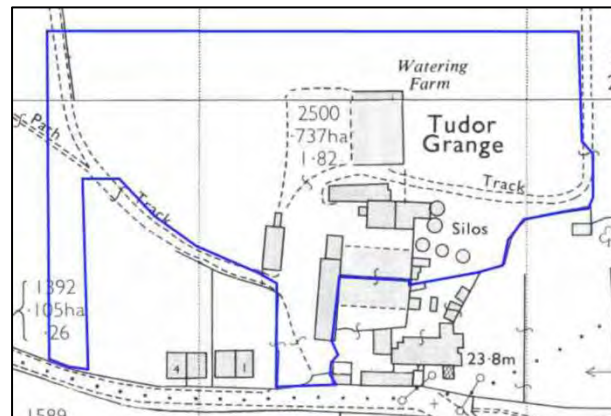


Figure 2 – Historic site layout (1967-1970)

By 1994, the site was exclusively known as *Tudor Grange*, with an additional large irregular shaped building in the north-east corner of the site. The two northern most silos were also no longer mapped.

No significant changes were noted on site by the latest map, 2003. The layout of the site is depicted in Figure 3 below.



Figure 3 – Historic site layout (2003)

5.2 Historic Aerial Photographs

Aerial photographs are available from December 2000 through to May 2019⁴. The site was noted to be broadly similar to the last historical map, with a collection of irregular shaped buildings at the centre extending off site to the south-east. The buildings were noted to be surrounded by hardstanding tracks/yard connecting with Ipswich Road along the southern site boundary. Various vehicles, machinery, and other agricultural plant were noted to be stored on site. Three silos, as previously mapped, were noted on site between December 2000 and February 2003, but were no longer present on site from August 2007.

Between August 2007 and May 2012 the north-west corner of the site was noted to transform from an area of disused rough land with numerous vehicle tracks, to becoming part of the arable field extending off to the north of the site.

From September 2017, the triangular area of rough land was noted to be in use for the parking of agricultural machinery and plant, as depicted on Figure 4 below.

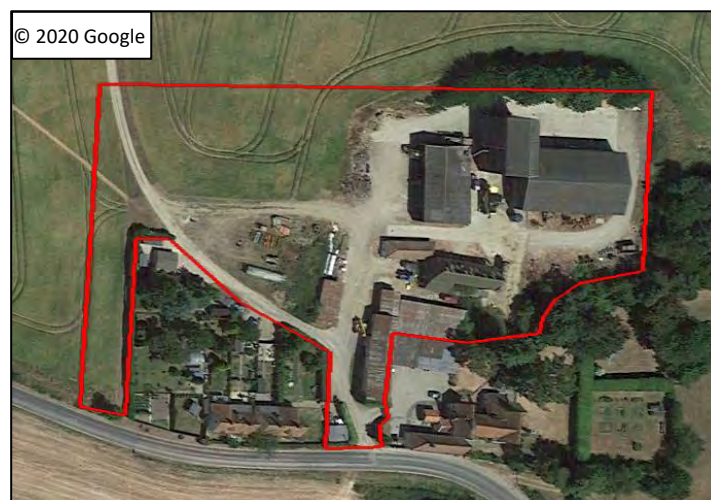


Figure 4 – Historic aerial imagery (2018)⁴

6. CURRENT LAND USES

Watering Farm comprised a variety of buildings/land uses within which the site is located. The collection of buildings to the south-east of the site are known as Tudor Grange and comprise a collection of residential properties and outbuildings, including several converted from their former agricultural use. The buildings located to the south of the

⁴Google Earth Imagery [Accessed 14 April 2020]

site, between the two extensions towards Ipswich Road, were a pair of semi-detached residential properties, known as Tudor Grange Cottages, with soft landscaped gardens extending up to the southern site boundary.

The land surroundings the farm, Tudor Granger, and Tudor Grange Cottages, was noted to predominantly be open fields, with the village of Somersham beyond to the south-west

7. WALKOVER SURVEY

A walkover survey was carried out on 7 April 2020 to enable identification of the current land use and other details not otherwise available from the archival information. The salient features are shown on Drawings 20.125/Phase I/02, 20.125/Phase I/03, and 20.125/Phase I/04 in Appendix C.

The site comprised a motley collection of eight buildings, with associated agricultural infrastructure. The site also included parts of the surrounding arable fields to the north and west (Photos 1, 3, 5, and 6). The buildings have been identified as Building 1 through to Building 7, as depicted on the Relevant Feature Plans in Appendix C.

Building 1

Building 1 is a relatively modern hay/seed barn. The building was noted to be a concrete beam construction with a corrugated cement board roof and side walls and a compacted crushed stone floor. The barn was noted to be in use for the storage of hay bales, seed bags, and a tractor (Photos 8, 10, and 19).

Directly adjacent to the north of the building was situated two above ground metal tanks; one situated upon brickwork supports, and the other within a concrete blockwork bund (Photos 8 and 9). Space for a possible third tank, within an empty concrete blockwork bund was noted. Fragments of cement board were noted in and around the supports, along with various oil stains.

Immediately to the west of Building 1 were several shallow piles of loose gravel, shingle, and sand (Photo 7).



Building 2

Building 2 was another more modern building, assumed to be a grain store⁵ (Photos 13 and 15). The building was noted to be clad in corrugated metal with brick walls. The building included the site office.

A shallow retaining wall was noted directly to the north of Building 2 between the main farm buildings and the arable field to the north (Photo 12). Directly to the south of the building were piles of corrugated cement panels, plastic pipework, some part worn tyres, agricultural machinery, and a large green plastic tank (Photo 15).

To the south-east of Building 2, along the eastern site boundary, was a pile of cobbles and boulders of concrete (see Photo 14).

Building 3

Building 3 was an old wooden barn, supported by wooden poles along the northern wall to prevent further collapse (Photo 18). The barn roof was noted to be hessian/heavy fabric. The barn was noted to have a concrete floor, and was used to store a pallet of rock salt, old wooden panels, and odd pieces of corrugated cement board.

Adjacent, to the east of Building 3 was parked a large tanker trailer (Photo 16), along with several IBC⁶ tanks (Photo 17). The contents/former contents of the tanker were unknown, however the adjacent 1000 Litre IBC tanks were noted to contain 15% Folair Manganese⁷, presumably diluted within the tanker when spraying operations are being carried out on the surrounding fields.

Building 4

Building 4 was a brick/blockwork rendered building with a tiled roof. The western end of the building was noted to include welfare facilities with the eastern half of the building comprising a chemical store (Photo 21). The internal floor was noted to be concrete, in a good condition, with no evidence of staining or spills (Photo 22).

Building 5

Building 5 comprised a row of garages⁸. The building was noted to be a wooden frame with wood panel walls and roof, and in a general state of disrepair. The internal floor was noted to be a mixture of bare earth and concrete. A roughly triangular shaped area of

⁵ Internal access unavailable at the time of the walkover

⁶ Intermediate Bulk Container (IBC)

⁷ A liquid feed applied directly to leaves of crops to encourage root growth

⁸ Only able to enter the northernmost garage, as other garages locked at the time of the walkover



rough land was noted to the west of the building, with an area of burning located at the centre (Photo 4).

Building 6

Building 6 was noted to be a small wooden frame extension to the large Building 8 to the south. The building had a corrugated metal roof and wooden panel walls. The building was in use as an oil store (including hydraulic and motor oil), with a strong hydrocarbon odour within. The concrete floor was noted to be stained in places. A metal tank was noted within the roof space, possibly filled with water (Photo 26).

Building 7

Building 7 was a lean-to structure situated to the east of Buildings 6 and 8. The building was noted to have a concrete floor and a corrugated metal roof. The building was used for general storage, including hydraulic oil containers, machinery, and pipework (Photos 24 and 25).

Building 8

Building 8 was being used to store a horse box/trailer and a wooden cart. An empty metal caged storage area was noted in the southern half. The building was noted to have wood panel walls and a corrugated metal roof (Photo 28).

No abstraction point was noted on site during the site walkover, possibly indicating that it is located off site to the south-east, within the Tudor Grange site.

No evidence of the historic silos, such as foundation bases, was noted on site.

8. HAZARDOUS GASES

The environmental data report indicates that the site is not within an area where specific protection from radon gas is required.

Databases published by the Environment Agency⁹ indicate that there are no historic or active landfill sites within 2 km of the site, confirmed by the environmental data report.

⁹Datasets last updated 19 March 2020 [Available at <https://data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites> and <https://data.gov.uk/dataset/ad695596-d71d-4cbb-8e32-99108371c0ee/permited-waste-sites-authorized-landfill-site-boundaries>]



No areas of infilled land have been recorded within 500 m of the site.

9. DISCUSSION OF ENVIRONMENTAL ISSUES

The proposed development of the site is likely to comprise the construction of three new dwellings and a new access route off Ipswich Road. The historic barns in the remainder of the site are to be converted to a residential end use, with the more modern barns, in the north-east corner of the site, being retained for agricultural use.

Historically, the site is understood to have been agricultural and is currently occupied by a various agricultural buildings. Aside from general agricultural use, the only other known uses of the buildings were as general and vehicle storage. Presently on site, there was noted to be cement board sheets, both on roofs and as fragments across the site, all of which have a potential to be asbestos containing materials. Some surface staining was noted in and around Buildings 6 and 7, along with numerous tanks across the site, and a chemical store within Building 4. An area of burning was also identified on site. All of these activities have the potential to have introduced contamination into near surface soils.

No historical or authorised landfill sites, which could impact upon the site have been identified. The site is not within a radon affected area. The hazard posed by ground gases is considered to be negligible as there are no identified potential sources.

The anticipated geology underlying the site comprises bedrock of the Newhaven Chalk Formation, which is designated a principal aquifer, overlain by River Terrace Deposits and Alluvium, both designated as secondary A aquifers. The site is also located within a groundwater source protection zone. A groundwater abstraction licence is held 12 m to the south-east of the site, at the adjacent Tudor Grange, for use in general agriculture and domestic supply.

The nearest surface water feature is a stream to the south of the site. No surface water abstraction licences are located within 1 km of the site.

It is plausible for any near surface contamination to have become mobile and entered the water environment via shallow throughflow, or base flow where groundwater is present, into the adjacent stream to the south. Bar any near surface contamination caused by the



historic and current land uses, no significant sources of mobile contamination, such as fuel and oil storage, have been identified.

10. PRELIMINARY CONCEPTUAL MODEL

Following a review of the archival information and the walkover survey a preliminary conceptual model was devised to determine the risk to appropriate targets from any potential contaminating activities. This collates the evidence gained and establishes the potential linkages that may exist under the principle of “source-pathway-receptor” and is presented in Table 2 below.

A risk category is determined for the potential linkages and an assessment made of risk and the significance of that risk from professional judgement. Risk assessment classification is included in Appendix D. Where appropriate, further work is recommended to fully quantify any potential risk.

It should be noted that an assessment of risk to construction workers suggests that only contamination of acute toxicity might represent an unacceptable risk to the health of construction workers but which should be managed through health and safety procedures.



Source of Contamination	Pathway	Receptor	Probability and Reasoning	Consequence and Reasoning	Risk Classification
Potentially contaminated soils (near surface soil impacted by historical and/or recent land use)	Direct contact, inhalation (of dusts and vapours), and ingestion	Human end-users	Likely – It is possible that the former and current land uses on site have introduced contamination into near surface soils.	Medium – Chronic damage to human health	Moderate Risk
		Construction workers		Mild – Potential short term exposure; can be managed with toolbox talks, PPE and adoption of good hygiene practices	Low / Moderate Risk
	Percolation of leachate / mobile contaminants	Groundwater	Low likelihood – No significant sources of mobile contamination identified. There is the potential for near surface contamination to become mobile into the water environment, though this is unlikely to be at a significant concentration.	Medium – The site was noted to overlie a principal aquifer, and within a source protection zone. A groundwater abstraction licence was also noted in close proximity to the site.	Low / Moderate Risk
		Surface water		Medium – A pond and stream was noted in close proximity to the south-east of the site	Low / Moderate Risk
	Direct Contact	Buildings	Low likelihood – Potentially isolated contamination may be present, most likely associated with fuels and oils.	Mild – Damage to buildings/structures	Low Risk
	Permeation through water supply pipes	Human end-users		Medium – Chronic damage to human health from permeation of plastic water supply pipes	Low / Moderate Risk
Potentially infilled land (off site)	Gas migration through permeable strata, ingress and accumulation in structures	Human end-users	Unlikely – Off-site landfill sites are considered to be too far away from the site to pose a significant risk. No areas of significant infilling were noted on site.	Severe – Acute risk to potential end users	Low Risk ¹⁰
		Structures			
Radon Gas		Human end-users	Unlikely – Site outside of radon affected area	Medium – Chronic risk to human end users	Low Risk

Table 2 – Preliminary Conceptual Site Model and Risk Assessment

¹⁰ Whilst the comparison of consequence against probability results in a moderate/low risk classification, the risk has been downgraded to low based on the negligible risk of gas generation

11. SUMMARY AND RECOMMENDATIONS

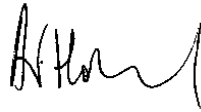
1. A Phase I Contamination Desk Study and Risk Assessment was carried out for a proposed residential re-development of the site at Watering Farm, Nettlestead, Ipswich, Suffolk.
2. Geological mapping indicates the site to be underlain by a bedrock of Newhaven Chalk Formation, with superficial River Terrace Deposits and Alluvium. The bedrock is designated a principal aquifer status, and the superficial deposits as secondary A aquifers. The closest groundwater abstraction licence is 12 m to the south-east of the site. The site is also located within a groundwater source protection zone.
3. A stream and pond was noted in close proximity to the site running parallel with the southern site boundary. No surface water abstraction licences are present within 1 km of the site.
4. Historical mapping and aerial photographs shows that the site has been in use for agricultural activities with various buildings/barns throughout.
5. The walkover survey identified eight buildings present on site along with numerous tanks, a chemical store, and an oil storeroom. Stacks of possible ACM was identified on site within the barns, scattered in soft landscaped areas, and in roof materials across the site. Some minor surface staining was noted within the oil storeroom, and around the tanks situated in the northern part of the site.
6. Given the potential for contamination of near surface soils a risk rating of moderate has been identified to human health from direct contact, inhalation or ingestion of contaminated soil and dust.
7. A low/moderate risk to construction workers has been identified, providing that toolbox talks and health and safety procedures are followed.
8. The risk to controlled waters (groundwater and surface water) has been assessed as low/moderate, from potential contamination within the near surface soils being mobilised into the water environment.
9. There may be potentially isolated sources of contamination on site, such as hydraulic oil, which may aggressive to buried concrete, or permeate into any water supply pipes. A low to low/moderate risk to buildings and human health have been concluded.
10. No significant sources of ground gas have been identified, both on and off site. A low risk to human end users via gas migration through permeable strata, ingress and accumulation in structures has been identified.
11. The site is not within an area where specific protection from radon gas is required.
12. It is recommended that an intrusive investigation of the near surface soils across the site is carried out to confirm the absence of any significant soil contamination, or otherwise to determine if the soil is suitable to be used within the proposed high exposure soft landscaped areas of the development. This should also include an



assessment of the suitability of plastic water supply pipes, if the soil is aggressive to buried concrete, and confirmation of the presence/lack of mobile and/or leachable contamination and the presence/lack of asbestos within near surface soils. Representative samples of the groundwater beneath the site should also be taken to assess any potential impact from site upon the groundwater and surface waters.



Mr J A Hallier
BSc (Hons) FGS



Dr A F Howland
MSc PhD DIC CEng FIMMM CGeol FGS

A F HOWLAND ASSOCIATES
16 April 2020



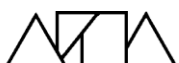
APPENDIX A: REFERENCES

BRITISH GEOLOGICAL SURVEY (BGS). 2020. British Geological Survey OpenGeoscience Website. Geology of Britain Viewer. www.bgs.ac.uk/opengeoscience

BRITISH STANDARDS INSTITUTION (BSI). 2017. BS 10175:2011+A2:2017. Code of practice for investigation of potentially contaminated Sites. British Standards Institution. London.

DEPARTMENT FOR COMMUNITIES AND LOCAL GOVERNMENT (DCLG). 2013. The Building Regulations - England - Approved Document C: Site preparation and resistance to contaminants and moisture, 2004 and incorporating 2010 and 2013 amendments.

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (DEFRA) AND THE ENVIRONMENT AGENCY (EA). 2004. Model Procedures for the Management of Land Contamination. Contaminated Land Report 11. Environment Agency, Bristol.



APPENDIX B: ENVIRONMENTAL DATA REPORT AND HISTORICAL MAPS

Enviro Insight Report (Groundsure, report reference GS-6729826)

Historic Maps - 1:2,500 and 1:10,000 scale maps (Groundsure, reference GS-6729825)



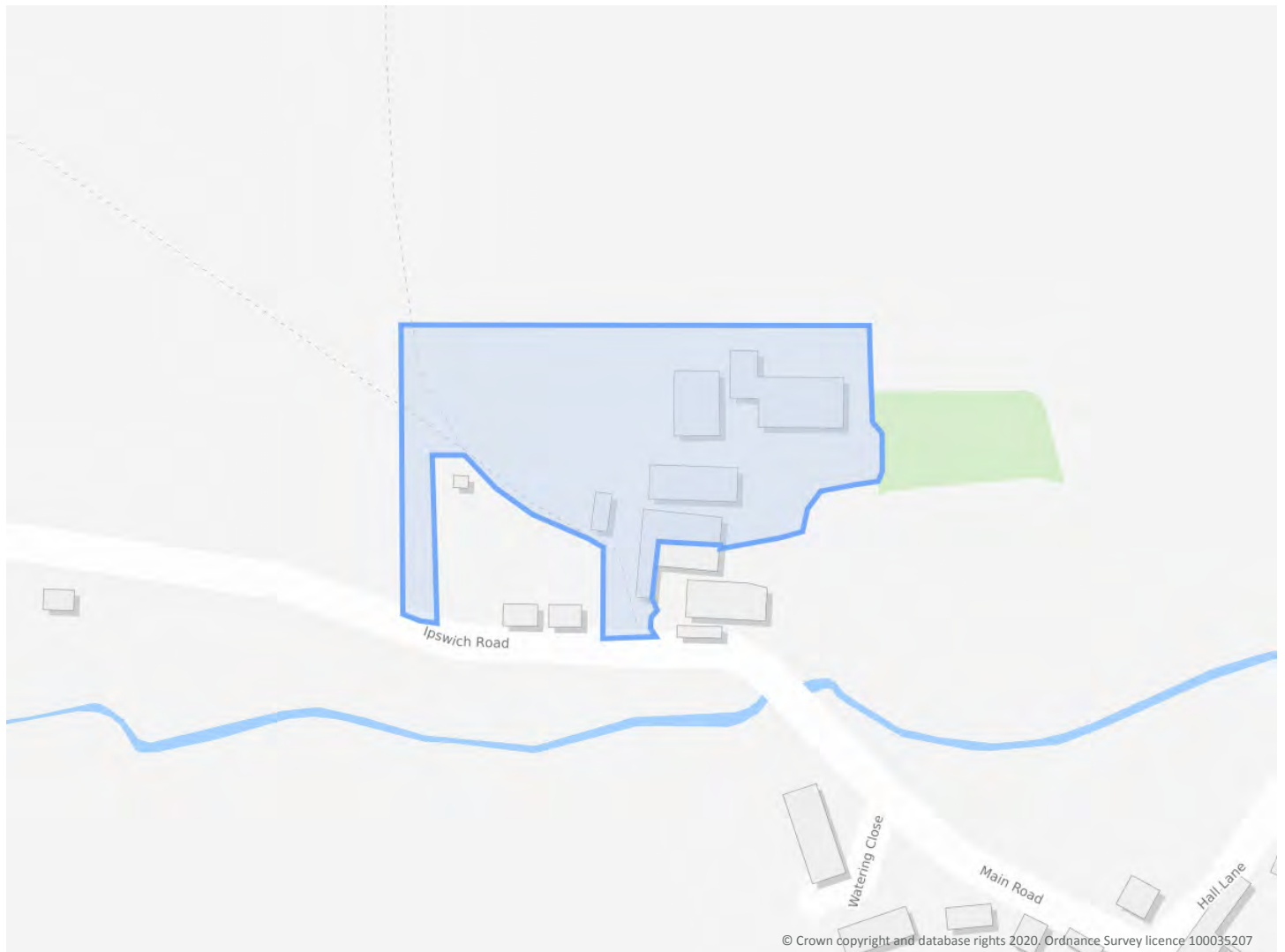
WATERING FARM, NETTLESTEAD, IPSWICH, IP8 4QL

Order Details

Date: 06/04/2020
Your ref: BJH_20_125
Our Ref: GS-6729826
Client: A F Howland Associates

Site Details

Location: 608218 248955
Area: 1.19 ha
Authority: [Mid Suffolk District Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.11

groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
12	1.1	<u>Historical industrial land uses</u>	0	0	3	0	-
13	1.2	<u>Historical tanks</u>	0	0	0	1	-
13	1.3	Historical energy features	0	0	0	0	-
13	1.4	Historical petrol stations	0	0	0	0	-
14	1.5	Historical garages	0	0	0	0	-
14	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
15	2.1	<u>Historical industrial land uses</u>	0	0	3	0	-
16	2.2	<u>Historical tanks</u>	0	0	0	1	-
16	2.3	Historical energy features	0	0	0	0	-
16	2.4	Historical petrol stations	0	0	0	0	-
16	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
17	3.1	Active or recent landfill	0	0	0	0	-
17	3.2	Historical landfill (BGS records)	0	0	0	0	-
18	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
18	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
18	3.5	Historical waste sites	0	0	0	0	-
18	3.6	Licensed waste sites	0	0	0	0	-
18	3.7	<u>Waste exemptions</u>	6	0	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
20	4.1	<u>Recent industrial land uses</u>	0	0	1	-	-
21	4.2	Current or recent petrol stations	0	0	0	0	-
21	4.3	Electricity cables	0	0	0	0	-
21	4.4	Gas pipelines	0	0	0	0	-
21	4.5	Sites determined as Contaminated Land	0	0	0	0	-



21	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
22	4.7	Regulated explosive sites	0	0	0	0	-
22	4.8	Hazardous substance storage/usage	0	0	0	0	-
22	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
22	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
22	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
23	4.12	Radioactive Substance Authorisations	0	0	0	0	-
23	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	1	-
23	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
23	4.15	Pollutant release to public sewer	0	0	0	0	-
24	4.16	List 1 Dangerous Substances	0	0	0	0	-
24	4.17	List 2 Dangerous Substances	0	0	0	0	-
24	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
24	4.19	Pollution inventory substances	0	0	0	0	-
24	4.20	Pollution inventory waste transfers	0	0	0	0	-
25	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
26	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
28	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
29	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
30	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
31	5.5	Groundwater vulnerability- local information	None (within 0m)				
32	5.6	<u>Groundwater abstractions</u>	0	1	0	0	8
34	5.7	Surface water abstractions	0	0	0	0	0
35	5.8	Potable abstractions	0	0	0	0	0
35	5.9	<u>Source Protection Zones</u>	1	0	0	1	-
35	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
36	6.1	<u>Water Network (OS MasterMap)</u>	0	2	1	-	-



37	6.2	<u>Surface water features</u>	0	1	2	-	-
37	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
38	6.4	<u>WFD Surface water bodies</u>	0	1	0	-	-
38	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
39	7.1	<u>Risk of Flooding from Rivers and Sea (RoFRaS)</u>	High (within 50m)				
40	7.2	Historical Flood Events	0	0	0	-	-
40	7.3	Flood Defences	0	0	0	-	-
40	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
40	7.5	Flood Storage Areas	0	0	0	-	-
41	7.6	<u>Flood Zone 2</u>	Identified (within 50m)				
42	7.7	<u>Flood Zone 3</u>	Identified (within 50m)				
Page	Section	Surface water flooding					
43	8.1	<u>Surface water flooding</u>	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
45	9.1	<u>Groundwater flooding</u>	High (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
46	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	1
47	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
47	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
47	10.4	Special Protection Areas (SPA)	0	0	0	0	0
47	10.5	National Nature Reserves (NNR)	0	0	0	0	0
48	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
48	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	5
48	10.8	Biosphere Reserves	0	0	0	0	0
49	10.9	Forest Parks	0	0	0	0	0
49	10.10	Marine Conservation Zones	0	0	0	0	0
49	10.11	Green Belt	0	0	0	0	0
49	10.12	Proposed Ramsar sites	0	0	0	0	0



49	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
50	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
50	10.15	Nitrate Sensitive Areas	0	0	0	0	0
50	10.16	<u>Nitrate Vulnerable Zones</u>	2	0	0	0	1
51	10.17	<u>SSSI Impact Risk Zones</u>	2	-	-	-	-
53	10.18	<u>SSSI Units</u>	0	0	0	0	1
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>	1	2	1	-	-
56	11.5	Conservation Areas	0	0	0	-	-
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>	Grade 3 (within 250m)				
58	12.2	Open Access Land	0	0	0	-	-
58	12.3	Tree Felling Licences	0	0	0	-	-
58	12.4	<u>Environmental Stewardship Schemes</u>	1	1	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	<u>Priority Habitat Inventory</u>	1	0	2	-	-
60	13.2	Habitat Networks	0	0	0	-	-
60	13.3	Open Mosaic Habitat	0	0	0	-	-
60	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
61	14.1	<u>10k Availability</u>	Identified (within 500m)				
62	14.2	<u>Artificial and made ground (10k)</u>	0	0	2	1	-
63	14.3	<u>Superficial geology (10k)</u>	1	1	3	4	-



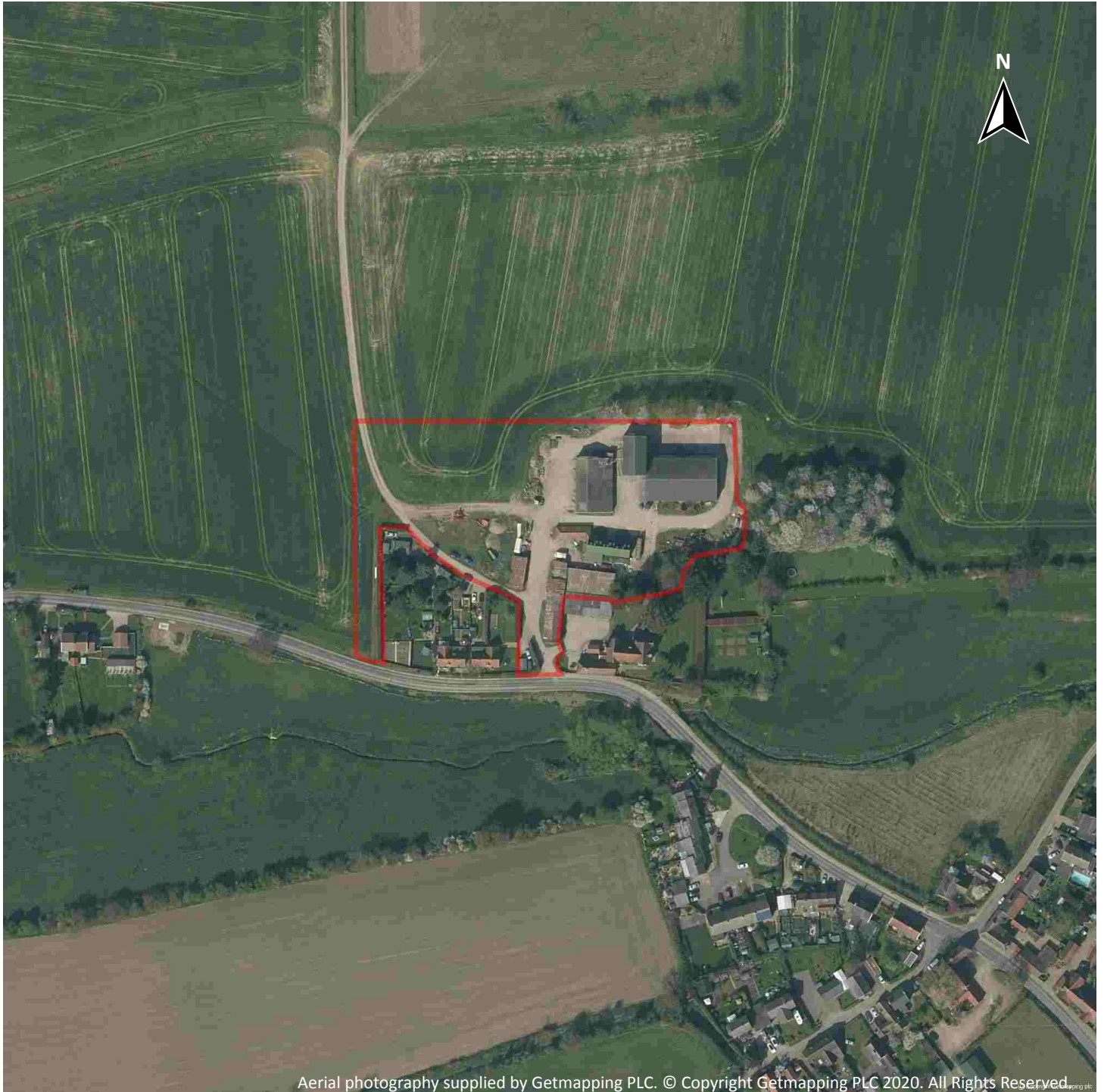
64	14.4	Landslip (10k)	0	0	0	0	-
65	14.5	<u>Bedrock geology (10k)</u>	1	1	1	0	-
66	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
67	15.1	<u>50k Availability</u>	Identified (within 500m)				
68	15.2	Artificial and made ground (50k)	0	0	0	0	-
68	15.3	Artificial ground permeability (50k)	0	0	-	-	-
69	15.4	<u>Superficial geology (50k)</u>	2	0	3	3	-
70	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
70	15.6	Landslip (50k)	0	0	0	0	-
70	15.7	Landslip permeability (50k)	None (within 50m)				
71	15.8	<u>Bedrock geology (50k)</u>	1	1	1	0	-
72	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
72	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
73	16.1	<u>BGS Boreholes</u>	1	1	5	-	-
Page	Section	Natural ground subsidence					
75	17.1	<u>Shrink swell clays</u>	Low (within 50m)				
76	17.2	<u>Running sands</u>	Low (within 50m)				
78	17.3	<u>Compressible deposits</u>	Moderate (within 50m)				
80	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
81	17.5	<u>Landslides</u>	Very low (within 50m)				
83	17.6	<u>Ground dissolution of soluble rocks</u>	Moderate (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
85	18.1	Natural cavities	0	0	0	0	-
86	18.2	<u>BritPits</u>	0	0	1	0	-
86	18.3	<u>Surface ground workings</u>	0	4	2	-	-
87	18.4	<u>Underground workings</u>	0	0	0	0	1
87	18.5	Historical Mineral Planning Areas	0	0	0	0	-



87	18.6	<u>Non-coal mining</u>		1	0	0	3	2
88	18.7	Mining cavities		0	0	0	0	0
88	18.8	JPB mining areas	None (within 0m)					
88	18.9	Coal mining	None (within 0m)					
89	18.10	Brine areas	None (within 0m)					
89	18.11	Gypsum areas	None (within 0m)					
89	18.12	Tin mining	None (within 0m)					
89	18.13	Clay mining	None (within 0m)					
Page	Section	Radon						
90	19.1	<u>Radon</u>	Less than 1% (within 0m)					
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m	
91	20.1	<u>BGS Estimated Background Soil Chemistry</u>	4	0	-	-	-	
91	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-	
91	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	
92	21.1	Underground railways (London)	0	0	0	-	-	
92	21.2	Underground railways (Non-London)	0	0	0	-	-	
92	21.3	Railway tunnels	0	0	0	-	-	
92	21.4	Historical railway and tunnel features	0	0	0	-	-	
92	21.5	Royal Mail tunnels	0	0	0	-	-	
93	21.6	Historical railways	0	0	0	-	-	
93	21.7	Railways	0	0	0	-	-	
93	21.8	Crossrail 1	0	0	0	0	-	
93	21.9	Crossrail 2	0	0	0	0	-	
93	21.10	HS2	0	0	0	0	-	



Recent aerial photograph

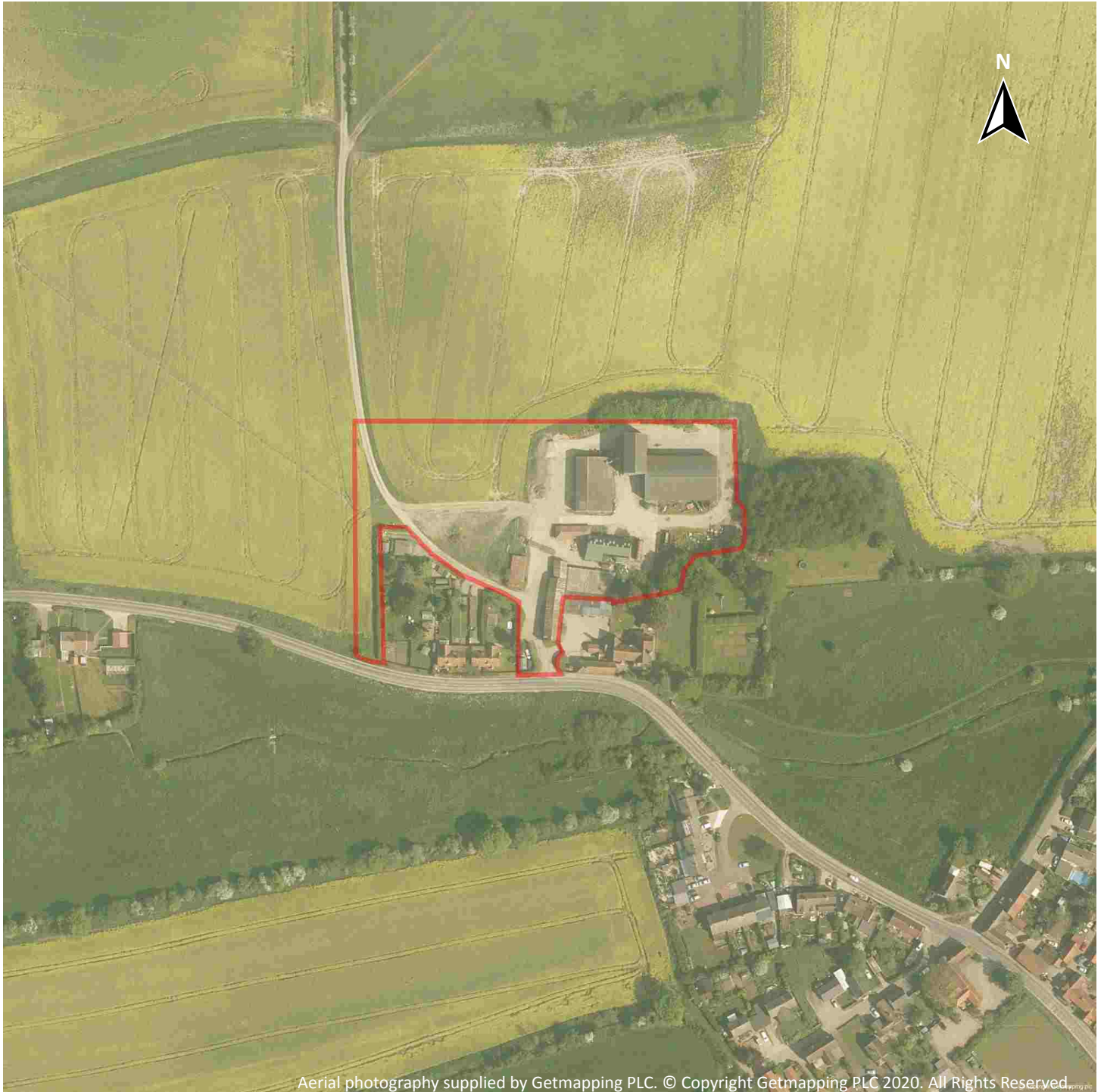


Capture Date: 09/04/2017

Site Area: 1.19ha



Recent site history - 2014 aerial photograph

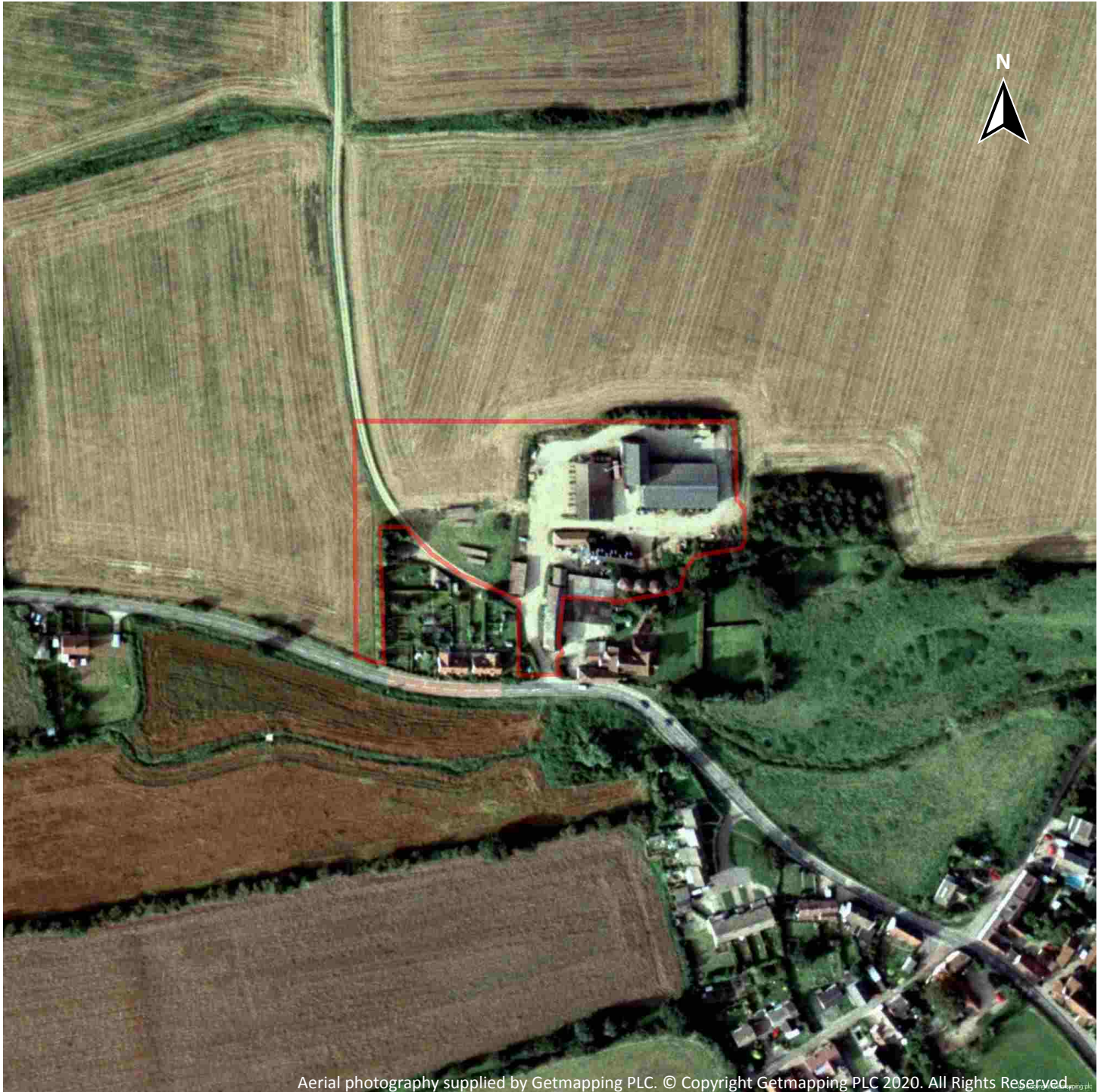


Capture Date: 05/05/2014

Site Area: 1.19ha



Recent site history - 1999 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2020. All Rights Reserved.

Capture Date: 26/06/1999

Site Area: 1.19ha



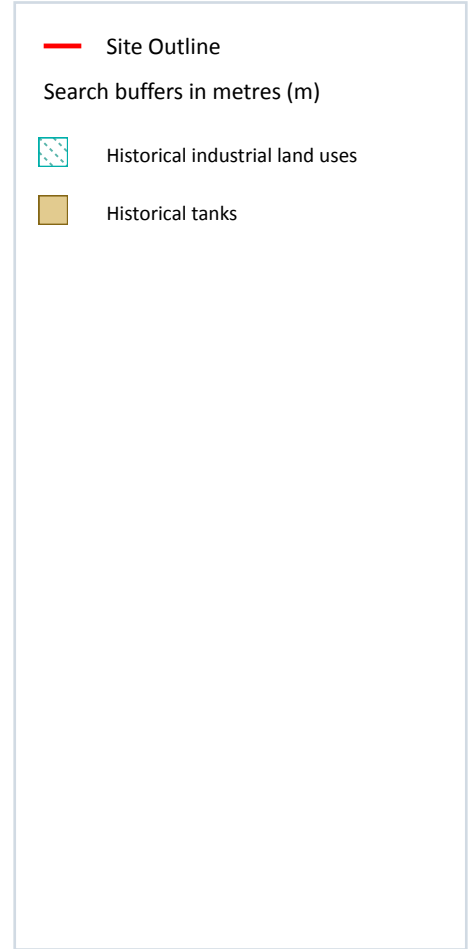
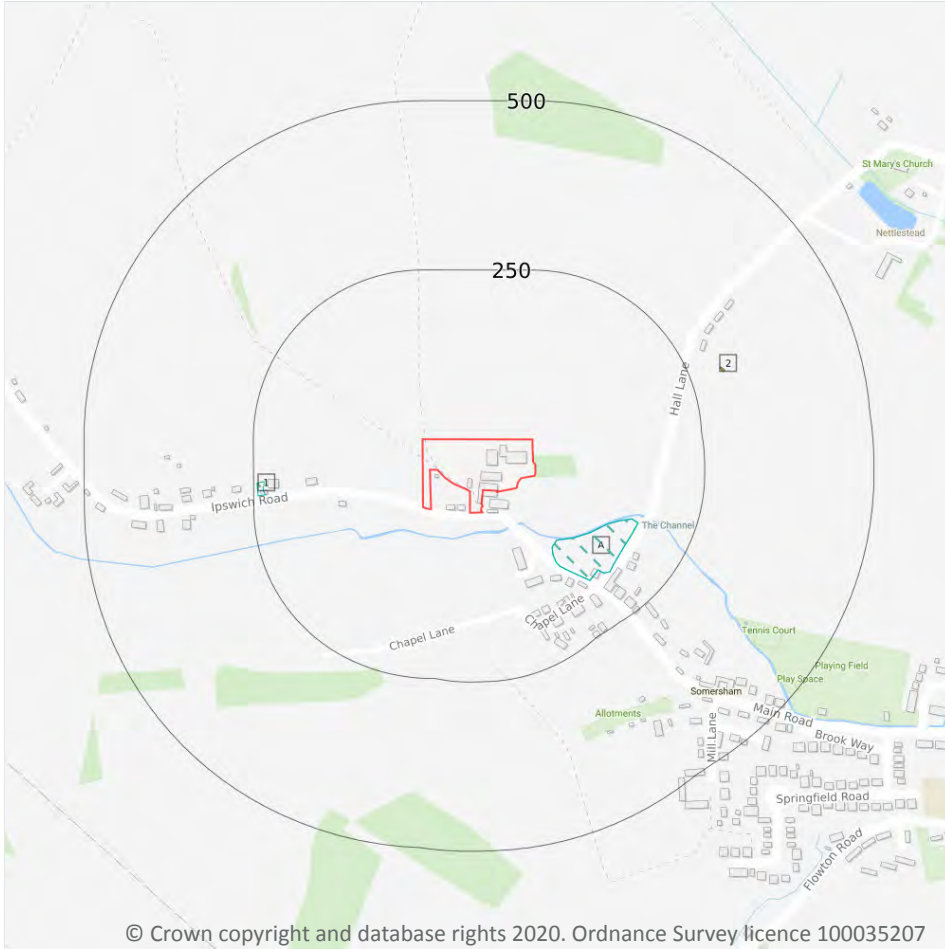
OS MasterMap site plan



Site Area: 1.19ha



1 Past land use



1.1 Historical industrial land uses

Records within 500m

3

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 12**

ID	Location	Land use	Dates present	Group ID
A	97m SE	Unspecified Pit	1905	2332413

ID	Location	Land use	Dates present	Group ID
A	97m SE	Unspecified Pit	1884	2340651
1	233m W	Police Station	1884	2324608

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

1

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'.

Features are displayed on the Past land use map on **page 12**

ID	Location	Land use	Dates present	Group ID
2	296m E	Sewage Tanks	1967	417030

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

0

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'.

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

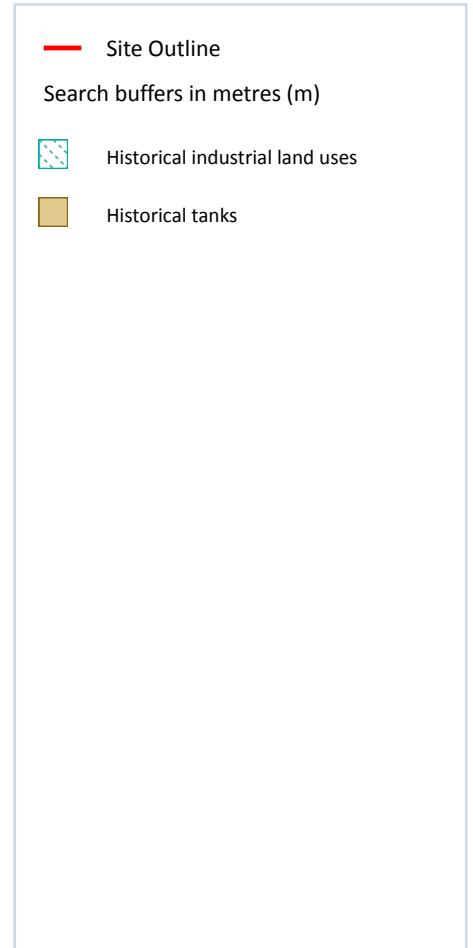
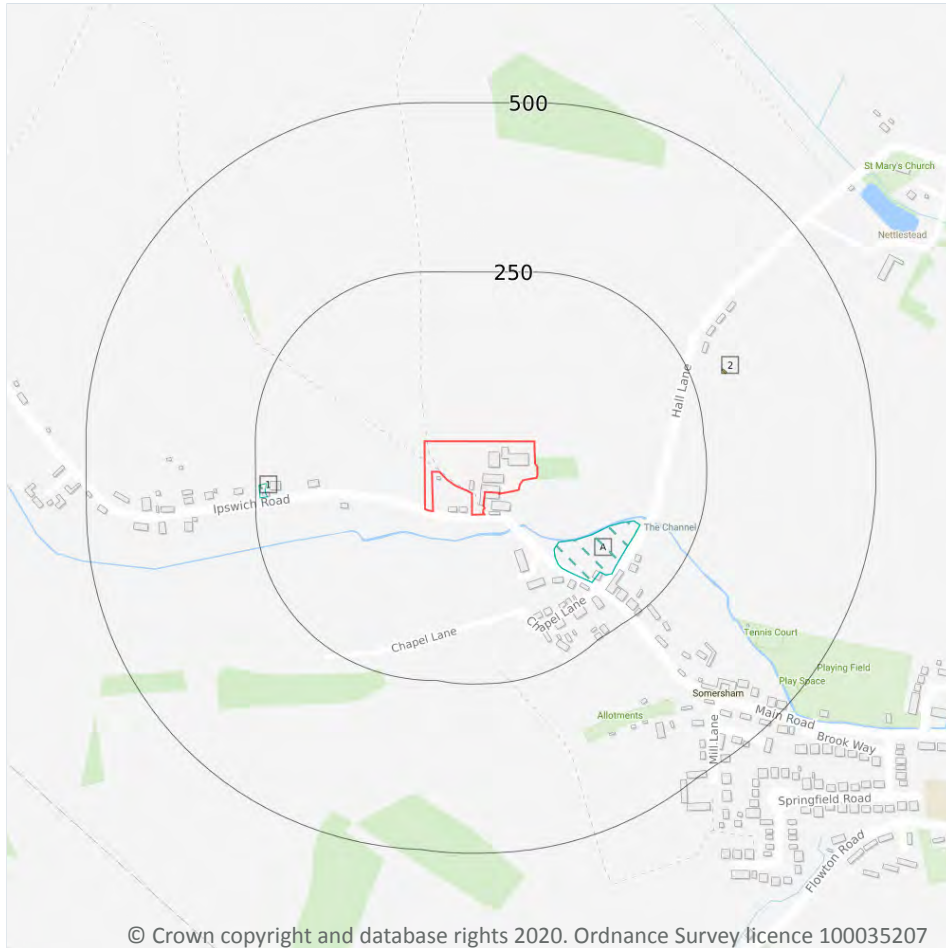
0

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



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

2.1 Historical industrial land uses

Records within 500m

3

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 15**

ID	Location	Land Use	Date	Group ID
A	97m SE	Unspecified Pit	1905	2332413
A	97m SE	Unspecified Pit	1884	2340651
1	233m W	Police Station	1884	2324608

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

1

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'.

Features are displayed on the Past land use - un-grouped map on **page 15**

ID	Location	Land Use	Date	Group ID
2	296m E	Sewage Tanks	1967	417030

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

0

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'.

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

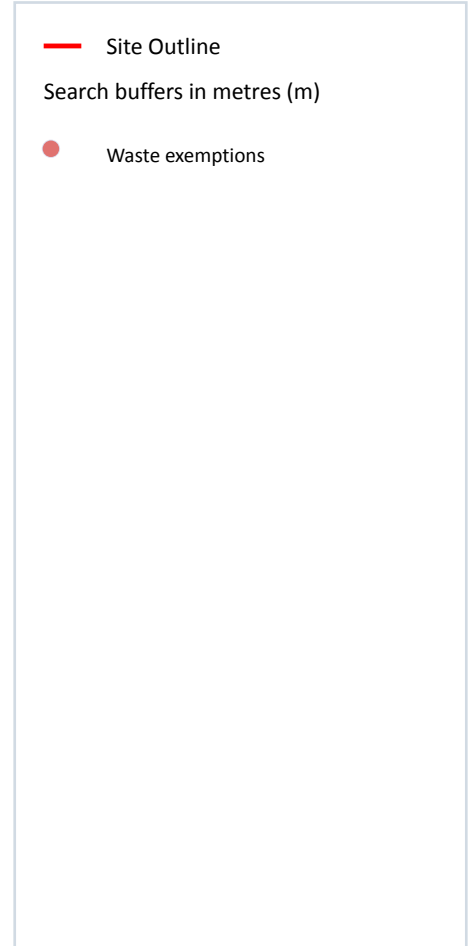
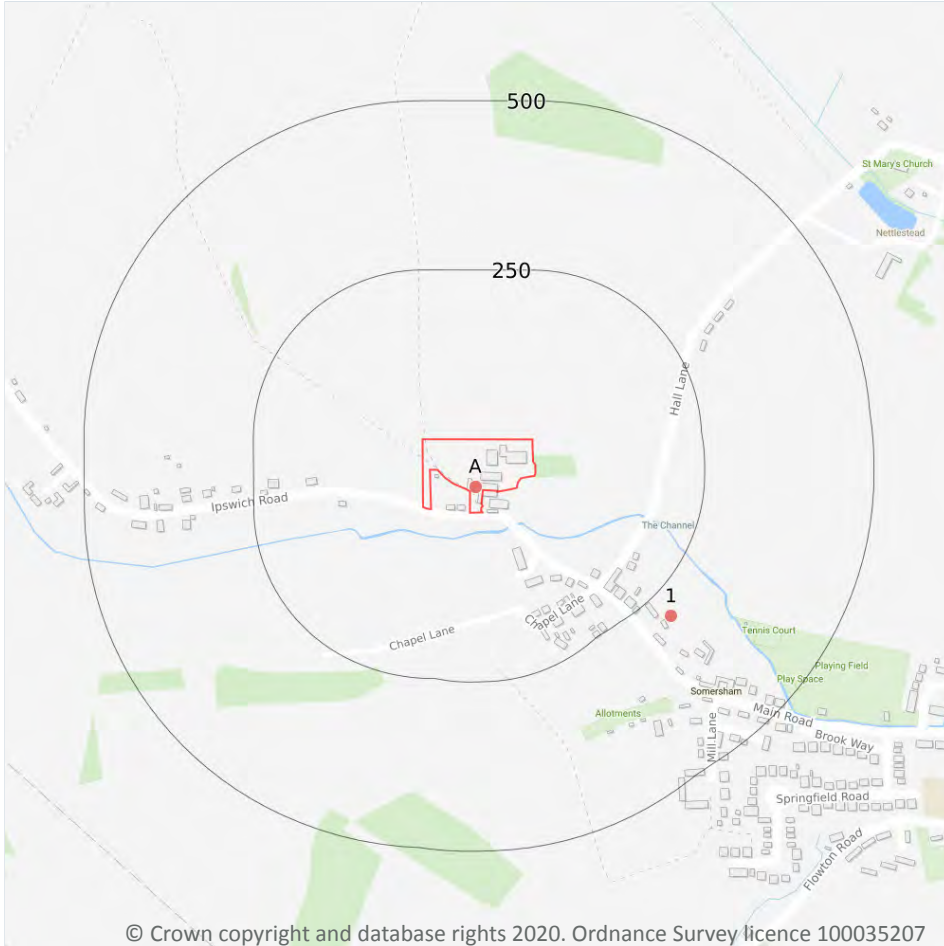
0

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



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

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

7

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 17**

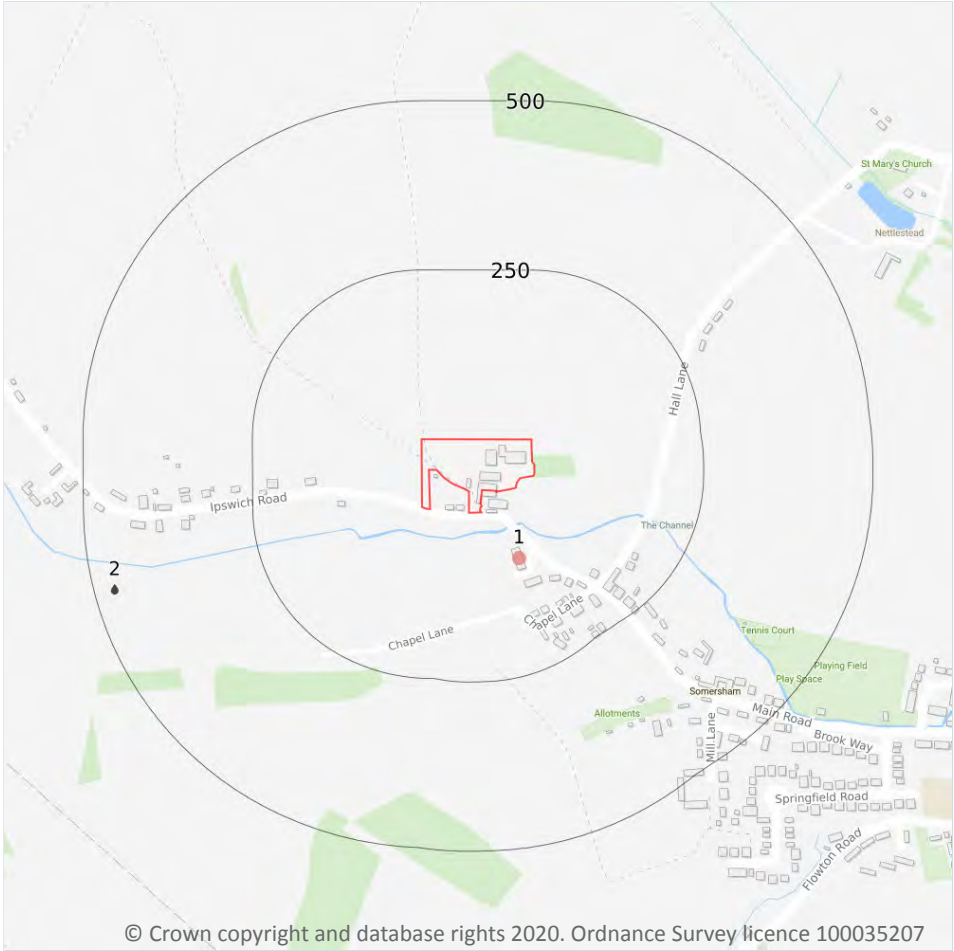


ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in a secure place
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Treating waste exemption	Agricultural Waste Only	Crushing and emptying waste vehicle oil filters
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Treating waste exemption	Agricultural Waste Only	Recovery of scrap metal
A	On site	Blakenham Farms Watering Farm Nettlestead Suffolk IP8 4QH	EPR/BH0679B B/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
1	289m SE	-	WEX125545	Storing waste exemption	On a farm	Storage of sludge

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 Discharges to controlled waters

© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

4.1 Recent industrial land uses

Records within 250m **1**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 20**

ID	Location	Company	Address	Activity	Category
1	87m SE	Pumps & Filtration	7, Watering Close, Lower Somersham, Ipswich, Suffolk, IP8 4QG	Air and Water Filtration	Industrial Products

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

0

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.

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 20**

ID	Location	Address	Details	
2	470m W	OFFTON LODGE, OFFTON, IPSWICH, IP8 4SF	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR4NF288 Permit Version: 1 Receiving Water: Somersham Watercourse River Gi	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 21/10/1985 Effective Date: 21/10/1985 Revocation Date: 01/07/1991

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

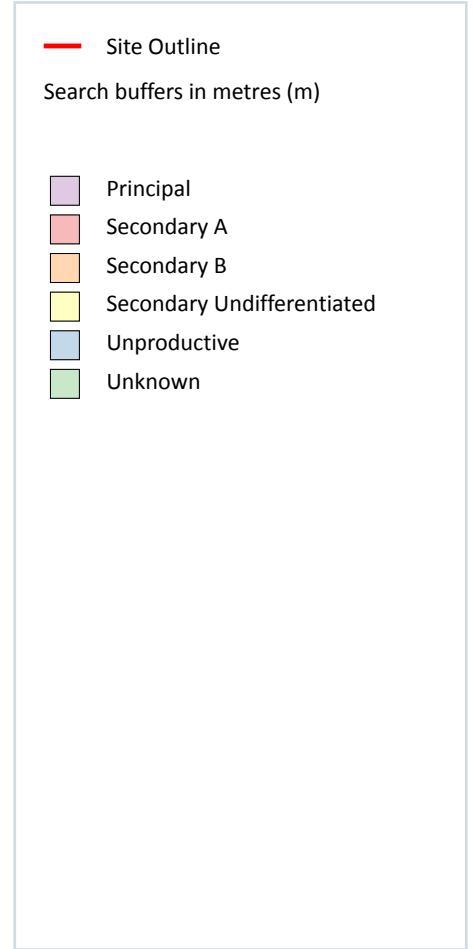
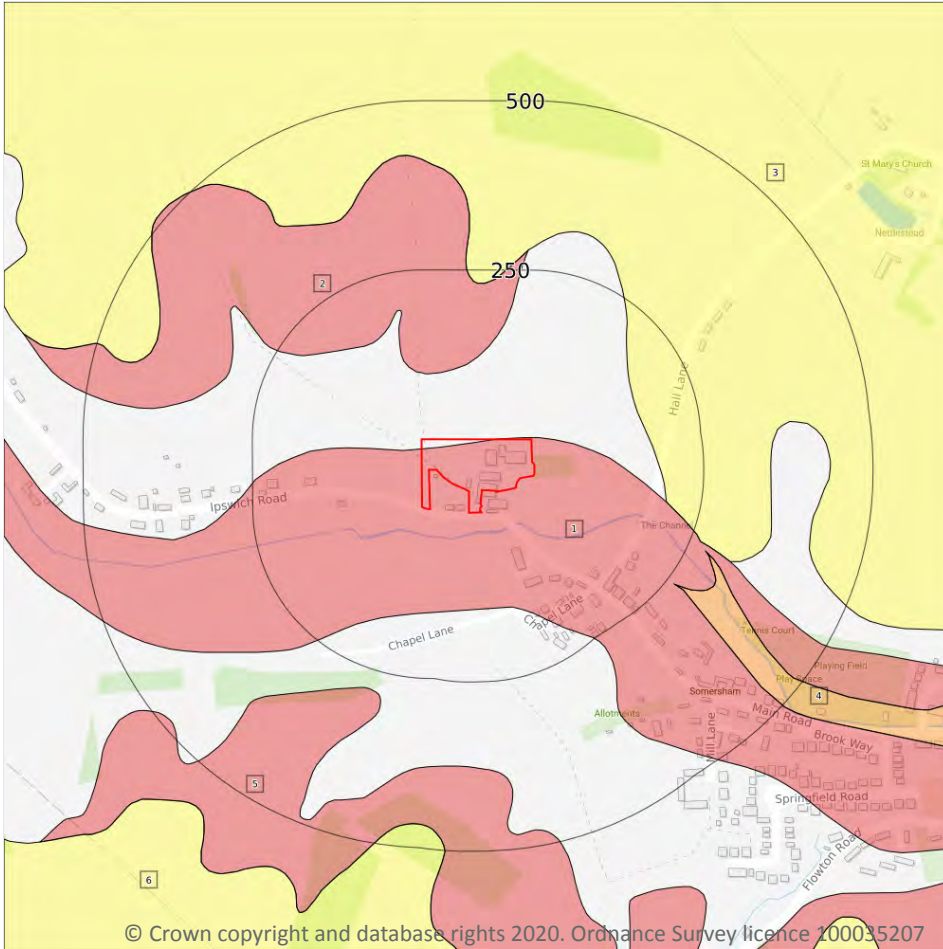
0

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



5.1 Superficial aquifer

Records within 500m

6

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 26**

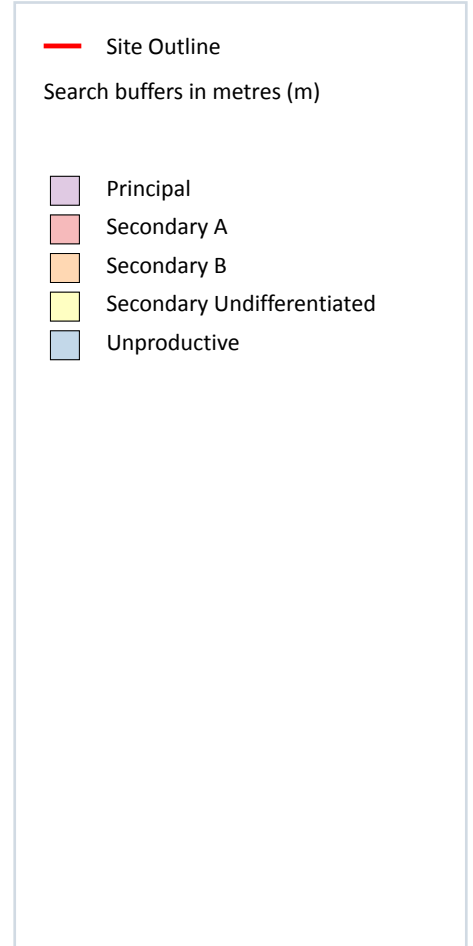
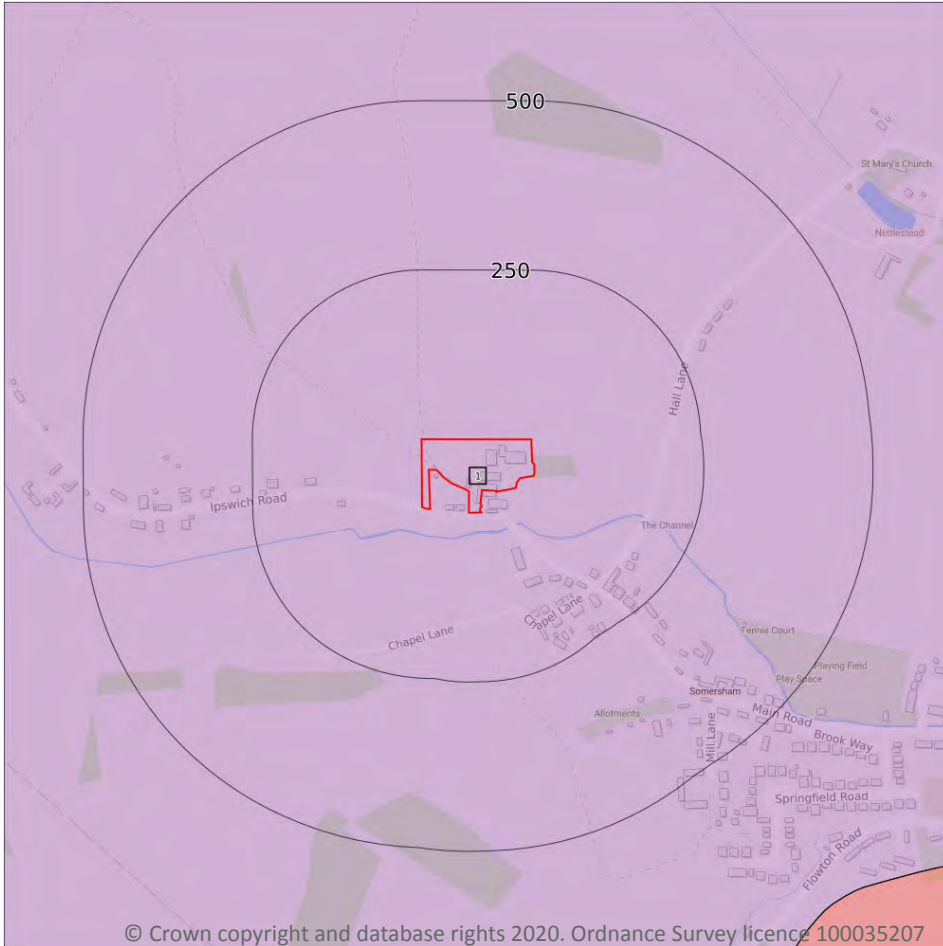
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	96m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	161m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	264m SE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
5	279m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	465m S	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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



Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m

1

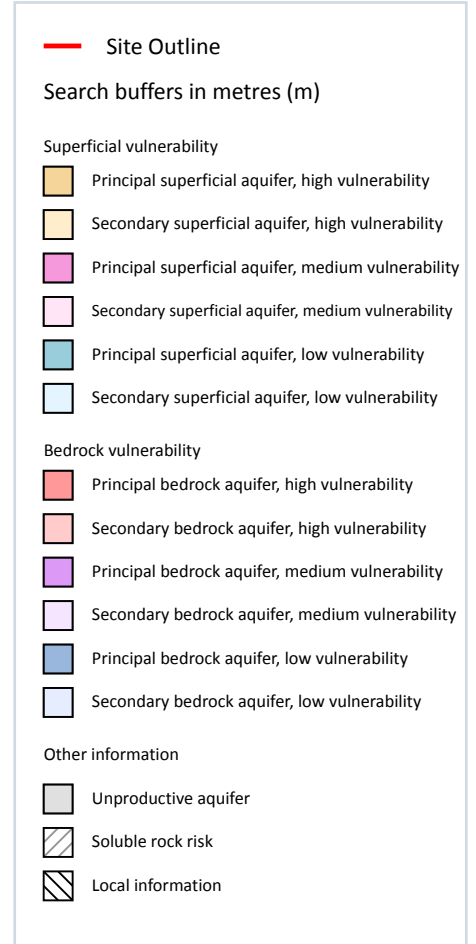
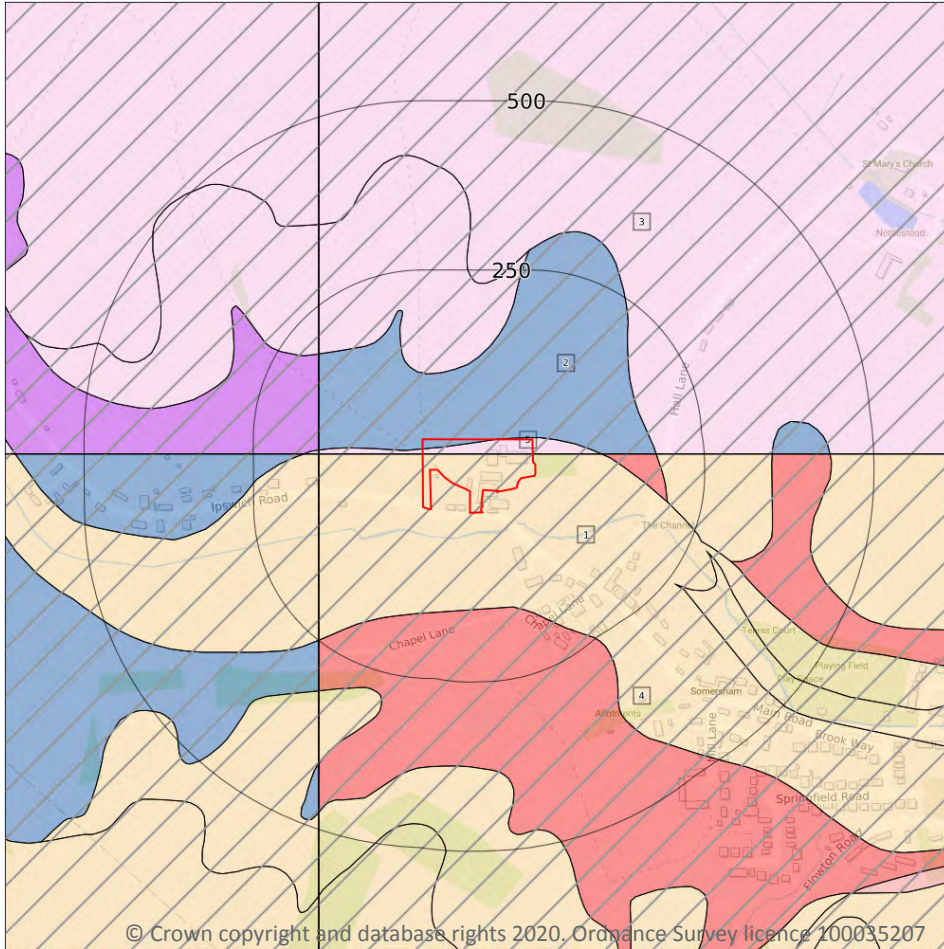
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 28**

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

3

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 29**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
2	On site	Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	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	2
------------------------	----------

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
3	Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.	0.0%
4	Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.	3.0%

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



5.5 Groundwater vulnerability- local information

Records on site

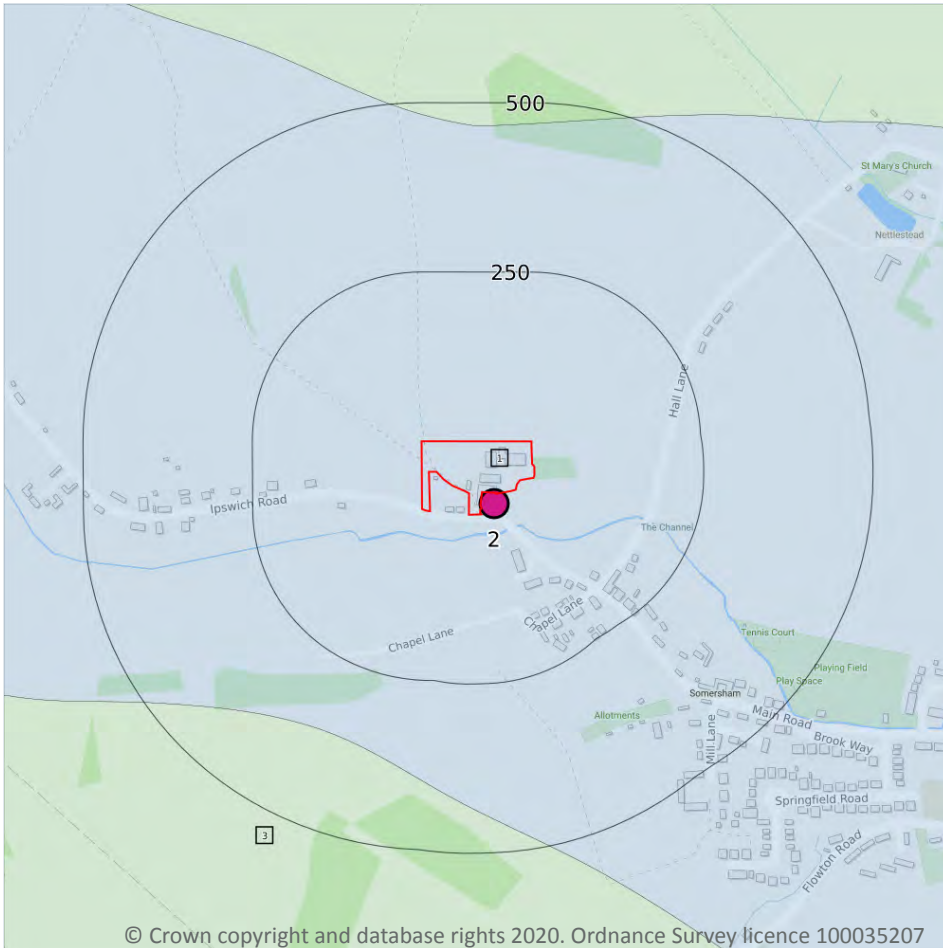
0

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

9

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 32**

ID	Location	Details	
2	14m S	Status: Active Licence No: 7/35/08/*G/0135 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT TUDOR GRANGE,NETTLES'D Data Type: Point Name: BLAKENHAM FARMS Easting: 608260 Northing: 248930	Annual Volume (m ³): 18,024 Max Daily Volume (m ³): 91.50 Original Application No: - Original Start Date: 01/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1967 Version End Date: -
-	710m N	Status: Active Licence No: 7/35/08/*G/0135 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT ROOKERY FM,NETTLESTEAD Data Type: Point Name: BLAKENHAM FARMS Easting: 608100 Northing: 249730	Annual Volume (m ³): 18,024 Max Daily Volume (m ³): 91.50 Original Application No: - Original Start Date: 01/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1967 Version End Date: -
-	1260m W	Status: Historical Licence No: 7/35/08/*G/0082 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT CALEY GREEN FM,L SOMER Data Type: Point Name: SVENDSEN Easting: 606950 Northing: 248550	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/02/1973 Version End Date: -
-	1479m W	Status: Historical Licence No: 7/35/08/*G/0062 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT HILL FM,SOMERSHAM Data Type: Point Name: ROLPH Easting: 606700 Northing: 248650	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/02/1973 Version End Date: -
-	1592m E	Status: Active Licence No: 7/35/08/*G/0135 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT ELM FM,L BLAKENHAM Data Type: Point Name: BLAKENHAM FARMS Easting: 609900 Northing: 248770	Annual Volume (m ³): 18,024 Max Daily Volume (m ³): 91.50 Original Application No: - Original Start Date: 01/01/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1967 Version End Date: -



ID	Location	Details	
-	1766m SW	Status: Historical Licence No: 7/35/08/*G/0049 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT GUNN'S FM,SOMERSHAM Data Type: Point Name: LAFLIN Easting: 606590 Northing: 248100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/02/1966 Version End Date: -
-	1823m S	Status: Historical Licence No: 7/35/08/*G/0026 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT LOVETOFTS FM,FLOWTON Data Type: Point Name: CALDWELL-SMITH Easting: 608510 Northing: 247110	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1966 Version End Date: -
-	1898m E	Status: Historical Licence No: 7/35/08/*G/0001 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BORE AT THE NUTTERY,L.BLAKEN'M Data Type: Point Name: RUNACRES Easting: 610150 Northing: 249510	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/11/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1970 Version End Date: -
-	1930m S	Status: Historical Licence No: 7/35/09/*G/0010 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT GROVE FM,FLOWTON Data Type: Point Name: LAFLIN Easting: 608560 Northing: 247010	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/02/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

0

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.

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



5.8 Potable abstractions

Records within 2000m

0

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.

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

5.9 Source Protection Zones

Records within 500m

2

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on **page 32**

ID	Location	Type	Description
1	On site	2	Outer catchment
3	357m S	3	Total catchment

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

5.10 Source Protection Zones (confined aquifer)

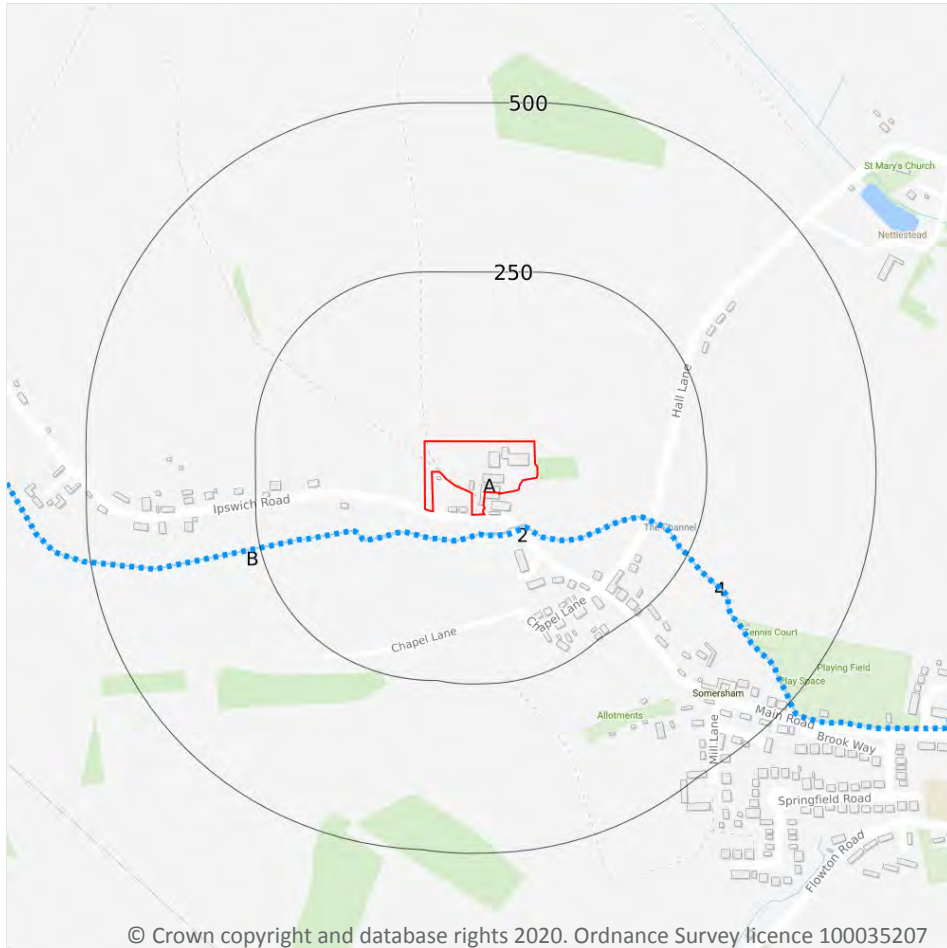
Records within 500m

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

3

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 36**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	29m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	The Channel

ID	Location	Type of water feature	Ground level	Permanence	Name
2	43m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	The Channel
4	52m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	The Channel

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	3
----------------------------	----------

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.

Features are displayed on the Hydrology map on **page 36**

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 36**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Somersham Watercourse	GB105035040310	Gipping	East Suffolk

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



6.4 WFD Surface water bodies

Records identified	1
---------------------------	----------

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.

Features are displayed on the Hydrology map on **page 36**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
1	29m S	River	Somersham Watercourse	GB105035040310	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

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

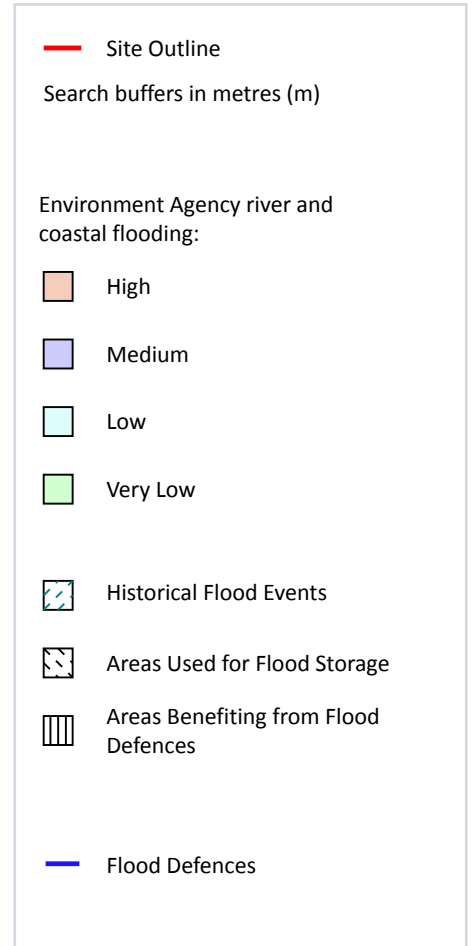
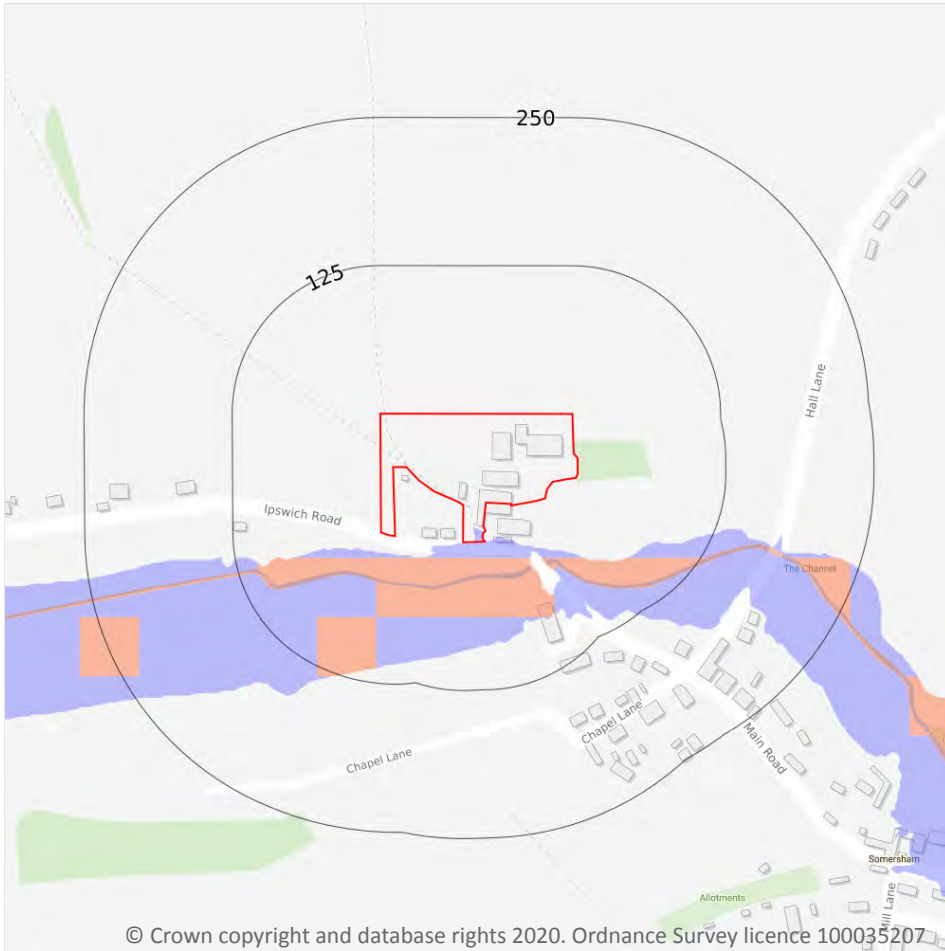
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 36**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Waveney and East Suffolk Chalk & Crag	GB40501G400600	Poor	Poor	Poor	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

4

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).

Features are displayed on the River and coastal flooding map on **page 39**

Distance	RoFRaS flood risk
On site	Medium
0 - 50m	High

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

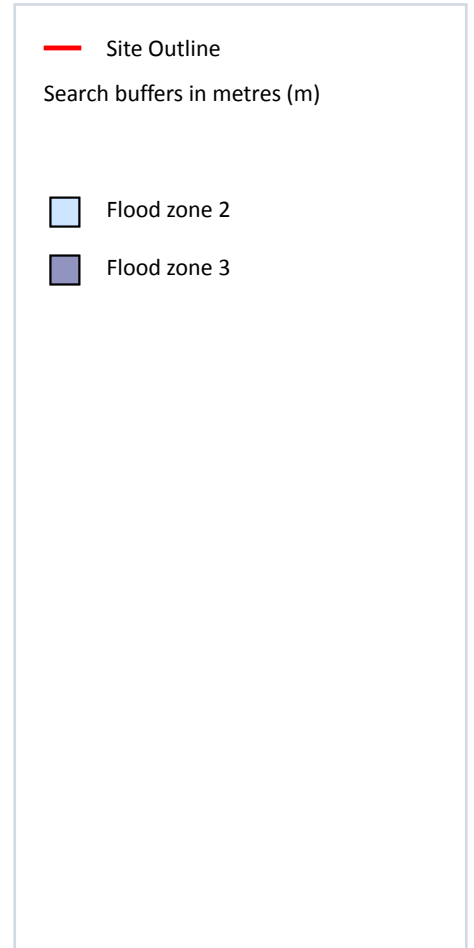
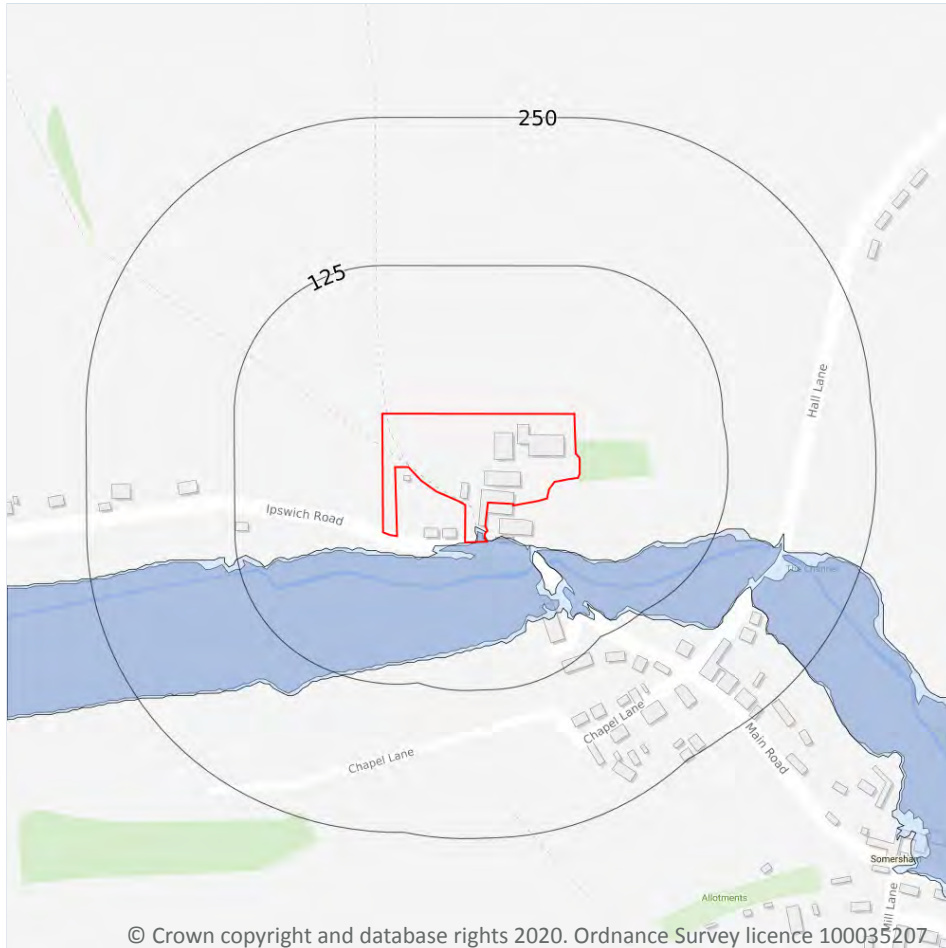
Records within 250m

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



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

7.6 Flood Zone 2

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on **page 39**

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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.

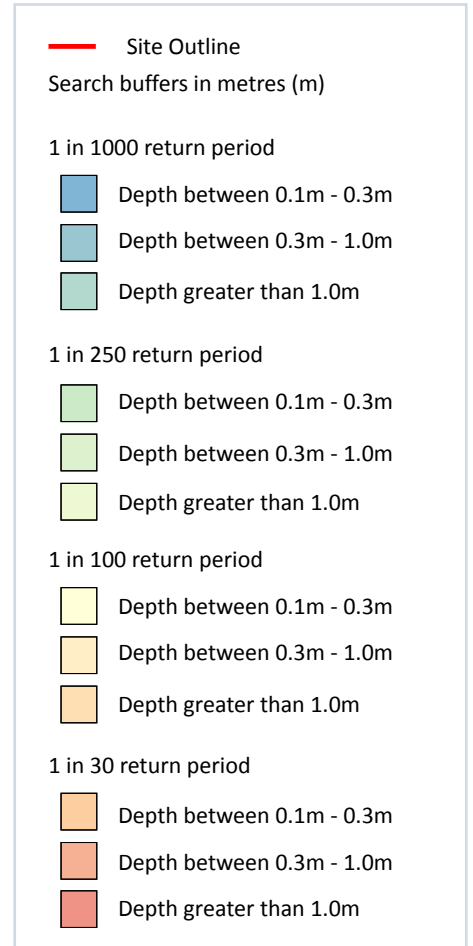
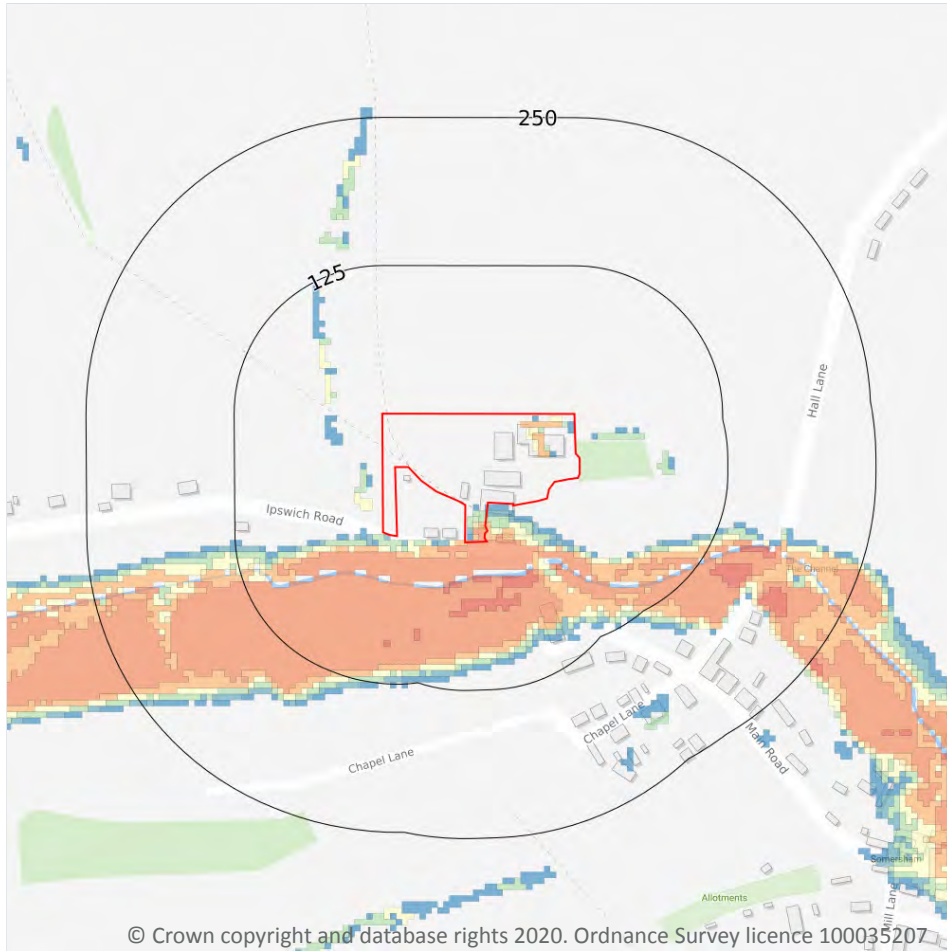
Features are displayed on the River and coastal flooding map on **page 39**

Location	Type
On site	Zone 3 - (Fluvial Models)

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 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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 43**

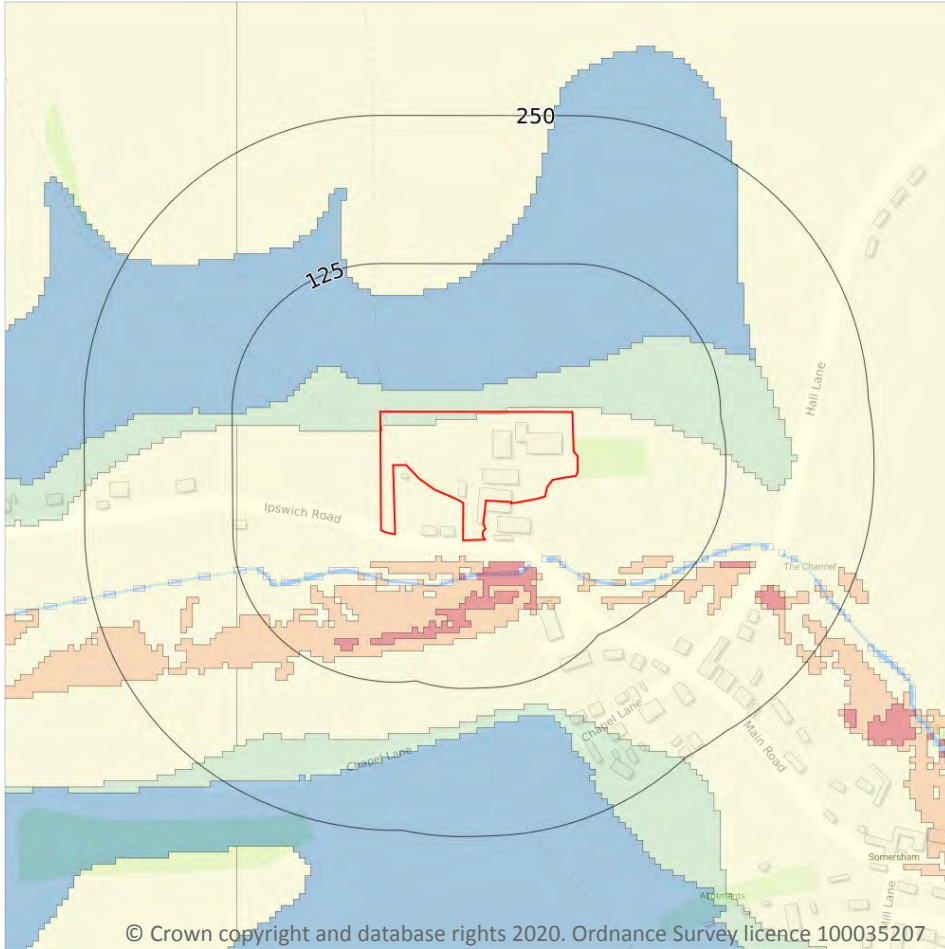
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

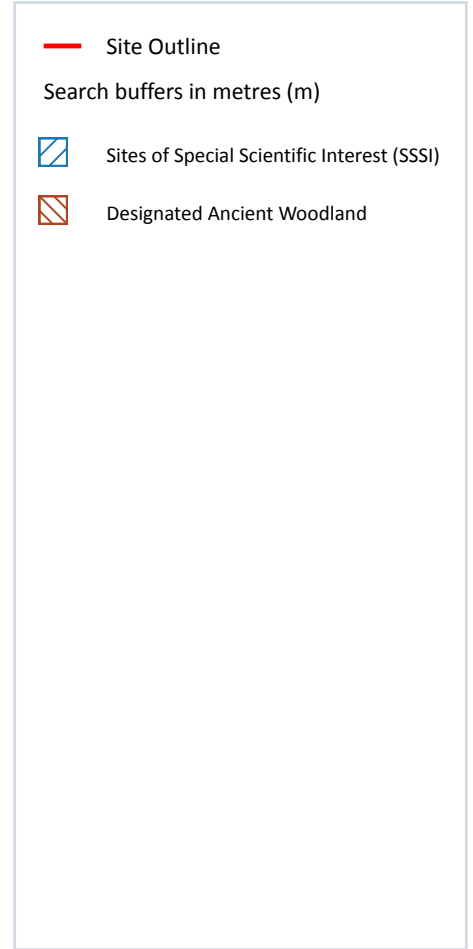
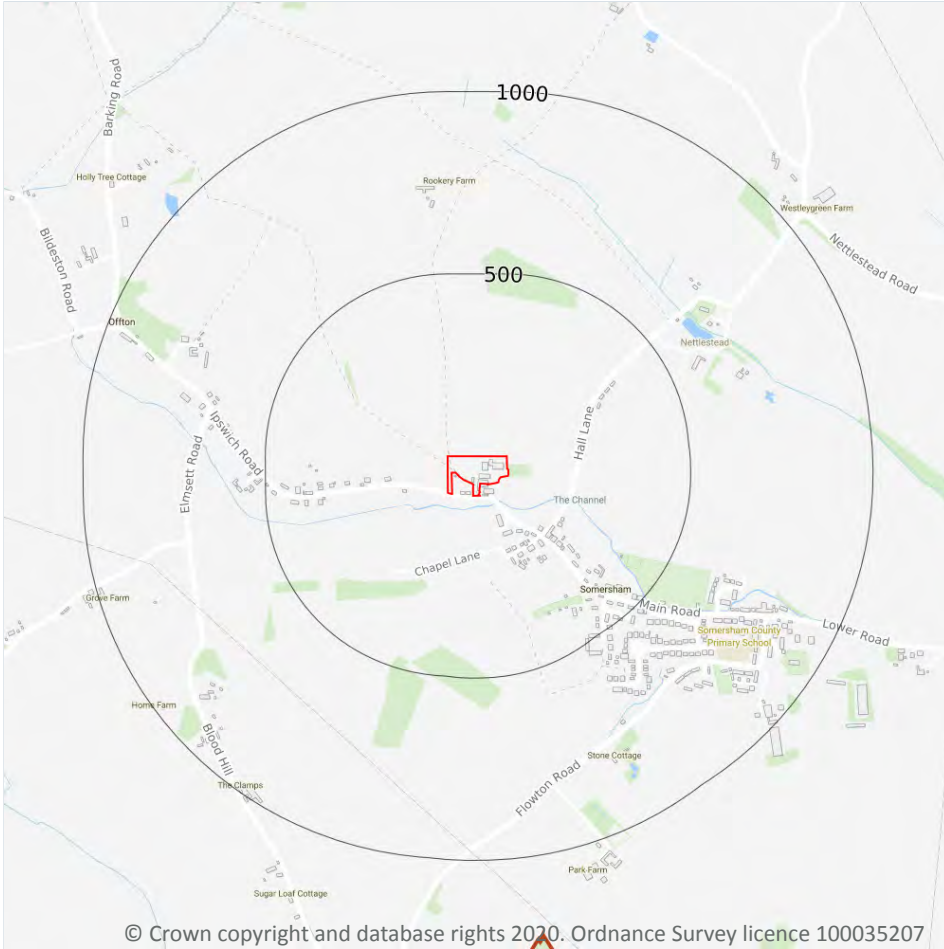
High

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 45**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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.

Features are displayed on the Environmental designations map on **page 46**

ID	Location	Name	Data source
-	1950m NW	Middle Wood, Offton	Natural England

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

5

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.

Features are displayed on the Environmental designations map on **page 46**

ID	Location	Name	Woodland Type
A	1217m S	SOMERSHAM PARK	Ancient & Semi-Natural Woodland
-	1328m S	SOMERSHAM PARK	Ancient Replanted Woodland
-	1360m S	SOMERSHAM PARK	Ancient & Semi-Natural Woodland
-	1791m N	Unknown	Ancient & Semi-Natural Woodland
-	1950m NW	MIDDLE WOOD	Ancient & Semi-Natural Woodland

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

3

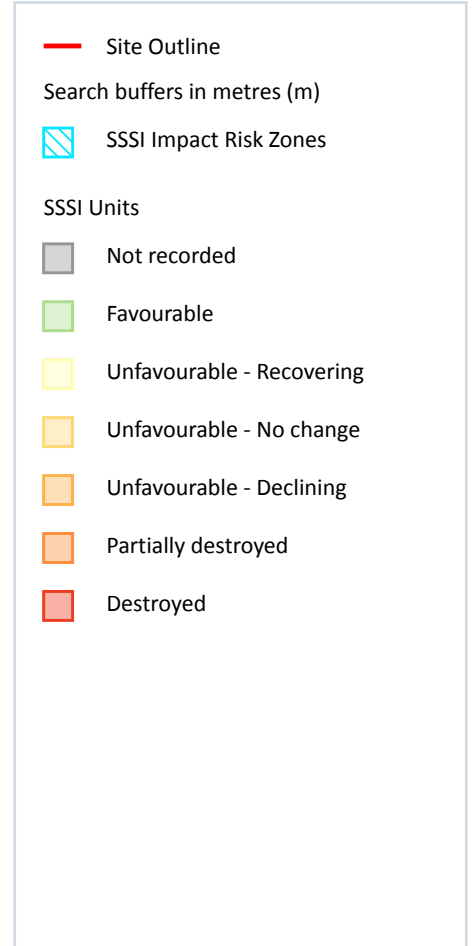
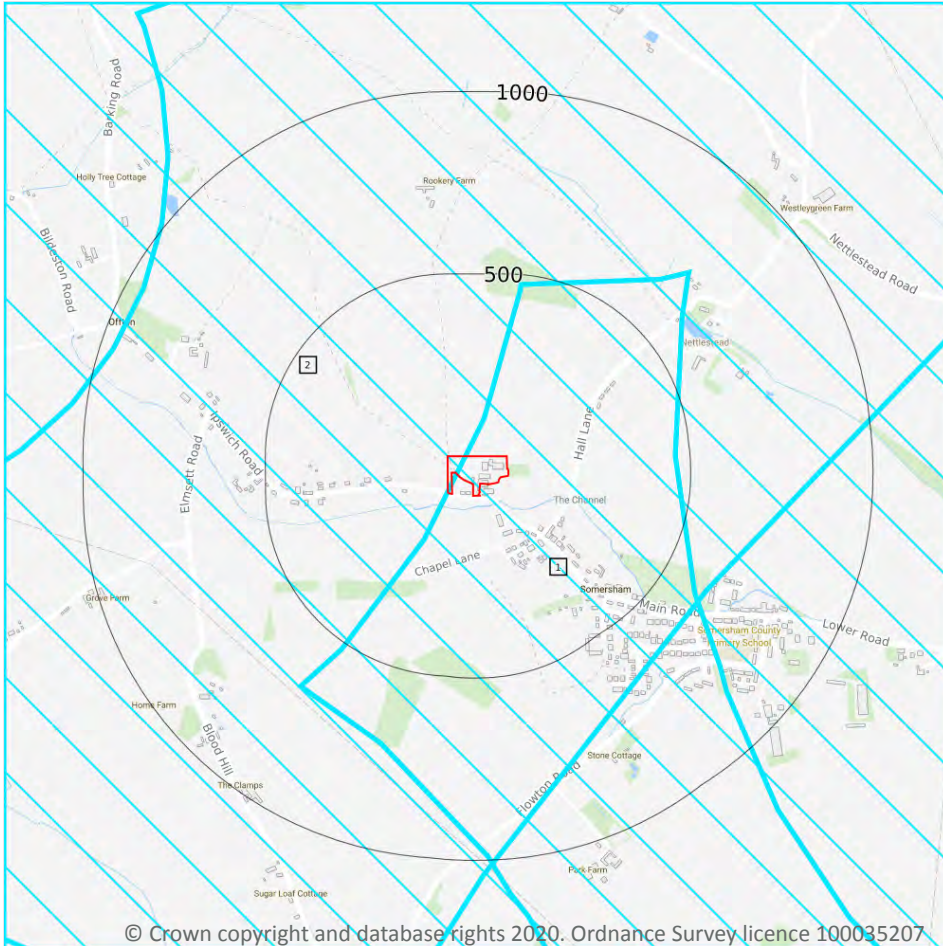
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	Sandlings and Chelmsford	Groundwater	G78	Existing
On site	River Gipping NVZ	Surface Water	S416	Existing
927m SW	Belstead Brook NVZ	Surface Water	S410	Existing

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



SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site

2

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 51**

ID	Location	Type of developments requiring consultation
1	On site	<p>All applications - All Planning Applications (Except Householder) Outside Or Extending Outside Existing Settlements/urban Areas Affecting Greenspace, Farmland, Semi Natural Habitats Or Landscape Features Such As Trees, Hedges, Streams, Rural Buildings/structures.</p> <p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Residential - Residential development of 50 units or more.</p> <p>Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.</p> <p>Notes: For new residential development in this area financial contributions are required towards the emerging Suffolk Recreational Disturbance Avoidance & Mitigation Strategy (RAMS). Contact the Local Planning Authority for further advice.</p>
2	On site	<p>All applications - All Planning Applications (Except Householder) Outside Or Extending Outside Existing Settlements/urban Areas Affecting Greenspace, Farmland, Semi Natural Habitats Or Landscape Features Such As Trees, Hedges, Streams, Rural Buildings/structures.</p> <p>Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Residential - Residential development of 50 units or more.</p> <p>Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & manure stores > 250t).</p> <p>Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.</p> <p>Notes: For new residential development in this area financial contributions are required towards the emerging Suffolk Recreational Disturbance Avoidance & Mitigation Strategy (RAMS). Contact the Local Planning Authority for further advice.</p>

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

1

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.

Features are displayed on the SSSI Impact Zones and Units map on **page 51**

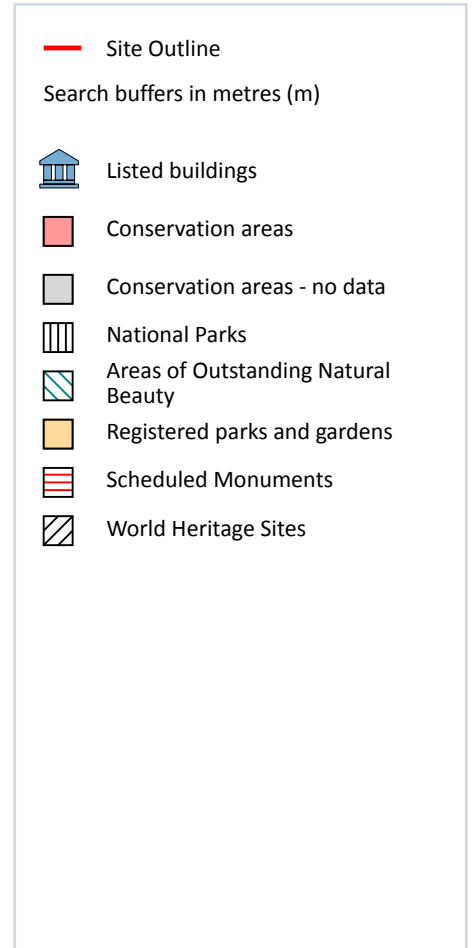
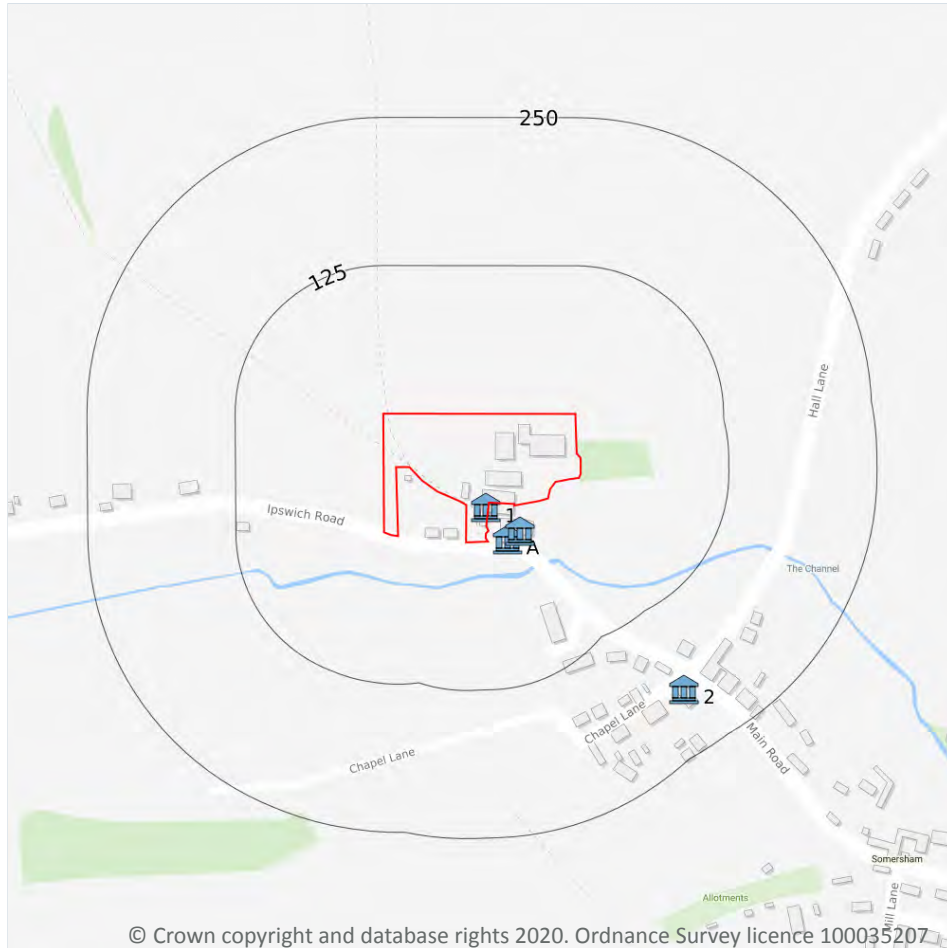
ID: -
Location: 1950m NW
SSSI name: Middle Wood, Offton
Unit name: Sentry
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Lowland mixed deciduous woodland	Favourable	29/11/2010

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



11 Visual and cultural designations



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

4

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
1	On site	Barn 20 Metres West Of Tudor Grange, Nettlestead, Mid Suffolk, Suffolk, IP8	II	1251581	09/12/1955
A	16m E	Dairy And Bakehouse Range Immediately South Of Tudor Grange, Nettlestead, Mid Suffolk, Suffolk, IP8	II	1250947	09/12/1955
A	22m S	Tudor Grange, Nettlestead, Mid Suffolk, Suffolk, IP8	II*	1263029	09/12/1955
2	198m SE	The Duke Of Malborough Public House, Somersham, Mid Suffolk, Suffolk, IP8	II	1251601	09/12/1955



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

11.5 Conservation Areas

Records within 250m

0

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.

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

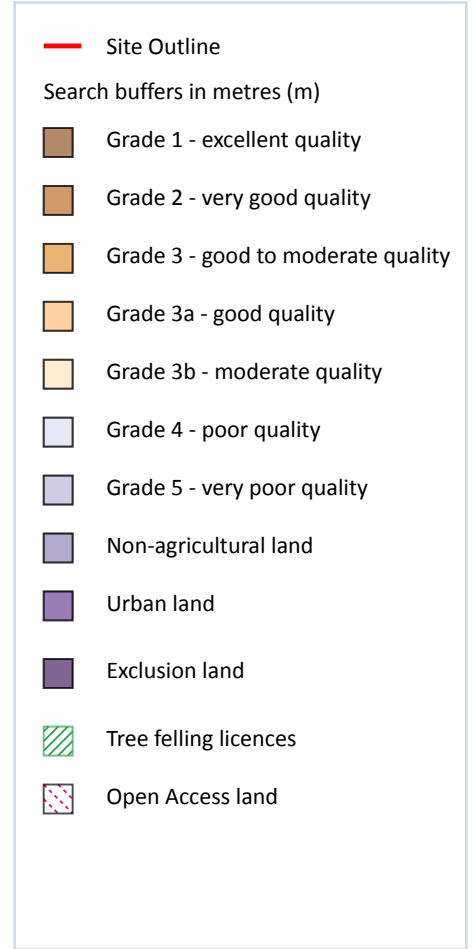
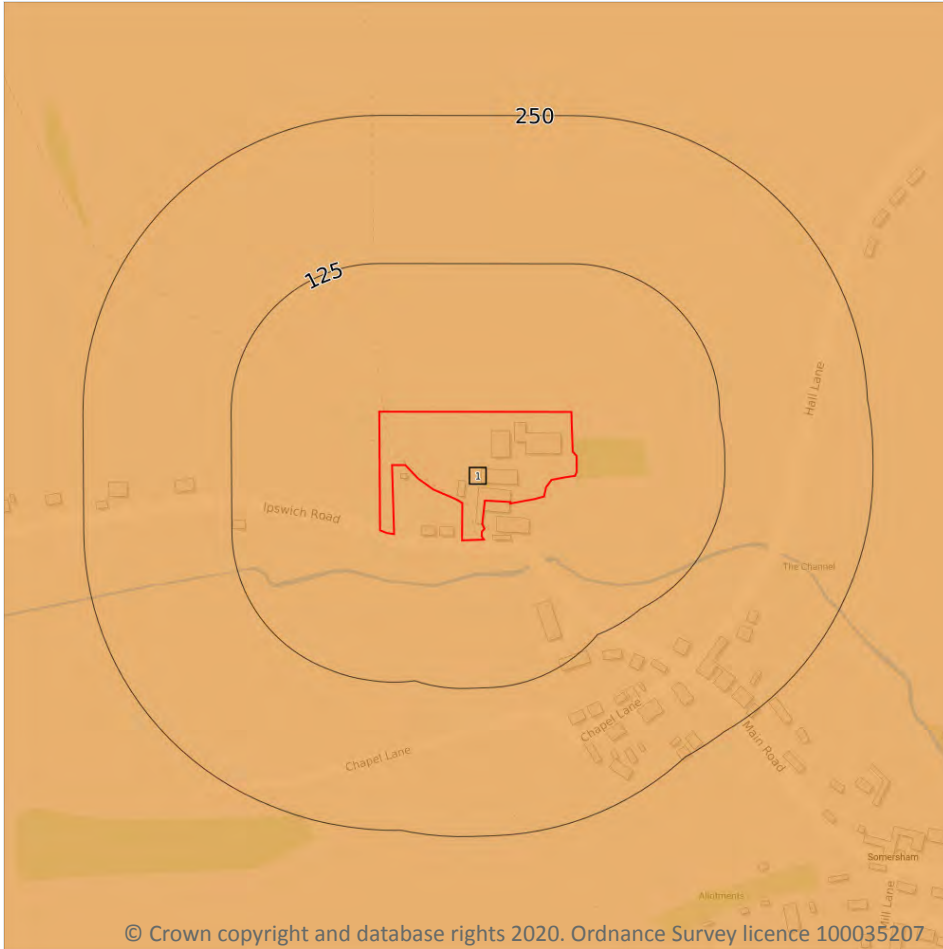
0

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



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	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

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

2

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

Location	Reference	Scheme	Start Date	End date
On site	AG00268385	Entry Level plus Higher Level Stewardship	01/05/2008	30/04/2018
8m SW	AG00268385	Entry Level plus Higher Level Stewardship	01/05/2008	30/04/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

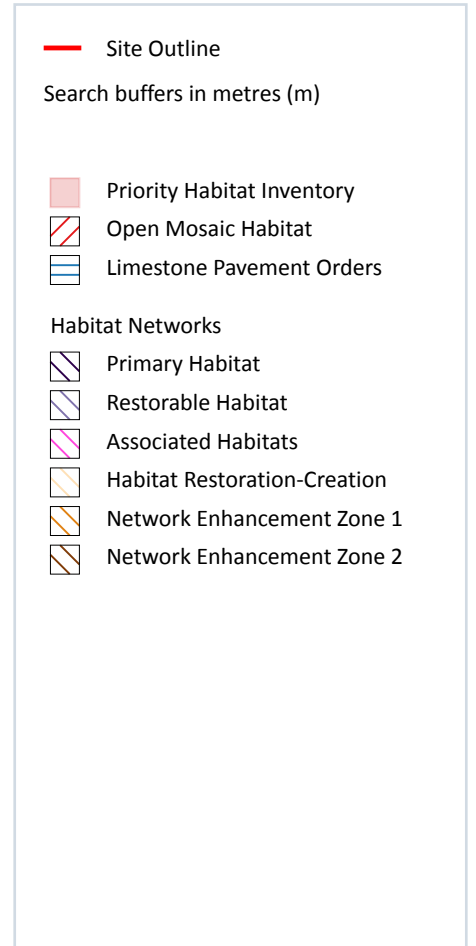
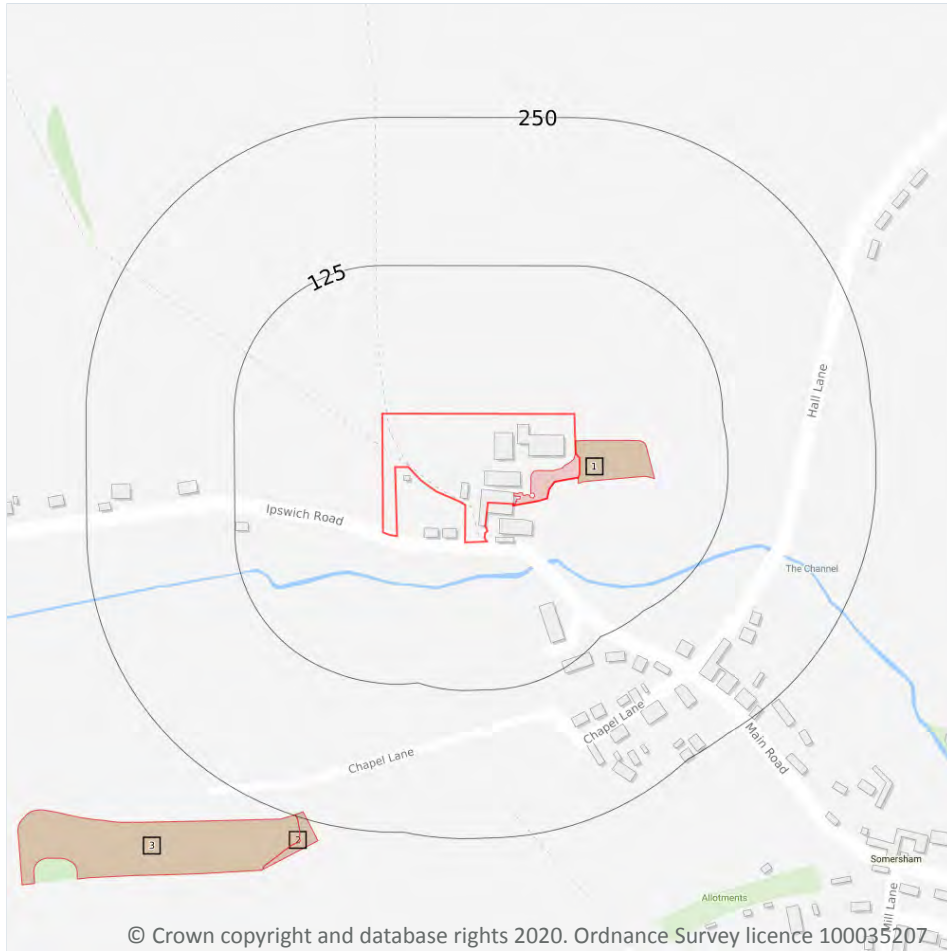
0

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

3

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

Features are displayed on the Habitat designations map on **page 59**

ID	Location	Main Habitat	Other habitats
1	On site	Traditional orchard	Main habitat: TORCH (INV > 50%)
2	245m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	249m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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

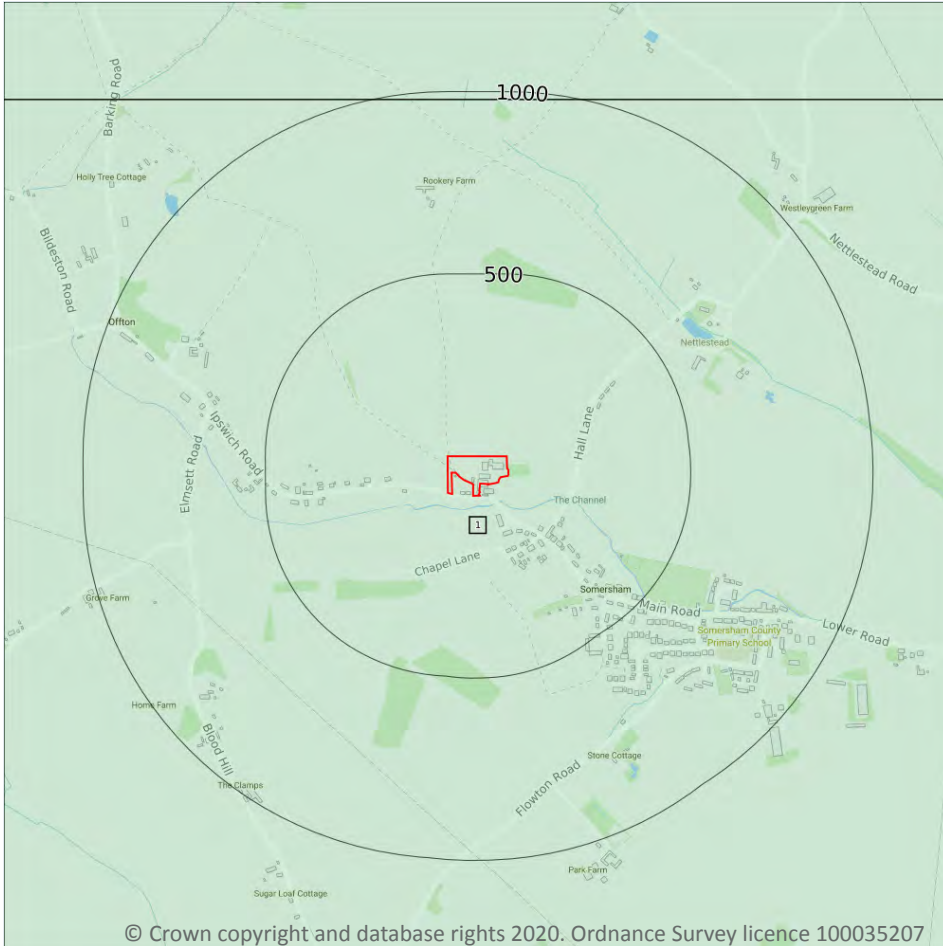
0

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

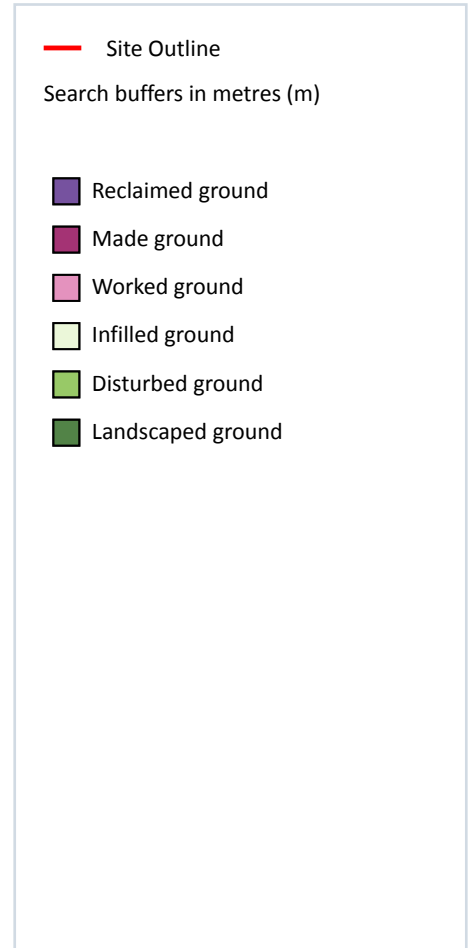
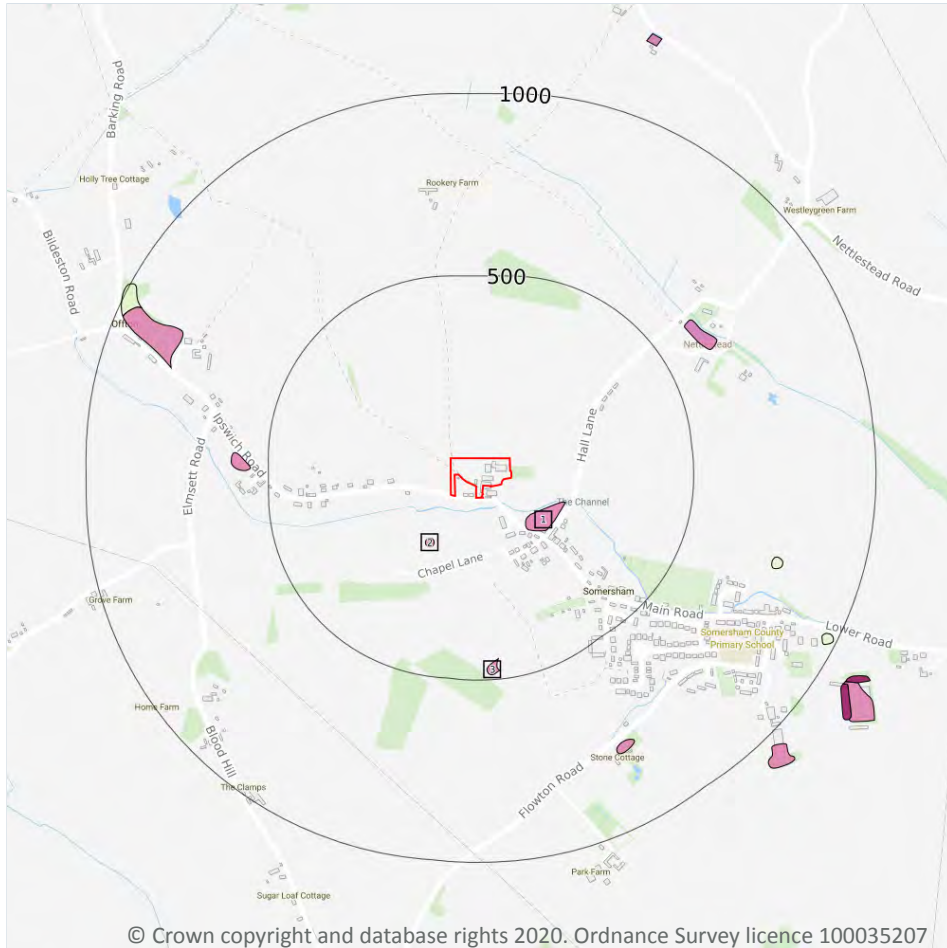
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 61**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	TM04NE

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

3

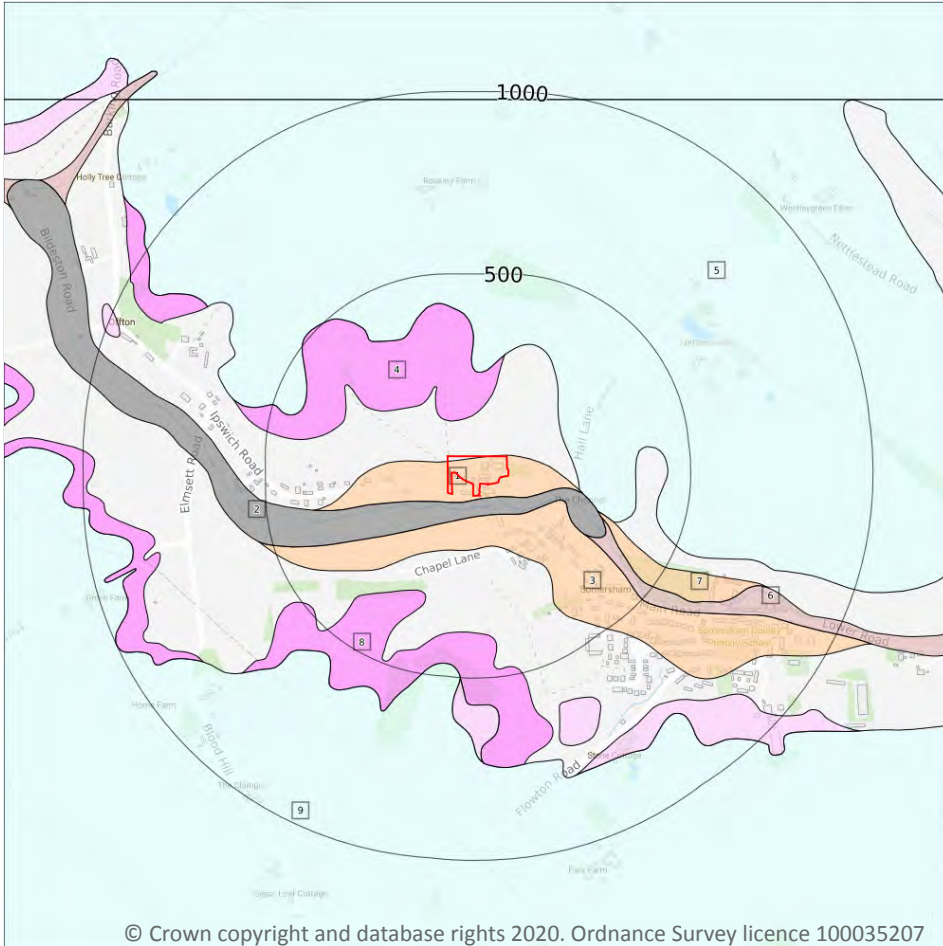
Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 62**

ID	Location	LEX Code	Description	Rock description
1	114m SE	WGR-VOID	Worked Ground (Undivided)	Void
2	131m SW	WGR-VOID	Worked Ground (Undivided)	Void
3	444m S	WGR-VOID	Worked Ground (Undivided)	Void

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

9

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 63**

ID	Location	LEX Code	Description	Rock description
1	On site	RTDU-XSV	River Terrace Deposits (undifferentiated) - Sand And Gravel	Sand And Gravel
2	9m S	ALV-CZ	Alluvium - Silty Clay	Clay, Silty
3	56m S	RTDU-XSV	River Terrace Deposits (undifferentiated) - Sand And Gravel	Sand And Gravel

ID	Location	LEX Code	Description	Rock description
4	96m N	KGCA-XSV	Kesgrave Catchment Subgroup - Sand And Gravel	Sand And Gravel
5	161m E	LOFT-DMTN	Lowestoft Formation - Diamicton	Diamicton
6	264m SE	HEAD-DMTN	Head - Diamicton	Diamicton
7	265m E	RTDU-XSV	River Terrace Deposits (undifferentiated) - Sand And Gravel	Sand And Gravel
8	279m S	KGCA-XSV	Kesgrave Catchment Subgroup - Sand And Gravel	Sand And Gravel
9	465m S	LOFT-DMTN	Lowestoft Formation - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

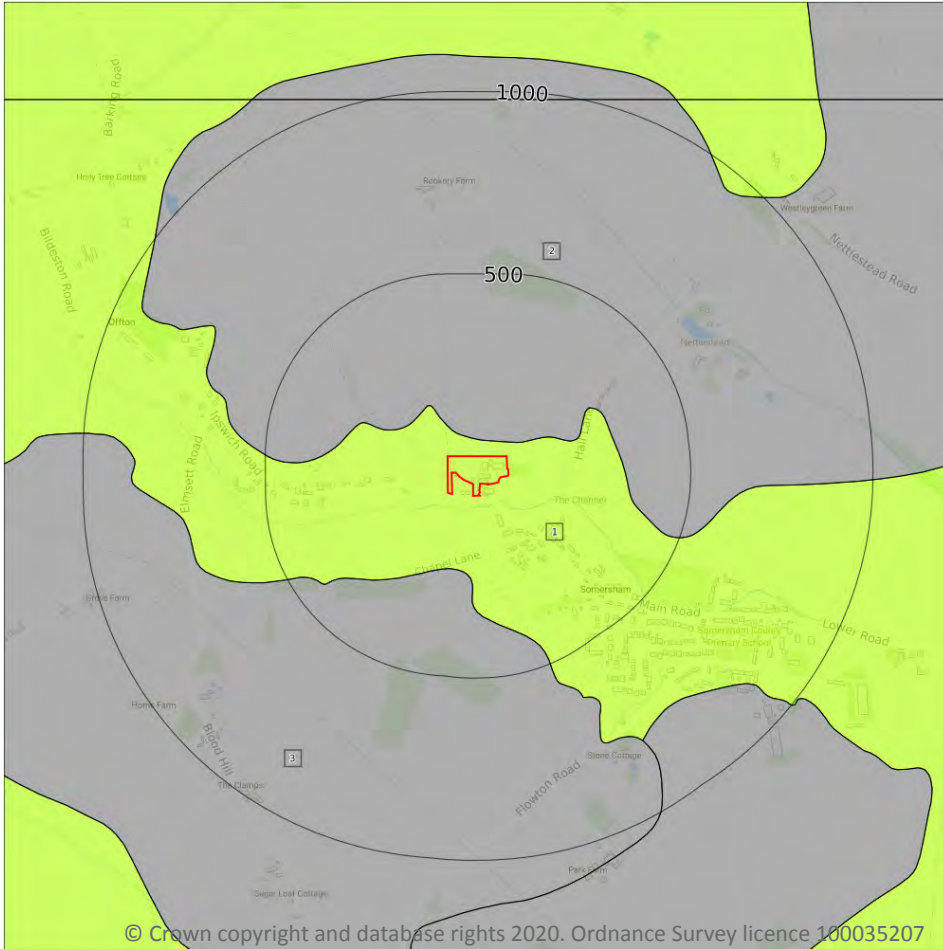
0

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

3

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 65**

ID	Location	LEX Code	Description	Rock age
1	On site	NCK-CHLK	Newhaven Chalk Formation - Chalk	Campanian Age - Santonian Age
2	40m N	CFB-SANDU	Chillesford Church Sand Member - Sand	Antian/Bramertonian Age
3	205m S	CFB-SANDU	Chillesford Church Sand Member - Sand	Antian/Bramertonian Age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

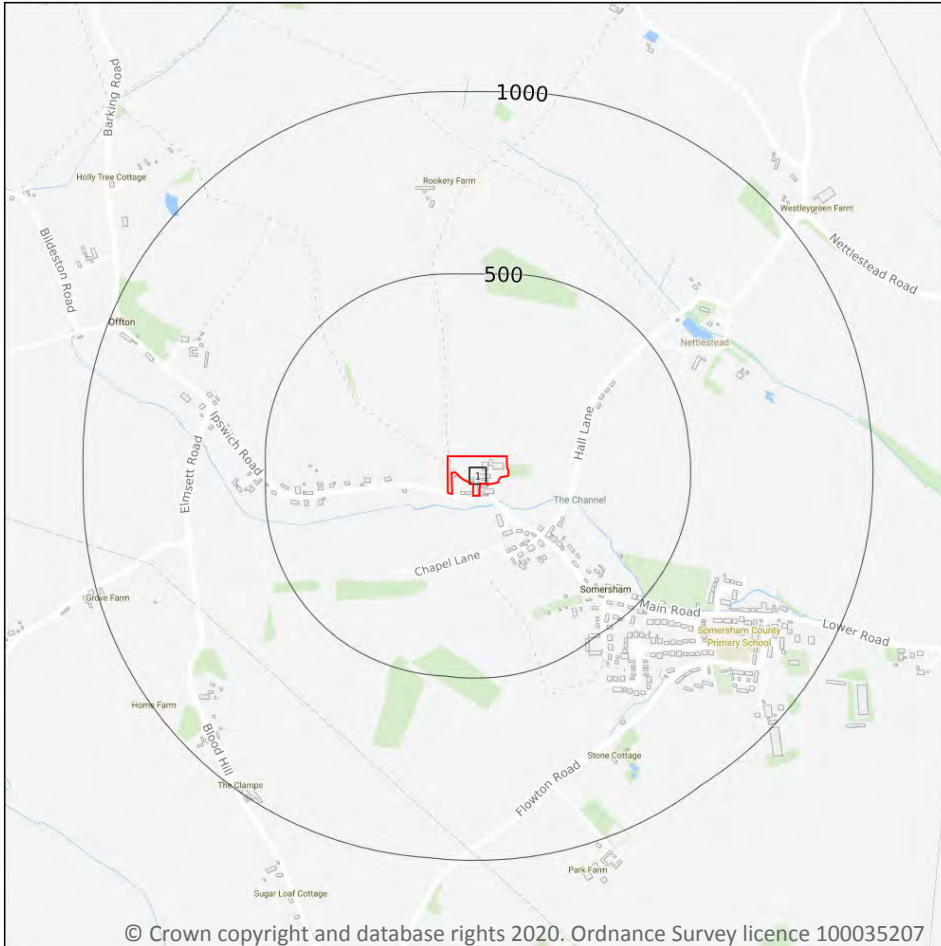
0

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 67**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW207_ipswich_v4

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

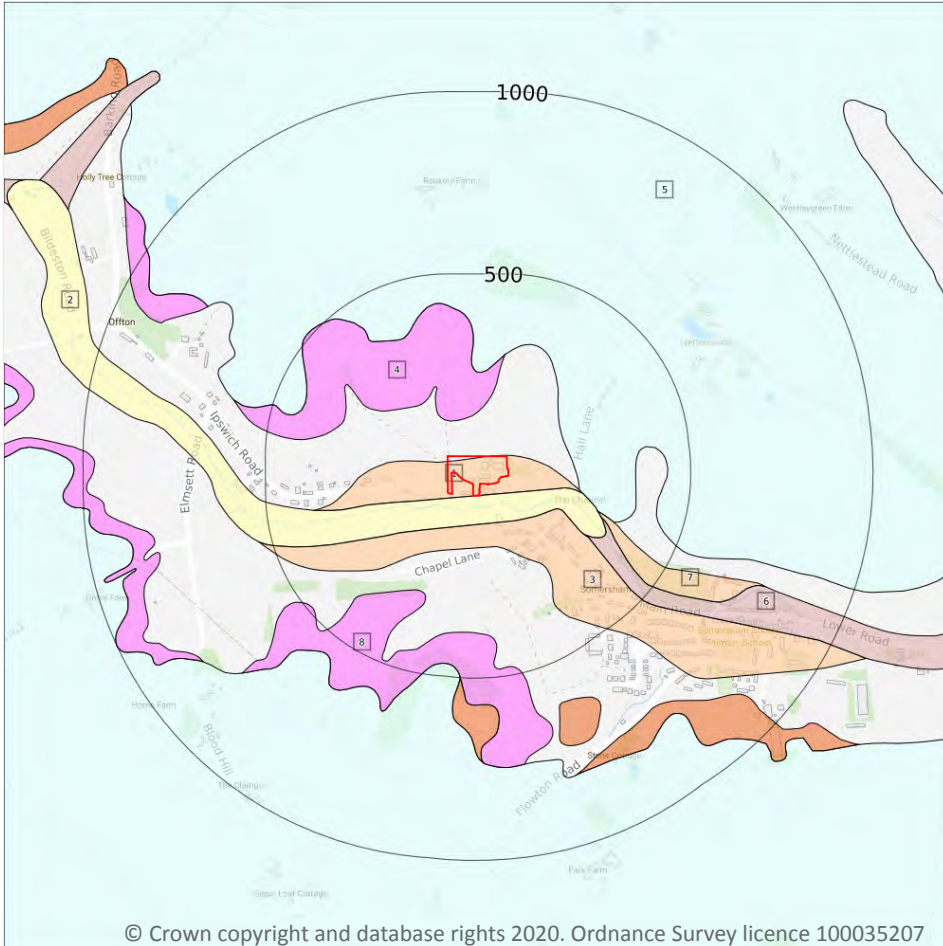
0

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

8

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 69**

ID	Location	LEX Code	Description	Rock description
1	On site	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
2	On site	ALV-XCZ	ALLUVIUM	CLAY AND SILT
3	78m S	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
4	96m N	KGCA-XSV	KESGRAVE CATCHMENT SUBGROUP	SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
5	161m E	LOFT-DMTN	LOWESTOFT FORMATION	DIAMICTON
6	264m SE	HEAD-DMTN	HEAD	DIAMICTON
7	265m E	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
8	279m S	KGCA-XSV	KESGRAVE CATCHMENT SUBGROUP	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial 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 any superficial deposits (the zone between the land surface and the water table).

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

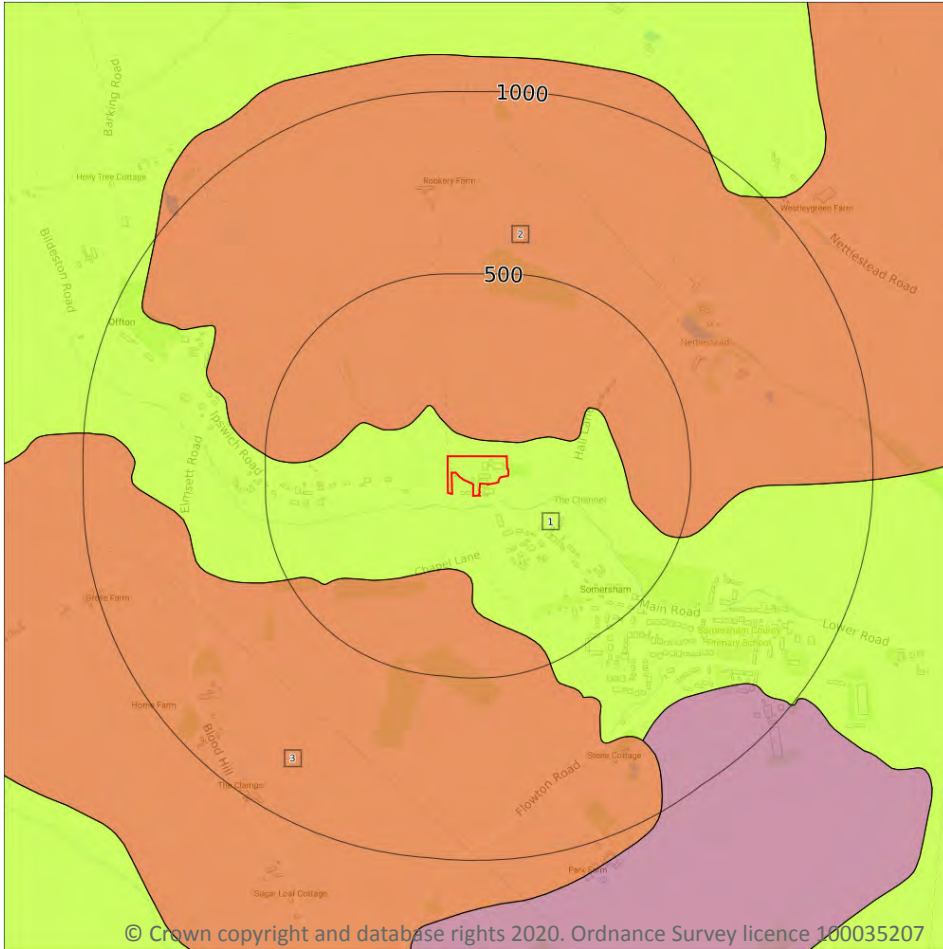
Records within 50m	0
---------------------------	----------

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 71**

ID	Location	LEX Code	Description	Rock age
1	On site	NCK-CHLK	NEWHAVEN CHALK FORMATION - CHALK	SANTONIAN
2	40m N	CFB-S	CHILLESFORD CHURCH SAND MEMBER - SAND	ANTIAN/BRAMERTONIAN
3	206m S	CFB-S	CHILLESFORD CHURCH SAND MEMBER - SAND	ANTIAN/BRAMERTONIAN

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
40m NE	Intergranular	High	High

This data is sourced from the British Geological Survey.

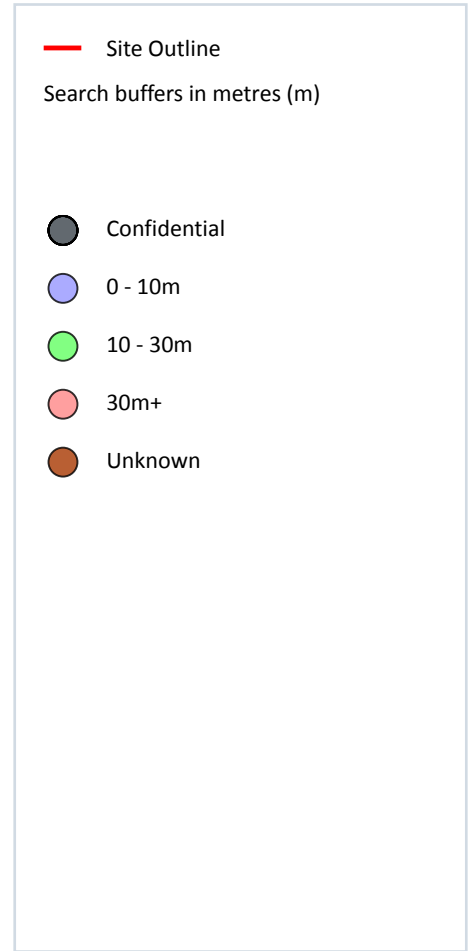
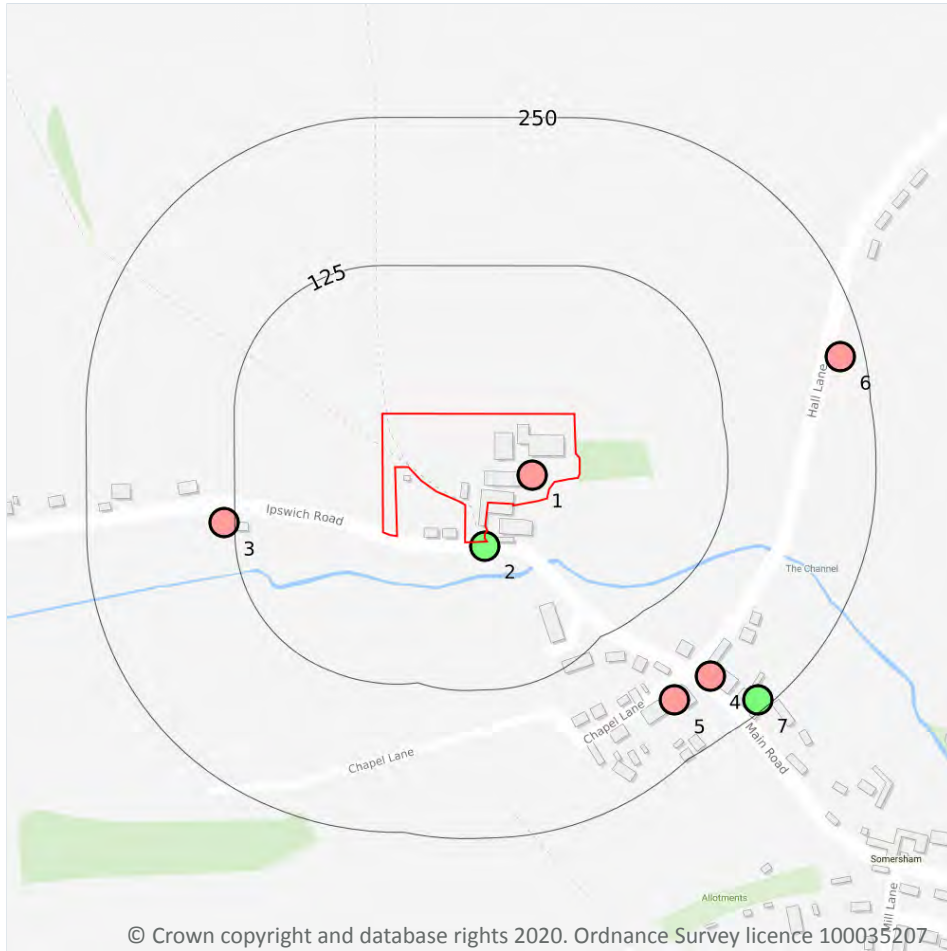
15.10 Bedrock faults and other linear features (50k)

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

7

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.

Features are displayed on the Boreholes map on **page 73**

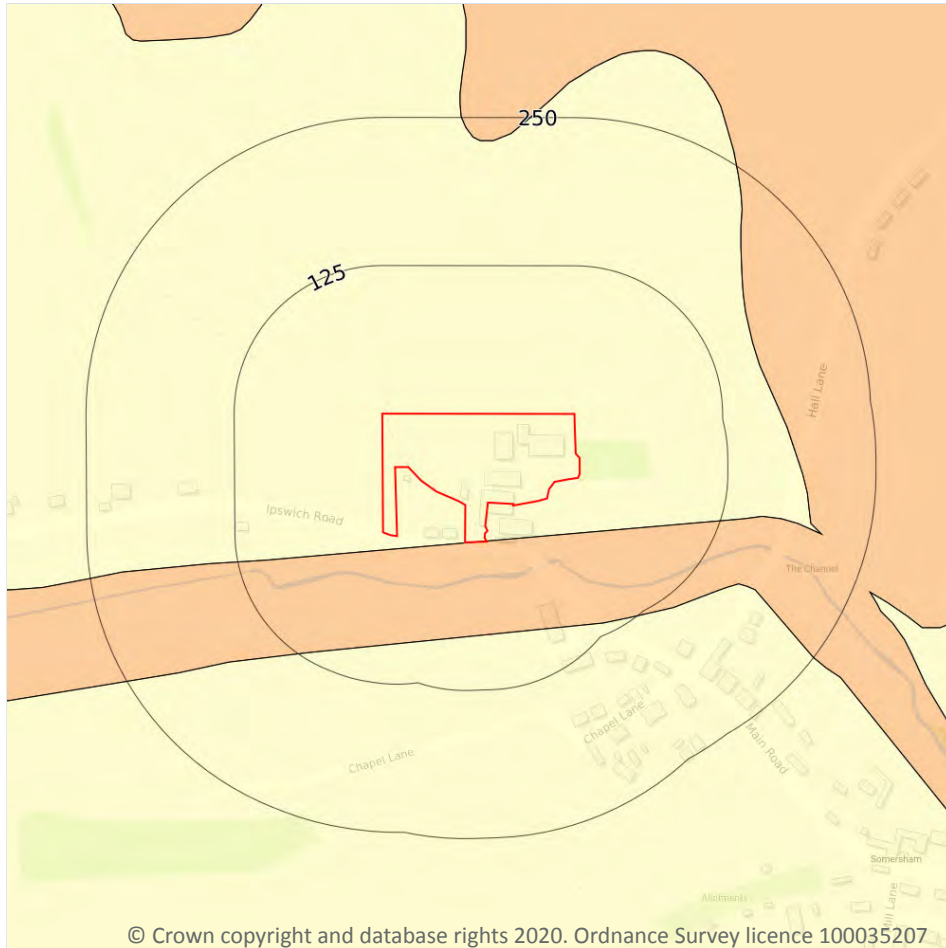
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	608280 248970	TUDOR GRANGE NETTLESTEAD	60.96	N	558565
2	4m S	608240 248910	TUDOR GRANGE, NETTLESTEAD	15.73	N	558603
3	134m W	608020 248930	ELM COTTAGES SOMERSHAM	45.72	N	558566

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	201m SE	608430 248800	WHITE HOUSE STORES SOMERSHAM	45.72	N	558564
5	201m SE	608400 248780	THE MARLBOROUGH HEAD SOMERSHAM	42.67	N	558563
6	230m E	608540 249070	GIPPING R.D.C. COUNCIL HOUSES	76.2	N	558571
7	241m SE	608470 248780	GREEN ACRES, SOMERSHAM	15.24	N	558601

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

17.1 Shrink swell clays

Records within 50m

2

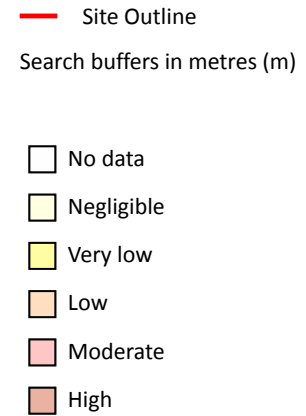
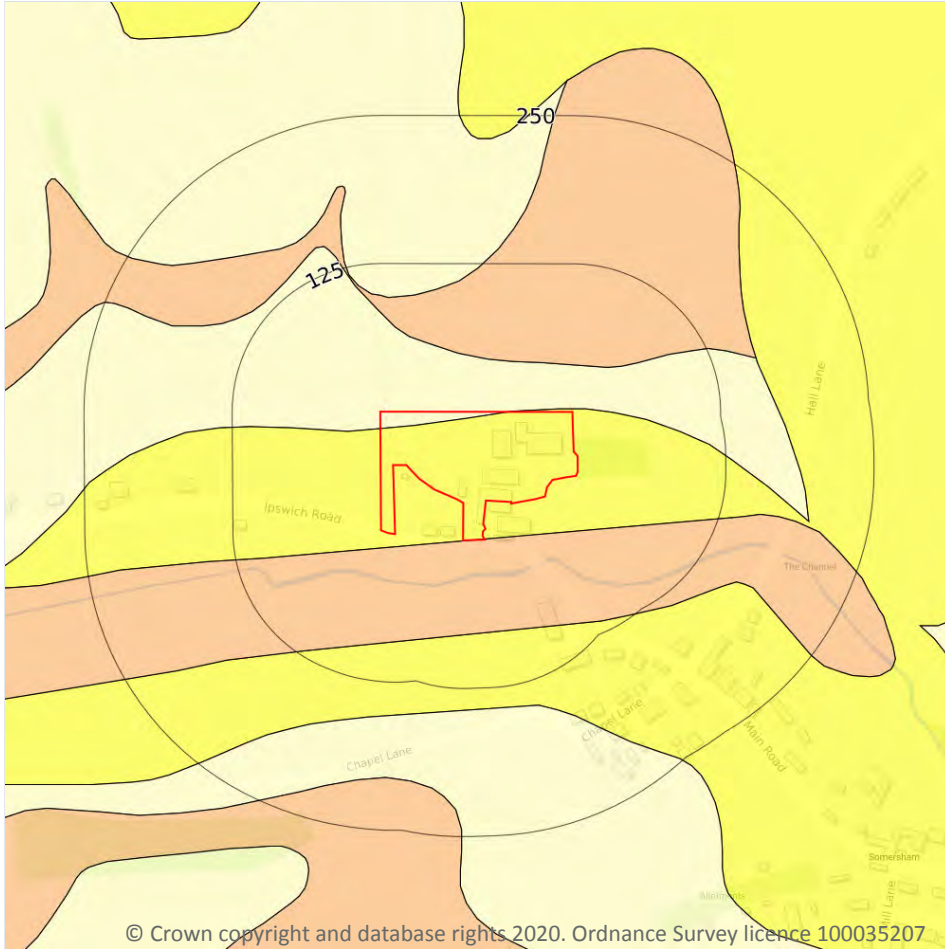
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 75**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

4

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.

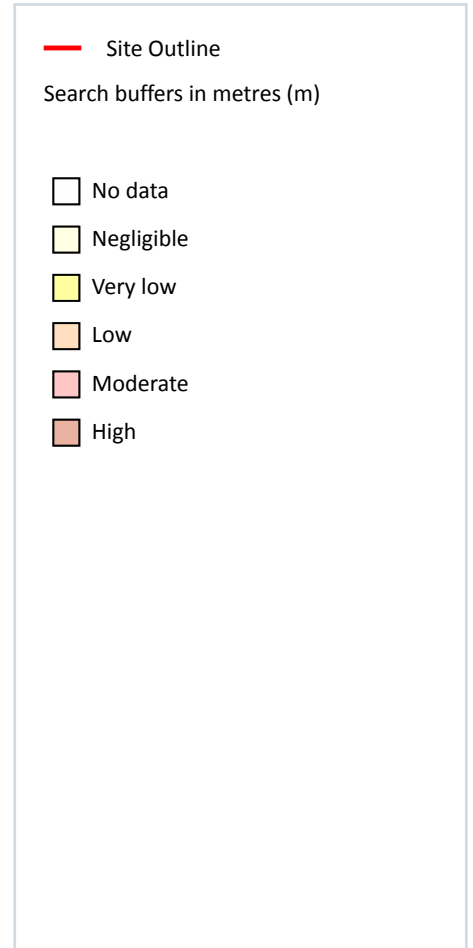
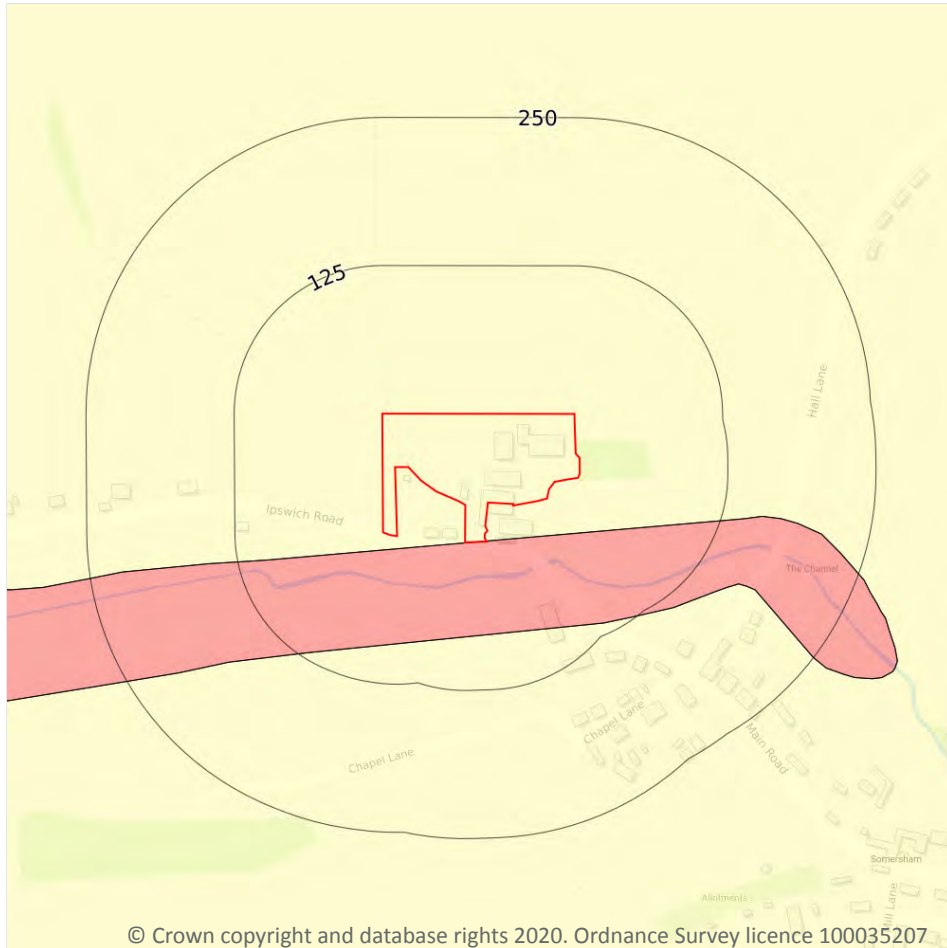
Features are displayed on the Natural ground subsidence - Running sands map on **page 76**

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
40m N	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



17.3 Compressible deposits

Records within 50m

2

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.

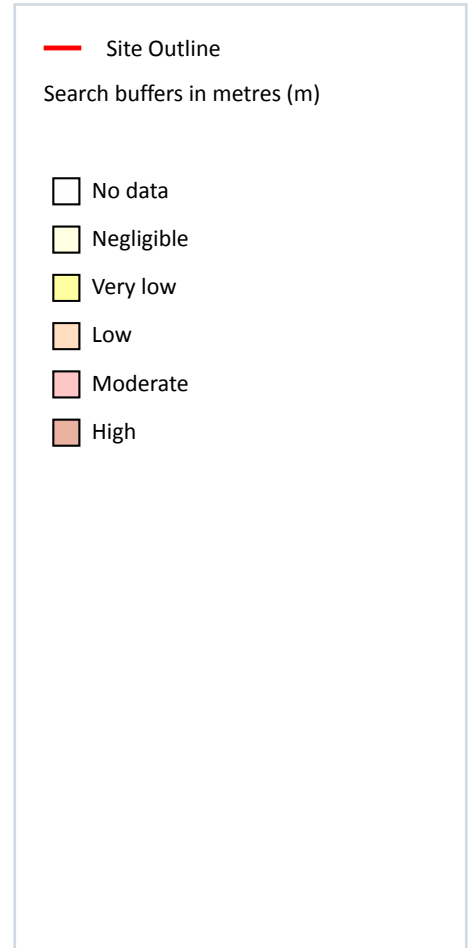
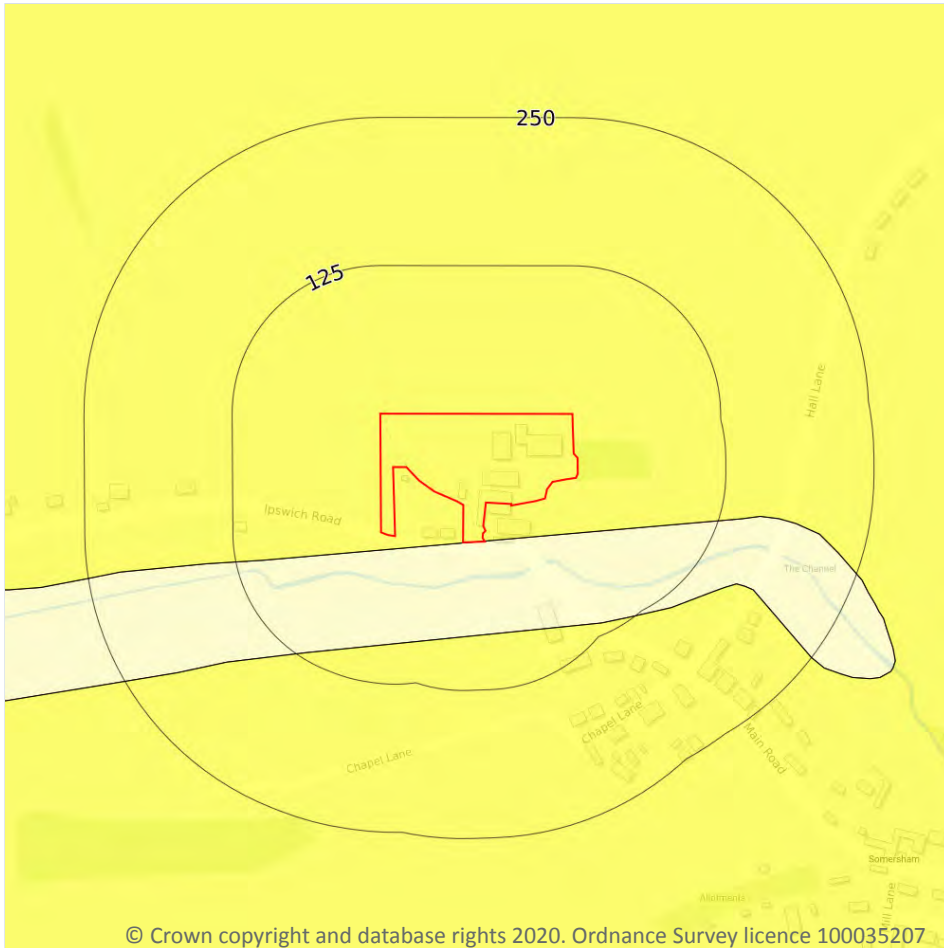
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 78**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

17.4 Collapsible deposits

Records within 50m

2

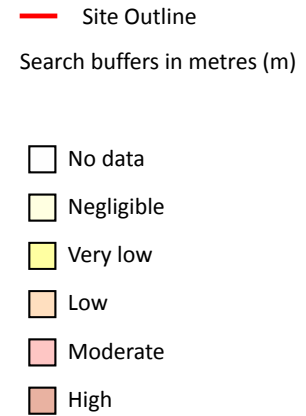
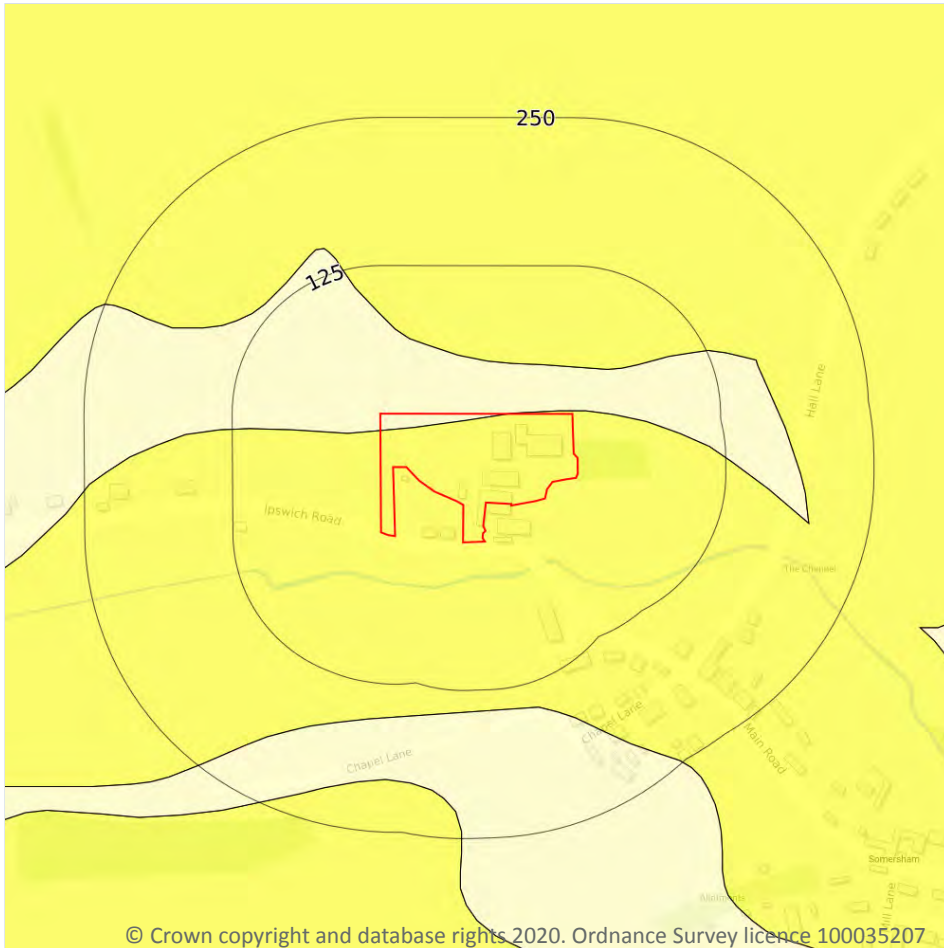
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 80**

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

17.5 Landslides

Records within 50m

2

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 81**

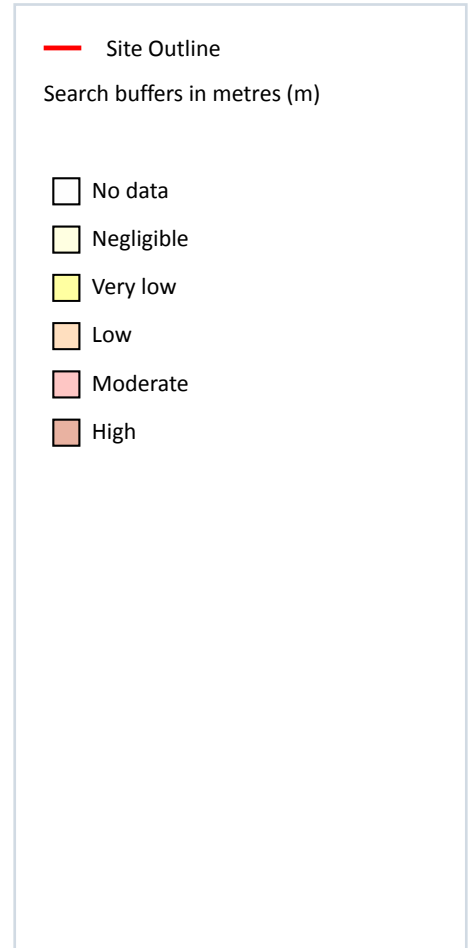
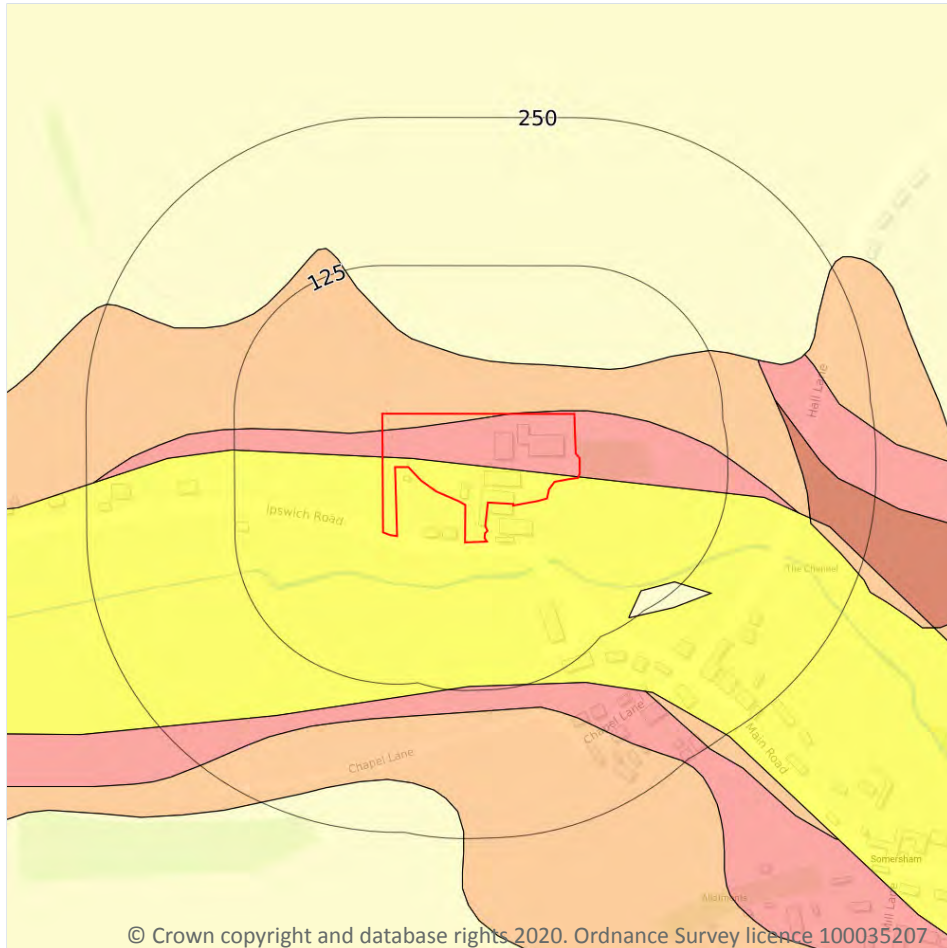
Location	Hazard rating	Details
On site	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

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.



Natural ground subsidence - Ground dissolution of soluble rocks



© Crown copyright and database rights 2020. Ordnance Survey licence 100035207

17.6 Ground dissolution of soluble rocks

Records within 50m

4

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.

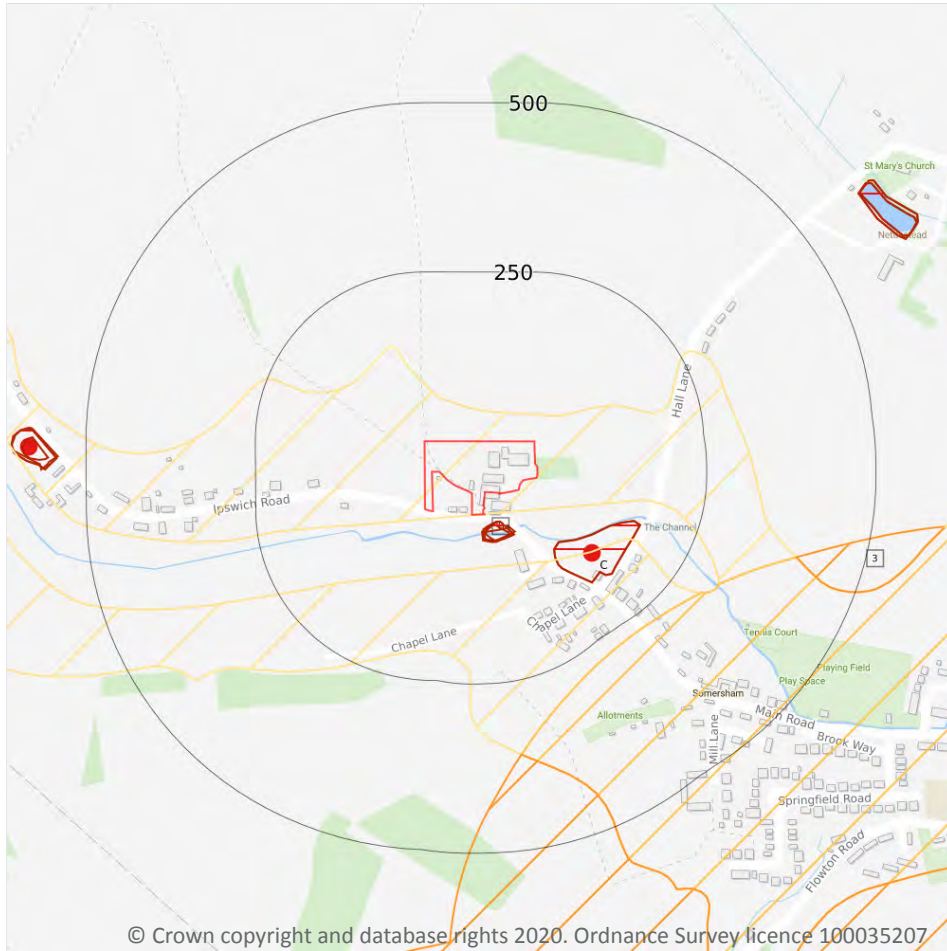
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 83**

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.

Location	Hazard rating	Details
On site	Low	Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances.
On site	Moderate	Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.
40m N	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



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

1

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Details	Description
C	137m SE	Name: Upper Street Pit Address: Somersham, IPSWICH, Suffolk Commodity: Sand & Gravel Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

6

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Land Use	Year of mapping	Mapping scale
B	18m SE	Pond	1953	1:10560
B	19m SE	Pond	1905	1:10560
B	20m SE	Pond	1884	1:10560
B	26m S	Pond	1971	1:10000
C	97m SE	Unspecified Pit	1905	1:10560
C	97m SE	Unspecified Pit	1884	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



18.4 Underground workings

Records within 1000m

1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Land Use	Year of mapping	Mapping scale
-	811m NW	Unspecified Shaft	1971	1:10000

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

6

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 85**

ID	Location	Name	Commodity	Class	Likelihood
A	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
1	271m SE	Not available	Chalk	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Location	Name	Commodity	Class	Likelihood
2	359m S	Not available	Chalk	C	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered
3	401m E	Not available	Chalk	C	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered
4	607m E	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
-	947m NE	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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site

0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

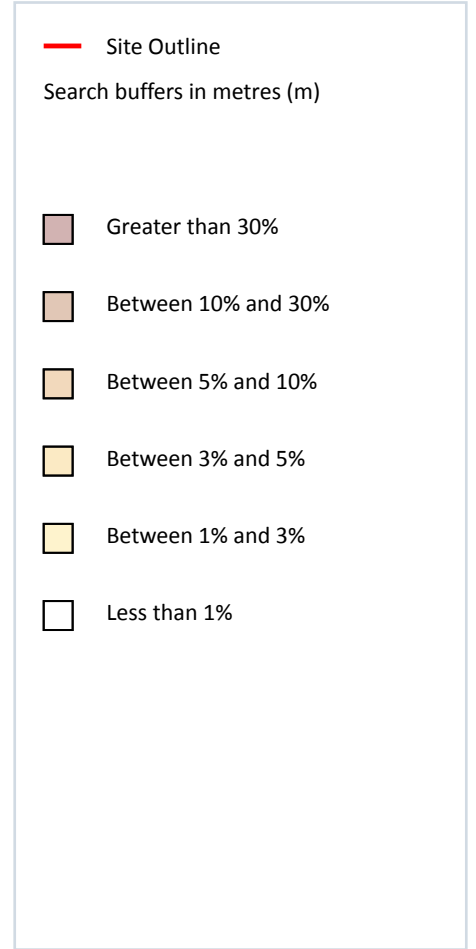
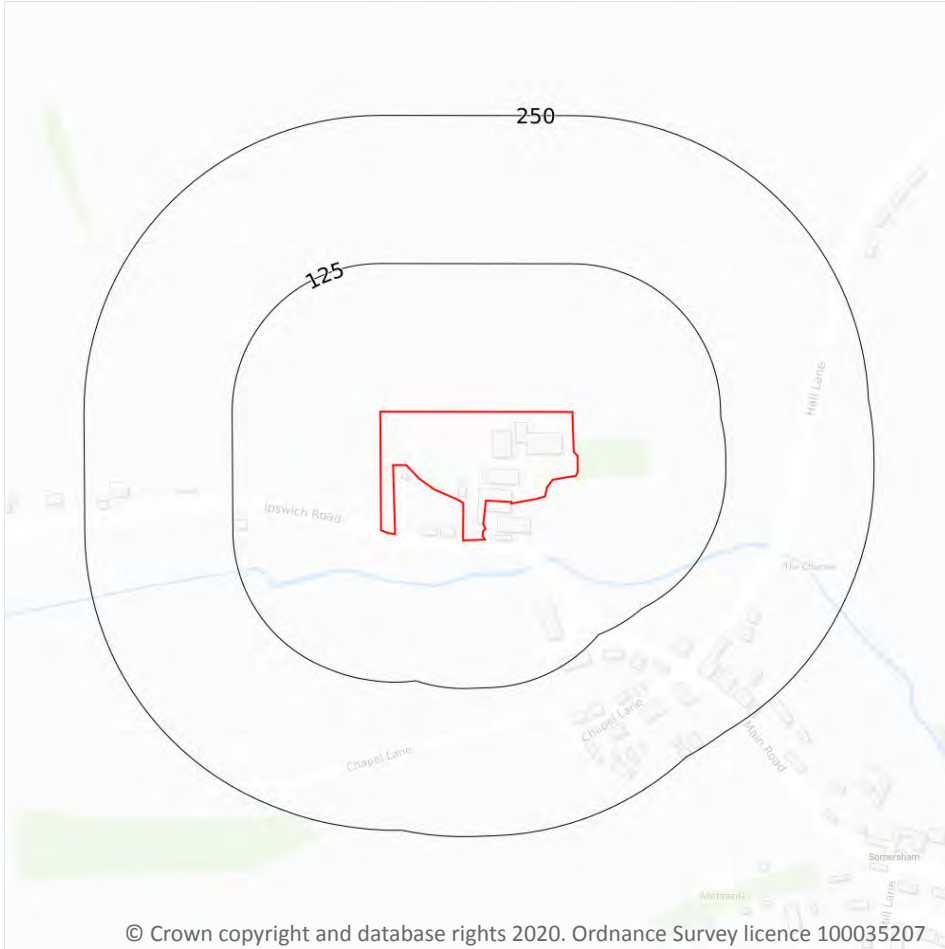
Records on site

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 90**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	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

4

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	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 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>.

Terms and conditions

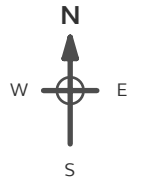
Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: County Series
Map date: 1882
Scale: 1:2,500
Printed at: 1:2,500



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

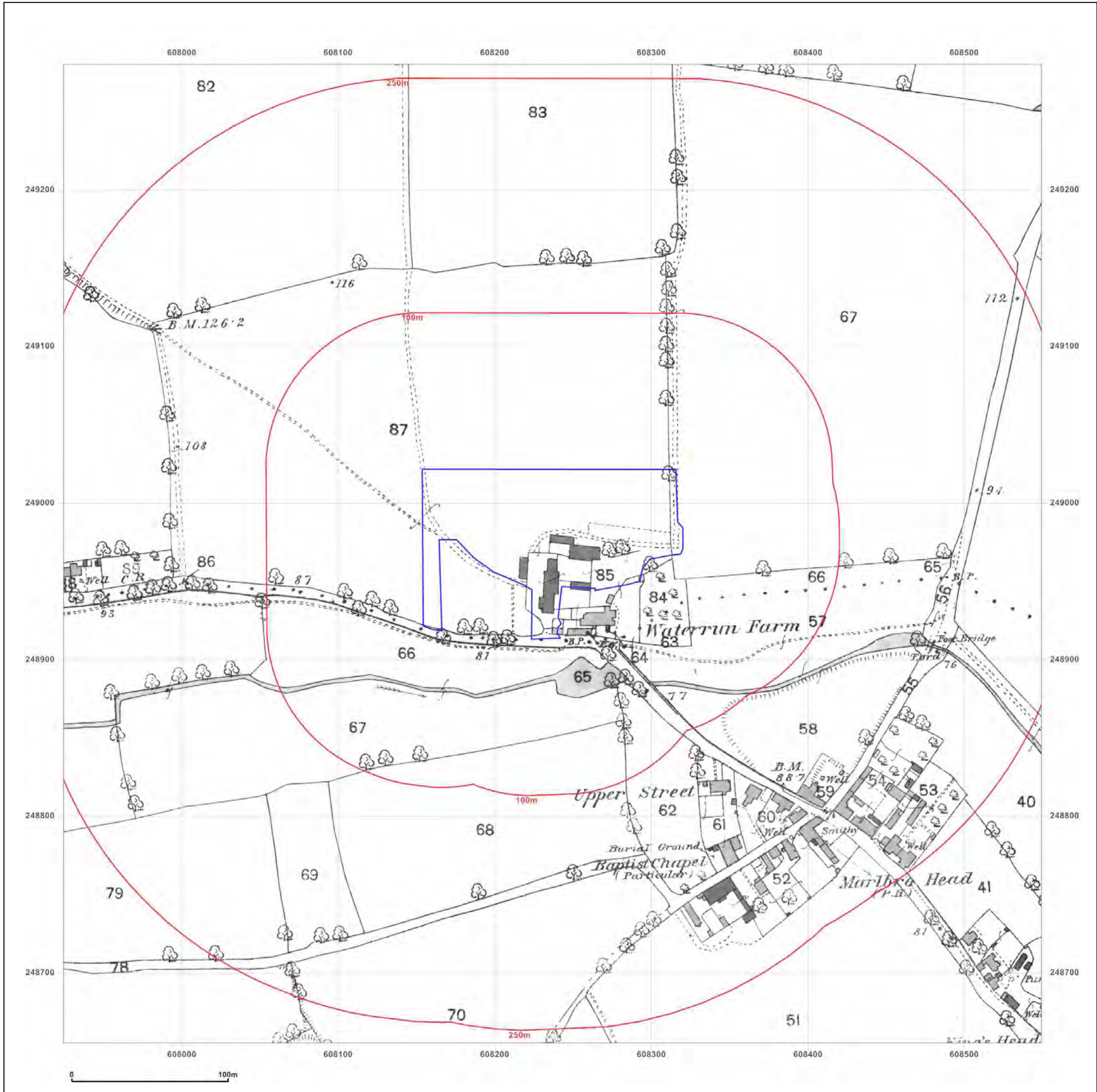
Powered by


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

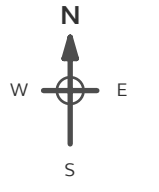
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: County Series
Map date: 1902
Scale: 1:2,500
Printed at: 1:2,500



Surveyed 1902
 Revised 1902
 Edition N/A
 Copyright N/A
 Levelled N/A

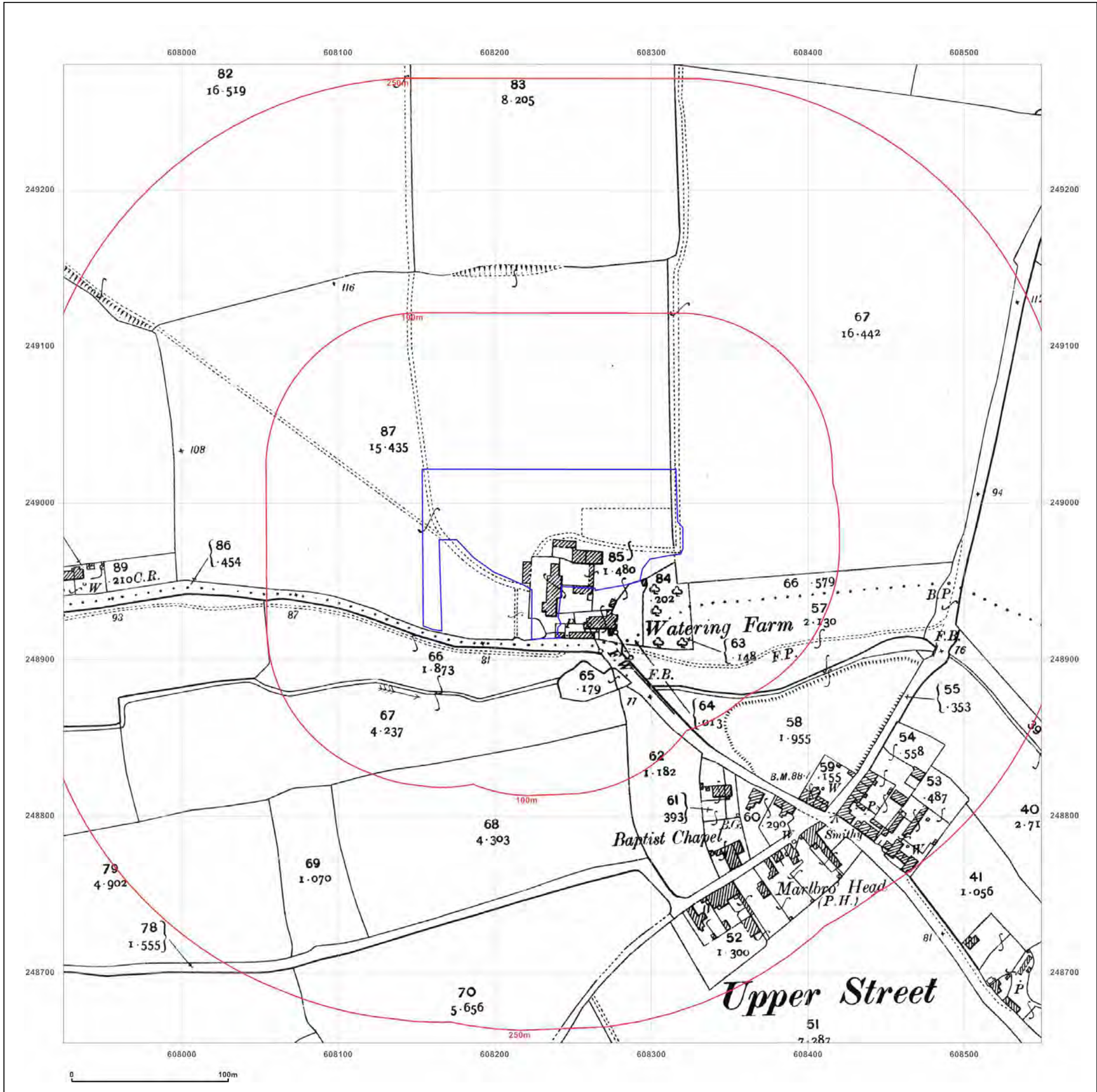
Powered by

 Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

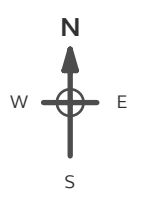
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 1967-1970
Scale: 1:2,500
Printed at: 1:2,500



Surveyed N/A Revised 1970 Edition N/A Copyright 1971 Levelled N/A	Surveyed 1967 Revised 1967 Edition N/A Copyright 1969 Levelled 1954
Surveyed 1970 Revised 1970 Edition N/A Copyright 1971 Levelled 1960	Surveyed 1969 Revised 1969 Edition N/A Copyright 1970 Levelled 1960



Powered by 

Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

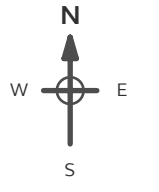
Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 1969-1971
Scale: 1:2,500
Printed at: 1:2,500



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 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

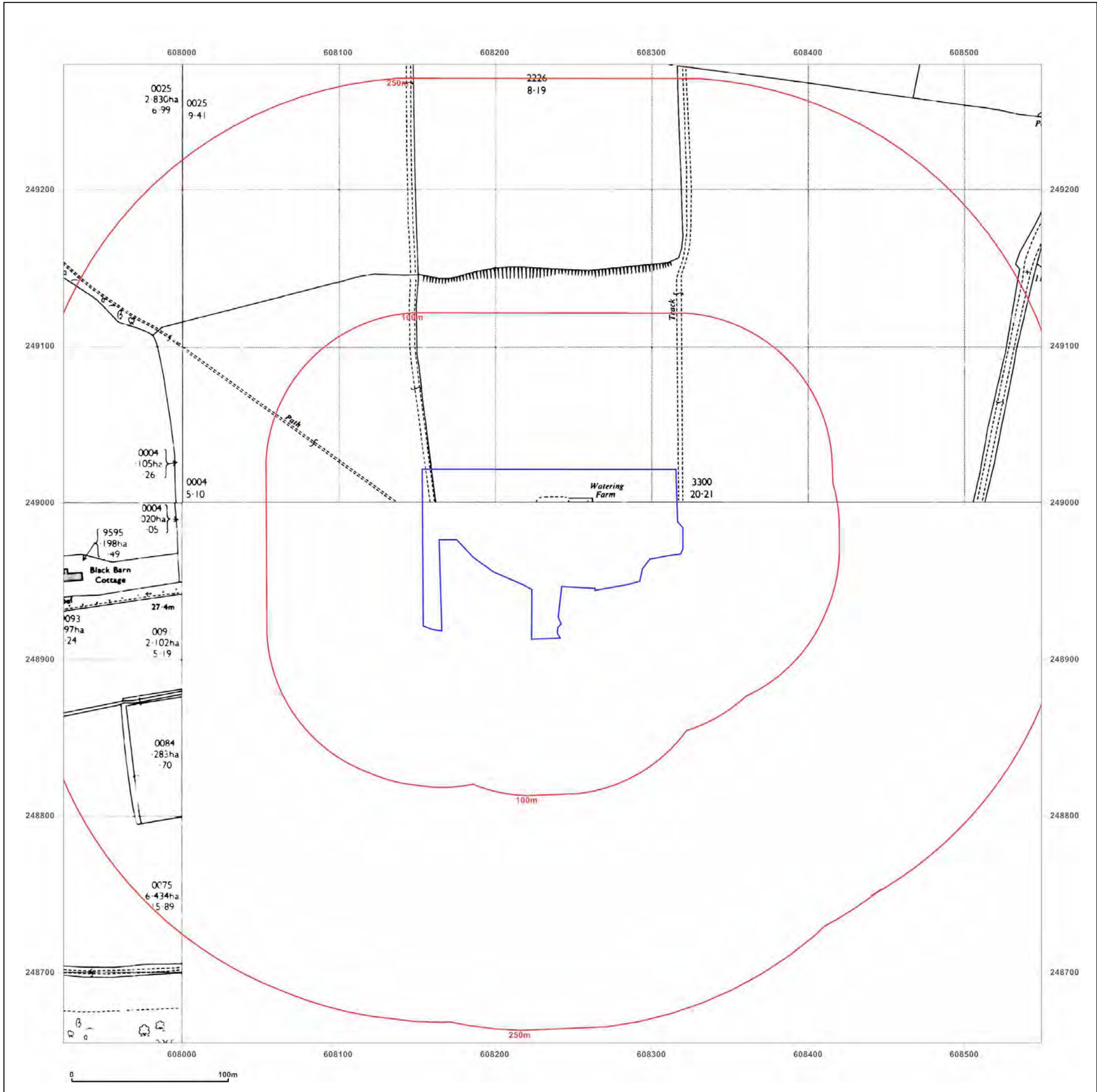
Powered by


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

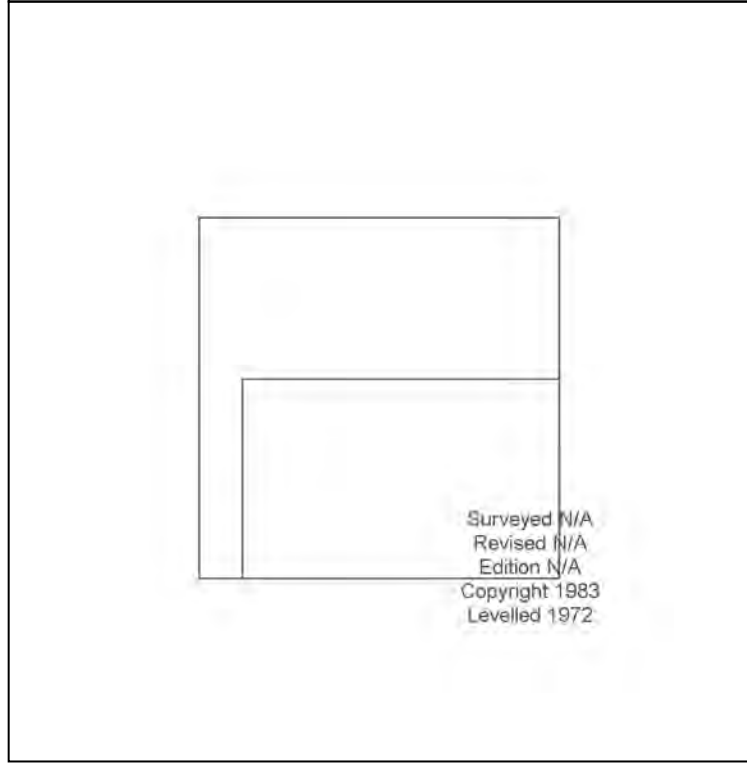
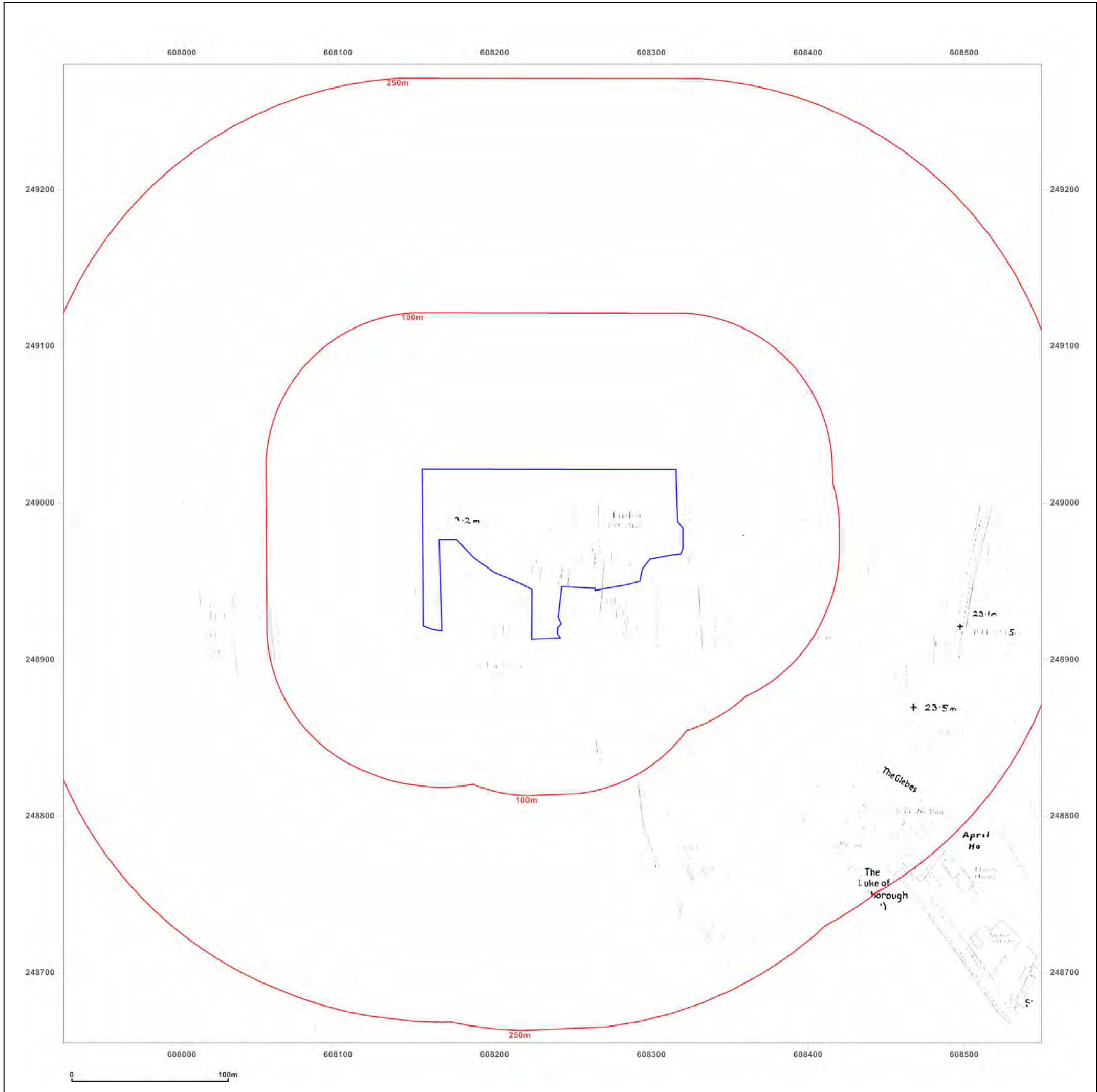
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 1983
Scale: 1:2,500
Printed at: 1:2,500



Powered by



Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

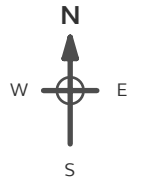

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

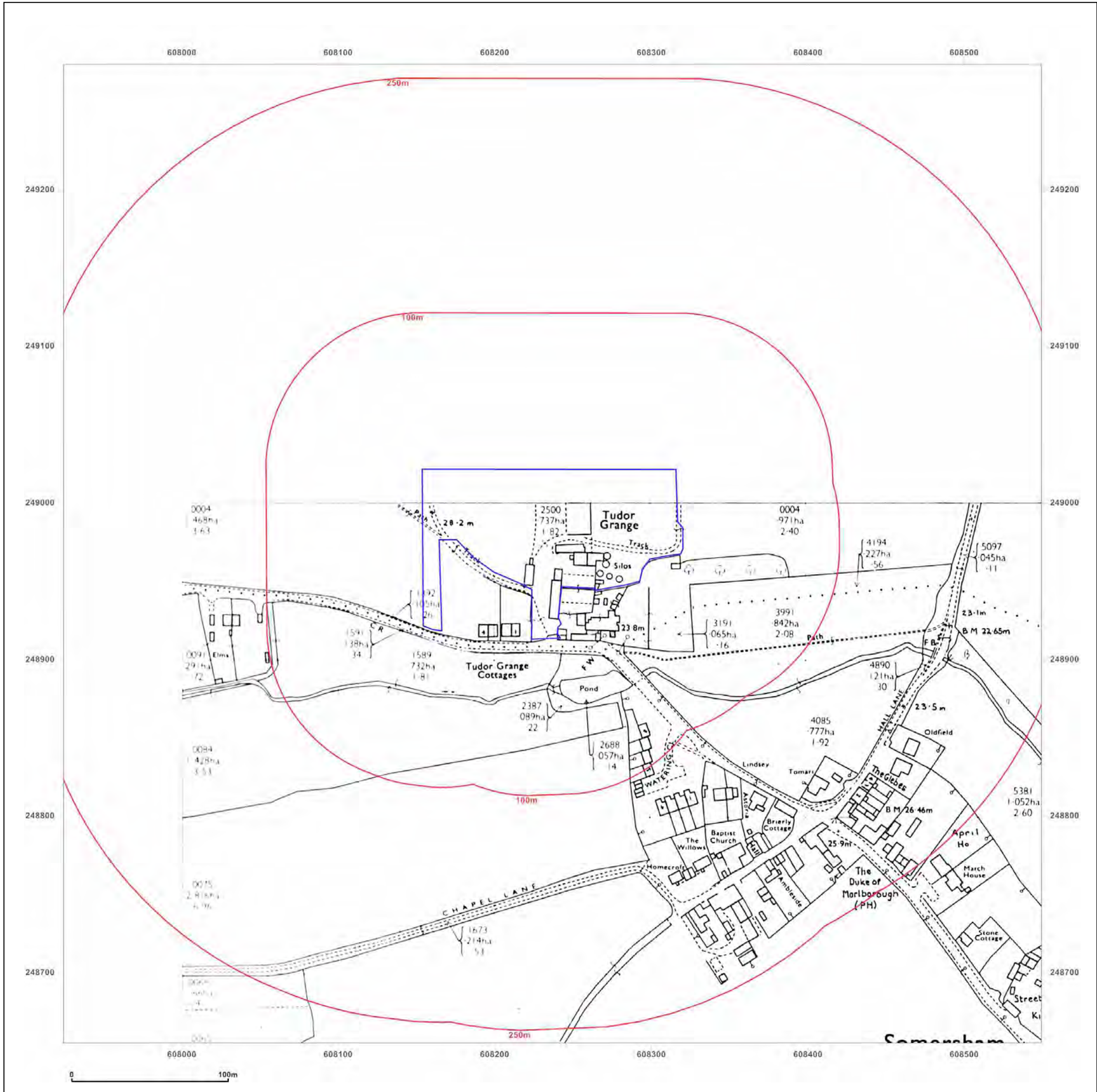
Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 1984
Scale: 1:2,500
Printed at: 1:2,500

Surveyed 1972
 Revised 1984
 Edition N/A
 Copyright 1984
 Levelled 1972



Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid

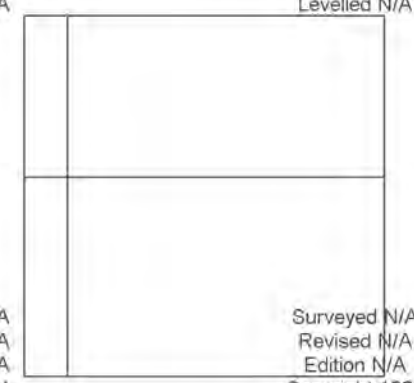
Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



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



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



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

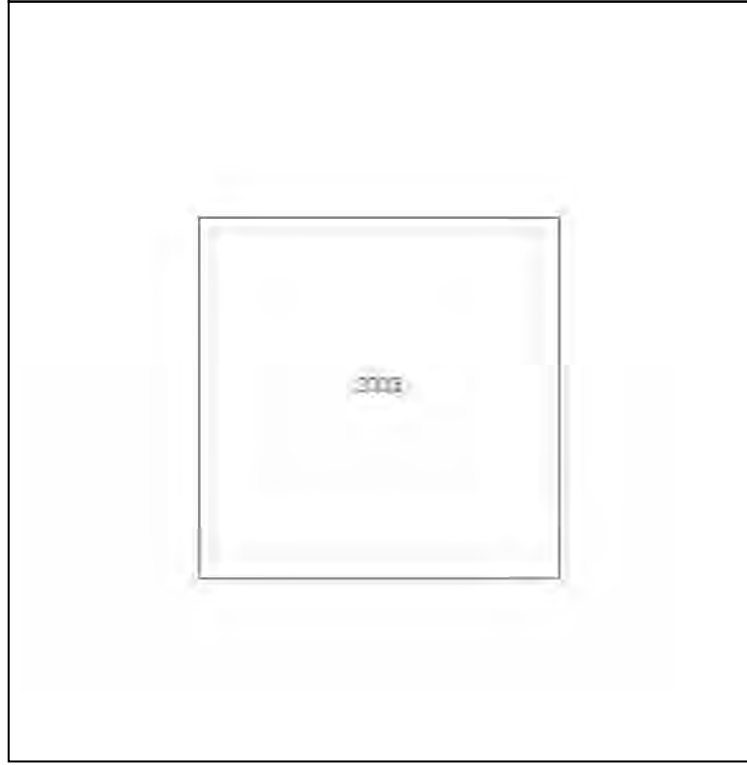
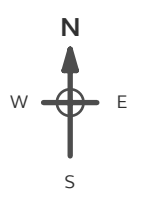
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: LandLine
Map date: 2003
Scale: 1:1,250
Printed at: 1:1,250



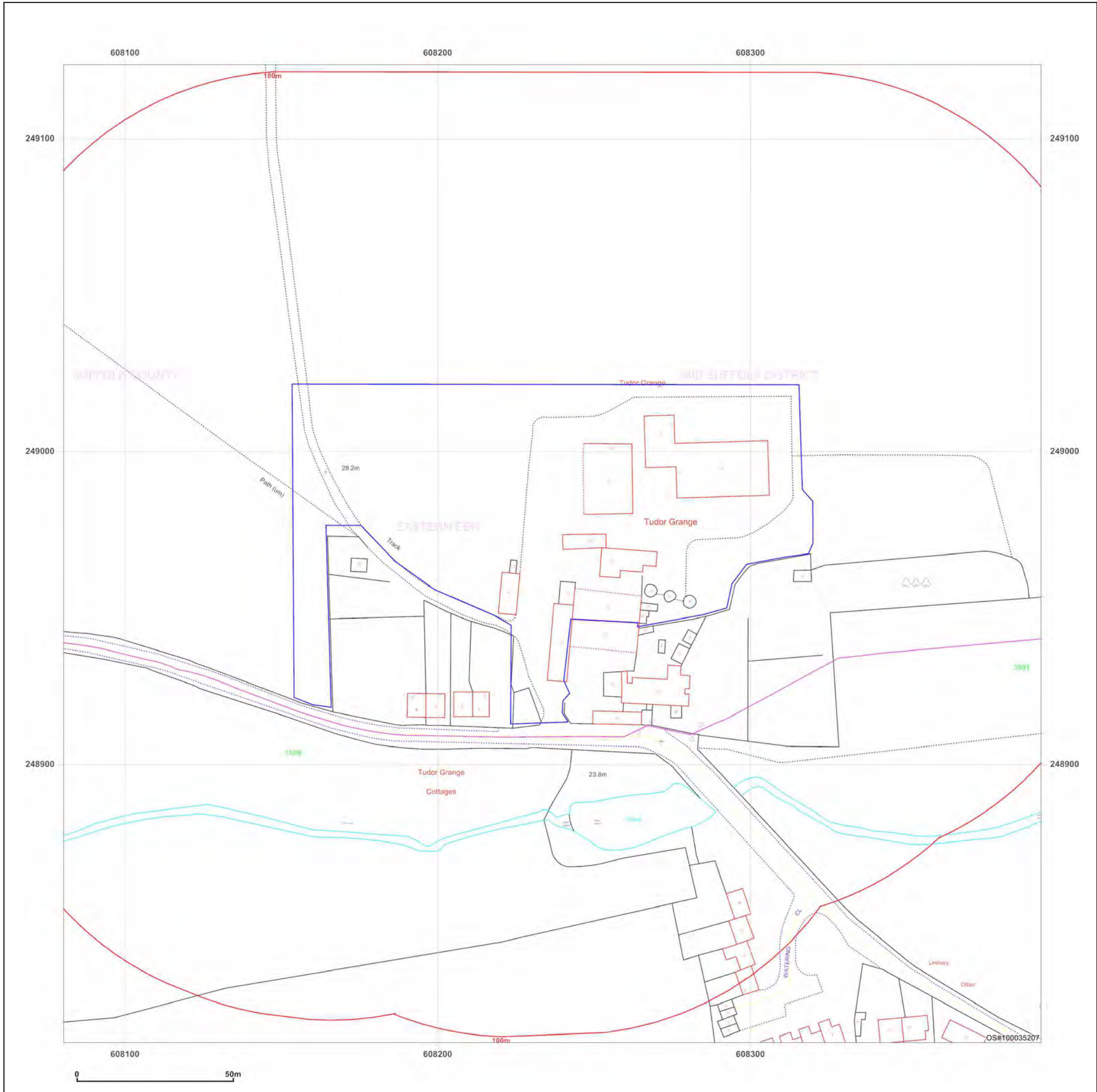
Powered by


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: County Series

Map date: 1881-1884

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
Revised 1884
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised 1883
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: County Series

Map date: 1888

Scale: 1:10,560

Printed at: 1:10,560



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

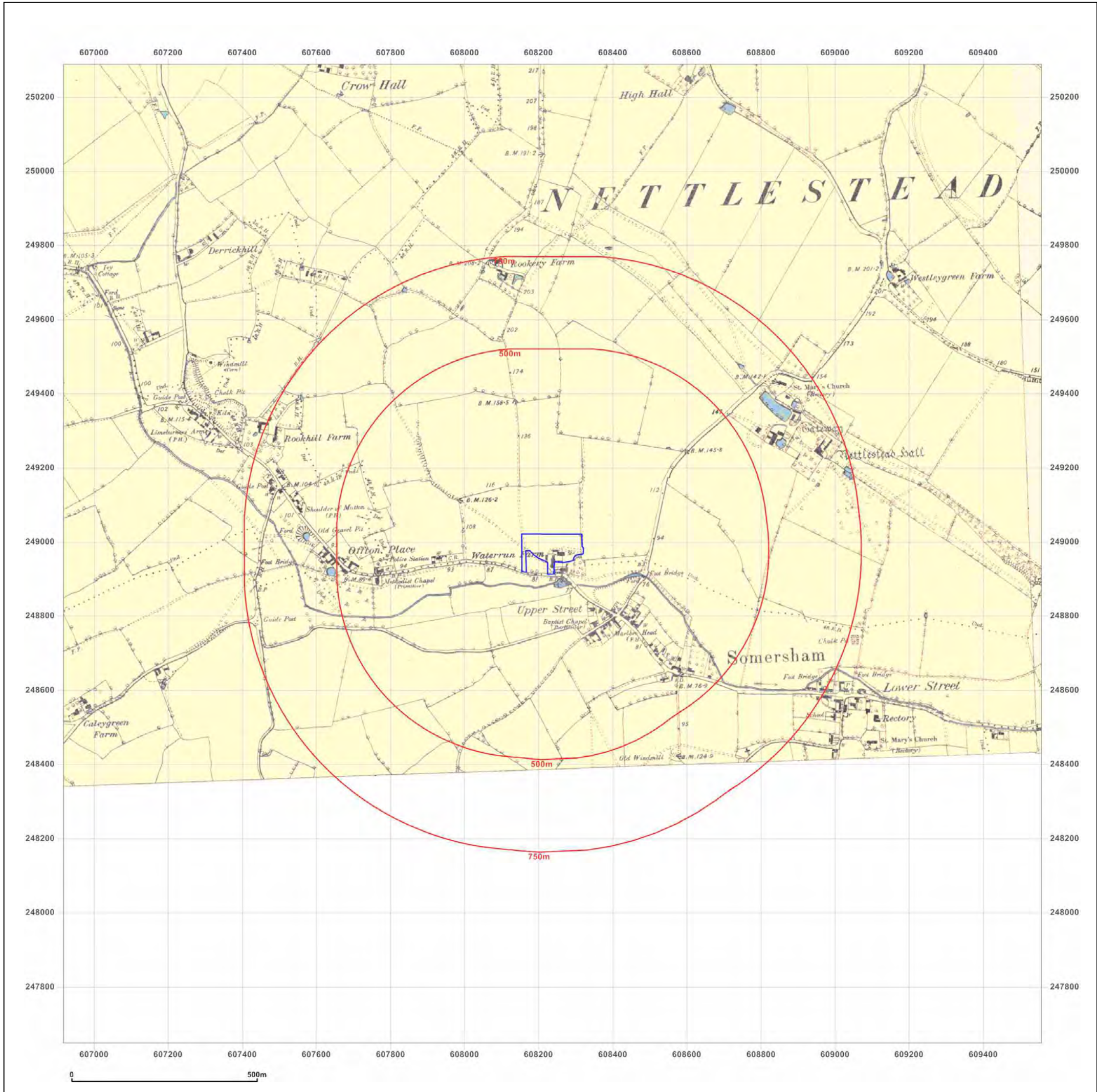


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

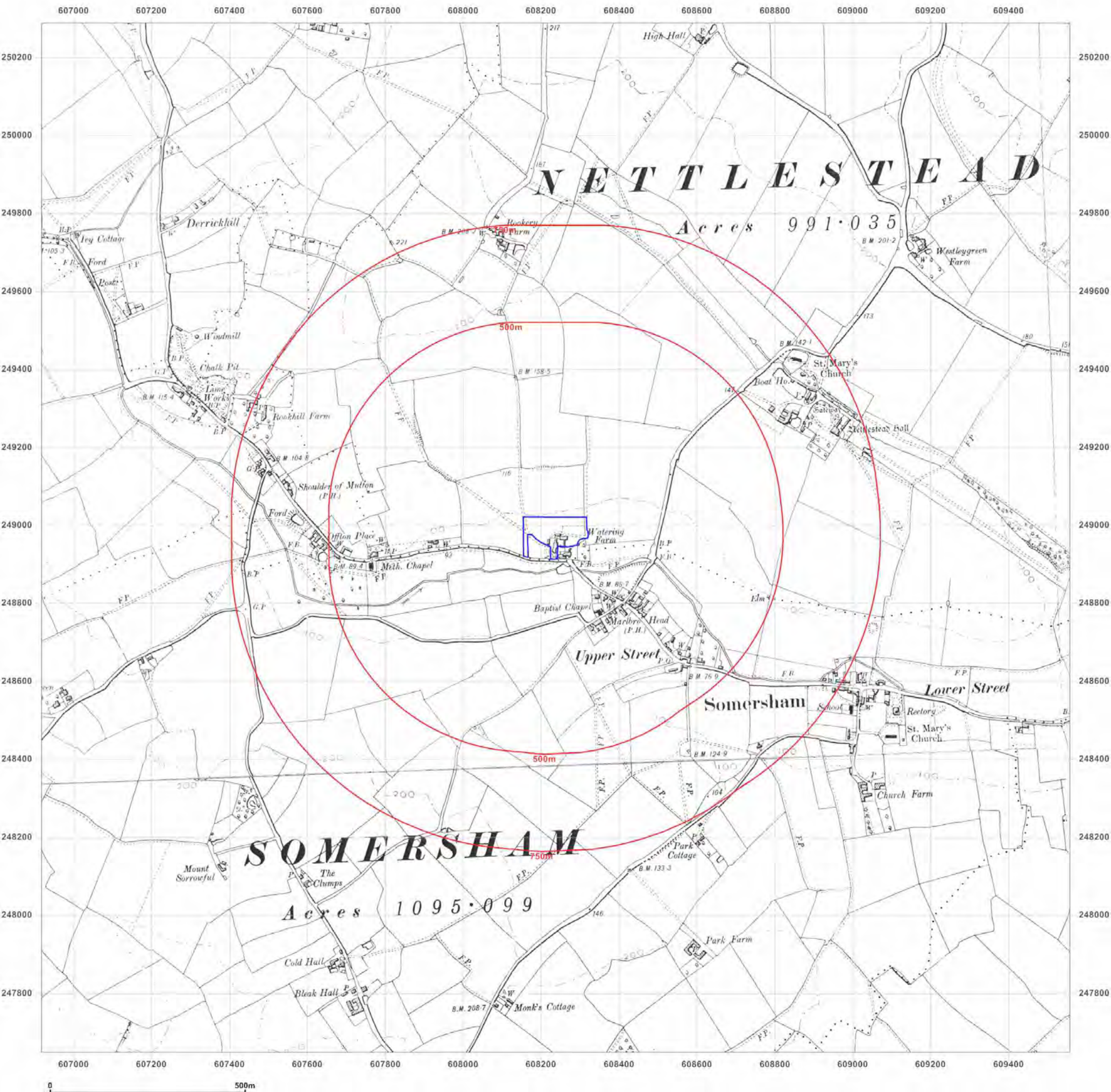
Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: County Series

Map date: 1902-1905

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1883 Revised 1905 Edition N/A Copyright N/A Levelled N/A	Surveyed 1884 Revised 1902 Edition N/A Copyright N/A Levelled N/A
---	---



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: Provisional

Map date: 1953

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1953
Revised 1953
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1953
Revised 1953
Edition N/A
Copyright N/A
Levelled N/A

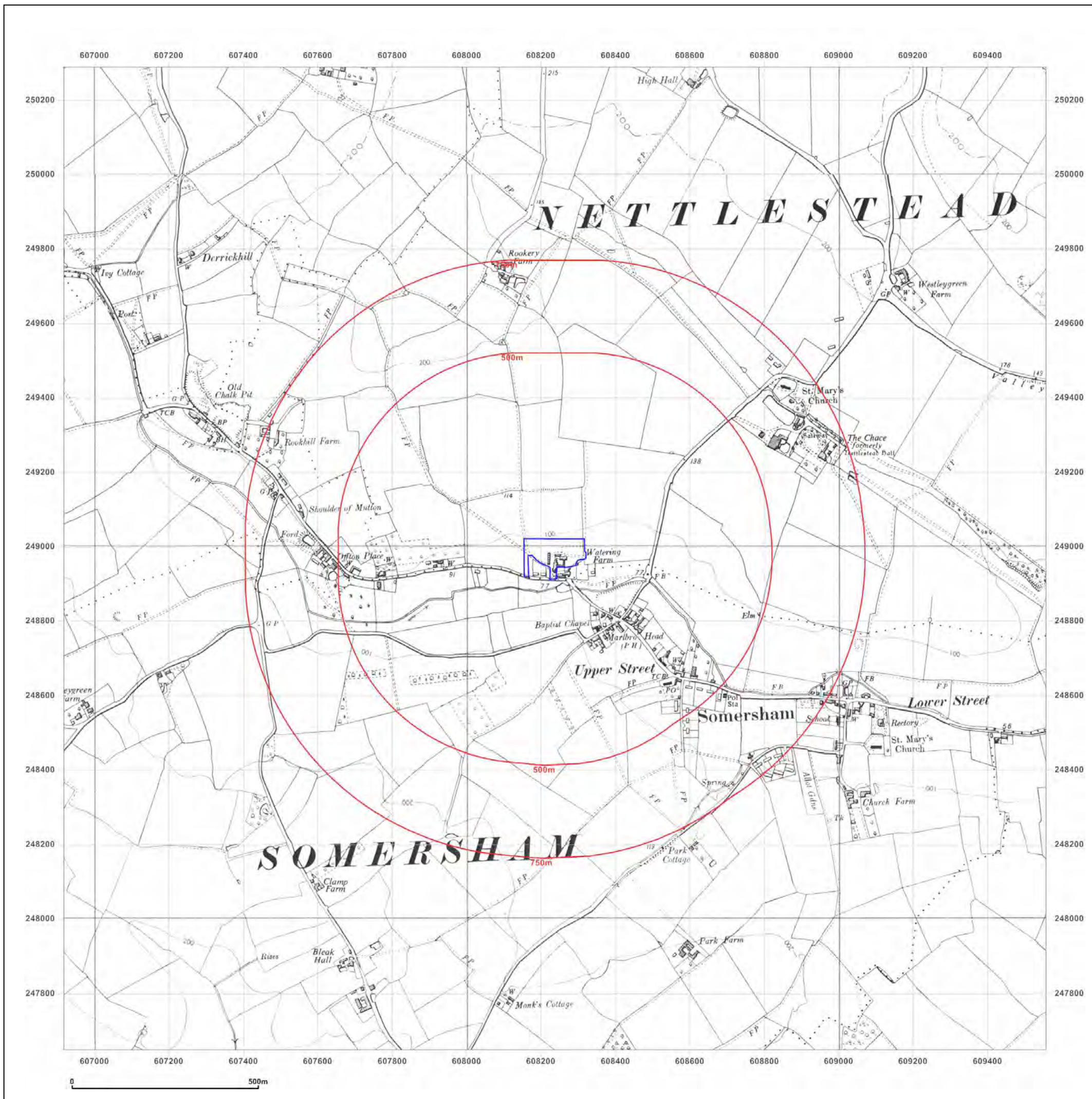


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

WATERING FARM,
NETTLESTEAD, IPSWICH, IP8
4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid

Map date: 1971

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1971
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1971
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

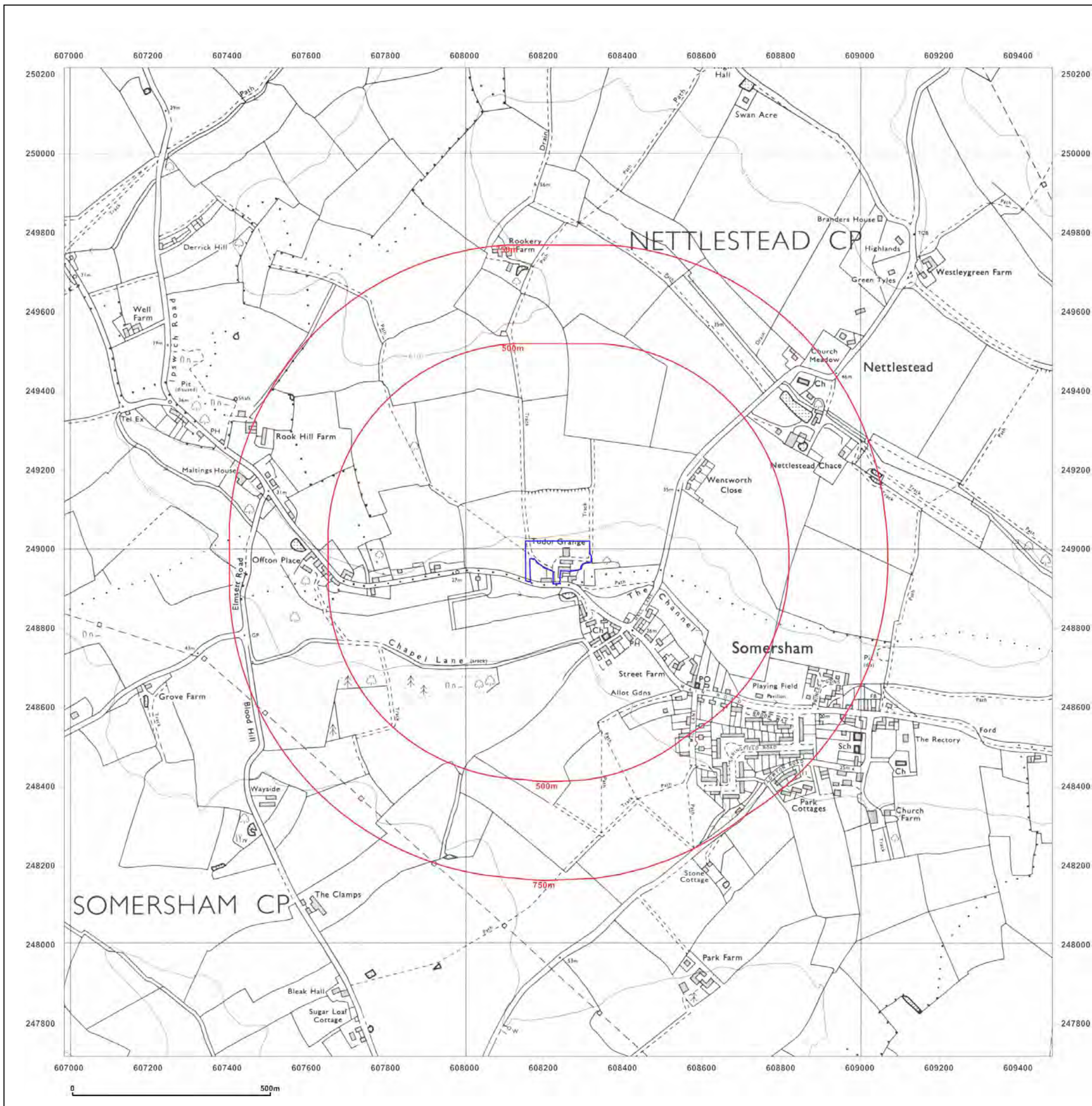


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

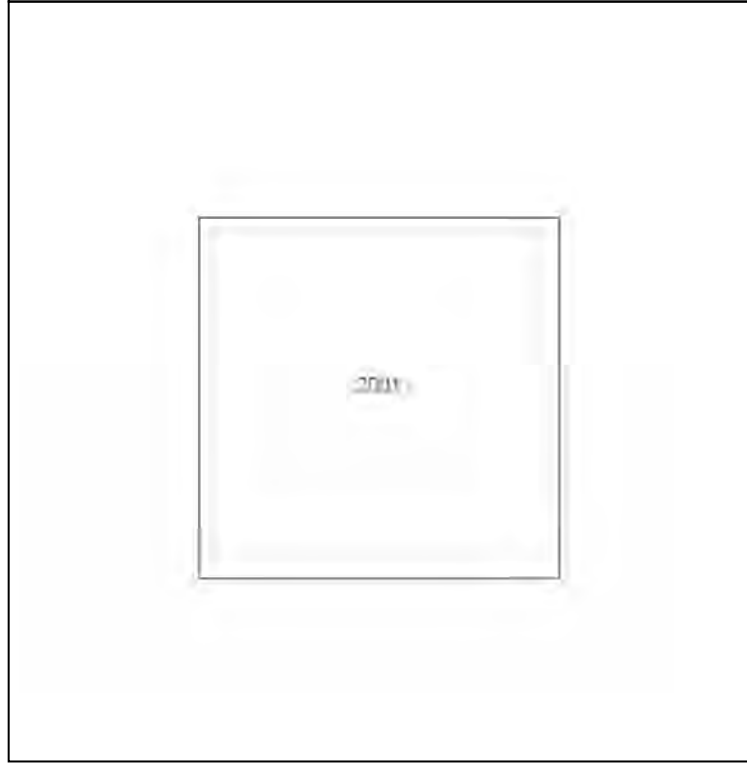
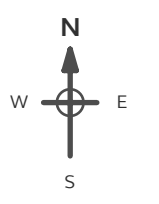
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 2001
Scale: 1:10,000
Printed at: 1:10,000



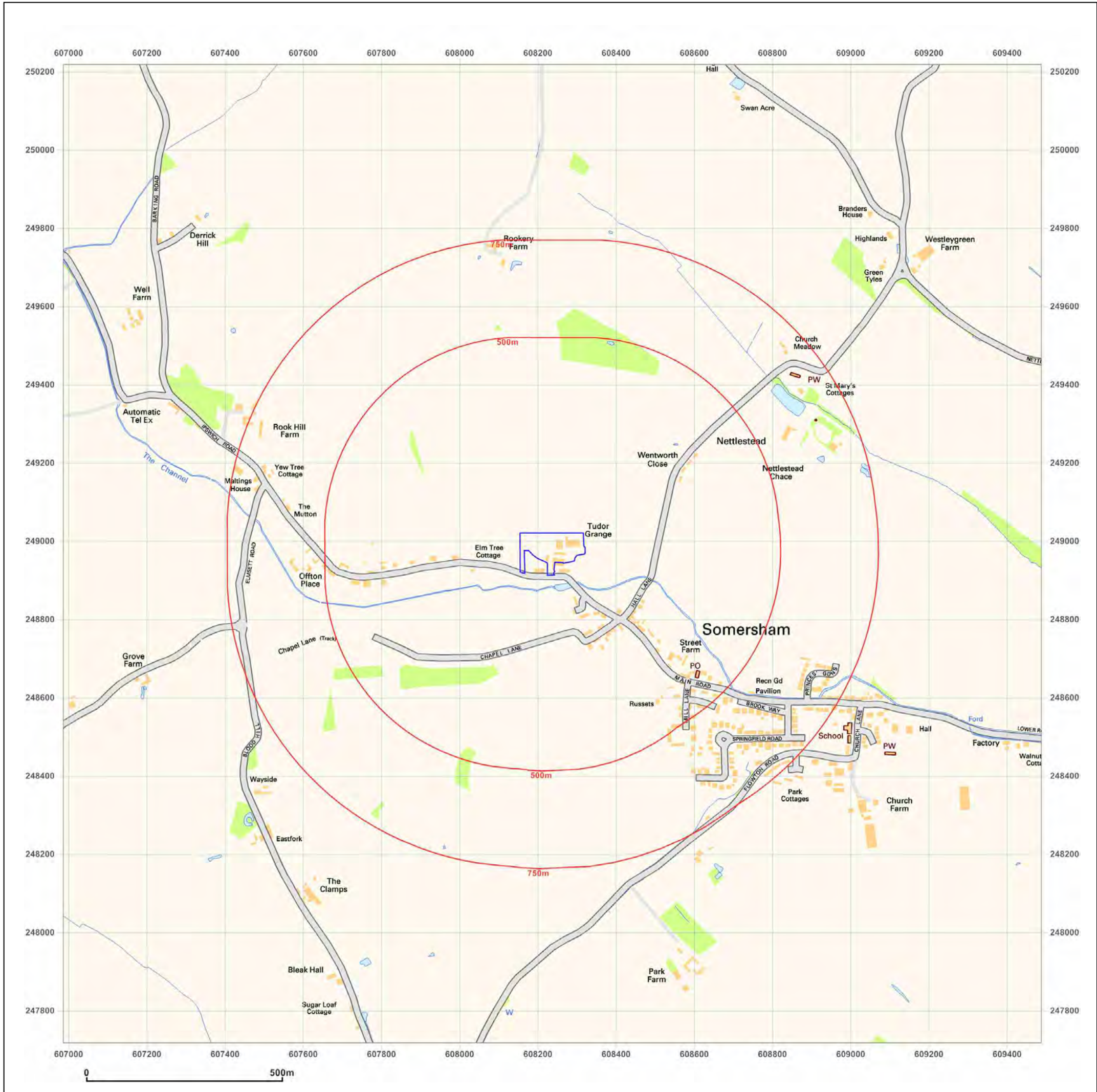
Powered by

 Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

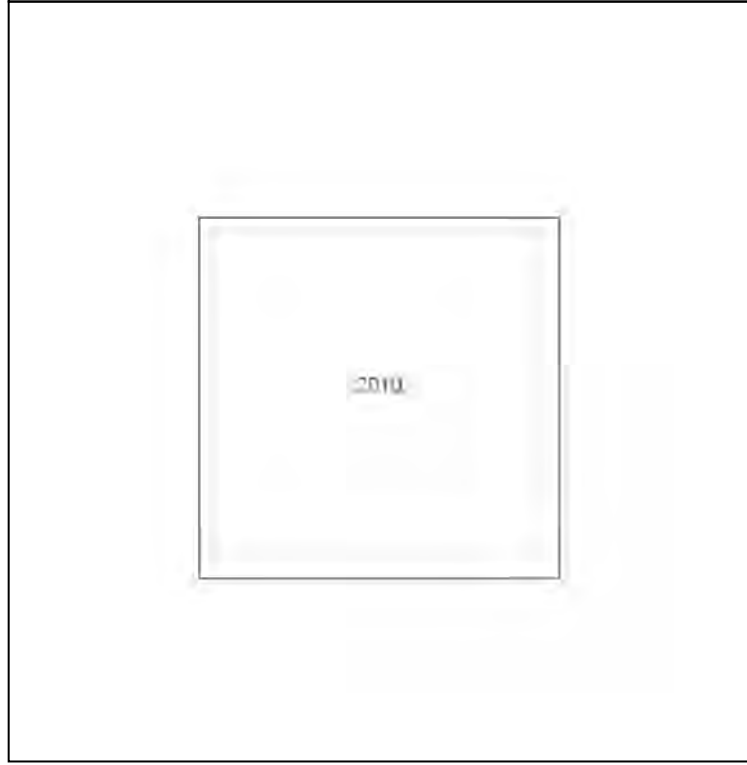
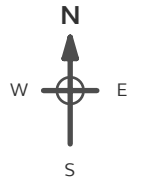
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 2010
Scale: 1:10,000
Printed at: 1:10,000



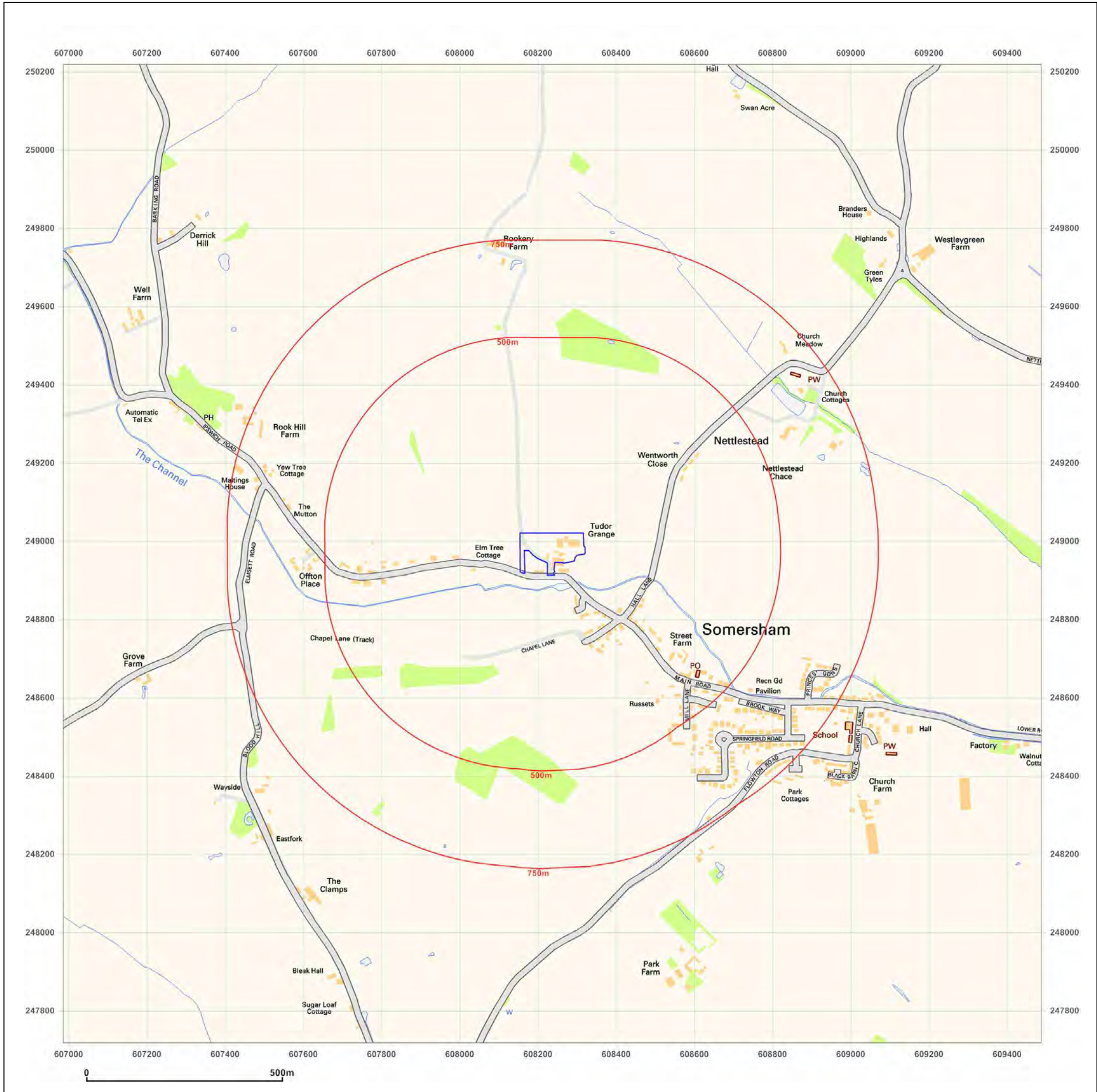
Powered by

 Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

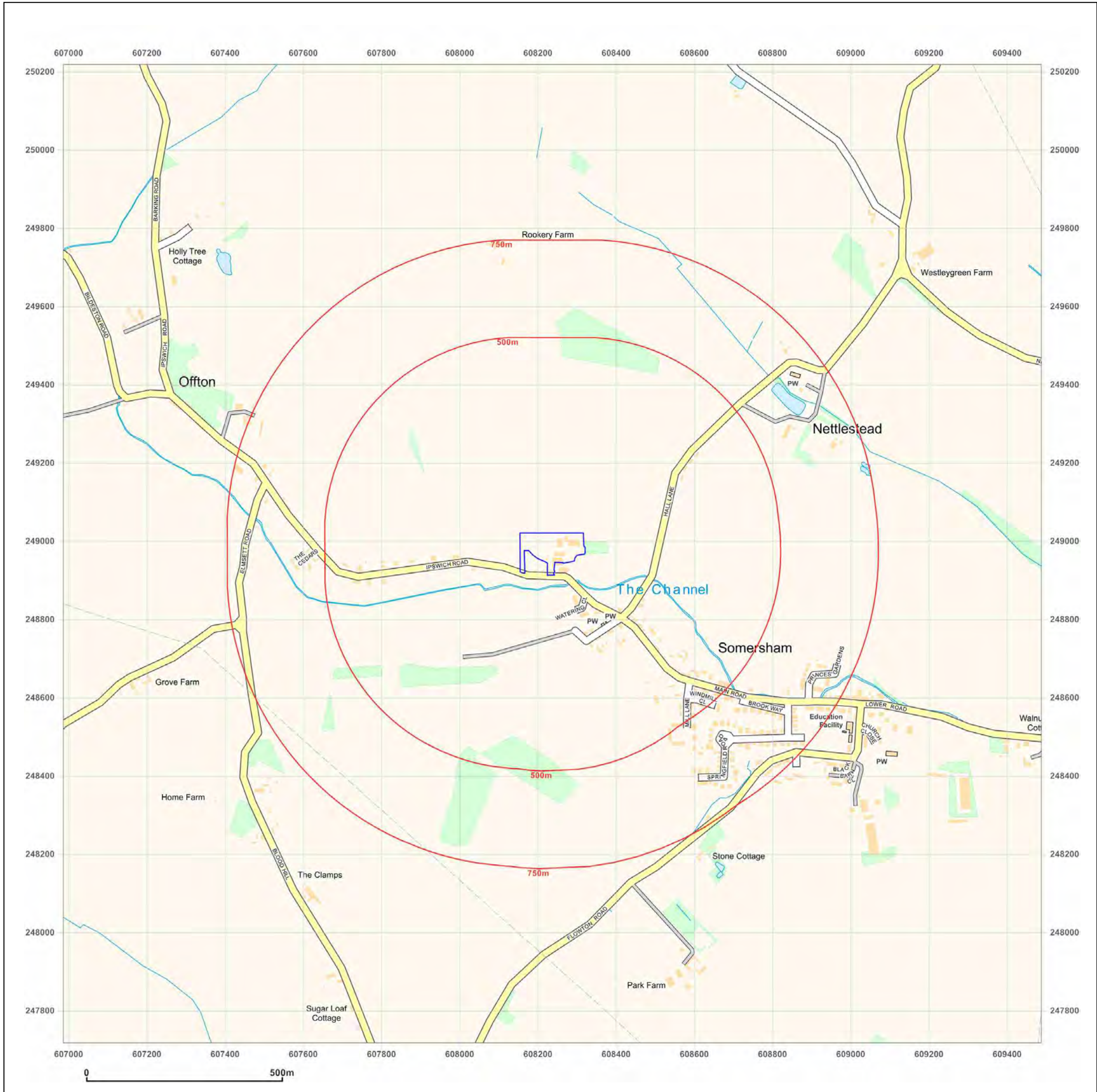
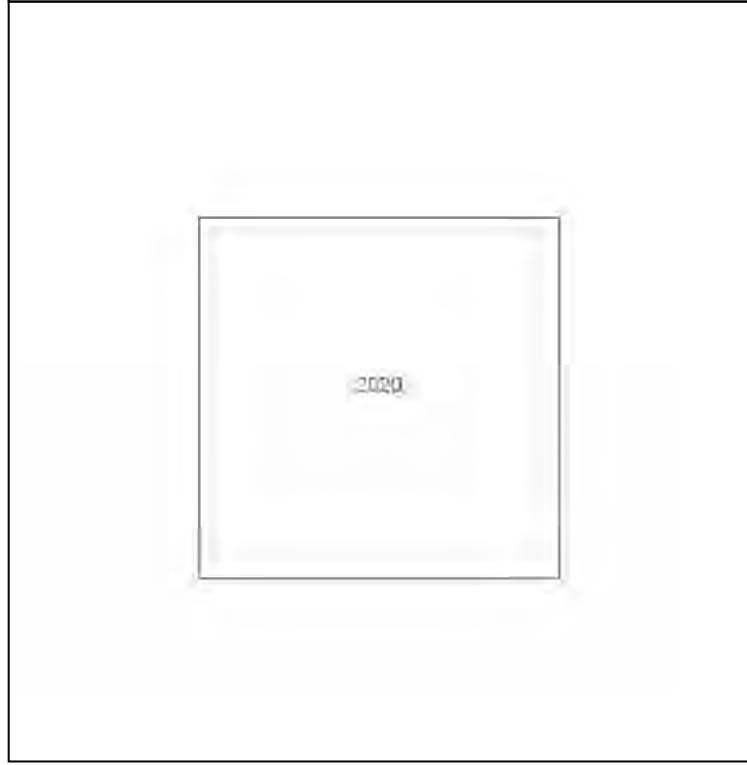
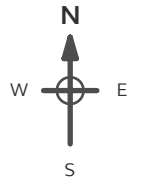
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:
 WATERING FARM,
 NETTLESTEAD, IPSWICH, IP8
 4QL

Client Ref: BJH_20_125
Report Ref: GS-6729825
Grid Ref: 608237, 248967

Map Name: National Grid
Map date: 2020
Scale: 1:10,000
Printed at: 1:10,000



Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 07 April 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

APPENDIX C: DRAWINGS

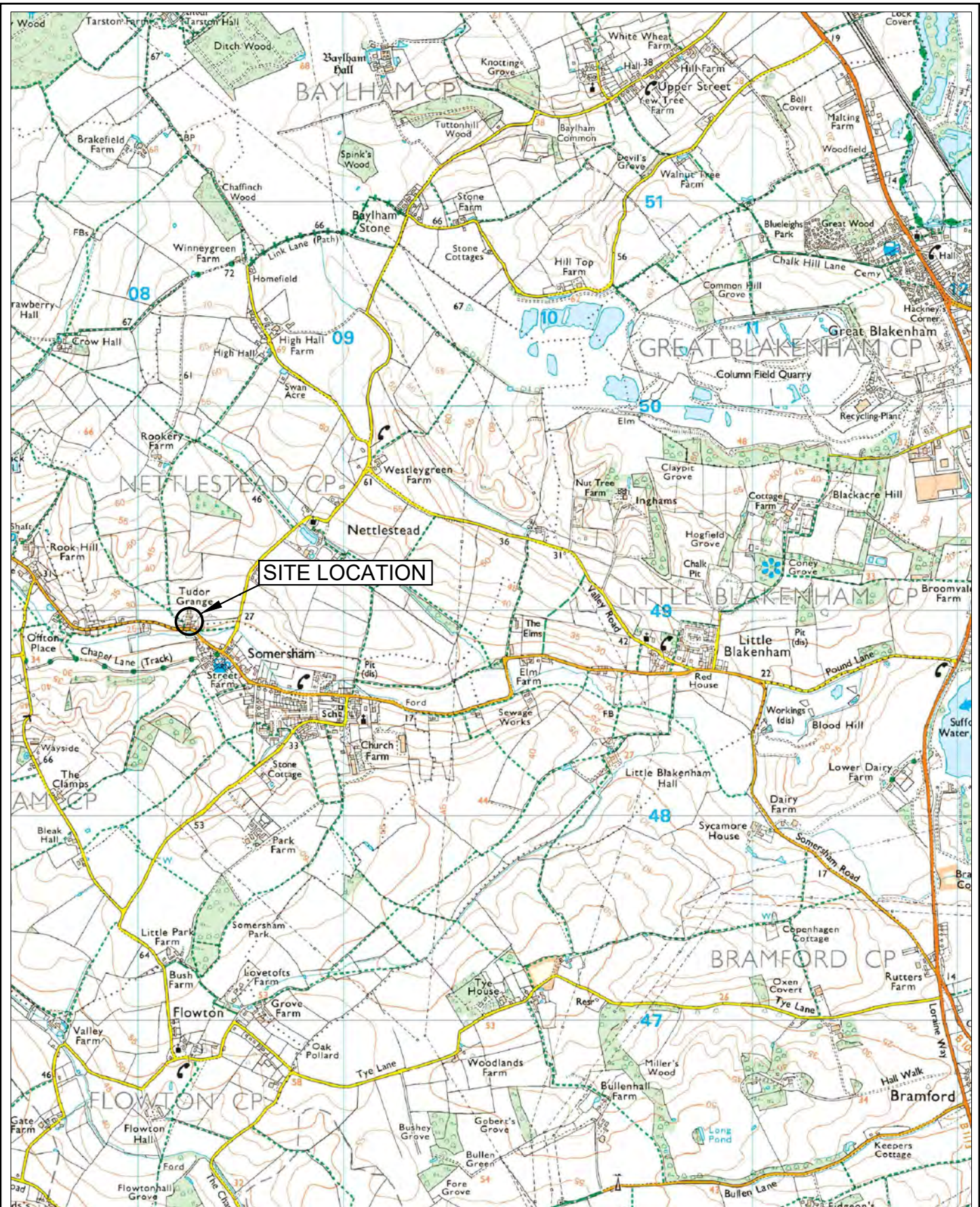
Drawing 20.125/Phasel/01 Site Location Plan

Drawing 20.125/Phasel/02 Relevant Feature Plan (Photographs 1 to 10)

Drawing 20.125/Phasel/03 Relevant Feature Plan (Photographs 11 to 20)

Drawing 20.125/Phasel/04 Relevant Feature Plan (Photographs 21 to 28)





North



Circle indicates approximate location of site



A F Howland Associates
Geotechnical Engineers

Site: Watering Farm, Nettlestead, Ipswich, Suffolk

SITE LOCATION PLAN

Client : Blakenham Farms

Date : April 2020

Dwg : 20.125/Phase1/01

Scale 1: 25,000 @ A4

Reproduced by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright Licence No. AL 100002157
Copyright © A F Howland Associates Limited 2020

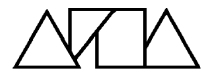


Photo 1 - Looking east towards the site



Photo 2 - Looking south-east towards the site



Photo 3 - Looking south along the western site boundary



Photo 4 - Area of burning



Photo 5 - Looking north-west



Photo 6 - Looking north-east



Photo 7 Looking south/south-west towards the site



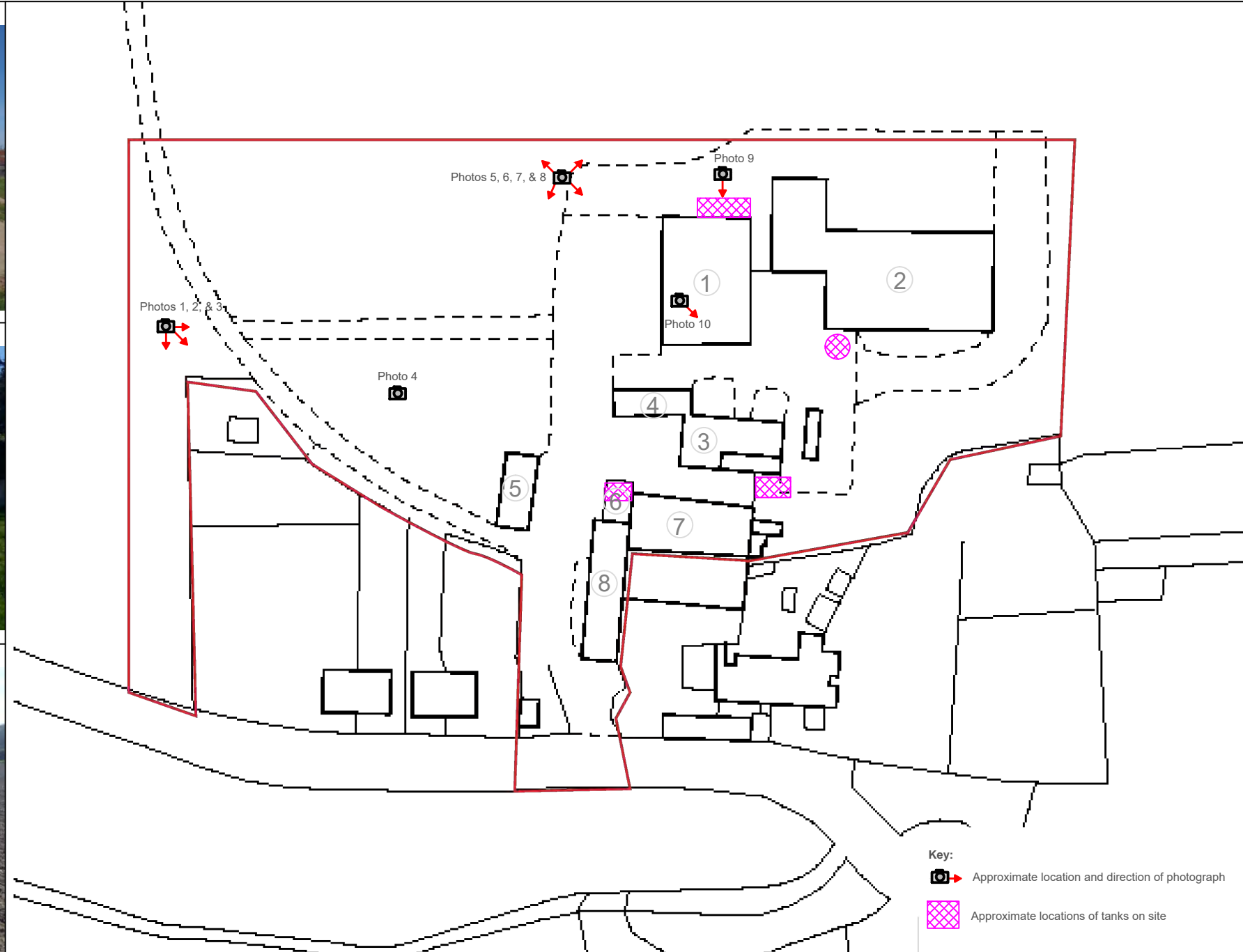
Photo 8 - Looking south-east towards Buildings 1 and 2



Photo 9 - Metal tanks to the north of Building 1



Photo 10 - South-east corner of Building 1



Key:
 Approximate location and direction of photograph
 Approximate locations of tanks on site



A F Howland Associates Ltd.
The Old Exchange
Newmarket Road
Cringelford
Norwich
NR4 6UF
Tel: 01603 250754

Website: www.howland.co.uk Email: admin@howland.co.uk

Client: Blakenham Farms
Site: Watering Farm, Nettlestead, Ipswich, Suffolk
Job No.: 20.125
Drawing title: Relevant Feature Plan
Drawing No.: 20.125/Phasel/02
Date: April 2020



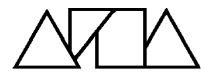


Photo 11 - Looking south between Buildings 1 and 2



Photo 12 - Small retaining wall along the northern site boundary



Photo 13 - Building 2, looking south-west



Photo 14 - South-east corner of the site



Photo 15 - Building 2, looking north-west



Photo 16 - Old tanker trailer adjacent to Building 3



Photo 17 - IBC tanks adjacent to Building 3

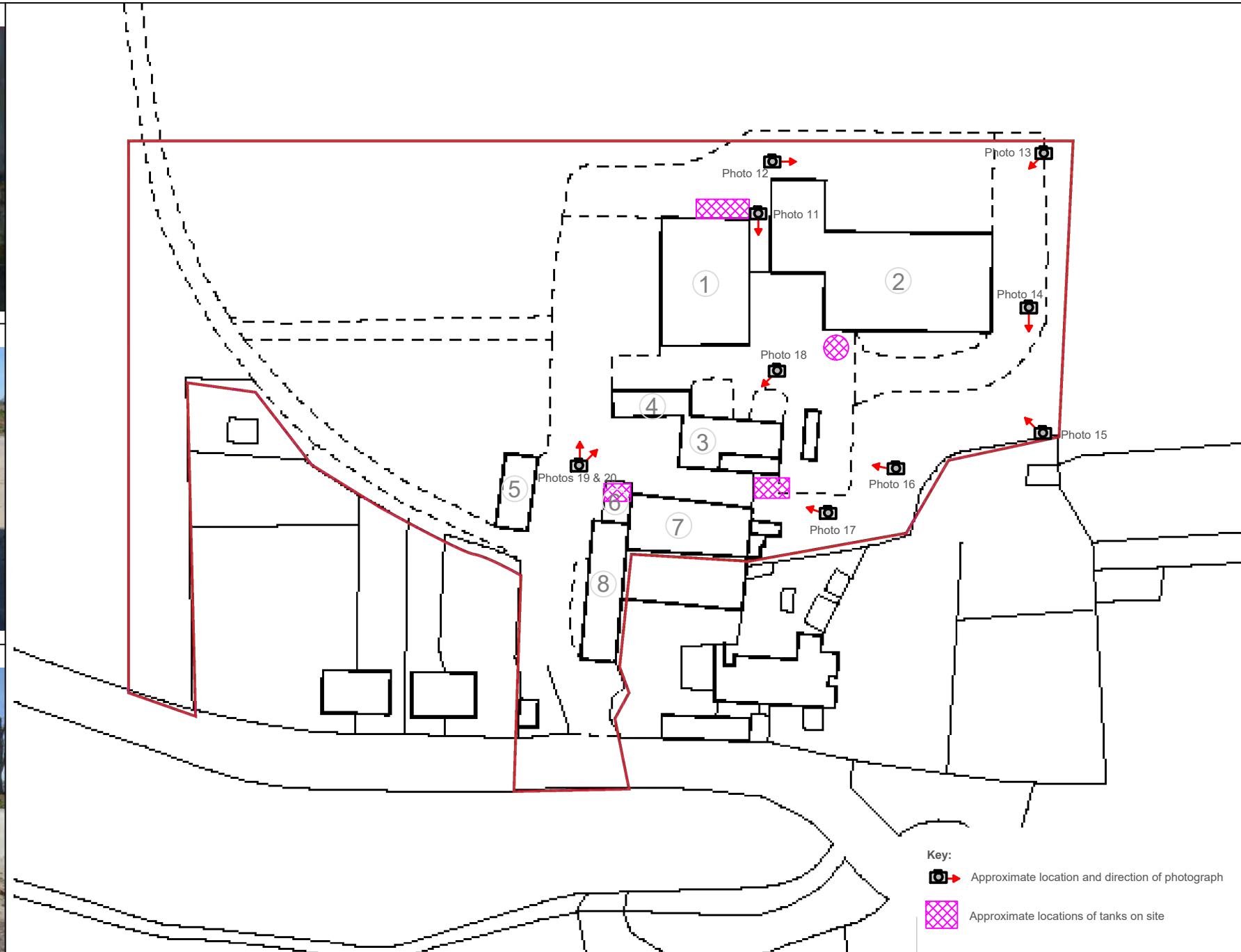


Photo 18 - Building 3



Photo 19 - Centre of the site, looking north



Photo 20 - Buildings 3 and 4



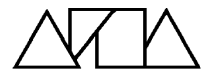


Photo 21 - Chemical store in Building 4



Photo 22 - Concrete floor of Building 4



Photo 23 - Between Buildings 3 and 7



Photo 24 - Building 7



Photo 25 - Building 7



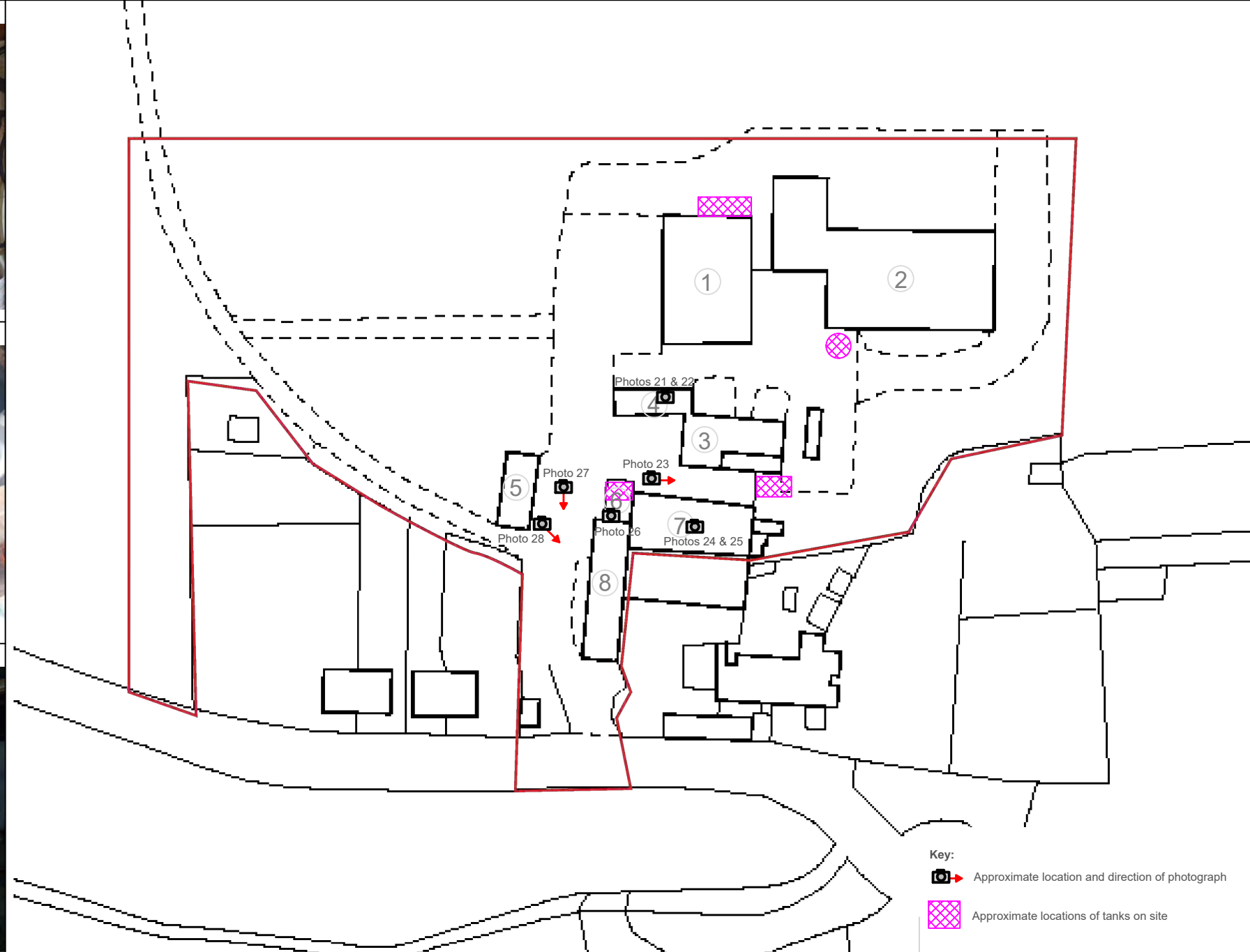
Photo 26 - Suspected water tank in Building 6



Photo 27 - Centre of the site looking south



Photo 28 - Building 8



APPENDIX D: RISK ASSESSMENT CLASSIFICATION

Classification	Definition	Examples
High Likelihood	There is a pollution linkage and an event which would either appear very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.	Free product visible on surface of sensitive water body or in the soil. On site or adjacent gassing 'landfill site'.
Likely	There is a pollution linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.	Potentially contaminative land use i.e. 'Brownfield' site, fuel storage depot, factory, petrol station etc. Sensitive receptors to be introduced as part of site redevelopment. Potentially infilled land identified on site or off-site with credible migration pathway.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.	Potential source of contamination identified i.e. historical land use as allotments or domestic above ground fuel storage tanks, areas of burning garden waste. Possible off-site infilled land.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.	No significant potential sources of contamination identified e.g. 'Greenfield' site. No potential sources of ground gas.

TABLE D1: CLASSIFICATION OF PROBABILITY

Classification	Definition	Examples
Severe	Short term (acute) risk to human health. Short term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short term risk to a particular ecosystem.	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Credible source of ground gas.
Medium	Chronic damage to Human Health. Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of a contaminant from site exceeds the generic, or site specific assessment criteria. Leaching of contaminants from a site to a Secondary or Principal aquifer or watercourse.
Mild	Pollution of non-sensitive water resources. Significant damage to buildings/structures and crops ("significant harm" as defined in the Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures or the environment.	Concentrations of a contaminant do not exceed the generic, or site specific assessment criteria. Leaching of contaminants from a site to an Unproductive Aquifer. Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as Personal Protective Equipment, etc).	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme.

TABLE D2: CLASSIFICATION OF CONSEQUENCE



APPENDIX D: RISK ASSESSMENT CLASSIFICATION (CONTINUED)

Classification	Definition
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard or there is evidence that severe harm is occurring. The risk, if realised, is likely to result in a substantial liability. Urgent investigation and remediation will be required.
High Risk	Harm or chronic damage is likely to arise to a designated receptor from an identified hazard. Investigation is required and remediation is likely to be required to ensure the site is suitable for a proposed use.
Moderate Risk	It is possible that harm or chronic damage could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe. Investigation and remediation are likely to be required to ensure the site is suitable for a proposed use.
Low/Moderate Risk	It is possible that harm or chronic damage could arise to a designated receptor from an identified hazard. Investigation is likely to be required. However, circumstances are such that investigation may prove the consequence to be mild and the site suitable for use without remediation.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard but it is likely that this harm, if realised, would at worst be mild. Investigation is unlikely to be required.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe. Investigation is not required.

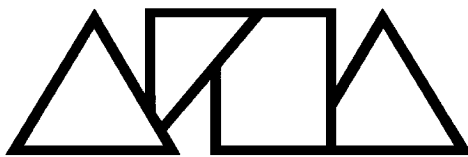
TABLE D3: DESCRIPTION OF RISK

		CONSEQUENCE			
		Severe	Medium	Mild	Minor
PROBABILITY	High likelihood	Very High	High	Moderate	Low/Moderate
	Likely	High	Moderate	Low/Moderate	Low
	Low likelihood	Moderate	Low/Moderate	Low	Very Low
	Unlikely	Low/Moderate	Low	Very Low	Very Low

TABLE D4: DETERMINATION OF RISK

Risk assessment classification v1.1 dated 08/03/2019





A F Howland Associates

The Old Exchange
Newmarket Road
Cringleford
Norwich
NR4 6UF

Tel: 01603 250754

Fax: 01603 250749

Email: admin@howland.co.uk

www: <http://www.howland.co.uk>