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p l a n n i n g

Contaminated land matters

**Demolition of glasshouses and development of two houses.
Previous Nursey land east of Kel Mar , Main Road, Holbeach
Drove , Spalding, PE12 0PS**

Compliance with Condition 6 of H09-0783-18 – Contaminated land

The following re-presents the submission and approval of the above condition to save repeating its requirements in the replacement permission.

Matrix Planning Ltd
38 Wade Park Avenue
Market Deeping
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Cambs
PE6 8JL

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TOWN AND COUNTRY PLANNING ACT 1990

APPROVAL REQUIRED BY CONDITION OF PERMISSION

Reference:	H09-0762-19	Date of Decision:	26th September 2019
Applicant:	All Square Properties Ltd C / O Matrix Planning Ltd 38 Wade Park Avenue Market Deeping Peterborough Cambs PE6 8JL		
Location:	Land East Of Kelmar Main Road Holbeach Drove Spalding Lincs		
Description:	Details of scheme to deal with contamination (Condition 6 of H09-0783-18)		

South Holland District Council hereby give notice that CONSENT HAS BEEN GRANTED for the details submitted for the purpose of conditions attached to the planning permission.

Notes:

The determined plans are:
Contamination Report Desk Study (Prepared by Plandescil - July 2019)
Appendix A - Groundsure Enviro Insight Report
Appendix B - Groundsure Enviro Insight Report
Appendix C - Historical Maps & Aerial Photographs
Appendix D - Drawing No. 25080/704 - Photograph Location Plan
Appendix E - Risk Categorisation and Terminology
Application Form

Phil Norman



**Planning and Building Control Manager
South Holland District Council**

BUILDING REGULATIONS:

This decision refers only to planning permission as granted under the Town and Country Planning Act 1990. The works that you are proposing may also require Building Regulations and this planning permission does not give authority under Building Regulations to commence work. Please contact the Building Control section for further information on 01775 764557 or bcadmin@sholland.gov.uk

RIGHTS OF APPEAL**Appeals to the Secretary of State**

If you are aggrieved by the decision of your Local Planning Authority to refuse permission for the proposed development or grant consent subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990 or Section 20 of the Planning (Listed Building and Conservation Areas) Act 1990.

Timescales for appealing

The deadlines for appeals are calculated from the **date of decision** and are as follows for the types of applications below:

12 Weeks	6 Months	8 Weeks
Householder Applications	Planning Permission	Consent to Display Adverts
Minor Commercial Development	Listed Building Consent	
Agricultural Determinations	Other Prior Approval Applications	
Householder Prior Approval Applications		

Enforcement Notices

If an enforcement notice was served prior to the planning application being determined then the deadline for appealing is 28 days from the date of the **planning refusal**

If an enforcement notice is served after the planning application is determined then the deadline for appealing is 28 days from the date of the **enforcement notice OR the timescales stated above for each application type** from the date of the planning refusal - whichever is sooner.

All appeals must be made using an Appeal Form which you can get from The Planning Inspectorate at Temple Quay House, 2 The Square, Bristol, BS1 6PN (tel: 0303 444 5000) or you can submit your appeal online at:

<http://www.planningportal.gov.uk/planning/appeals/online/makeanappeal>

The Secretary of State can allow a longer period for giving notice of an appeal but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to him that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions it imposed, having regard to the statutory requirements, to the

provisions of the development order and to any directions given under the order. In practice the Secretary of State does not refuse to consider appeals solely because the Local Planning Authority based its decision on a direction given by him.

For detailed information on appeals, appeal types and guidance on the appeals process please visit:

<http://www.planningportal.gov.uk/planning/appeals/planningappeals>

Purchase Notices

If either the Local Planning Authority or the Secretary of State refuses permission to develop land or grant it subject to conditions the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor can he render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of the Part VI of the Town and Country Planning Act 1990 or Section 32 of the Planning (Listed Building and Conservation Areas) Act 1990.

Compensation

In certain circumstances compensation may be claimed from the Local Planning Authority if permission is refused or granted subject to conditions by the Secretary of State on appeal or on reference of the application to him.

These circumstances are set out in Section 114 and related provisions of the Town and Country Planning Act 1990 and Section 27 of the Planning (Listed Building and Conservation Areas) Act 1990.



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Planning Department
South Holland District Council

Attn David Grant

05 August 2019

Dear Mr Grant,

**Demolition of glasshouses and development of two houses.
Previous Nursey land east of Kel Mar , Main Road, Holbeach
Drove , Spalding, PE12 0PS**

Compliance with Condition 6 of H09-0783-18 – Contaminated land

Condition 6 of the above permission prevents a commencement of development (which includes glasshouse demolition) until such time as a scheme to address the contamination of the land has been agreed. The conclusions in the submitted report (page 13, risk summary) are that the risk to receptors is either 'low risk' or 'very low risk'

Once this submission is approved, then the development may commence (subject to compliance with the other planning conditions) and the following recommendations. This is the scheme required by the Condition.

"Recommendation 1

Construction workers may be exposed to potentially contaminative materials. This risk should be mitigated by the correct use of personal protective equipment, and compliance with relevant health and safety legislation.

Recommendation 2

If unusual materials/ground conditions are encountered these should be treated in accordance with applicable health and safety and environmental legislation and reported to a competent person for further investigation."

In broader terms, the report's conclusions are at page 14:

"The basic requirements for land development in the UK is that the land should be suitable for use. The information reviewed in the preparation of this Phase 1 contamination Report Desk Study identified potential existing and historical on-site sources of contamination;

Recommendations 1 – 2 in Table 7.1 should be adhered to during the development of the site in order to safeguard potential receptors. When developing the site, it is possible that differing ground conditions and higher concentrations of contaminants exist than have been identified by this report. In the event that differing ground conditions are encountered, further assessment/investigation should be undertaken by a competent person(s)."

Yours sincerely,



Gordon Smith, MRTPI

The submission is :

- a. This letter
- b. Main report Contamination desk Study July 2019 by Plandescil (21 pages)
- c. Appendices A - B (105 pages)
- d. Appendix C- E (24 pages)

Note: Condition 6 of H09-0783-18 states:

- 6 The development hereby permitted shall not be commenced until a scheme to deal with any contamination of land or pollution of controlled waters has been submitted to and approved in writing by the Local Planning Authority (LPA) and until the measures approved in that scheme have been implemented. The scheme shall include all of the following measures:

- i) a desk-top study carried out to identify and evaluate all potential sources of contamination and the impacts on land and/or controlled waters, relevant to the site. The desk-top study shall establish a 'conceptual site model' and identify all plausible pollutant

linkages. Furthermore, the assessment shall set objectives for intrusive site investigation works/Quantitative Risk Assessment (or state if none required). Two full copies of the desk-top study and a non-technical summary shall be submitted to the LPA without delay upon completion.

- ii) if identified as being required following the completion of the desk-top study, a site investigation shall be carried out to fully and effectively characterise the nature and extent of any land contamination and/or pollution of controlled waters. It shall specifically include a risk assessment that adopts the Source-Pathway-Receptor principle, in order that any potential risks are adequately assessed taking into account the sites existing status and proposed new use. Two full copies of the site investigation and findings shall be forwarded to the LPA without delay upon completion.

- iii) thereafter, a written method statement detailing the remediation requirements for land contamination and/or pollution of controlled waters affecting the site shall be submitted to and approved in writing by the LPA, and all requirements shall be implemented and completed to the satisfaction of the LPA. No deviation shall be made from this scheme. If during redevelopment contamination not previously considered is identified, then the LPA shall be notified immediately and no further work shall be carried out until a method statement detailing a scheme for dealing with the suspect contamination has been submitted to and agreed in writing by the LPA.

- iv) two full copies of a full closure report shall be submitted to and approved in writing by the LPA. The report shall provide verification that the required works regarding contamination have been carried out in accordance with the approved Method Statement(s). Post-remediation sampling and monitoring results shall be included in the closure report to demonstrate that the required remediation has been fully met.

Note

The applicant is advised that the phased risk assessment required by the Contaminated Land Scheme Condition should be carried out in accordance with the procedural guidance of the Environmental Protection Act 1990 Part 11A.

The applicant's attention is also drawn to the document entitled "Developing Land Within Lincolnshire - A guide to submitting planning applications to develop land that may be contaminated", which can be obtained through the Local Environmental Health Department.

Reason: To assess whether the site is polluted and to address any pollution to ensure a satisfactory development. This issue is integral to the development and therefore full details need to be finalised prior to the commencement of works.

This Condition is imposed in accordance with Policy 30 of the South East Lincolnshire Local Plan, 2019.



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This Condition is imposed in accordance with Policy 30 of the South East Lincolnshire Local Plan, 2019.

Contamination Report Desk Study
Revision 0

Job No. 25080

Proposed Residential Development
Land to the East of Kelmar
Main Road
Holbeach Drove
Lincolnshire
PE12 OPS

Client: David Taylor Associates (UK) Ltd

July 2019

REPORT CONTROL SHEET**Client:** David Taylor Associates (UK) Ltd**Job No.:** 25080

Project Name: Proposed Residential Development
Land to the East of Kelmar
Main Road
Holbeach Drove
Lincolnshire
PE12 OPS

Issue		
Revision 0	July 2019	Report Prepared by: Peter Dickerson B.Sc (Hons) Graduate Forensic Scientist
		Report Reviewed & Authorised by: Sara Riley B.Sc (Hons) Senior Director

CONDITIONS OF INVESTIGATION & REPORTING

This report and its findings should be considered in relation to the terms of the brief and objectives agreed between Plandescil Ltd and the Client.

Plandescil Ltd has made every effort to provide an accurate assessment of the ground condition of the site, within the constraints of this desk study. However it is possible that different ground conditions or contamination may exist in parts of the site which has not been identified in the desk study or the visual survey.

The conclusions within this report are professional opinions based on the interpretation of environmental and historical data which have been compiled using a standard methodology designed to provide reasonable consistency and robustness. Plandescil Ltd cannot be held responsible for any contamination subsequently identified during development of the land.

The details contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by Plandescil Ltd has not been independently verified by Plandescil Ltd, unless otherwise stated in the report.

This report was prepared and provided for the sole and specific use of the client. Plandescil Ltd shall not be responsible for any use of the report or its contents for any other purpose. Copies of the report to other parties for information should be copied in full but Plandescil Ltd shall extend no professional liability or warranty to other parties in this connection without written consent.

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DRAWINGS APPENDIX

Drawing No. 25080/701	-	Site Location Plan
Drawing No. 25080/702	-	Existing Site Layout
Drawing No. 2046-18-3	-	Indicative Site Plan

APPENDIX A

Groundsure Enviro Insight Report

APPENDIX B

Groundsure Geo Insight Report

APPENDIX C

Historical Maps & Aerial Photographs

APPENDIX D

Drawing No. 25080/704	-	Photograph Location Plan
Photograph Portfolio		

APPENDIX E

Risk Categorisation and Terminology

1.0 INTRODUCTION

Plandescil Ltd has been commissioned by David Taylor Associates (UK) Ltd on behalf of the applicant, to prepare a Phase 1 Contamination Report Desk Study to address contamination related planning conditions for an application for the demolition of glasshouses and erection of 2 detached dwellings at the land to the east of Kelmar, Main Road, Holbeach Drove.

The proposed development will involve construction of two residential dwellings, refer to Drawing No. 2046-18-3 in the **Drawings Appendix** detailing the proposed site layout.

1.1 Existing Site Description

The site is situated in the village of Holbeach Drove, which lies approximately 8.5 miles south of the town of Spalding and approximately 8.5 miles west of the town of Wisbech, refer to the Site Location Plan, Drawing No. 25080/701 (**Drawings Appendix**). The site is located at National Grid reference 532508E, 312349N⁽⁹⁾.

The existing site currently comprises a large glasshouse, refer to Site Walkover in Section 4.1 for further details.

Site levels are identified BY Ordnance Survey mapping as approximately 3.0m above ordnance datum (AOD), refer to Drawing No. 25080/702 (**Drawings Appendix**). All levels within this report refer to ground levels above ordnance datum (AOD) unless otherwise noted.

2.0 OBJECTIVES

This Phase 1 Desk Study seeks to identify as far as reasonably practicable, the likelihood of potential environmental contamination which may affect the suitability of the site for future use as a residential development, or adversely affect the health and safety of sensitive receptors.

This will be achieved by:

1. Construction of a preliminary conceptual site model (CSM), to facilitate an understanding of the potential sources, pathways and receptors which may exist on-site;
2. Production of a qualitative preliminary risk assessment accounting for potential pollutant linkages, and
3. Establishing the need and scope for further investigation.

3.0 SITE HISTORY

3.1 Historic Site Description

The site has been subject to agricultural use as a nursery/ glasshouse since at least 1992, with the glasshouse still present on-site. Historical mapping from 1887 indicates that no development had occurred on-site prior to the sites use as a nursery/ glasshouse.

3.2 Historical Setting

Historical maps obtained from Groundsure as part of their Map Insight report⁽¹⁰⁾ and aerial photographs obtained from various archival sources^(11, 12) are included in **Appendix C**. A summary of the significant information obtained from the historical maps and aerial photographs is provided in **Table 3.2**.

Please note: The site boundary detailed within the Groundsure report identifies the approximate location of the site boundary, please refer to Drawing No. 2046-18-3 (**Drawings Appendix**) for the accurate location of the proposed development.

Table 3.2 Summary of Historical Land Use

Date of Map	Scale	On-site	Off-Site <250m (Wells <50m, Ponds & Structures <100m)
1887	1:10,560	Undeveloped land	Nothing of significance
1888	1:2,500	No significant change	- Chapel approx. 25m SE - Chapel approx. 50m SW
1904	1:2,500	No significant change	- Chapel identified in 1888 approx. 50m SW no longer labelled
1903-1906	1:10,560	No significant change	No significant change within 250m of site
1950	1:10,560	No significant change	No significant change within 250m of site
1959	1:10,560	No significant change	No significant change within 250m of site
1975	1:2,500	No significant change	- Large structure adjoining the north-east boundary corner
1980	1:10,000	No significant change	- Structure identified in 1975 has expanded towards the west
1992	1:2,500	Structure identified, occupying the majority of the site.	- Filling station identified approx. 95m E
1994	1:2,500	No significant change	No significant change within 250m of site
1999	Aerial Photographs	Site predominantly occupied by a glasshouse	- Unknown stockpiled materials identified approx. 5m NW of site - Tank identified approx. 2m N of site
2002	1:10,000	No significant change	No significant change within 250m of site
2005	Aerial Photographs	No significant change	No significant change within 250m of site
2006	Aerial Photographs	No significant change	- Materials identified in 1999 aerial approx. 5m NW, no longer identified.
2010	1:10,000	No significant change	No significant change within 250m of site
2014	1:10,000	No significant change	No significant change within 250m of site
2018	Aerial Photographs	Small brown object in south-east corner, possibly the bulk storage tank identified during the walkover.	No significant change within 250m of site

N.B features refer to Section 1 of Enviro Insight Report⁽⁸⁾ (**Appendix A**)

4.0 ENVIRONMENTAL SETTING

4.1 Site Walkover

A site walkover was conducted on 17th July 2019, by Peter Dickerson of Plandescil Ltd. The objective of the walkover was to assess existing site activities and identify any potential causes of contamination arising from these including, but not limited to, a robust review of the physical condition of the surface and any hardstandings present on-site to attempt to identify any existing areas of contamination.

A series of photographs was taken to record the site as encountered during the site walkover. These photographs and Drawing No. 25080/704, which identifies the location of each photograph, are included within the photo portfolio held at **Appendix D**.

Drawing No. 25080/702 in the **Drawings Appendix** details the existing site layout.

4.1.1 Site Observations

Access and egress to the site is through a gated entrance to the south-west off of the main road. A maintained grassed pathway extends along the boundary from the entrance to the north-west of the site.

The southern boundary is occupied by dense vegetative overgrowth and immature trees. An empty, heavily corroded bulk storage tank was identified towards the south-east corner. The tank did not appear to be connected to any pipework and appeared to have been dumped, this has been confirmed by the architect after consulting the landowner. No obvious visual or olfactory evidence of hydrocarbon contents were identified within it or its vicinity.

The majority of the site was occupied by a large glasshouse. The glasshouse has not been in use for at least 8 years when it was utilised for growing flowers and no activity has occurred within the glasshouse since then (anecdotal). A concrete slab ran through the centre of the glasshouse from the southern to the northern boundary, the concrete was in good condition with no staining identified. The remaining ground within the glasshouse was laid to a bare sandy soil with varying densities of vegetative overgrowth throughout. The dense areas of vegetative overgrowth were located where the glass on the ceilings or walls was missing and allowing in rainwater. Areas of vegetative dieback were noted within the glasshouse, likely due to the lack of water within the glasshouse and the recent hot and dry conditions. Two small empty bags of ammonium nitrate fertiliser were identified within the glasshouse, towards the southern extent. No obvious visual or olfactory evidence of potential contamination was identified within the glasshouse.

No additional structures or buildings were observed on-site.

4.1.2 Off-Site Observations

Residential dwellings were identified to the east and west of the site. To the north of the site is an unmaintained field containing a large empty bulk storage tank. The tank was in good condition with no obvious visual or olfactory evidence of contamination identified within its vicinity. Beyond the field to the north is agricultural land. To the south of the site there is a road, beyond which is agricultural land.

4.2 Geology

The British Geological Survey's, Digital geological map of Great Britain 1:50,000 scale⁽⁴⁾, identifies the site to be underlain with Bedrock Geology comprising Oxford Clay Formation - Mudstone. Superficial Deposits of Terrington Beds – Clay and Silt are identified to overlay the bedrock. This is consistent with the findings of the Groundsure Geo Insight report⁽⁸⁾ held in **Appendix B**.

Geotechnical data relating to the project sites' ground conditions have been obtained from Groundsure Geo Insight (referred to in **Table 4.2** as Geo) and Enviro Insight (referred to in **Table 4.2** as Enviro) summarised below.

Table 4.2 Geotechnical Data Summary

Ground Subsidence/Geotechnical Information	Details
Ground Workings (Geo Section 4) and Potentially Infilled Land (Enviro Section 1.7)	No records of current or historical ground workings or potentially infilled ground are identified within 250m of the site.

Ground Subsidence/Geotechnical Information	Details
Artificial/Made Ground (Geo Section 2.1)	No artificial/made ground is identified on-site or within 250m of the site.
Mining (Geo Section 5)	The site is not situated within an area, which has been mined for clay, tin, coal or other valuable materials.
Natural Cavities (Geo Section 5.6)	No records of natural cavities are identified within 250m of the site.
Shrink-Swell Clays (Geo Section 6.1)	Negligible. Ground conditions predominantly non-plastic. No special actions required.
Landslides (Geo Section 6.2)	Very Low. Slope instability problems are unlikely to be present. No special actions required.
Ground Dissolution Soluble Rocks (Geo Section 6.3)	Negligible. Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required.
Compressible Deposits (Geo Section 6.4)	Moderate. Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. Consider possibility of compressible ground within ground investigation.
Collapseable Deposits (Geo Section 6.5)	Negligible. No indicators for collapseable deposits identified. No special actions required.
Running Sands (Geo Section 6.6)	High. Very significant potential for running sand problems. Avoid large amounts of water entering the ground, for example through pipe leakage or soakaways. Do not dig deep holes into saturated ground without technical advice.
Estimated Background Soil Chemistry (Geo Section 8)	2 records of background soil chemistry are located on-site. The values do not estimate elevated levels of Arsenic, Cadmium, Chromium, Nickel or Lead to be present that would exceed the most conservative assessment criteria for soil within a residential garden area with home grown produce.
Railways and Tunnels (Geo Section 9)	The site is not situated on, or within 250m of railway, tunnel or railway/tunnel feature (current or historical).
Groundwater Vulnerability/Soil Leaching Potential (Enviro Section 6.8) (Geo Section 2.3.2)	Environment Agency data does not identify a groundwater vulnerability and soil leaching potential for the site as the aquifer within the bedrock is considered unproductive. The mudstone bedrock identified on-site is considered low to have a low permeability through fractured flow.

4.3 Hydrogeology and Hydrology

The Groundsure Enviro Insight (**Appendix A**) identifies Superficial Deposits of Tidal Flat Deposits which is classified as Secondary (undifferentiated) Aquifer.

The Bedrock Geology comprising Mudstone Formation is classified as unproductive.

The project site is not situated within a designated Source Protection Zone.

The BGS Hydrogeological Map⁽³⁾ does not include the site, however the immediate area to the River Great Ouse is unproductive and groundwater levels are not identified.

One MasterMap Water Network entry is identified within 100m of the site. The entry refers to an unclassified ground surface inland watercourse located 14m S of the site.

Six surface water features are identified approx. 12m S, 111m SE, 159m W, 189m S, 216m S and 217m W of the site, which are not represented on maps. These features are likely to be drainage ditches.

4.4 Flooding

The site is located in Flood Zone 1⁽⁶⁾; therefore the annual probability of the site being flooded by a fluvial/tidal flood event is less than 0.1% (equivalent to a flood event having less than 1 in 1000 year annual probability).

4.5 Industrial Pollution

Industrial pollution data for those installations regulated by the Environment Agency, and the Local Authority have been consulted to identify the location of any potentially polluting activities such as landfill sites (current and historic), permitted facilities, and discharge consents etc. The results are summarised within **Table 4.5**.

Table 4.5 Summary of Pollution Data

Data	Source	Detail
Sites Determined as Contaminated Land under Part 2A EPA 1990	Groundsure Insight ⁽⁹⁾ Enviro	No records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990.
Recorded Pollution Incidents	Groundsure Insight ⁽⁹⁾ Enviro	No pollution incidents are identified within 250m of the site.
Industrial Use	Groundsure Insight ⁽⁹⁾ Enviro	Three records of potentially contaminative industrial sites are recorded within 250m of the site. Existing - Bassett Weldings (feature 2) (cutting, drilling and welding services) are identified approx. 227m E. Historical - A nursery is identified on-site, dated 1980 - A nursery is identified approx. 44m SW of site, dated 1980.
Tanks	Groundsure Insight ⁽⁹⁾ Enviro	No existing or historical tanks are identified within 250m of the site.
Garage and Motor Vehicle Repairs	Groundsure Insight ⁽⁹⁾ Enviro	Two records of existing and historical garages or petrol/fuel sites are identified within 250m of the site. Existing - The Stores & Filling Station (feature 1) (petrol and fuel station) are identified approx. 91m E. Historical - A filling station is identified approx. 83m E, dated 1975.
Energy Features	Groundsure Insight ⁽⁹⁾ Enviro	No records of current or historical energy features are identified within 250m of site.
Records of Part A(1) and IPPC Authorised Activities	Groundsure Insight ⁽⁹⁾ Enviro	No records of activities listed as Part A(1) or IPPC authorised activities were identified within 250m of the site.
Records of Part A(2) and Part B Listed Activities and Enforcements	Groundsure Insight ⁽⁹⁾ Enviro	No records of activities listed as Part A(2) and Part B were identified within 250m of the site.
Records of Licensed Discharge Consents	Groundsure Insight ⁽⁹⁾ Enviro	Nineteen records of Licensed Discharge Consents are recorded within 250m of the site. All refer to historic legislation, permitting the discharge of unspecified effluent or final/ treated effluent. Predominantly the permits are for discharges to land with the remaining permits not specified.
Water Abstraction Licences	Groundsure Insight ⁽⁹⁾ Enviro	No groundwater, surface water or potable water abstraction licences were identified within 250m of the site.
Landfill	Groundsure Insight ^(6,9) Enviro	One record of historic and no records of current landfill sites are located within 500m of the site. Historical - Holbeach Drove Gate. Site ref: RD7-27-01/89, SH-27/01/89, 2500/5073
Services	Groundsure Insight ⁽⁹⁾ Enviro	There are no records of National Grid high pressure or high voltage underground pipelines within 500m of the site. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). The dataset also does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses.

4.6 Invasive Plant Species

No noticeable evidence of Japanese Knotweed or Giant Hogweed, was identified during the site walkover. *"It is an offence under section 14(2) Wildlife and Countryside Act 1981 to plant or otherwise cause the plant to grow in the wild"* Natural England⁽¹⁵⁾. Should either of these species be identified during the works specialist advice should be sought to control them.

No noticeable evidence of Himalayan Balsam was identified during the site walkover.

4.7 Environmentally Sensitive Sites

The project site is not situated within a Surface Water Nitrate Vulnerable Zone.

No records of designated environmentally sensitive areas are identified within 250m of the site. No records of any other designated environmentally sensitive sites are identified within 250m of the site.

4.8 Radon Data

The site is not situated in a Radon affected area, as defined by the Health Protection Agency, as less than 1% of properties are above the Action Level. Groundsure⁽⁸⁾ (**Appendix B**) indicates no radon protective measures are necessary.

5.0 PRELIMINARY CONCEPTUAL SITE MODEL

5.1 Conceptual Site Model

CLR11⁽²⁾ states that “*land contamination in its broadest sense describes a general spectrum of site and soil conditions.*” To understand the level of potential contamination present on-site, it is essential to understand the natural history of the site and its current and historic uses.

Robust research has been conducted to attempt to identify any area of land which may exhibit elevated levels of naturally occurring substances, but also any specific site uses which may have resulted in a legacy of contamination remaining on-site from activities including those arising from waste storage and disposal.

The conceptual site model attempts to understand the existing and historic uses in combination with the existing and historic land uses associated with neighbouring sites. A robust understanding of local land use is required to attempt to identify land which has been affected by aerial deposition, accidents, incidents (including leaks/spillages), and/or migration of contamination, which could affect the condition of the project site.

The preliminary conceptual site model accounts for both on-site and off-site potential sources of contamination, and their potential pathways to impact sensitive receptors. Potential sources, pathways and receptors are identified in detail at **Sections 5.2 - 5.5**.

5.2 Potential Sources of Contamination

Two potential on-site sources of contamination have been identified relating to the current and historic uses and include:

- S1. Herbicides, fungicides, pesticides, insecticides and fertilisers from commercial horticulture
- S2. TPH's from Bulk Storage Tank on the southern boundary of the site

One potential off-site contamination source has been identified:

- OS1. TPH from Bulk Storage Tank approximately 2m north of the site

5.3 Potential Pathways

A pathway can be defined as a route or means by which a receptor can be affected by a contaminant. The conceptual site model identifies potential pathways by which potential contaminants may migrate from source to the receptor, these include:

- P1. Permeable Ground - the soil leaching potential and the soil vulnerability category has not been classified for the site.
- P2. Subsurface Structures – electricity, mains water, foul & surface water drainage, and phone and internet connections may be present on-site, and are likely to be installed as part of the proposed development. These structures can cause migration of contaminants via leakages, but can also provide a route for mobile contaminants and gas to follow in or around the structure potentially increasing the distance permissible for lateral migration of mobile contaminants.
- P3. Direct Contact – dermal contact or ingestion of substances that are present at or near the surface of the land.
- P4. Inhalation – of airborne particles, vapours or ground gases that may be present on the site.
- P5. Flooding – The site is situated within Flood Zone 1, the preferred zone for development, and is unlikely to be at risk from river or tidal flooding. However if flooding were to occur this may facilitate migration of contaminants off-site.
- P6. Migration due to SuDS – Soakaways, porous pavement or infiltration basins could promote the migration of pollutants into controlled waters
- P7. Plant Uptake – Ingestion of plants (vegetables/fruit) that contain substances that are present within the land, which may detrimentally affect the receptor.

5.4 Potential Receptors

CLR11⁽²⁾ defines a receptor as something, which can be adversely affected by a contaminant. The potential receptors, which may be affected by the potential presence of contaminants at or around the project site, have been identified as:

- R1. Human Health (construction workers) - Exposure of construction workers to contaminants may occur during the construction process, and must be managed in accordance with applicable Health and Safety and Environmental Legislation.
- R2. Human Health (future land users) – Future users may be directly exposed to contaminants via dermal contact, or inhalation of dusts from potentially contaminated land, where they work in close proximity to it.
- R3. Groundwater - The Bedrock Geology is considered to be of low permeability Unproductive aquifer with negligible significance for water supply or river base flow.

Superficial Deposits on-site are considered Secondary (undifferentiated) Aquifer which is 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. The site is not situated within a designated Source Protection Zone for groundwater.

- R4. Buildings and Structures – Services could be vulnerable to chemical attack if ground conditions contain contaminants.
- R5. Ecological – The site is not situated within a Surface Water Nitrate Vulnerable Zone and no designated environmentally sensitive sites are identified within 250m of the site.
- R6. Neighbouring Sites – The neighbouring sites consist of residential properties and agricultural land.
- R7. Surface Water – Surface water drainage systems and features may be vulnerable if contaminants migrate into the drainage system.

5.5 Pollution Linkages

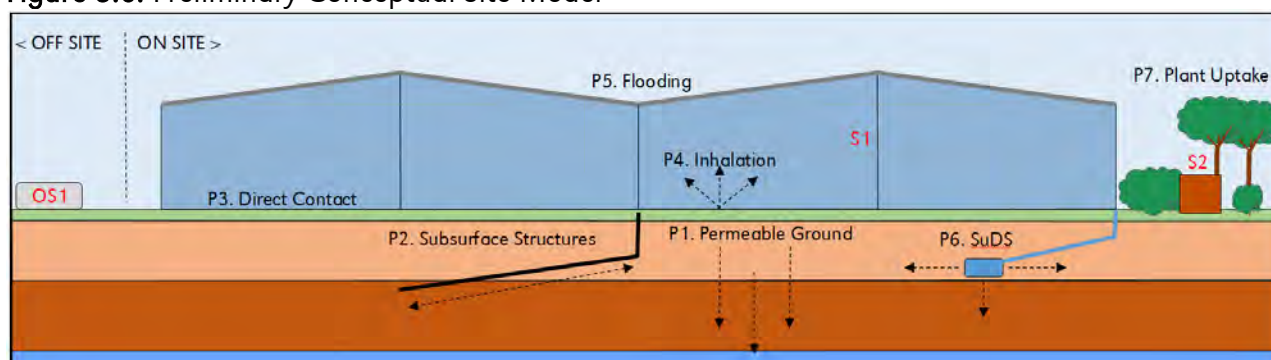
The concept of a pollutant linkage, involves a potential contaminant being able to reach a receptor via a specific pathway. It is possible for each element to exist independently but where they are linked, a pollution linkage is realised.

The pollution linkages identified for the project site, are visually summarised within the conceptual site model in **Figure 5.6**.

5.6 Illustrative Preliminary Conceptual Site Model

A preliminary conceptual site model has been prepared based upon the site survey and desk study and is included at **Figure 5.6**.

Figure 5.6: Preliminary Conceptual Site Model



Key

- S1. Historic Horticultural Processes (Herbicides, Pesticides, Fungicides, Insecticides, and Fertiliser)
- S2. Bulk Storage Container (TPH)
- OS1. Bulk Storage Container (TPH)

6.0 RISK ASSESSMENT

6.1 Risk Categorisation and Terminology

The preliminary conceptual site model at **Figure 5.6**, establishes the potential source, pathway and receptor linkages which may exist at the project site. These linkages form the baseline from which the following qualitative risk assessment has been made.

The risk for each pollutant linkage identified has been reviewed based on both the likelihood and consequence of potential contamination impacting on each receptor identified within the Conceptual Site Model.

Risk categorization terminology and description has been adopted from Environment Agency and NHBC guidance⁽¹⁾ and are summarised in **Appendix E**.

6.2 Preliminary Risk Assessment

Utilising the terminology set out in **Appendix E**, in combination with the review of current and historical environmental information and the preliminary conceptual site model, the following risks have been established for the project site in **Table 6.3**.

Table 6.3 Contamination Risk Assessment

Contaminant(s)	Receptor	Probability/ Consequence	Risk	Comments/Justification/Linkage
Herbicides, pesticides, fungicides, insecticides and fertiliser from historic horticulture (S1)	R1 Human Health - Construction Workers	Low likelihood/ Minor	Very Low Risk	Risk: The risk from Horticultural processes potential contamination on-site is considered Low. Justification: S1 – Herbicides, pesticides, fungicides, insecticides and fertilisers are likely to have been applied to the land and plants in accordance with current legislation at the time. There was no visible or olfactory evidence of any significant stockpiling / storage of Herbicides, pesticides, fungicides, insecticides and fertilisers. It is unlikely that any legislated chemical applied to the crops would present a significant contaminative risk. The glasshouses have not been in-use for at least eight years. It is unlikely that any chemical applied to the plants and land will have persisted in the soil in a concentration likely to result in a significant risk of significant harm to the identified receptors.
	R2 Human Health - future land users	Low likelihood/ Mild	Low Risk	
	R3 Groundwater	Unlikely/ Mild	Very Low Risk	
	R4 Buildings and Structures	Unlikely/ Mild	Very Low Risk	
	R5 Ecological Receptors	Unlikely/ Mild	Very Low Risk	
	R7 Surface Water	Unlikely/ Mild	Very Low Risk	
Hydrocarbons from bulk storage tank (S2)	R1 Human Health - Construction Workers	Unlikely/ Medium	Low Risk	Risk: The risk from The Bulk Storage Tank potential contamination on-site is considered Low. Justification:

Contaminant(s)	Receptor	Probability/ Consequence	Risk	Comments/Justification/Linkage
	R2 Human Health - future land users	Unlikely/ Medium	Low Risk	S2 – An empty and corroded bulk storage tank was identified on-site. The tank was in a poor and heavily corroded condition with no evidence that it had been used on-site. No pipework was present off of the tank and it was not level or aligned with the nearby boundary or buildings. The tank was in a poor condition with frequent holes corroded through it. Historic aerial imagery indicates that the tank was not present on-site before August 2016 indicating that the tank has likely been brought to the site in a corroded condition and therefore was unlikely to contain any liquid. No obvious visual or olfactory evidence of spillage or hydrocarbon content was identified at the time of the site visit. It is not anticipated that significant spillages have occurred that may have resulted in the contamination of the local soils. However, in order to safeguard the future land users from potential hydrocarbon contaminants on-site Recommendation 2 should be adhered to. (See Section 7.0)
	R3 Groundwater	Unlikely/ Medium	Low Risk	
	R4 Buildings and Structures	Unlikely/ Medium	Low Risk	
	R5 Ecological Receptors	Unlikely/ Mild	Very Low Risk	
	R7 Surface Water	Unlikely/ Medium	Low Risk	
Hydrocarbons from bulk storage tank (OS1)	R1 Human Health - Construction Workers	Low likelihood/ Minor	Very Low Risk	Risk: The risk from the off-site Bulk Storage Tank potential contamination is considered Very Low. Justification: OS1 – A bulk storage tank was identified in historic aerial imagery (1999) and during the site walkover, near to the northern site boundary. The tank was in good condition with no obvious visible or olfactory evidence of contamination being identified. This area is not part of the site due to be developed but is within the ownership boundary. The tank appeared to be empty and no longer in-use. It is not anticipated that there is a significant source of hydrocarbon storage within the tank. The tank was in good condition with no evidence of spillage. No pathway was identified during the site walkover to the soil. In addition, due to the distance to site, any small spillage is considered unlikely to affect the identified site receptors.
	R2 Human Health - future land users	Unlikely/ Mild	Very Low Risk	
	R3 Groundwater	Unlikely/ Mild	Very Low Risk	
	R4 Buildings and Structures	Low likelihood/ Mild	Low Risk	
	R5 Ecological Receptors	Unlikely/ Mild	Very Low Risk	
	R7 Surface Water	Low likelihood/ Mild	Low Risk	

Contaminant(s)	Receptor	Probability/ Consequence	Risk	Comments/Justification/Linkage
Potential contaminants not identified	Human Health - Construction Workers	Unlikely/ Medium	Low Risk	Risk: The risk from unexpected contaminants not identified with the report is considered Low. Justification: Plandescil Ltd. has made every effort to provide an accurate assessment of the ground condition of the site, within the constraints of this desk study. However, it is possible that different ground conditions or contamination may exist in parts of the site which has not been identified in the desk study or the visual survey. In order to reduce the risk to the construction workers, and all other receptors Recommendation 2 should be adhered to. (See Section 7.0)

7.0 CONCLUSION & RECOMMENDATIONS

7.1 Risk Summary

The site conceptual model indicates that there are several potential pollutant linkages on-site, and the perceived risk to receptors is summarised at **Table 7.1**.

To safeguard receptors, the recommendations and notes detailed in **Table 7.1** should be addressed.

Table 7.1 Receptor Risk Summary

Receptor	Notes
R1 Construction Workers	Receptor R1 is classified as Low Risk. To reduce the risk to Construction Workers, the following recommendations should be addressed: Recommendation 1 <i>Construction workers may be exposed to potentially contaminative materials. This risk should be mitigated by the correct use of personal protective equipment, and compliance with relevant health and safety legislation.</i> Recommendation 2 <i>If unusual materials/ground conditions are encountered these should be treated in accordance with applicable health and safety and environmental legislation and reported to a competent person for further investigation.</i>
R2 Future Land Users	Receptor R2 is classified as Low Risk .
R3 Groundwater	Receptor R3 is classified as Low Risk
R4 Buildings and Structures	Receptor R4 is classified as Low Risk .
R5 Ecological Receptors	Receptor R5 is classified as Very Low Risk .
R6 Neighbouring Sites	Receptor R6 is classified as Very Low Risk .
R7 Surface Water	Receptor R7 is classified as Low Risk .

7.2 Conclusion

The basic requirements for land development in the UK is that the land should be suitable for use. The information reviewed in the preparation of this Phase 1 Contamination Report Desk Study identified potential existing and historical on-site sources of contamination; **Recommendations 1 – 2** in **Table 7.1** should be adhered to during the development of the site in order to safeguard potential receptors.

When developing the site, it is possible that differing ground conditions and higher concentrations of contaminants exist than have been identified by this report. In the event that differing ground conditions are encountered, further assessment/investigation should be undertaken by a competent person(s).

8.0 SOURCES OF INFORMATION

A variety of public, published and site-specific information sources have been consulted in the compilation of this report. These sources are listed below:

- (1) NHBC, Environment Agency & CIEH (2008) Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66: 2008 Volume 1
- (2) Environment Agency (2014) Model Procedures for the Management of Land Contamination. Contaminated Land Report 11.
- (3) British Geological Survey (1967) Sheet 2 Hydrogeological Map of North and east Lincolnshire.
- (4) British Geological Survey website (2019) Digital Geological map of Great Britain. Scale 1:50,000
- (5) Anglian Water (Unknown) Information for Developers about Contaminated Land and Ground Condition Assessments
- (6) Environment Agency (2019) Flood map for planning
- (7) Environment Agency (2019) Wild Plants: dangerous, invasive and protected species. www.gov.uk.
- (8) Groundsure (2019) Geo Insight Report compiled July 2019.
- (9) Groundsure (2019) Enviro Insight Report compiled July 2019.
- (10) Groundsure (2019) Map Insight (All Scales) compiled July 2019.
- (11) Google (2019) Google Maps.
- (12) Norfolk County Council (2019) Historic Map Explorer
- (13) UK Grid Reference Finder (2019) Maps.
- (14) Bing (2019) Bing Maps.
- (15) Natural England (2019) Injurious weeds and invasive plants. www.naturalengland.org.uk

DRAWINGS APPENDIX

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Drawing No. 25080/701	-	Site Location Plan
Drawing No. 25080/702	-	Existing Site Layout
Drawing No. 2046-18-3	-	Indicative Site Plan



Source: Bing Maps

**Legend**

— Site Location

0	25.07.19	SAR	First Issue
Rev	Date	Chkd	Description

plandescil
consulting engineers

Connaught Road Attleborough Norfolk NR17 2BW
Telephone: (01953) 452001 Fax: (01953) 456955
E-mail: pdc@plandescil.co.uk www.plandescil.co.uk

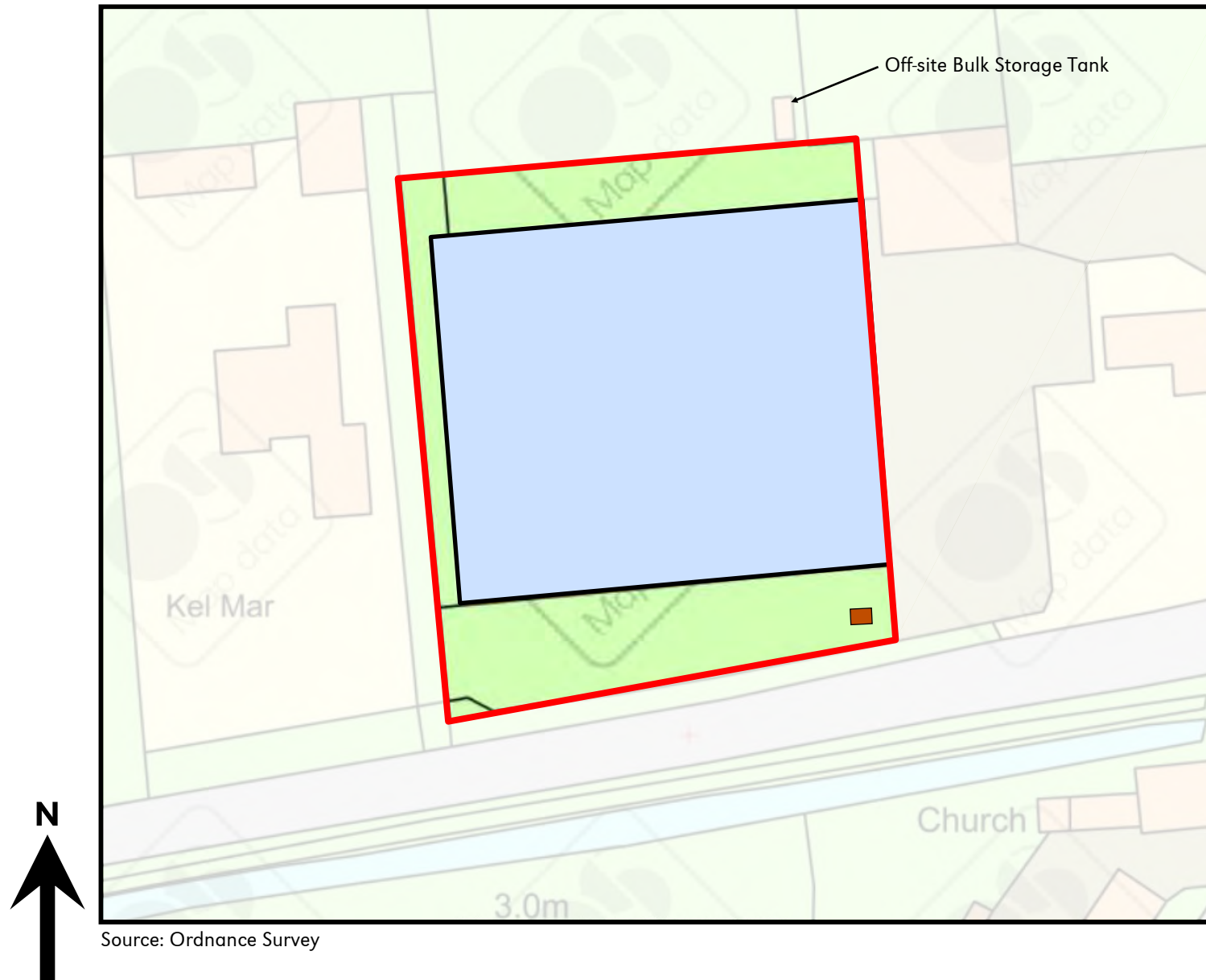
civil / structural / environmental / surveying

Client
David Taylor Associates (UK) Ltd

Project
Residential Development
Main Road
Holbeach Drive
Lincolnshire

Drawing Title
Site Location Plan

Scale	U.N.O.	Date	Drawn By
	N.T.S (A4)	July 2019	PJD
Drawing No.	25080/701	Rev	0

**Legend**

- Vegetated Area
- Glasshouse
- Bulk Storage Tank
- Site Boundary

0	25.07.19	SAR	First Issue
Rev	Date	Chkd	Description

plandescil
consulting engineers

Connaught Road Attleborough Norfolk NR17 2BW
Telephone: (01953) 452001 Fax: (01953) 456955
E-mail: pdc@plandescil.co.uk www.plandescil.co.uk

civil / structural / environmental / surveying

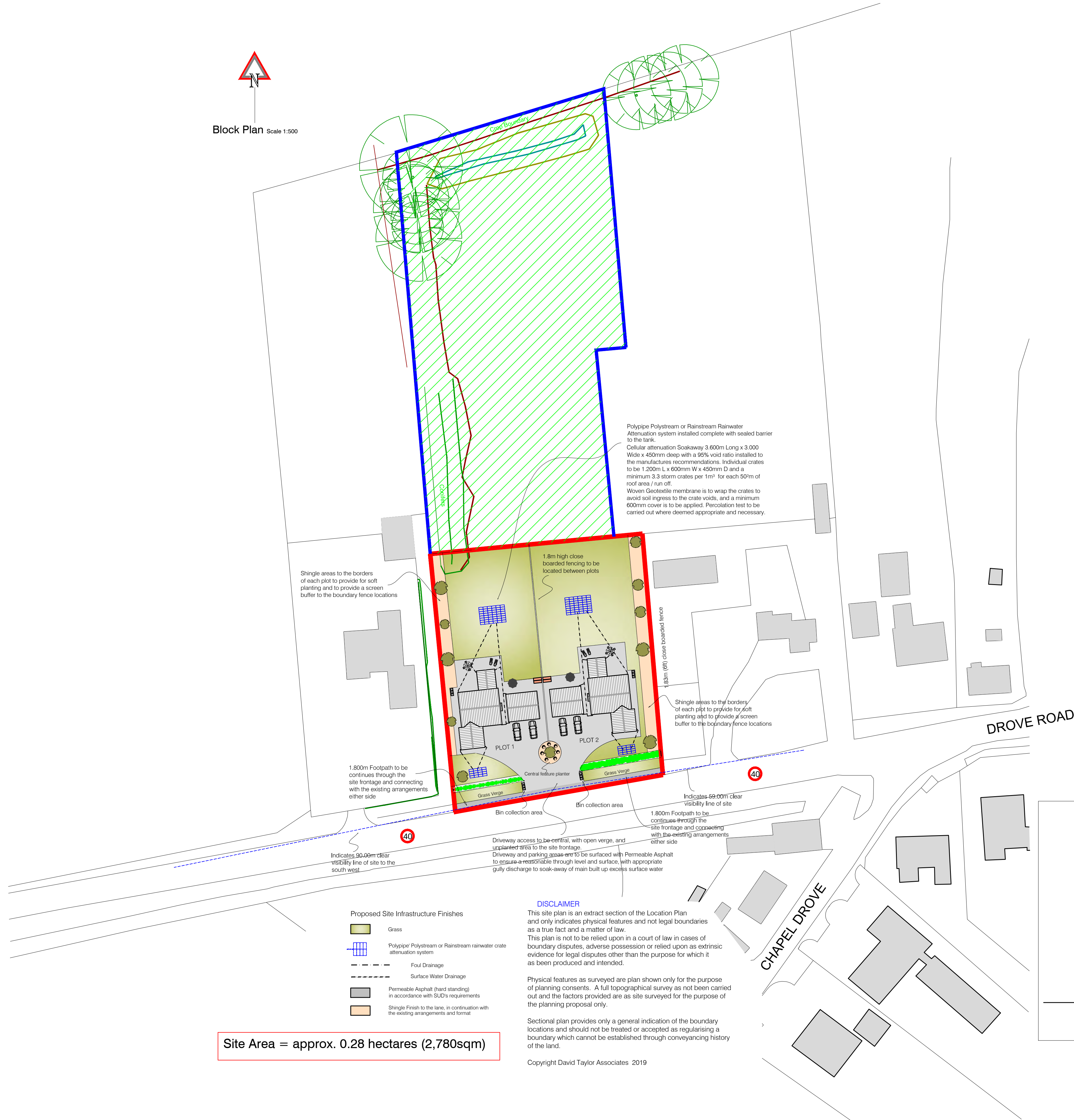
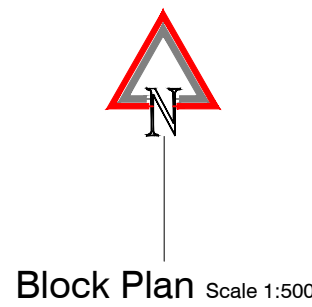
Client
David Taylor Associates (UK) Ltd

Project
Residential Development
Main Road
Holbeach Drove
Lincolnshire

Drawing Title
Existing Site Layout

Scale	U.N.O.	Date	Drawn By
	N.T.S (A4)	July 2019	PJD
Drawing No.	25080/702	Rev	0

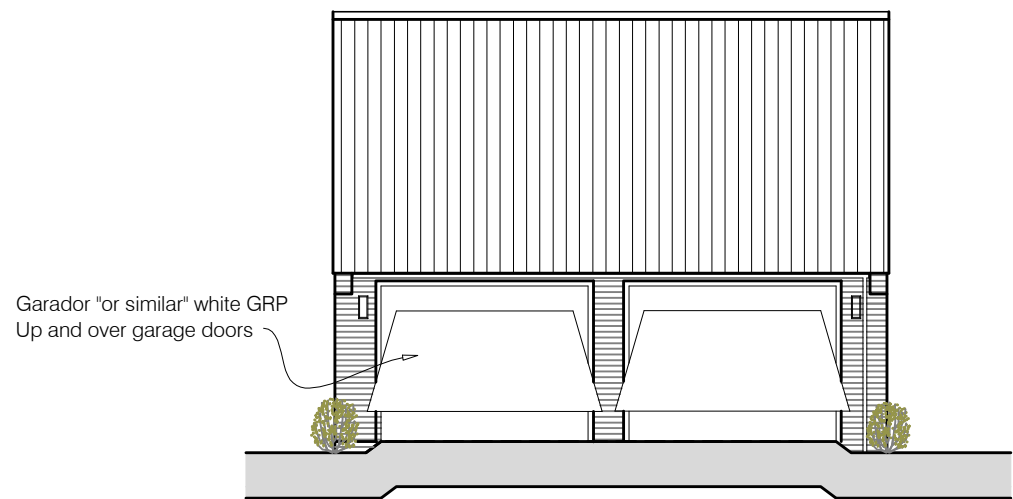
Revisions		
Date	For	Details



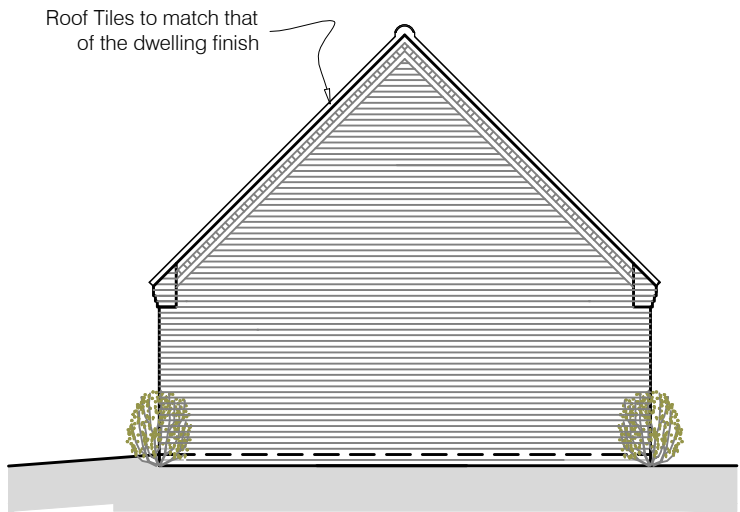
Site Area = approx. 0.28 hectares (2,780sqm)

Proposed Garage Elevations

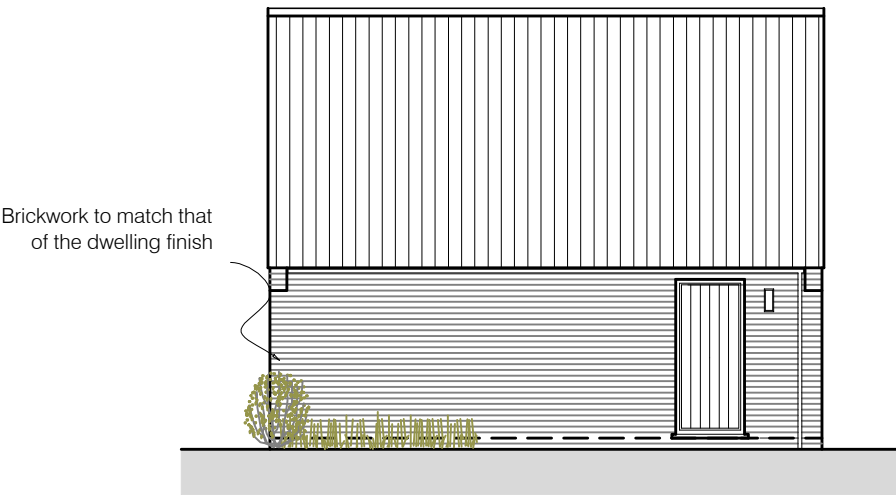
Scale 1:100



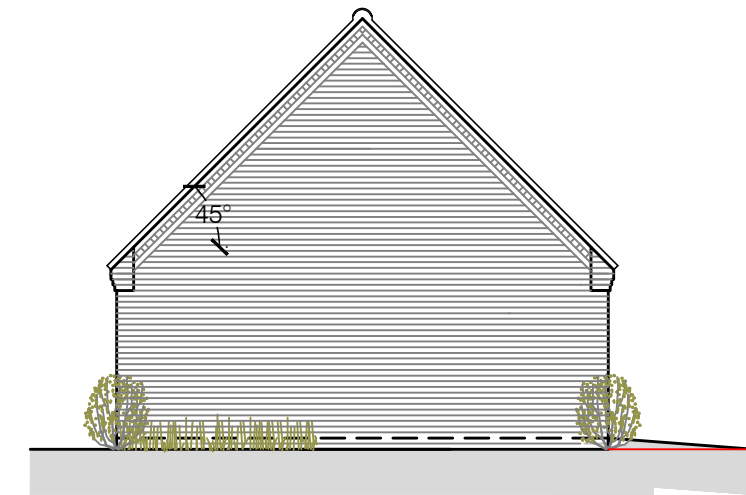
Principle Front Elevation



Side



Rear



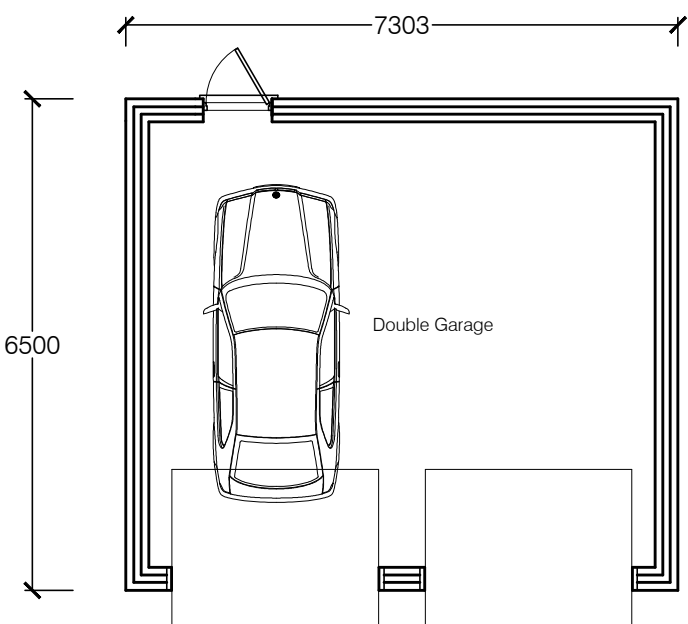
FRL 5.832

EL 2.375

GL 0.00

Proposed Floor Plan

Scale 1:100



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Project: Previous Nursery Land East of Kel Mar, Main Road, Holbeach Drove, Spalding, Lincs PE12 0PS

Client: Clients of DTAUK

Size: A1

Title: 2 DETACHED DWELLINGS & GARAGES

Drwg No. 2046-18-3

Rev:

Scale: 1:100 1:500

Date: March 2019

Drawn: DT

Checked: DT

Drawing Issued For: Planning Consents

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Chartered Institute of Architectural Technologists

APPENDIX A

CONTENTS

Groundsure Enviro Insight Report



Plandescil Ltd

42-44 PLANDESCIL LTD, CONNAUGHT ROAD,
ATTLEBOROUGH, NR17 2BW

Groundsure
Reference:

GS-6161038

Your Reference: 25080

Report Date 10 Jul 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: MAIN ROAD NURSERY, MAIN ROAD, HOLBEACH DROVE, SPALDING, PE12 0PS

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight



Enviro Insight

Address: MAIN ROAD NURSERY, MAIN ROAD, HOLBEACH DROVE, SPALDING, PE12 0PS
Date: 10 Jul 2019
Reference: GS-6161038
Client: Plandescil Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 06-May-2018
Grid Reference: 532508,312349
Site Size: 0.2466ha

Report Reference: GS-6161038
Client Reference: 25080

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8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	50
8.11 Records of National Parks (NP) within 2000m of the study site:	50
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	50
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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	1	0	3
1.2 Additional Information – Historical Tank Database	0	0	0	3
1.3 Additional Information – Historical Energy Features Database	0	0	0	0
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	2	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	2
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	0	0	5
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	19	4
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

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

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

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology				0-500m		
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	0	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	2	14	82	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding	
7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low
7.4 Flood Defences within 250m of the study site	None identified
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified
7.6 Areas used for Flood Storage within 250m of the study site	None identified
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Moderate

Section 8: Designated Environmentally Sensitive Sites						
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	High
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Negligible
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Moderate
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Negligible
9.1.6 Maximum Running Sand hazard rating identified on the study site	High
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	None identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

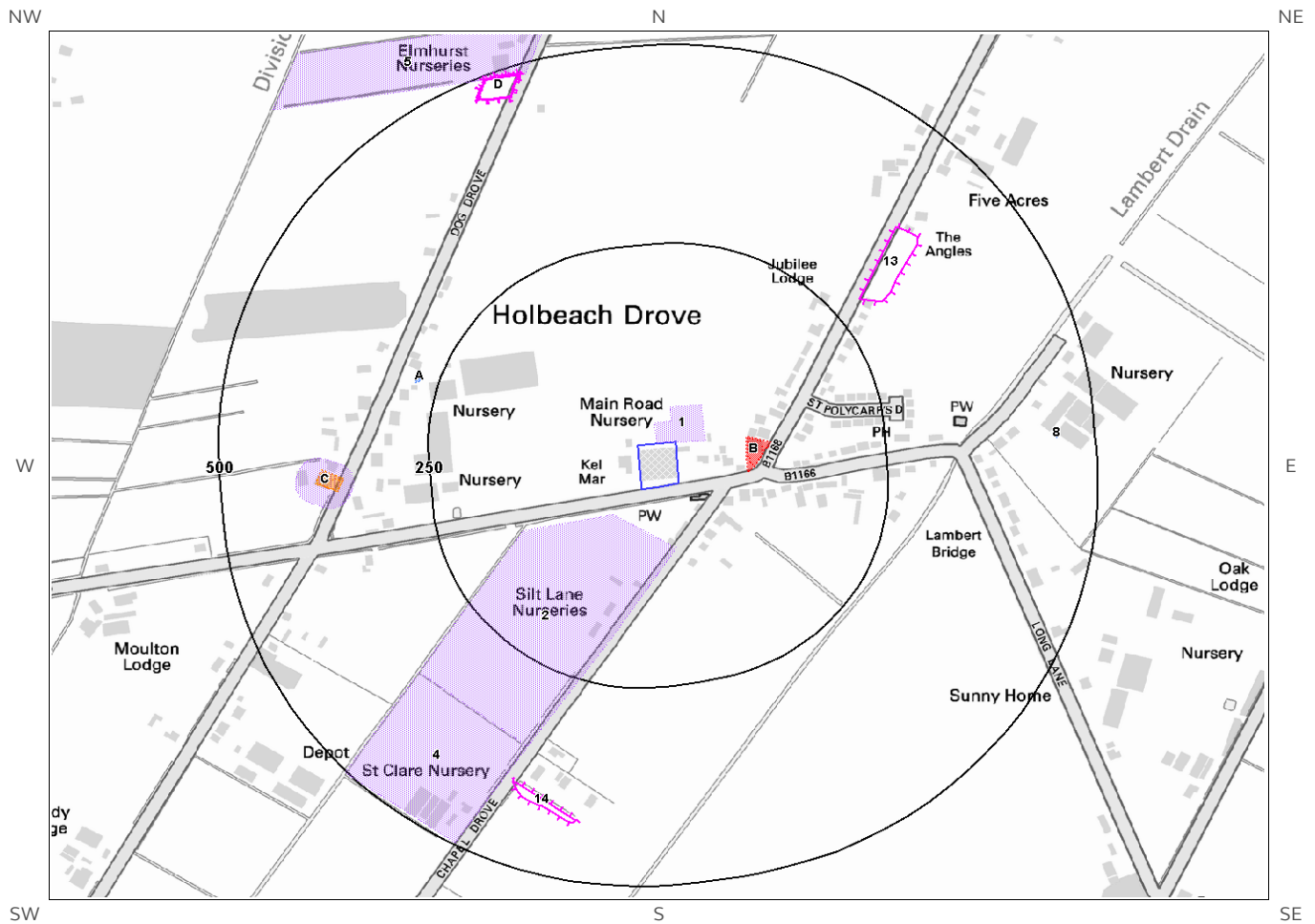
Note: Maps

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

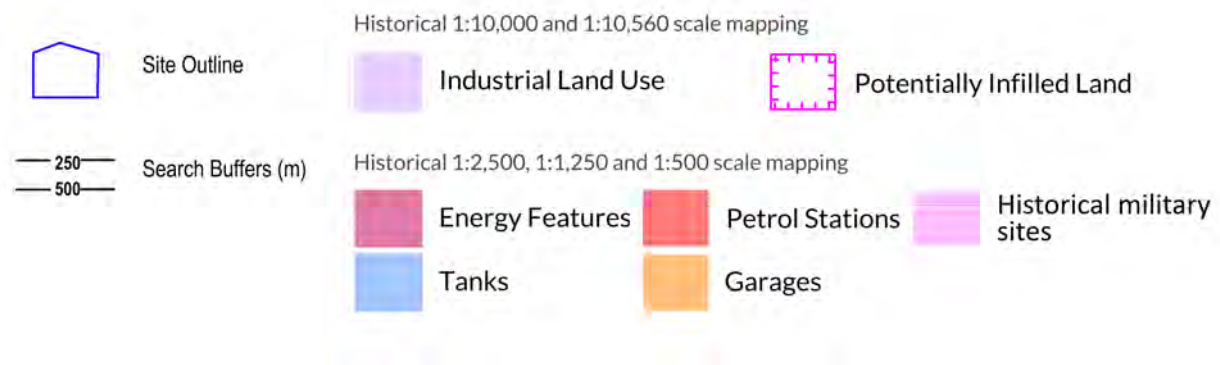
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



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1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 5

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Nursery	1980
2	44	SW	Nurseries	1980
3C	341	W	Garage	1980
4	342	SW	Nursery	1980
5	486	N	Nurseries	1980

1.2 Additional Information – Historical Tank Database

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

Records of historical tanks within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
6A	271	W	Unspecified Tank	1992
7A	272	W	Unspecified Tank	1975
8	453	E	Unspecified Tank	1992

1.3 Additional Information – Historical Energy Features Database

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

Records of historical energy features within 500m of the search boundary: 0

Database searched and no data found.

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

2

ID	Distance (m)	Direction	Use	Date
9B	83	E	Filling Station	1975
10B	85	E	Filling Station	1992

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

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

2

ID	Distance (m)	Direction	Use	Date
11C	353	W	Garage	1992
12C	355	W	Garage	1975

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

0

Database searched and no data found.

1.7 Potentially Infilled Land

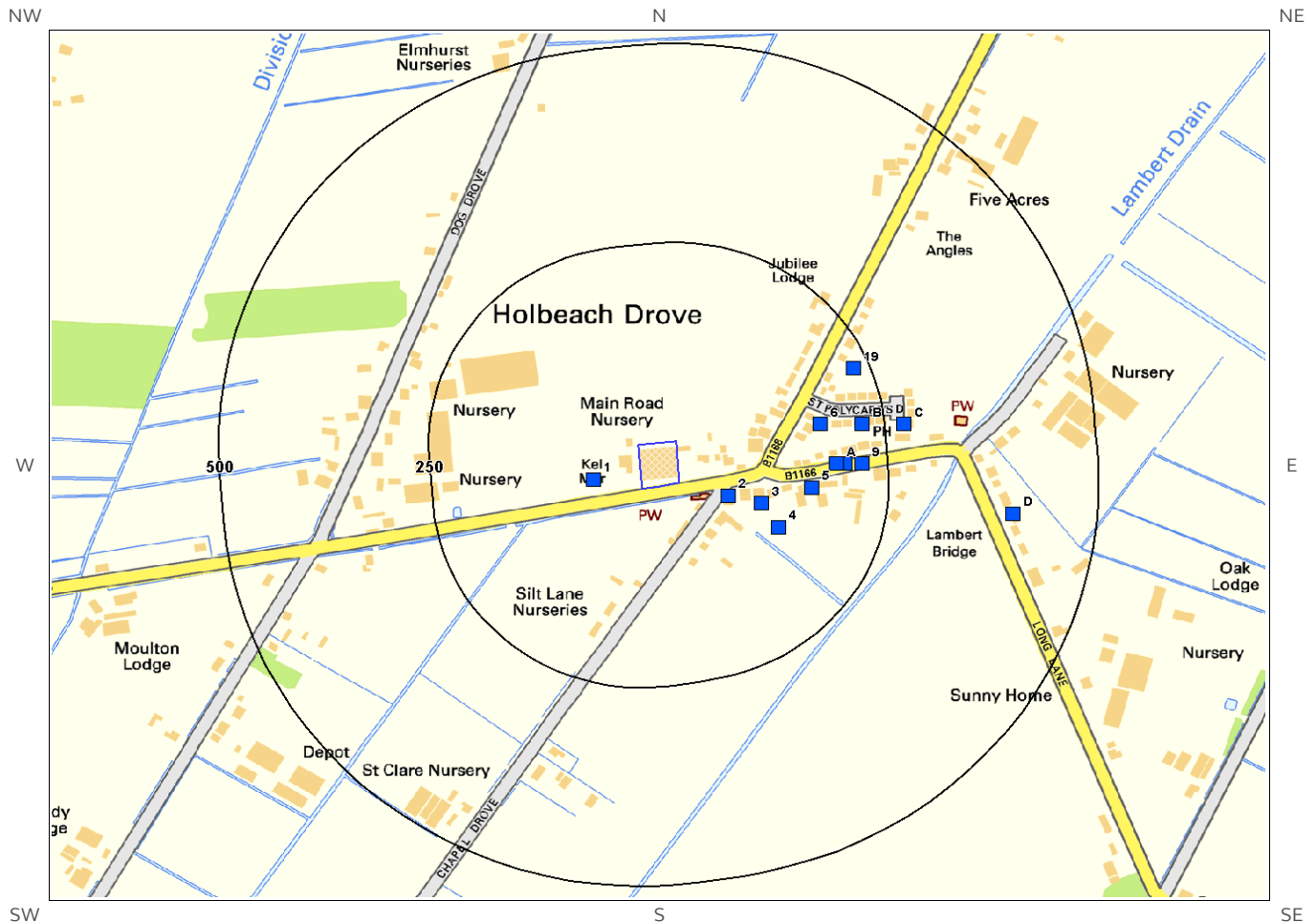
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site:

5

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

ID	Distance(m)	Direction	Use	Date
13	284	NE	Pond	1887
14	398	S	Pond	1887
15D	464	N	Pond	1950
16D	464	N	Pond	1905
17D	466	N	Pond	1887

2. Environmental Permits, Incidents and Registers Map



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2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

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

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

23

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

ID	Distance (m)	Direction	NGR	Details
1	57	W	532430 312330	Address: KELMAR, HOLBEACH DROVE, SPALDING, LINC, PE12 0PS Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PRNLF03486 Permit Version: 1 Receiving Water: - Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 29/08/1990 Effective Date: 29-Aug-1990 Revocation Date: -
2	60	E	532590 312310	Address: CHAPEL LANE, HOLBEACH DROVE, HOLBEACH, LINC, LN9 6JY Effluent Type: UNSPECIFIED Permit Number: PR5LF5427 Permit Version: 1 Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 14/10/1987 Effective Date: 14-Oct-1987 Revocation Date: 01/10/1996
3	101	E	532630 312300	Address: CHERRINGTON VILLA, HOLBEACH DROVE, SPALDING, PE12 0PS Effluent Type: UNSPECIFIED Permit Number: PR5LF3266 Permit Version: 1 Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 21/10/1975 Effective Date: 21-Oct-1975 Revocation Date: 01/10/1996
4	130	SE	532650 312270	Address: HOLBEACH DROVE, SPALDING, LINC Effluent Type: UNSPECIFIED Permit Number: PR5LF3375 Permit Version: 1 Receiving Water: land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 04/11/1976 Effective Date: 04-Nov-1976 Revocation Date: 01/10/1996
5	158	E	532690 312320	Address: DETACHED BUNGALOW, MAIN ROAD, HOLBEACH DROVE, SPALDING Effluent Type: UNSPECIFIED Permit Number: PR5LF5245 Permit Version: 1 Receiving Water: - Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 03/12/1986 Effective Date: 03-Dec-1986 Revocation Date: 01/10/1996
6	173	E	532700 312400	Address: BUNGALOW AT DROVE GATE, HOLBEACH DROVE, SPALDING Effluent Type: UNSPECIFIED Permit Number: PR5LF3758 Permit Version: 1 Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 10/02/1981 Effective Date: 10-Feb-1981 Revocation Date: 01/10/1996

ID	Distance (m)	Direction	NGR	Details	
7A	189	E	532720 312350	Address: PLOT 2 MAIN ROAD, HOLBEACH, LINCS Effluent Type: UNSPECIFIED Permit Number: PR5LF5239 Permit Version: 1	Receiving Water: - Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 26/11/1986 Effective Date: 26-Nov-1986 Revocation Date: 01/10/1996
8A	199	E	532730 312350	Address: PLOT 1 MAIN ROAD, HOLBEACH DROVE, SPALDING, LINCS Effluent Type: UNSPECIFIED Permit Number: PR5LF5238 Permit Version: 1	Receiving Water: - Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 26/11/1986 Effective Date: 26-Nov-1986 Revocation Date: 01/10/1996
9	219	E	532750 312350	Address: MAIN STREET PLOT 2, MAIN STREET, HOLBEACH DROVE, LINCS, PE12 0PS Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PRNLF02427 Permit Version: 1	Receiving Water: land Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 02/04/1990 Effective Date: 02-Apr-1990 Revocation Date: 01/10/1996
10B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE NO.6, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3888 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 25/05/1983 Effective Date: 25-May-1983 Revocation Date: 10/09/1997
11B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE NO.6, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR5LF5036 Permit Version: 1	Receiving Water: land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 21/03/1985 Effective Date: 21-Mar-1985 Revocation Date: 01/10/1996
12B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
13B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
14B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
15B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
16B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996

ID	Distance (m)	Direction	NGR	Details	
17B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
18B	223	E	532750 312400	Address: ST.POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3239 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 18/03/1978 Effective Date: 18-Mar-1978 Revocation Date: 01/10/1996
19	231	NE	532740 312470	Address: HOLBEACH DROVE, NR SPALDING, LINCS, PE12 0PU Effluent Type: UNSPECIFIED Permit Number: PR5LF3270 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 11/11/1975 Effective Date: 11-Nov-1975 Revocation Date: 01/10/1996
20C	273	E	532800 312400	Address: DWELLING AT 4 ST POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PR5LF3765 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 02/03/1981 Effective Date: 02-Mar-1981 Revocation Date: 08/09/1997
21C	273	E	532800 312400	Address: DWELLING AT 4 ST POLYCARPS DRIVE, HOLBEACH DROVE, SPALDING, PE12 0SF Effluent Type: UNSPECIFIED Permit Number: PRNLF02738 Permit Version: 1	Receiving Water: land Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 09/05/1990 Effective Date: 09-May-1990 Revocation Date: 25/07/1997
22D	399	E	532930 312287	Address: CHERRYTOFT, LONG LANE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0PP Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR5LF3886 Permit Version: 1	Receiving Water: Land Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 16/05/1983 Effective Date: 16-May-1983 Revocation Date: 13/12/2011
23D	399	E	532930 312287	Address: CHERRYTOFT, LONG LANE, HOLBEACH DROVE, SPALDING, LINCS, PE12 0PP Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR5LF3886 Permit Version: 2	Receiving Water: Land Status: VARIED UNDER EPR 2010 Issue date: 14/12/2011 Effective Date: 14-Dec-2011 Revocation Date: -

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

0

Database searched and no data found.

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

0

Database searched and no data found.

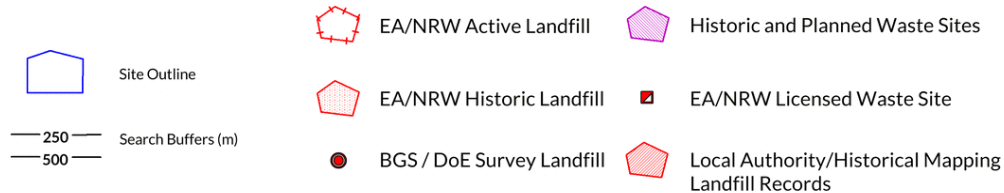
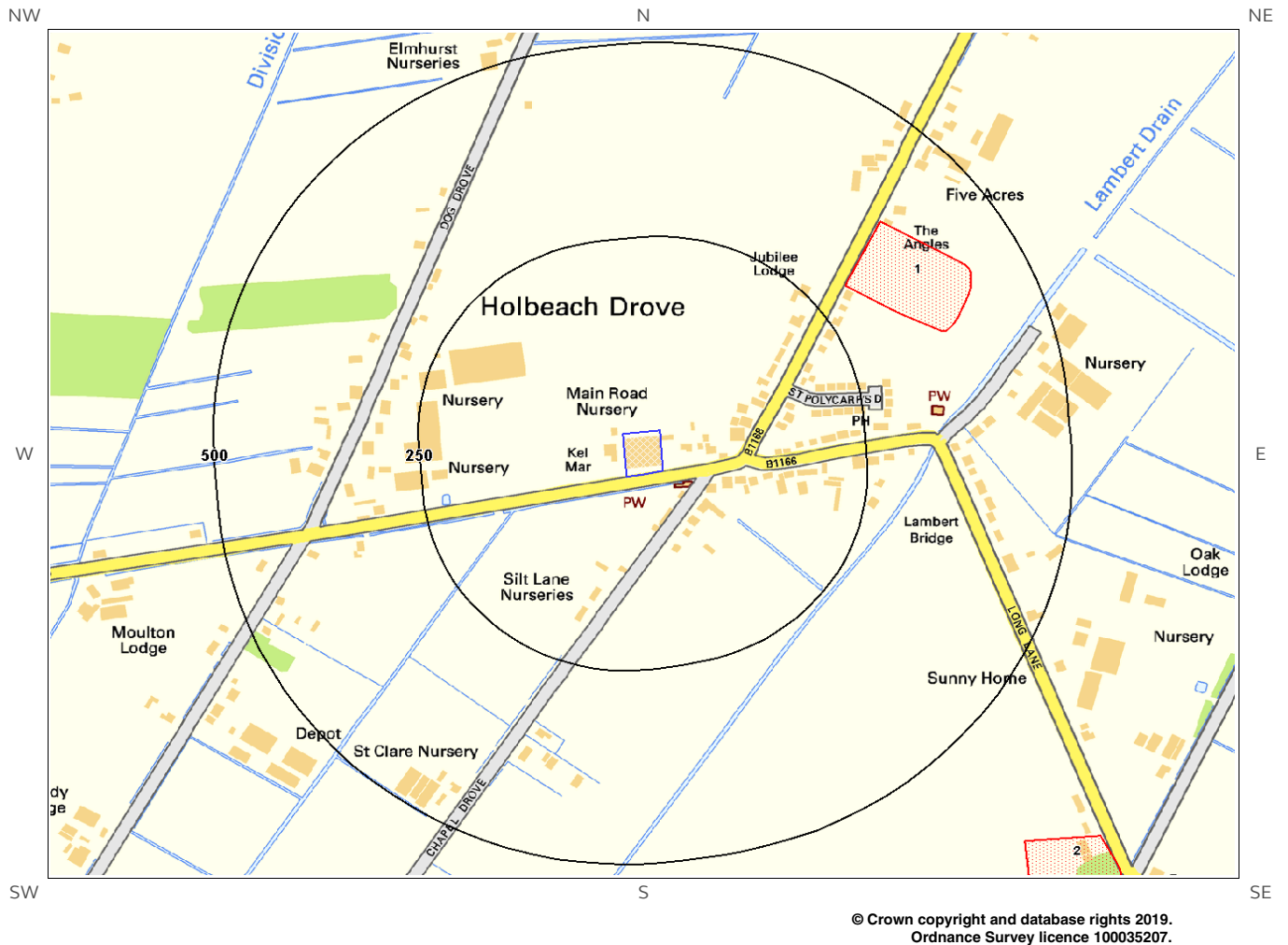
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site

0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

4

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

ID	Distance (m)	Direction	NGR	Details
1	294	NE		Site Address: Holbeach Drove Gate, Holbeach Drove, Lincolnshire Waste Licence: - Site Reference: RD7-27-01/89, SH-27-01/89, 2500/5073 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
2	651	SE		Site Address: Long Lane, Gedney Hill, Lincolnshire Waste Licence: - Site Reference: RD7-30-01/89, SH-30-01/89 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1091	N		Site Address: Parsons Lane, Whaplode Drove, Lincolnshire Waste Licence: - Site Reference: SH-26-01/89, RD7-26-01/89, 2500/5072 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1242	SE		Site Address: Peacock House, West Drove North, Gedney Hill Waste Licence: - Site Reference: SH-32-01/89, RD7-32-01/89, 2500/5076 Waste Type: Household Environmental Permitting Regulations Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details
(Waste) Reference: -				

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

0

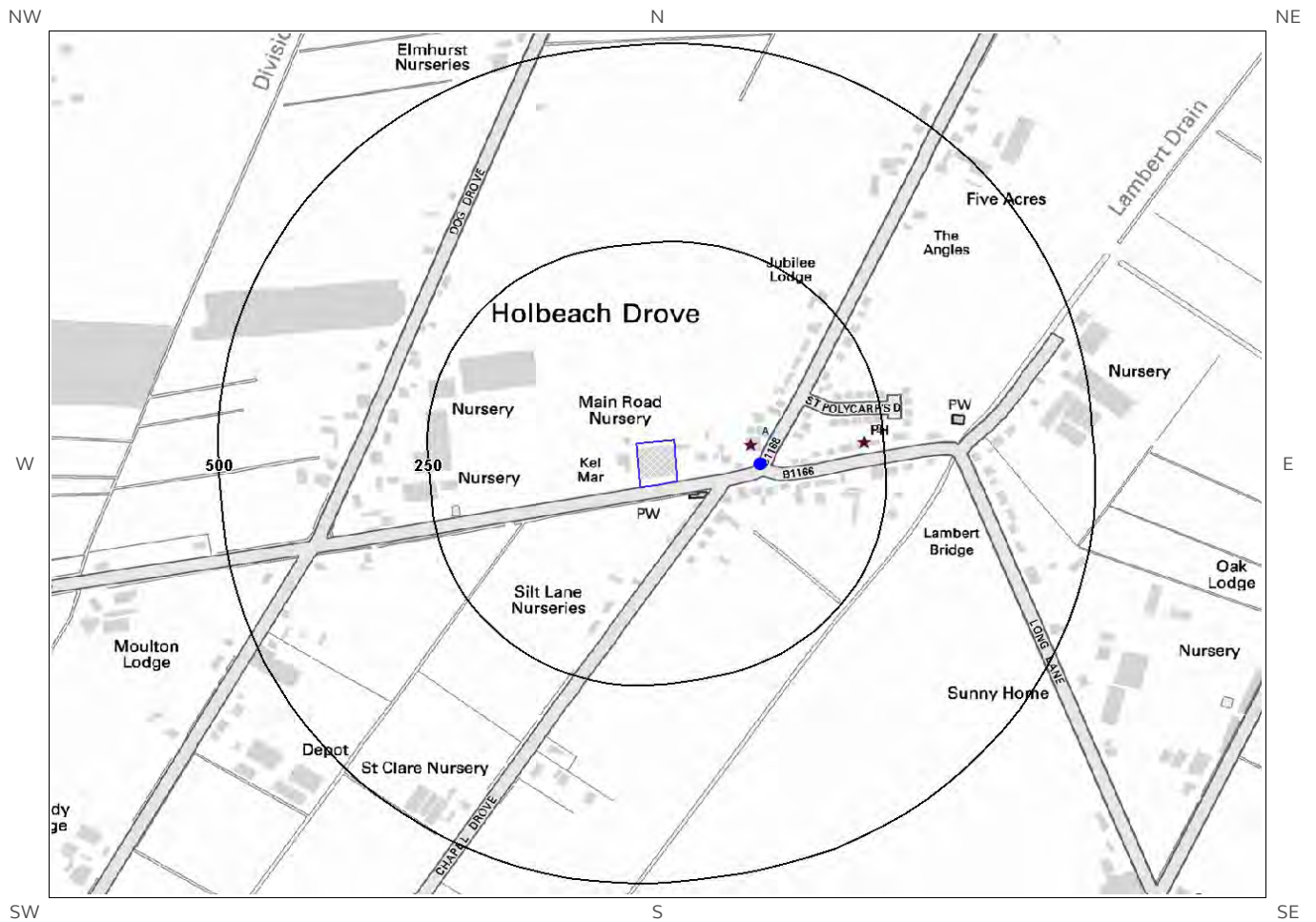
Database searched and no data found.

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

0

Database searched and no data found.

4. Current Land Use Map



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Site Outline

★ Current Industrial Sites

— Electricity Transmission Cables

— 250 — Search Buffers (m)
 — 500 —

● Petrol & Fuel Sites

— Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

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

2

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1A	91	E	The Stores & Filling Station	532620 312373	Holbeach Drove, Spalding, Lincolnshire, PE12 0PX	Petrol and Fuel Stations	Road and Rail
2	227	E	Bassett Weldings	532755 312376	Rosella, Main Road, Holbeach Drove, Spalding, Lincolnshire, PE12 0PS	Cutting, Drilling and Welding Services	Construction Services

4.2 Petrol and Fuel Sites

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

1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
3A	100	E	532631 312348	PACE	Holbeach Drove, Spalding, Lincolnshire, PE12 0PX	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
TFD1-XSZ	TIDAL FLAT DEPOSITS, 1	SAND AND SILT

5.3 Bedrock and Solid Geology

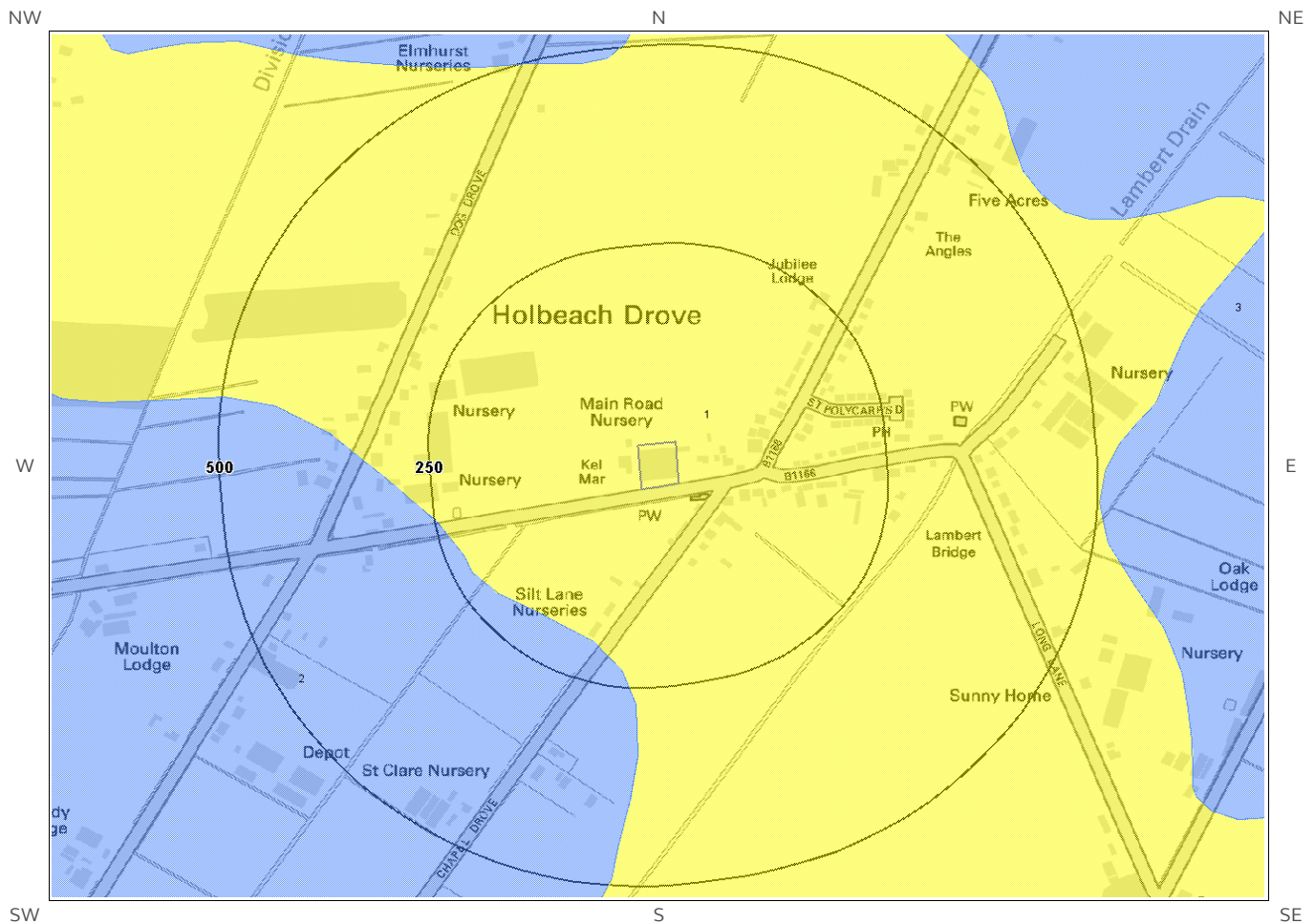
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
OXC-MDST	OXFORD CLAY FORMATION	MUDSTONE

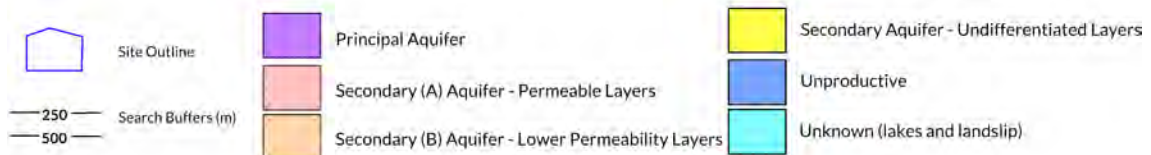
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

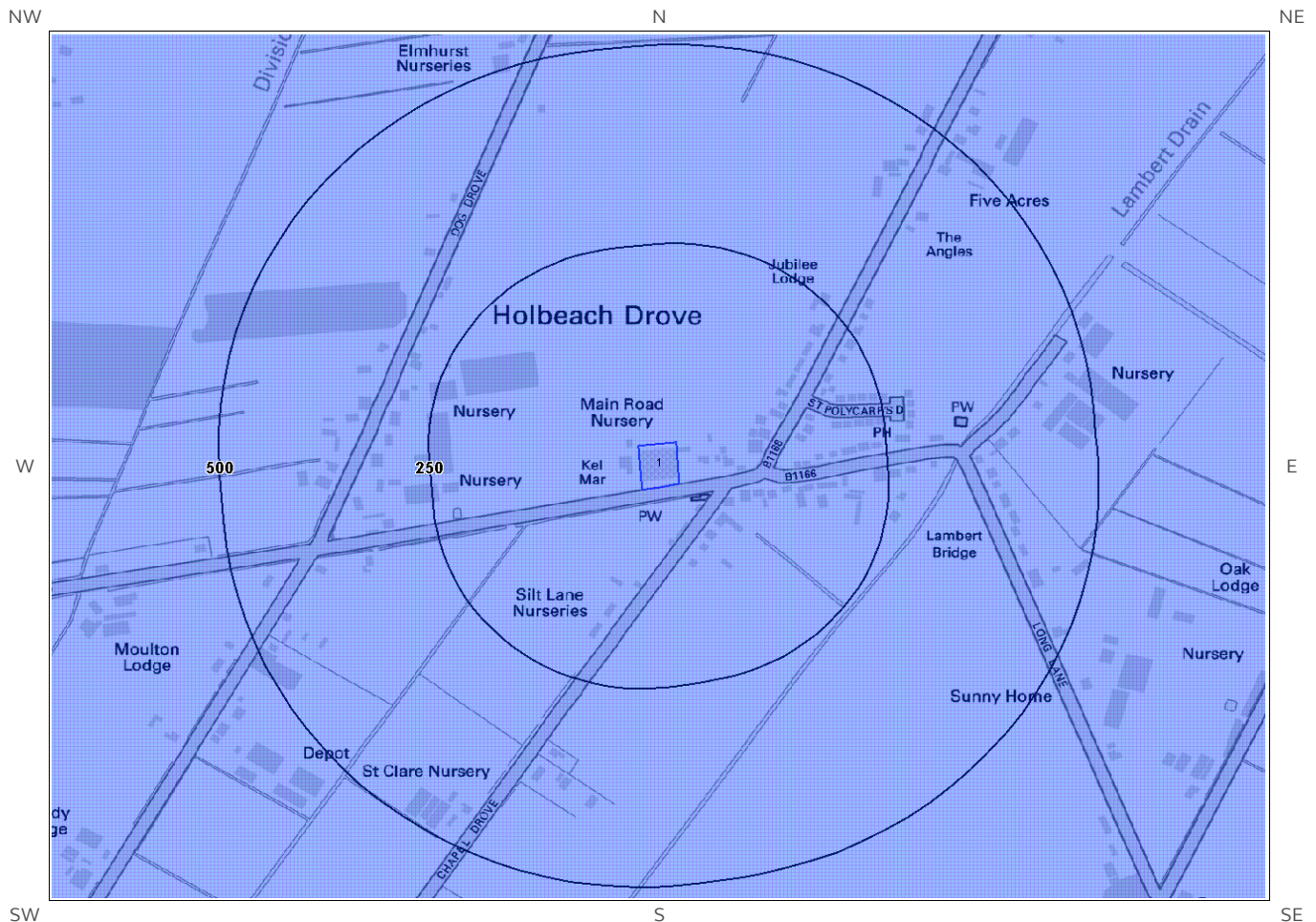
6a. Aquifer Within Superficial Geology



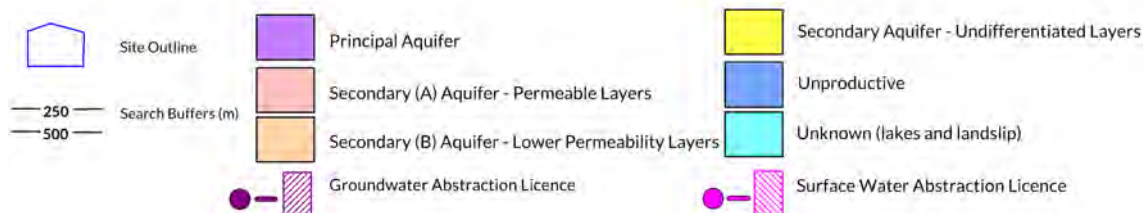
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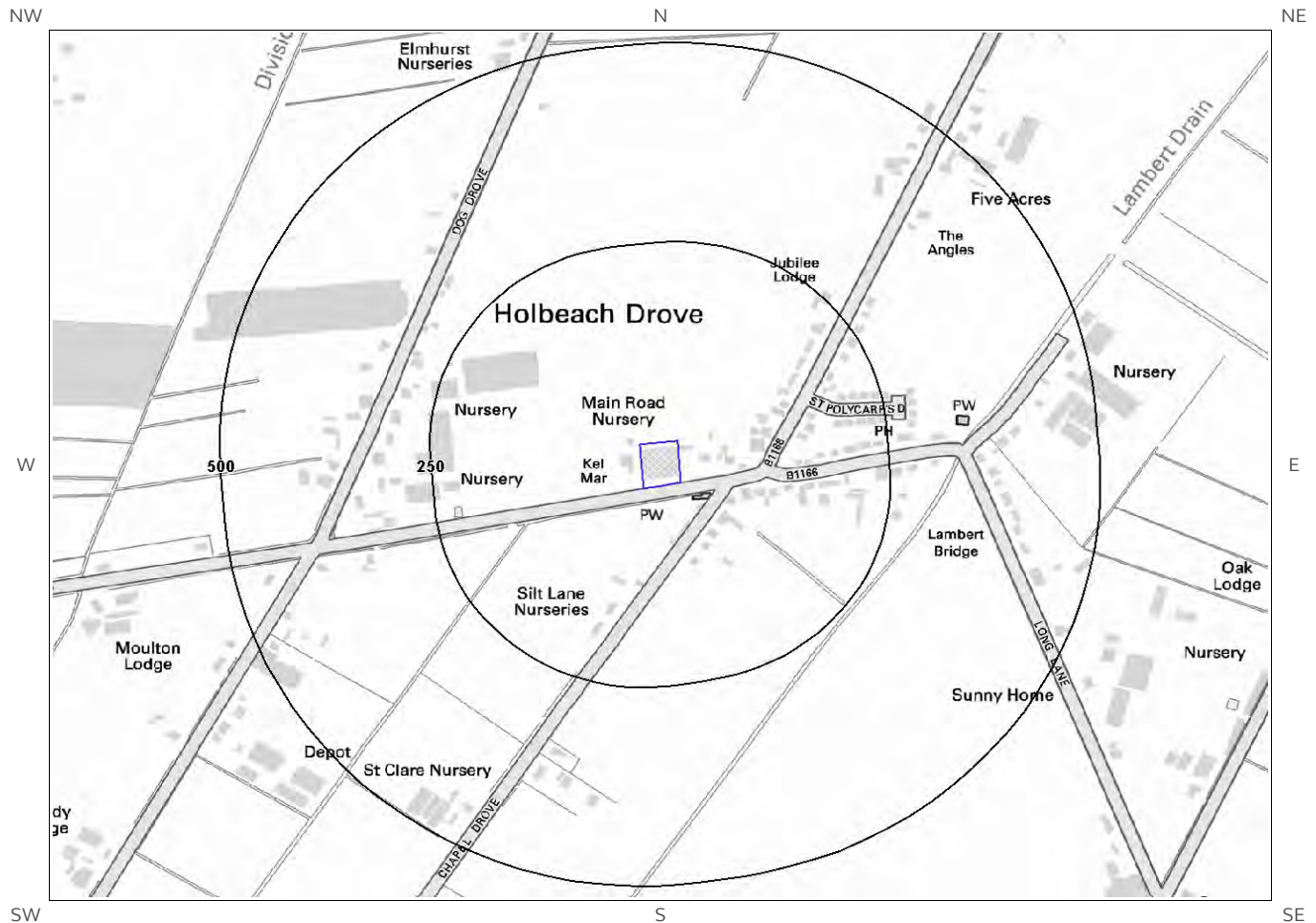
6b. Aquifer Within Bedrock Geology and Abstraction Licences



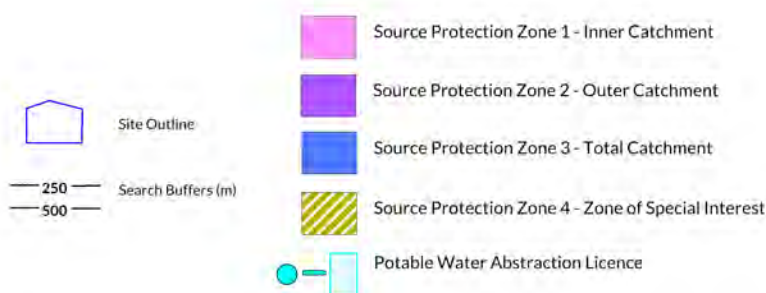
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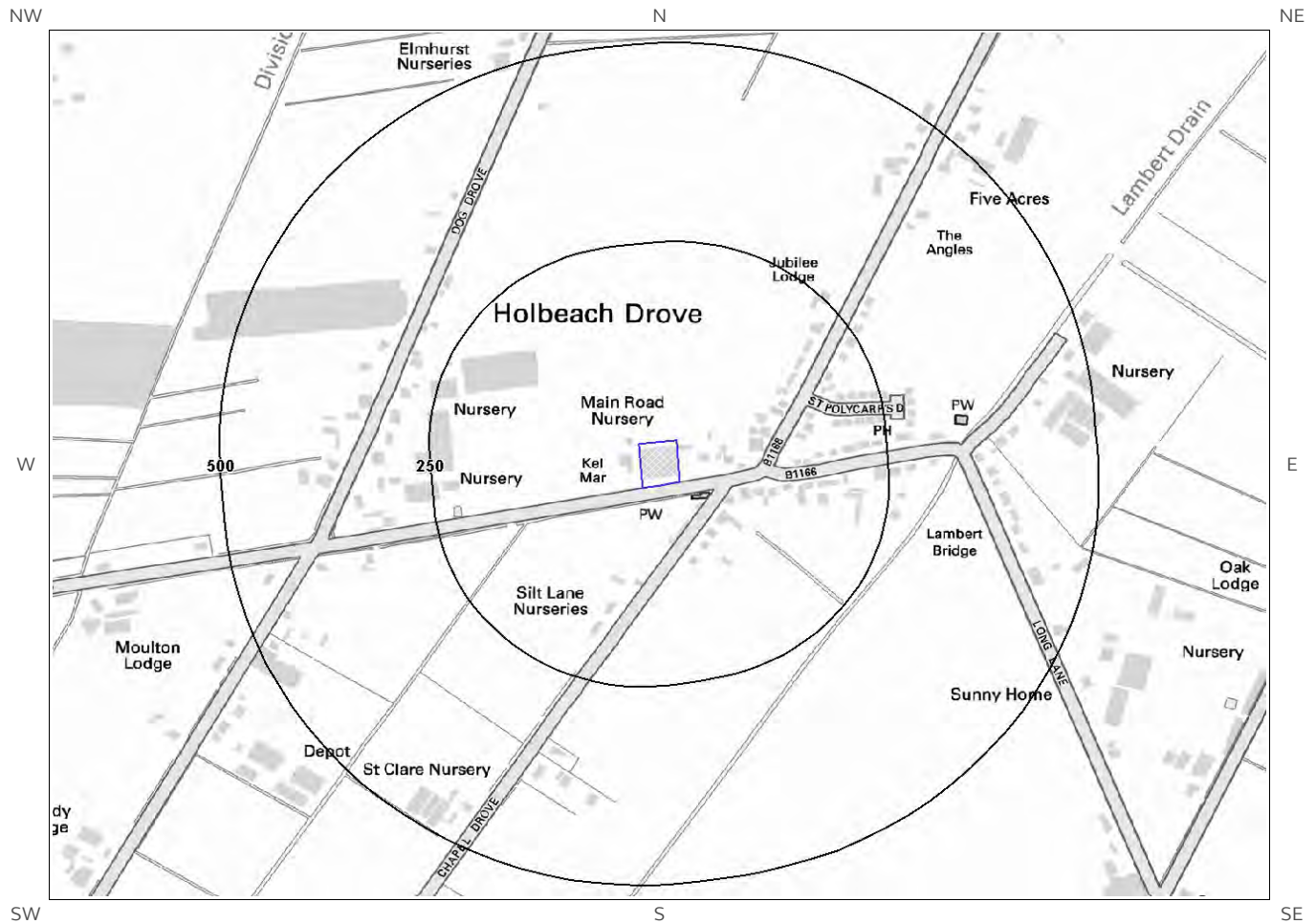
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



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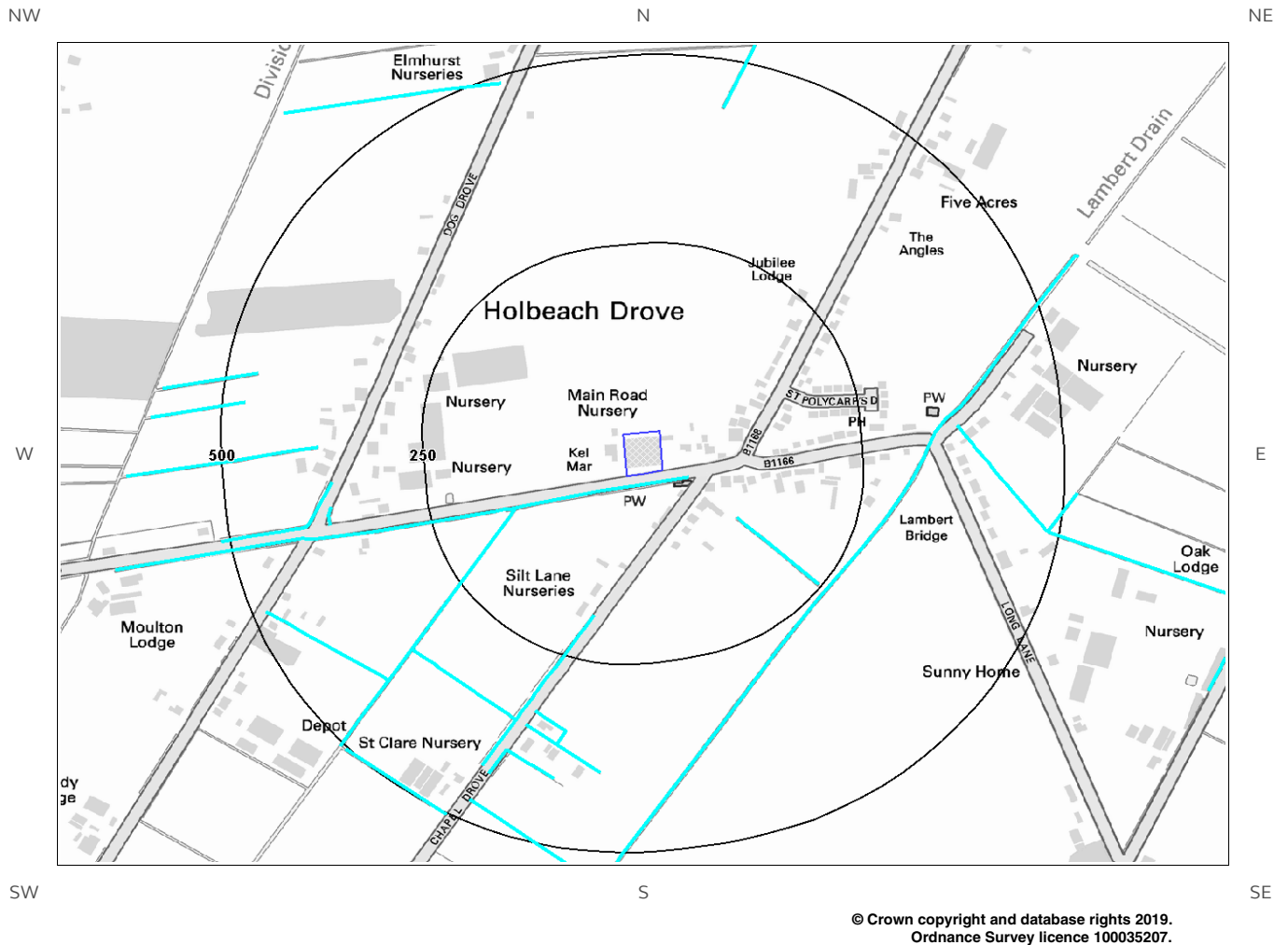
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary (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
2	195	SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
3	486	N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

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

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

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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site None identified

Database searched and no data found.

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1924	NW	530240 318290	Status: Historical Licence No: 5/32/11/*S/0052B Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: FRESH WATER DRAIN, CROWN HALL Data Type: Line Name: A H CLARK FARMS LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 01/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 02/04/1966 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site None identified

Database searched and no data found.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site None identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	14 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
4	14 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
2	111 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
5	111 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
3	146 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
4	146 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	146 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
7	146 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	159 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
8	159 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
6	189 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	189 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	208 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	208 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	216	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	216 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	258 SE	Lambert Drain	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.1
12	258 SE	Lambert Drain	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.1
10	312 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	312 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	318 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	318 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	322 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	322 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	329 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0
16	329 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0
14	332 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
Not shown	332 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	342 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	342 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	350 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
19	350 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
17	351 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	351 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	353 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	353 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	366 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	366 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
20	367 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not shown	367 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	369 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
Not shown	369 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
22	370 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	370 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	379 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7
Not shown	379 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7
24	382 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	382 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	388 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	388 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
26	389 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	389	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	E			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	392 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	392 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	399 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	399 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	399 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	399 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	402 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
31	402 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
Not shown	402 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	402 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
32	404 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	404 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
35	404 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	404 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
34	412 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.9
Not shown	412 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.9
35	436 N	Tinsley's Drain	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
Not shown	436 N	Tinsley's Drain	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
36	440 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	440 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	446 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	446 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
38	448 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	448 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
39	461 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
Not shown	461 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
40	467 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	467 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
41	468 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	468 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
42	471 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
43	471 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	471 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
Not shown	471 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
44	472 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
Not shown	472 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
45	475	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	SW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	475 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	486 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
47	486 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1
Not shown	486 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
Not shown	486 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1
48	491 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
Not shown	491 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
49	497 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
Not shown	497 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Nene Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5

6.11 Surface Water Features

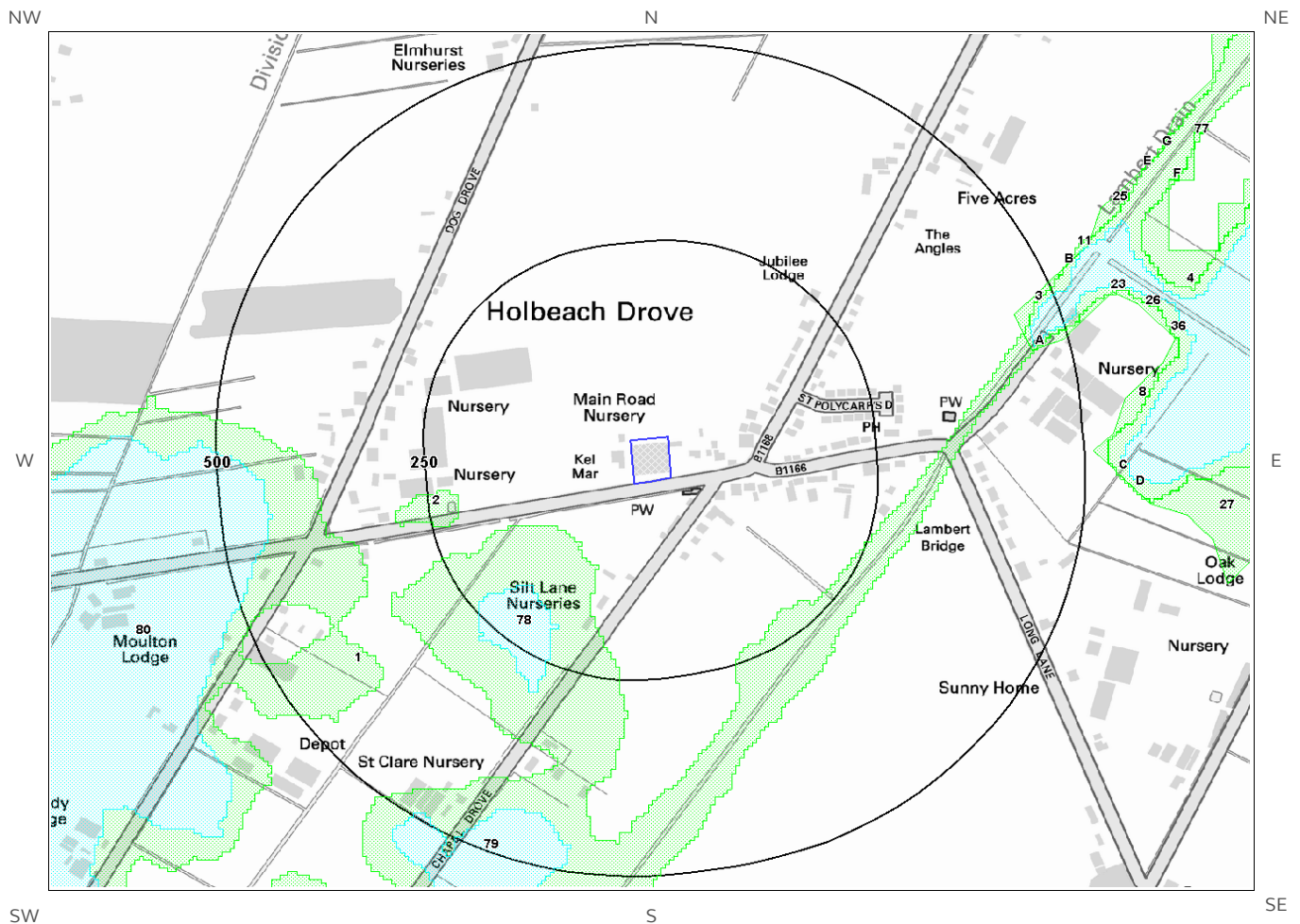
Surface water features within 250m of the study site

Identified

The following surface water records are not represented on mapping:

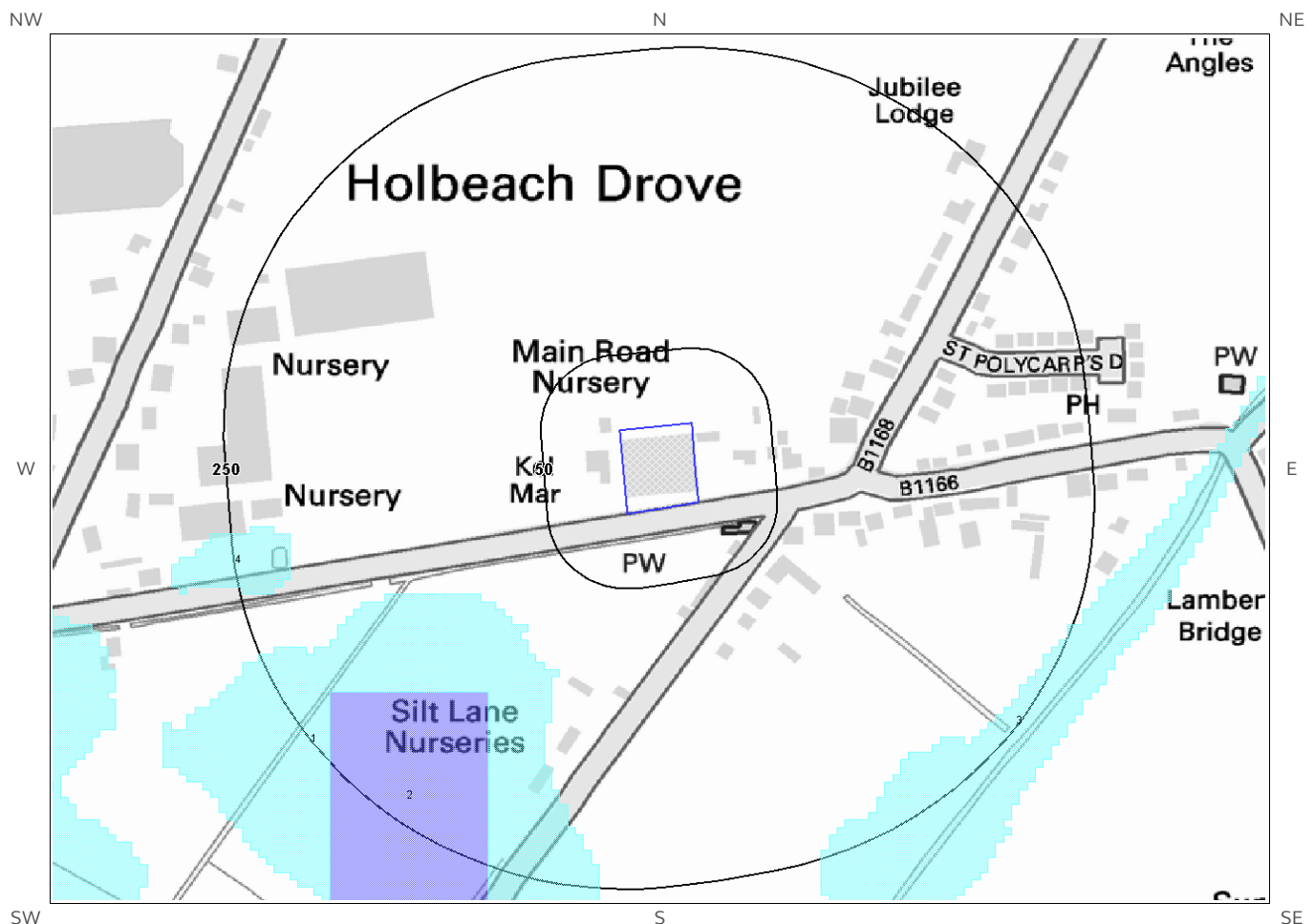
Distance (m)	Direction
12	S
111	SE
159	W
189	S
216	S
217	W

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



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



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Site Outline
 Search Buffers (m)
 100
 250

RoFRaS Rating
 Very Low
 Low
 Medium
 High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

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

ID	Distance (m)	Direction	Update	Type
1	96	SW	20-Jun-2019	Zone 2 - (Fluvial /Tidal Models)
2	213	W	20-Jun-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

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

ID	Distance (m)	Direction	Update	Type
1	177	SW	20-Jun-2019	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite

Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Flood Defences within 250m of the study site None identified
 Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified

Clearwater Flooding or Superficial Deposits Flooding Superficial Deposits Flooding

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

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

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

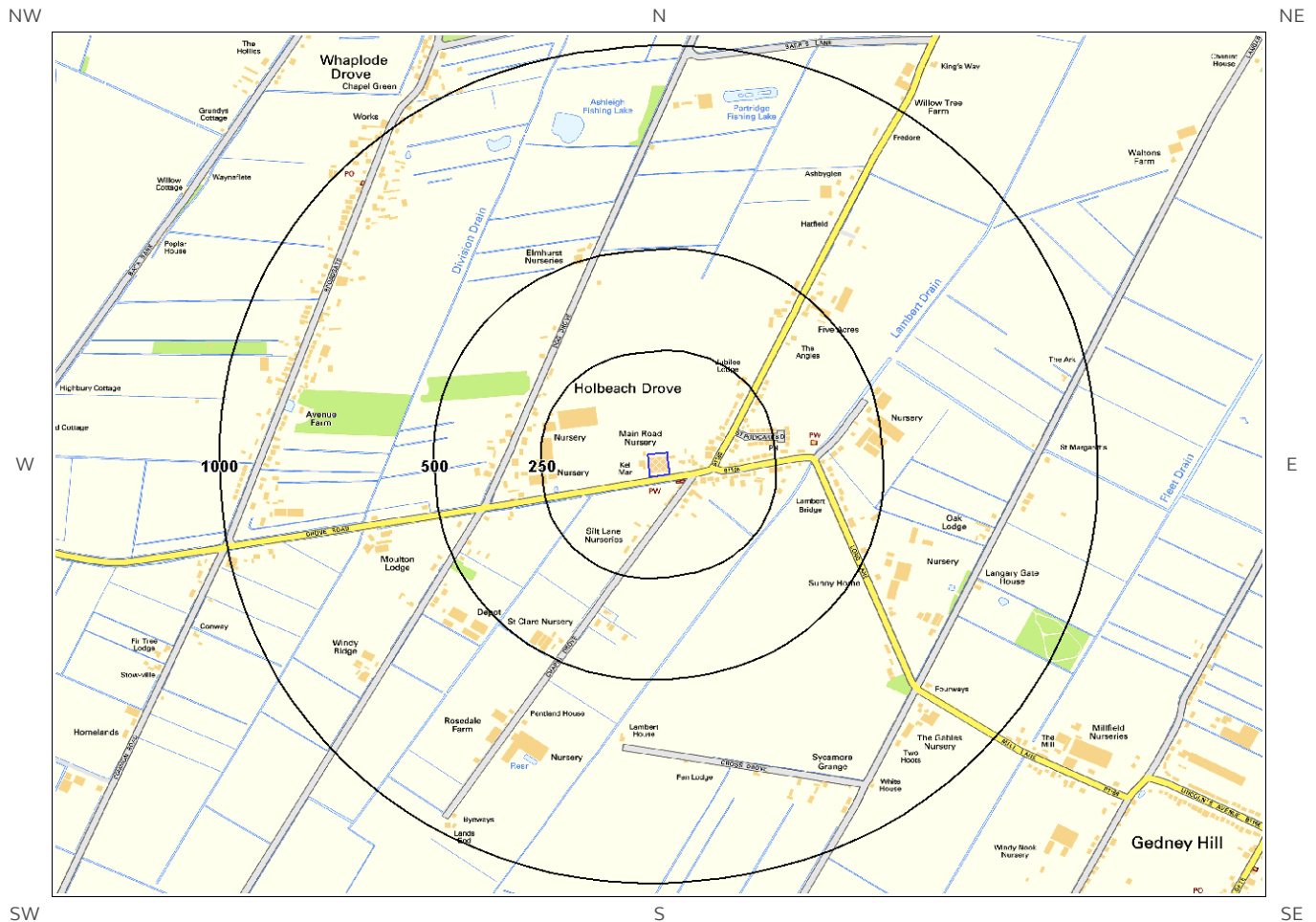
7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result Moderate

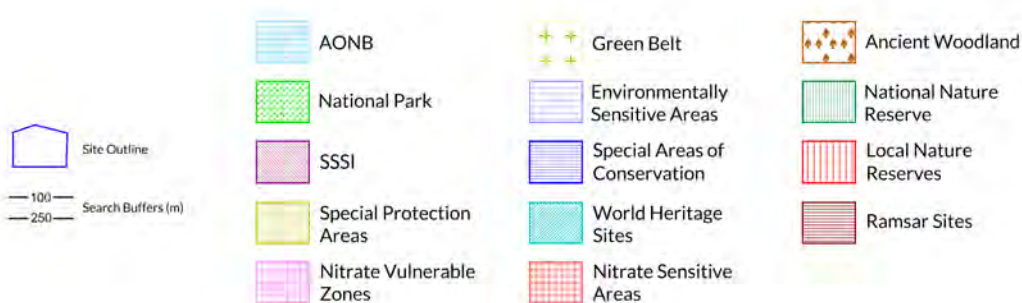
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	NVZ Name	Data Source
Not shown	1803	W	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Negligible

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

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

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

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

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

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Moderate

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Negligible

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

Hazard
No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

High

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

Hazard
Very significant potential for running sand problems. Avoid large amounts of water entering the ground, for example through pipe leakage or soak-aways. Do not dig (deep) holes into saturated ground without technical advice. For new build consider the consequences of soil and groundwater conditions during and after construction. Possible extra cost during construction. For existing property possible increase in insurance risk from running sand, for instance ions due to water leakage, high rainfall events or flooding.

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

9.2 Radon

9.2.1 Radon Affected Areas

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

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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

British Geological Survey Enquiries

Kingsley Dunham Centre
 Keyworth, Nottingham NG12 5GG
 Tel: 0115 936 3143.
 Fax: 0115 936 3276.
 Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency

National Customer Contact Centre, PO Box 544
 Rotherham, S60 1BY
 Tel: 03708 506 506

Web: www.environment-agency.gov.uk

Email: enquiries@environment-agency.gov.uk

Public Health England

Public information access office
 Public Health England, Wellington House
 133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email: enquiries@phe.gov.uk
 Main switchboard: 020 7654 8000

The Coal Authority

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

Ordnance Survey

Adanac Drive, Southampton
 SO16 0AS
 Tel: 08456 050505

Local Authority

Authority: South Holland District Council
 Phone: 01775 761 161

Web: <http://www.sholland.gov.uk/>

Address: Council Offices, Priory Road, Spalding, Lincolnshire, PE11

Gemapping PLC

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



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

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<https://www.groundsure.com/terms-and-conditions-feb11-2019>

APPENDIX B

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Groundsure Geo Insight Report



Groundsure

LOCATION INTELLIGENCE

Plandescil Ltd

42-44 PLANDESCIL LTD, CONNAUGHT ROAD,
ATTLEBOROUGH, NR17 2BW

Groundsure
Reference:

GS-6161039

Your Reference: 25080

Report Date 10 Jul 2019

Report Delivery Email - pdf
Method:

Geo Insight

Address: MAIN ROAD NURSERY, MAIN ROAD, HOLBEACH DROVE, SPALDING, PE12 0PS

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight



Geo Insight

Address: MAIN ROAD NURSERY, MAIN ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Date: 10 Jul 2019

Reference: GS-6161039

Client: Plandescil Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 06-May-2018
Grid Reference: 532508,312349
Site Size: 0.2466ha

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Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale

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

Section 2: Geology 1:50,000 Scale

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

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

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

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

No

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

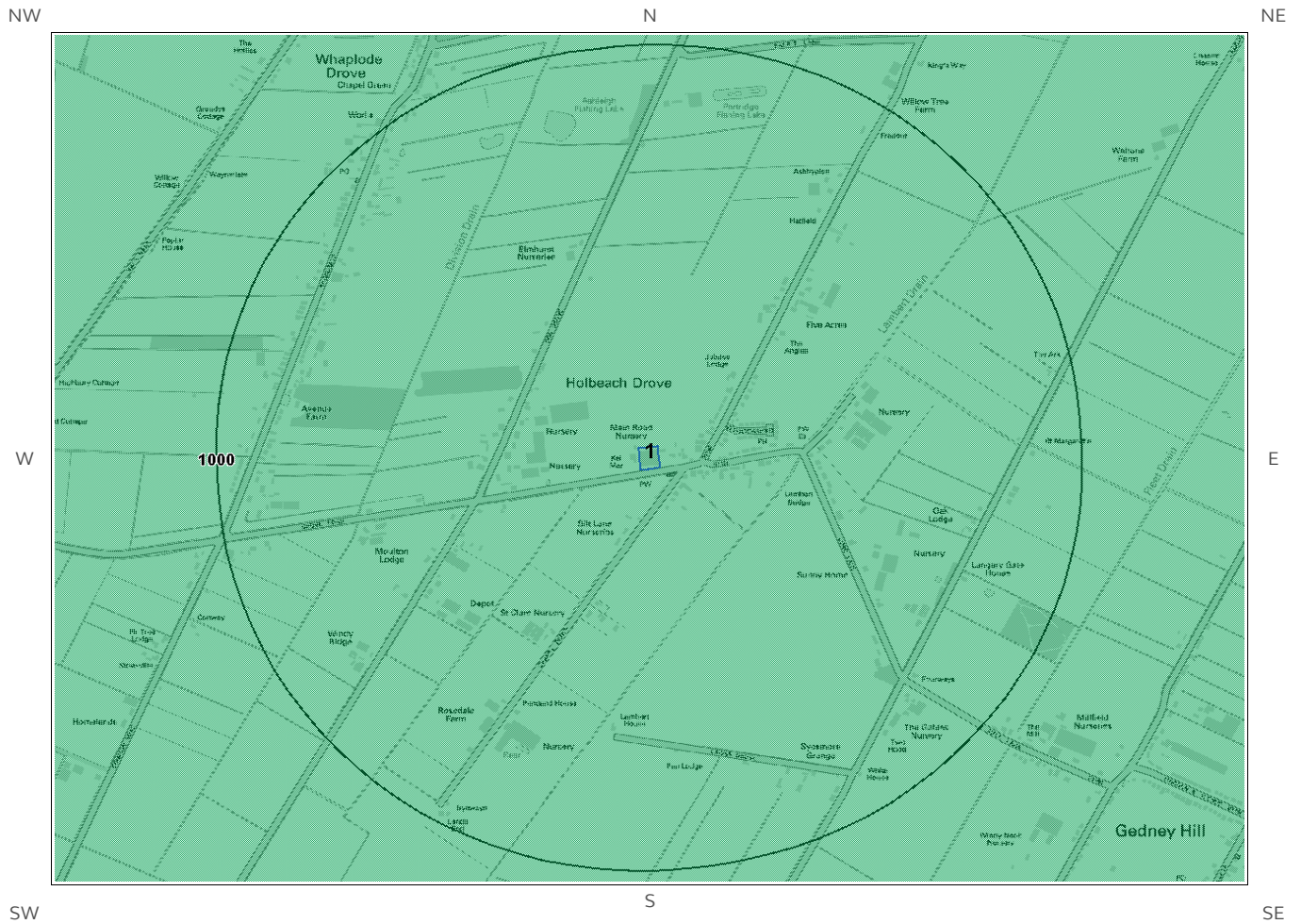
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities

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

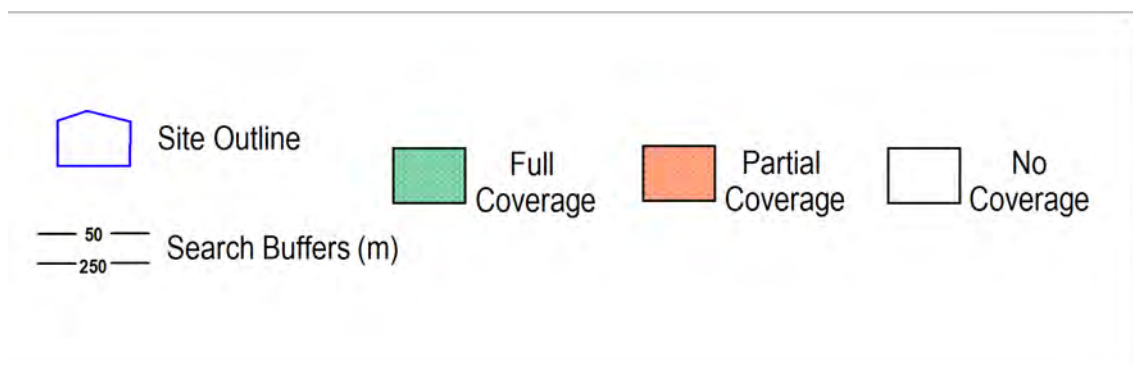
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Negligible				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Negligible				
6.5 Running Sand	High				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	1		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	2	0	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	Full	Full	No coverage

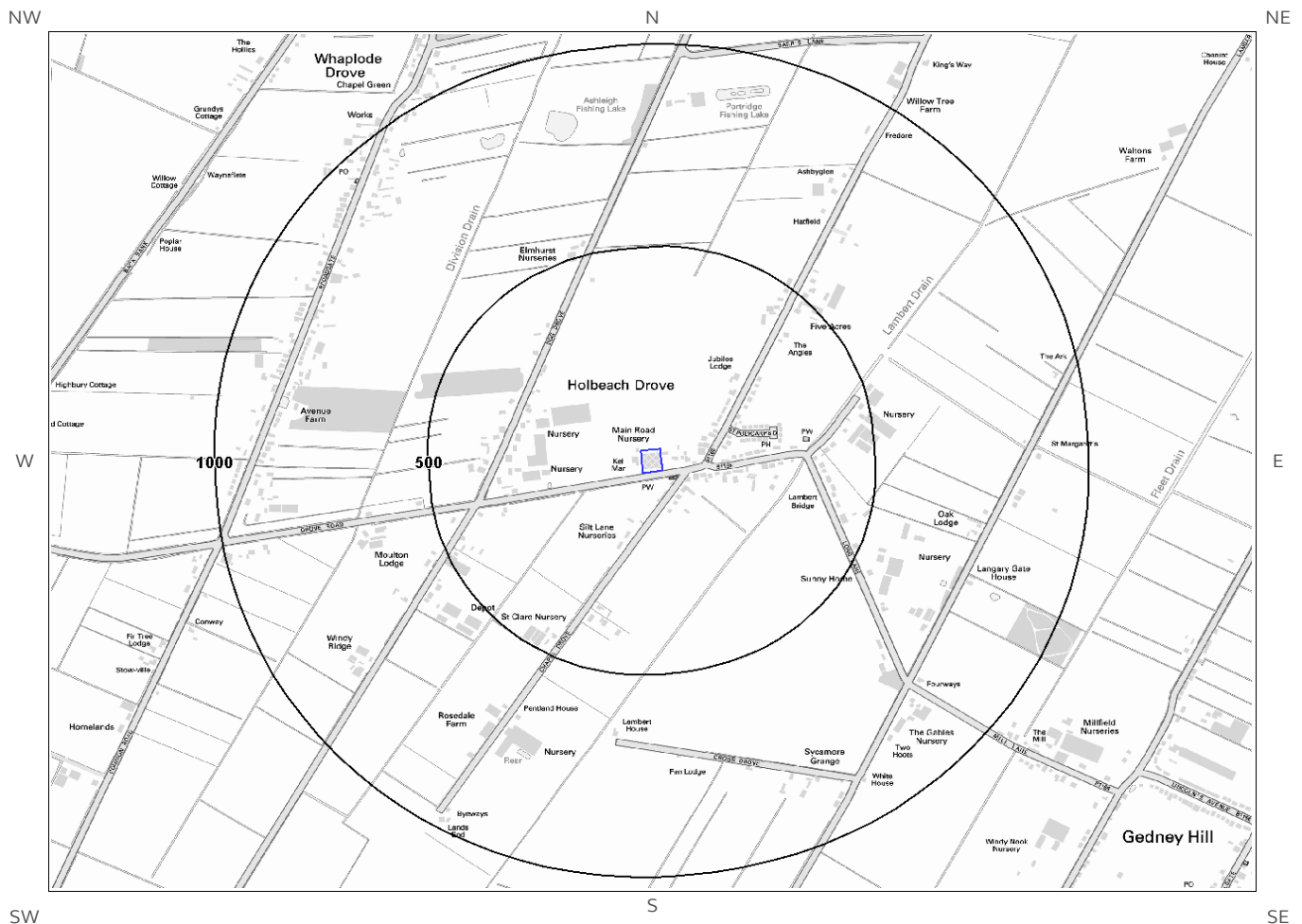
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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1. Geology 1:10,000 scale

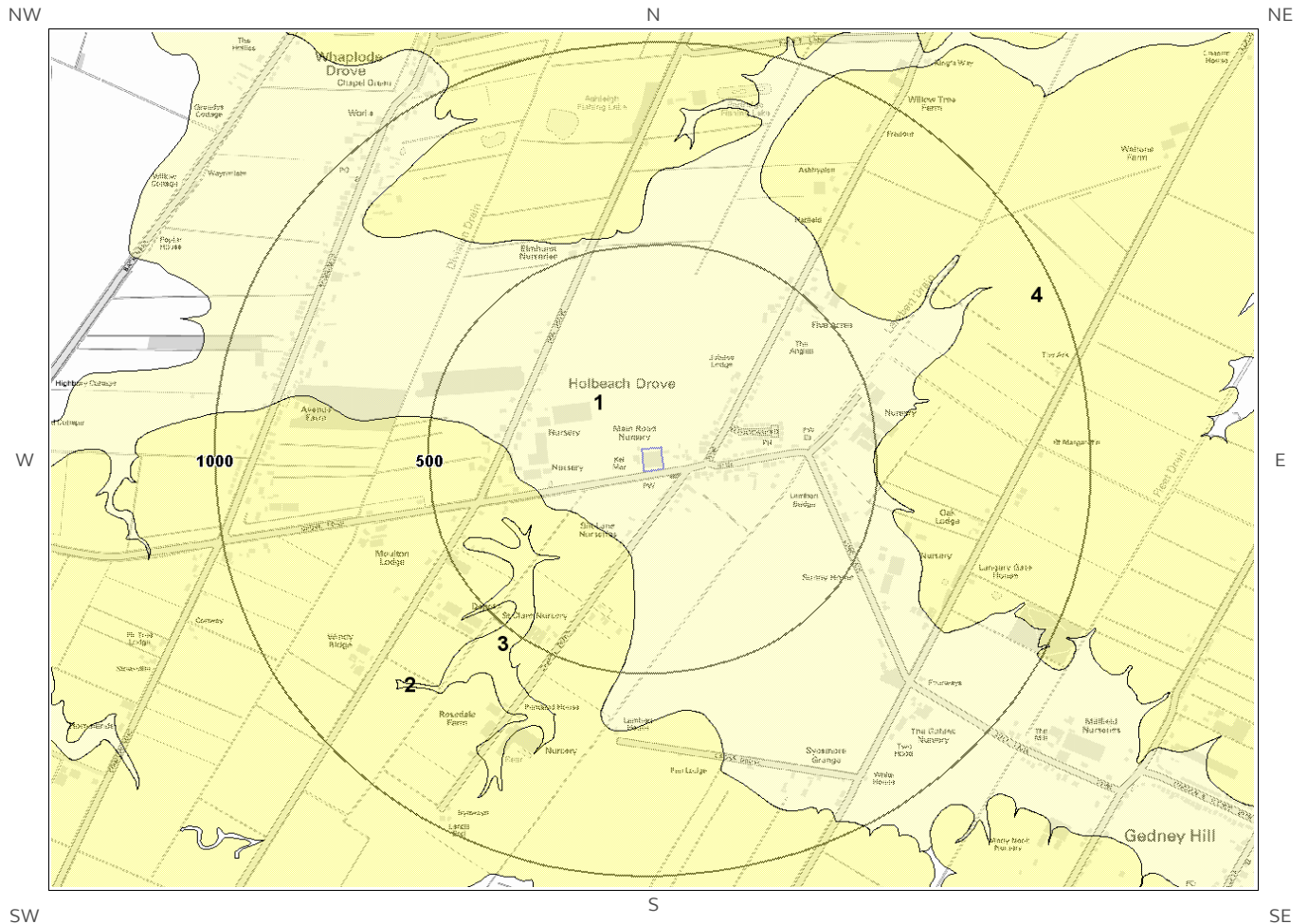
1.1 Artificial Ground

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

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

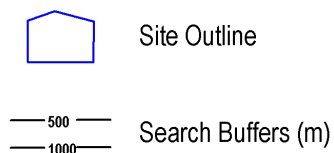
Database searched and no data found.

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



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TTB-XCZ	Terrington Beds - Clay And Silt	Clay And Silt
2	174.0	SW	BYD-XCZ	Barroway Drove Beds - Clay And Silt	Clay And Silt
3	290.0	SW	BYD-XSZ	Barroway Drove Beds - Sand And Silt	Sand And Silt
4	492.0	E	BYD-XCZ	Barroway Drove Beds - Clay And Silt	Clay And Silt

1.2.2 Landslip

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

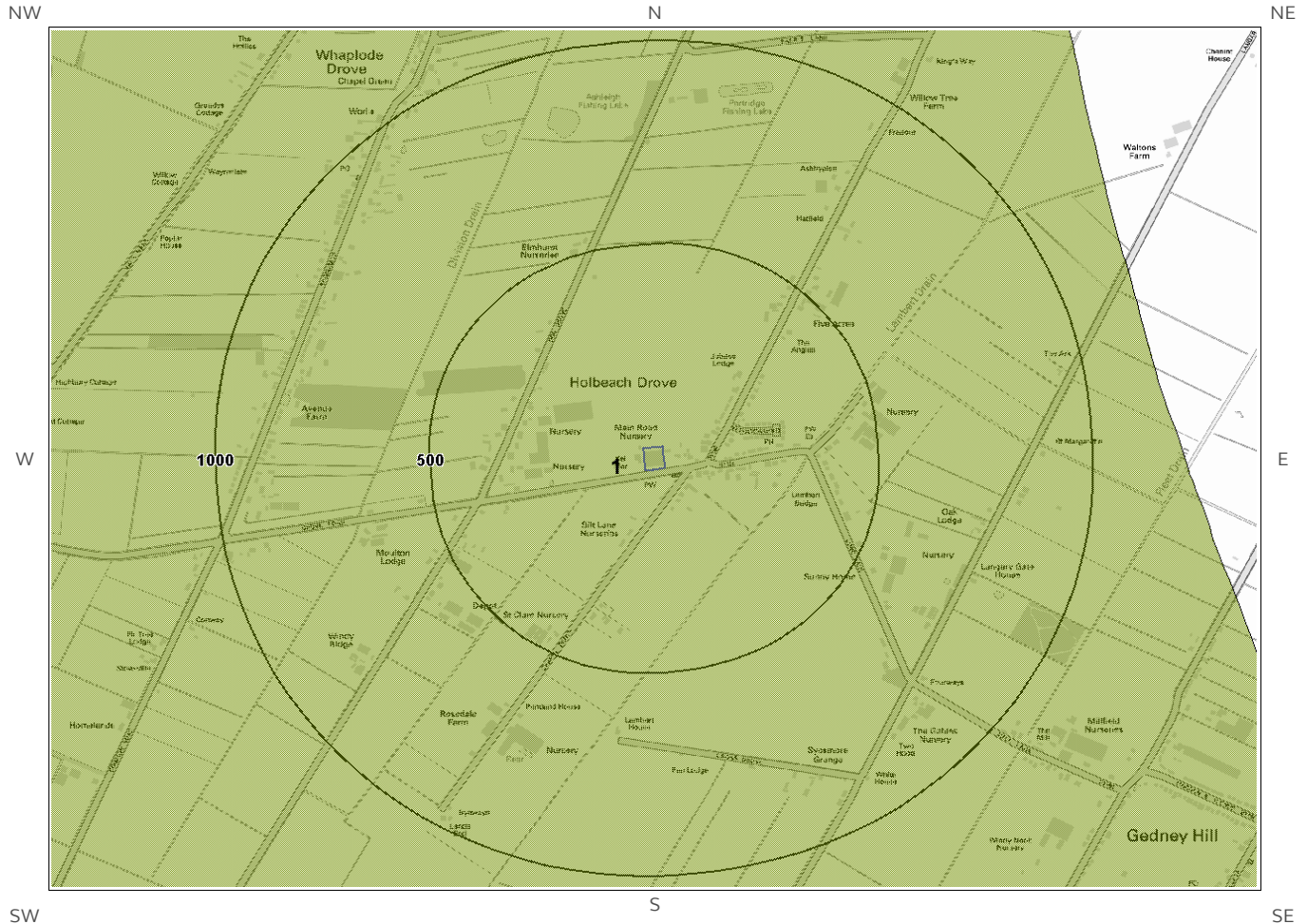
No

Database searched and no data found.

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

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

1.3 Bedrock and linear features map (1:10,000 scale)

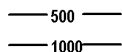


Bedrock and linear features Legend

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Site Outline



Search Buffers (m)

1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	OXC-MDST	Oxford Clay Formation - Mudstone	Oxfordian Age - Callovian Age

1.3.2 Linear features

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

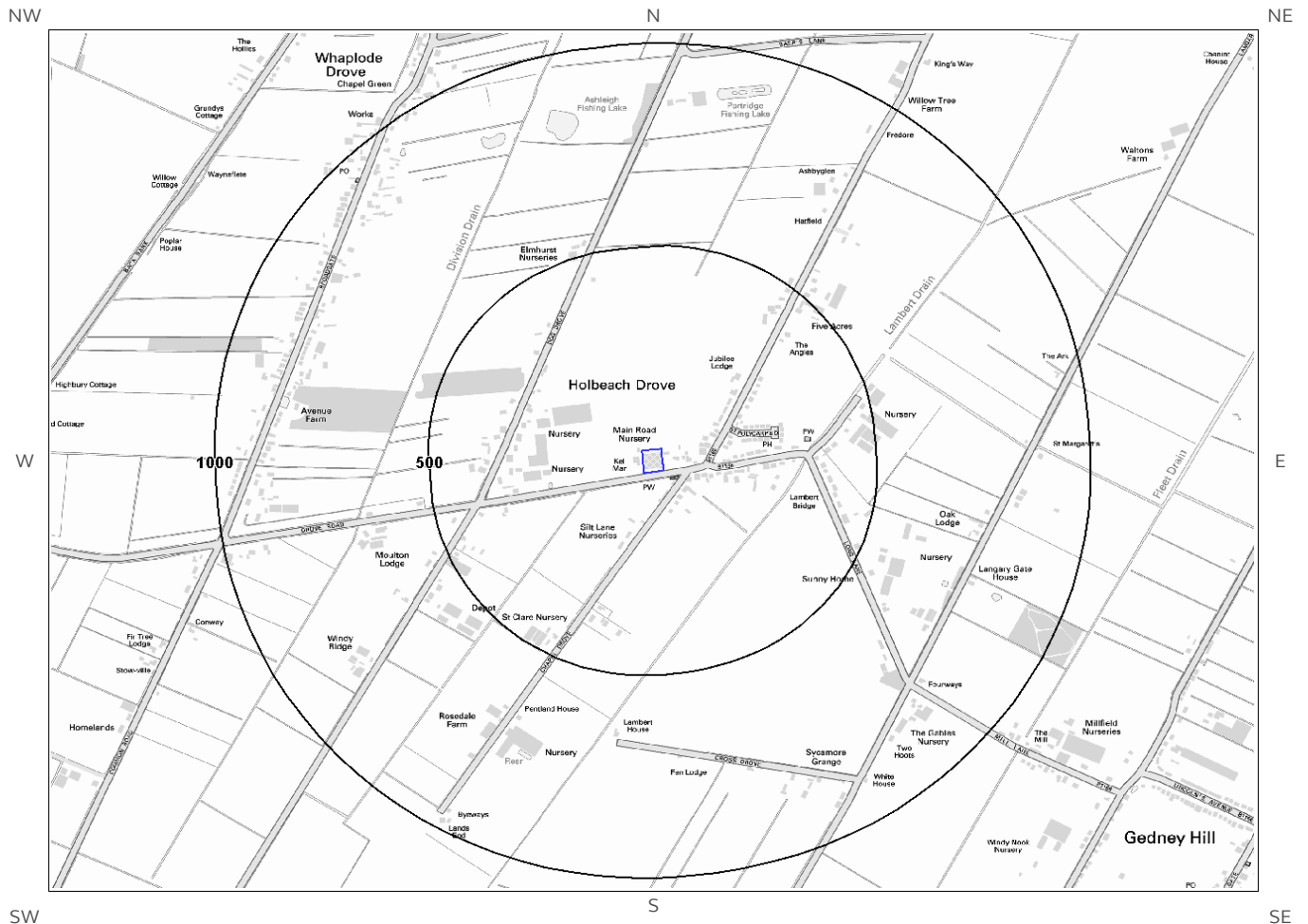
Database searched and no data found at this scale.

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

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 158

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? No

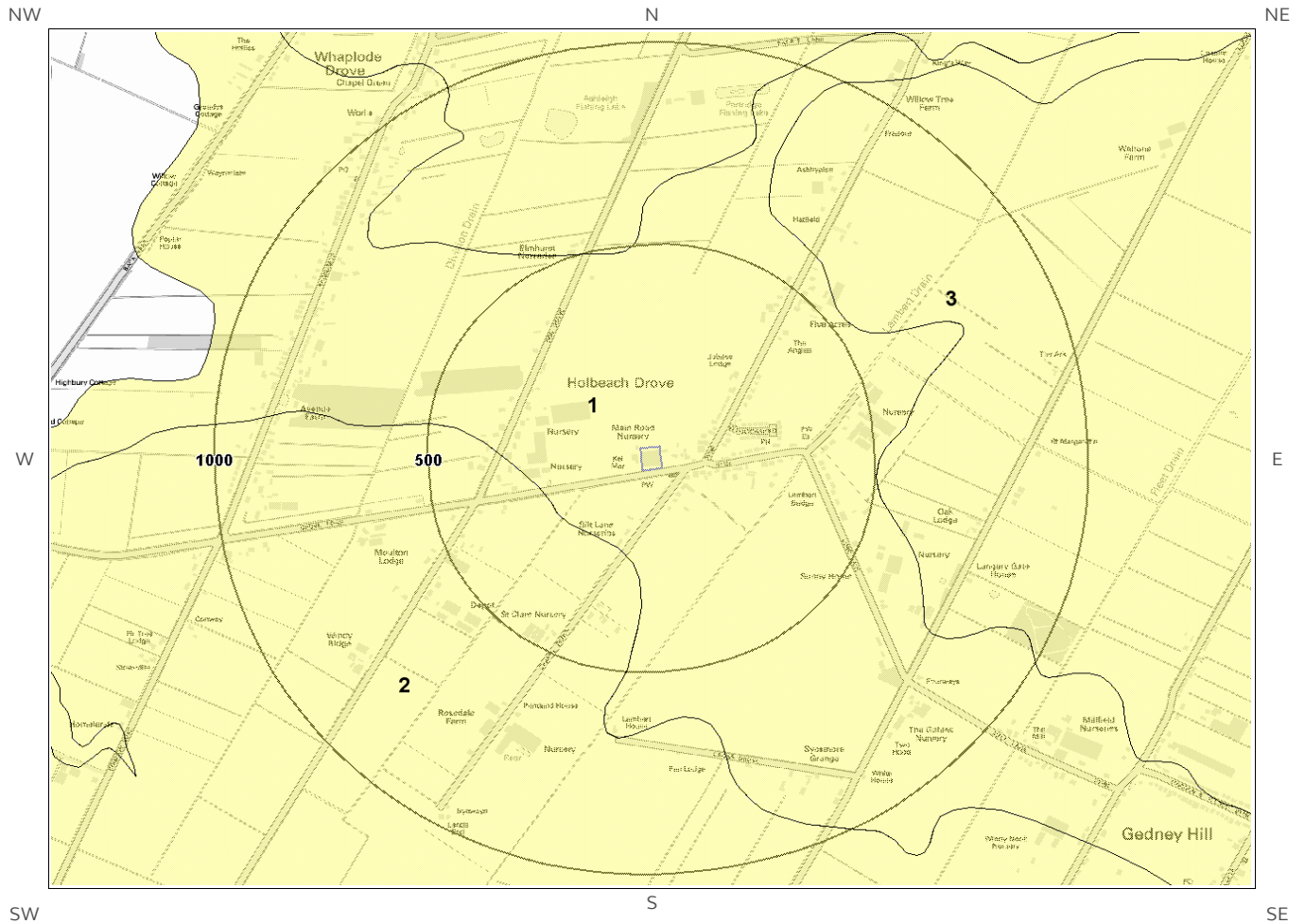
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.

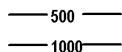
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TFD1-XSZ	TIDAL FLAT DEPOSITS, 1	SAND AND SILT
2	195.0	SW	TFD1-XCZ	TIDAL FLAT DEPOSITS, 1	CLAY AND SILT
3	486.0	N	TFD1-XCZ	TIDAL FLAT DEPOSITS, 1	CLAY AND SILT

2.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	Moderate

2.2.3 Landslip

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

Database searched and no data found.

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

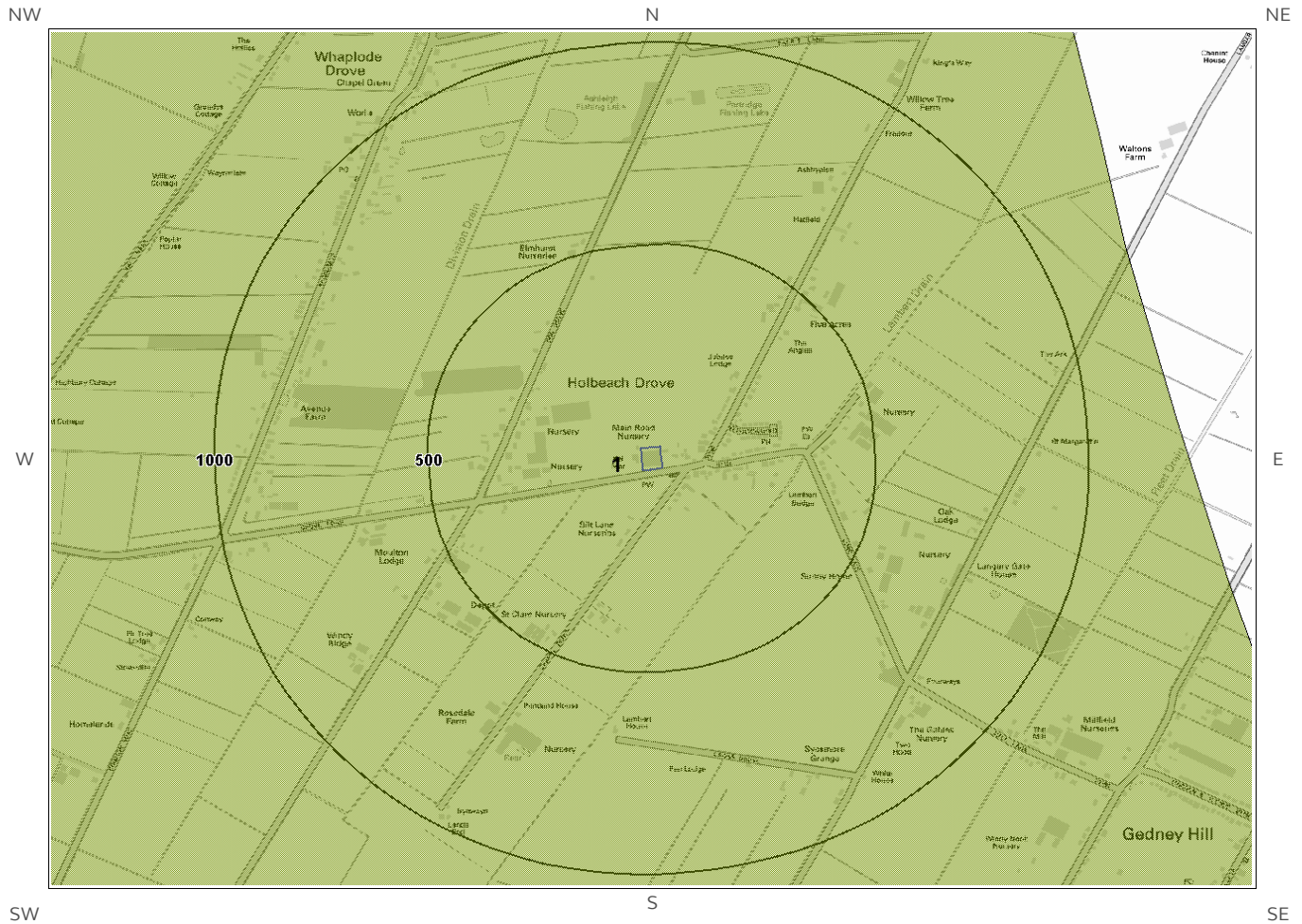
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

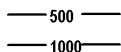
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 158

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	OXC-MDST	OXFORD CLAY FORMATION - MUDSTONE	CALLOVIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Very Low

2.3.3 Linear features

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

Database searched and no data found.

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

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

3 Radon Data

3.1 Radon Affected Areas

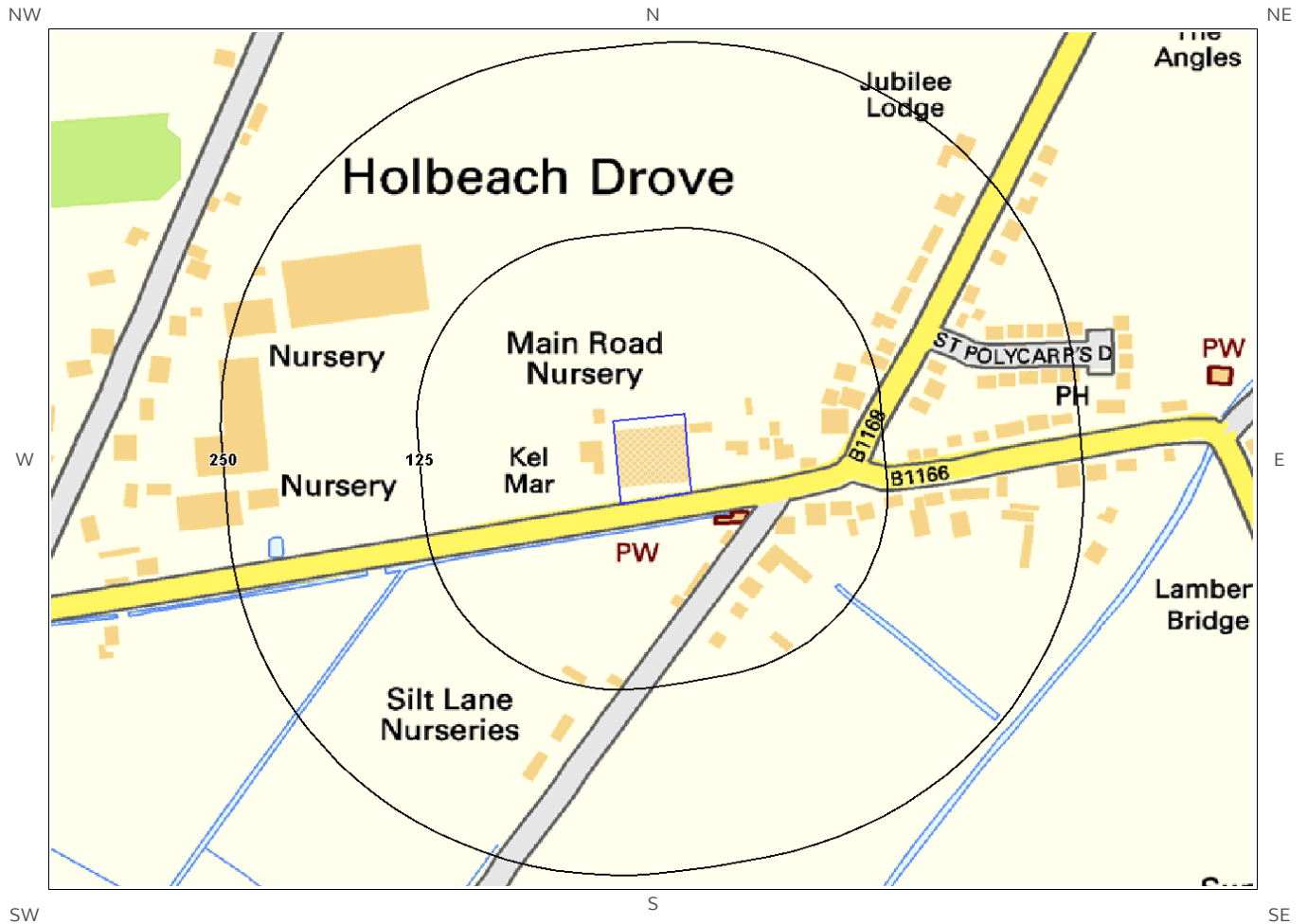
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

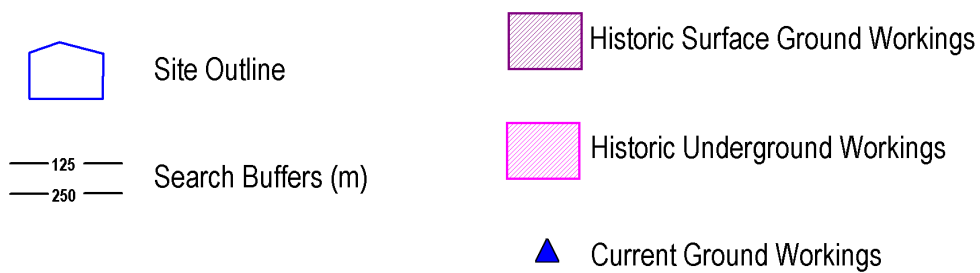
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? No

Database searched and no data found.

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

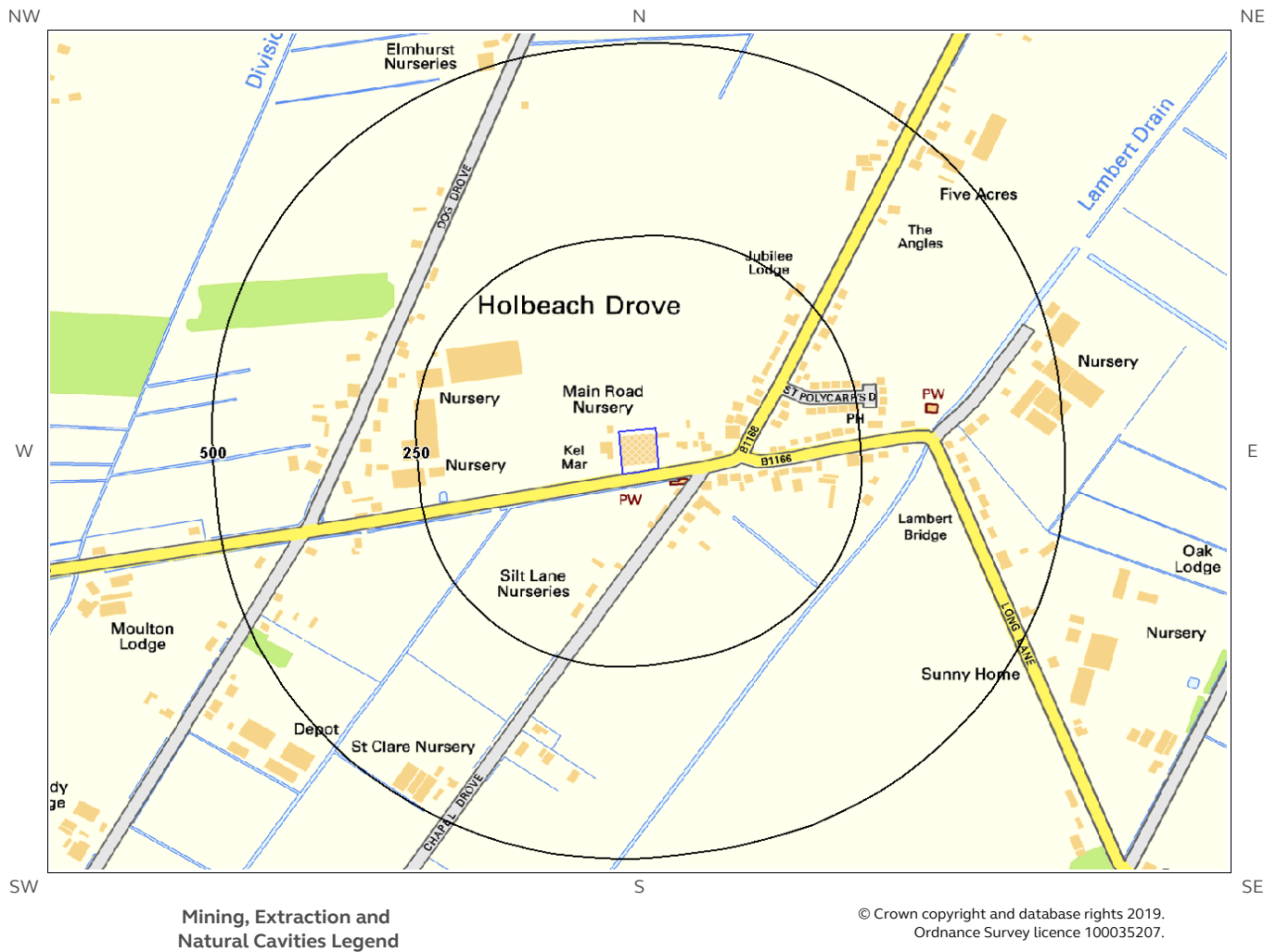
4.3 Current Ground Workings

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

Are there any BGS Current Ground Workings within 1000m of the study site boundary? No

Database searched and no data found.

5 Mining, Extraction & Natural Cavities map



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

Database searched and no data found.

5.2 Coal Mining

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

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

Database searched and no data found.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

Database searched and no data found.

5.5 Non-Coal Mining Cavities

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

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

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

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

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

This dataset provides information on metalliferous mining areas in Cornwall/Devon and is derived from records held by Mining Searches UK.

Are there any Cornwall and Devon Metalliferous Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

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

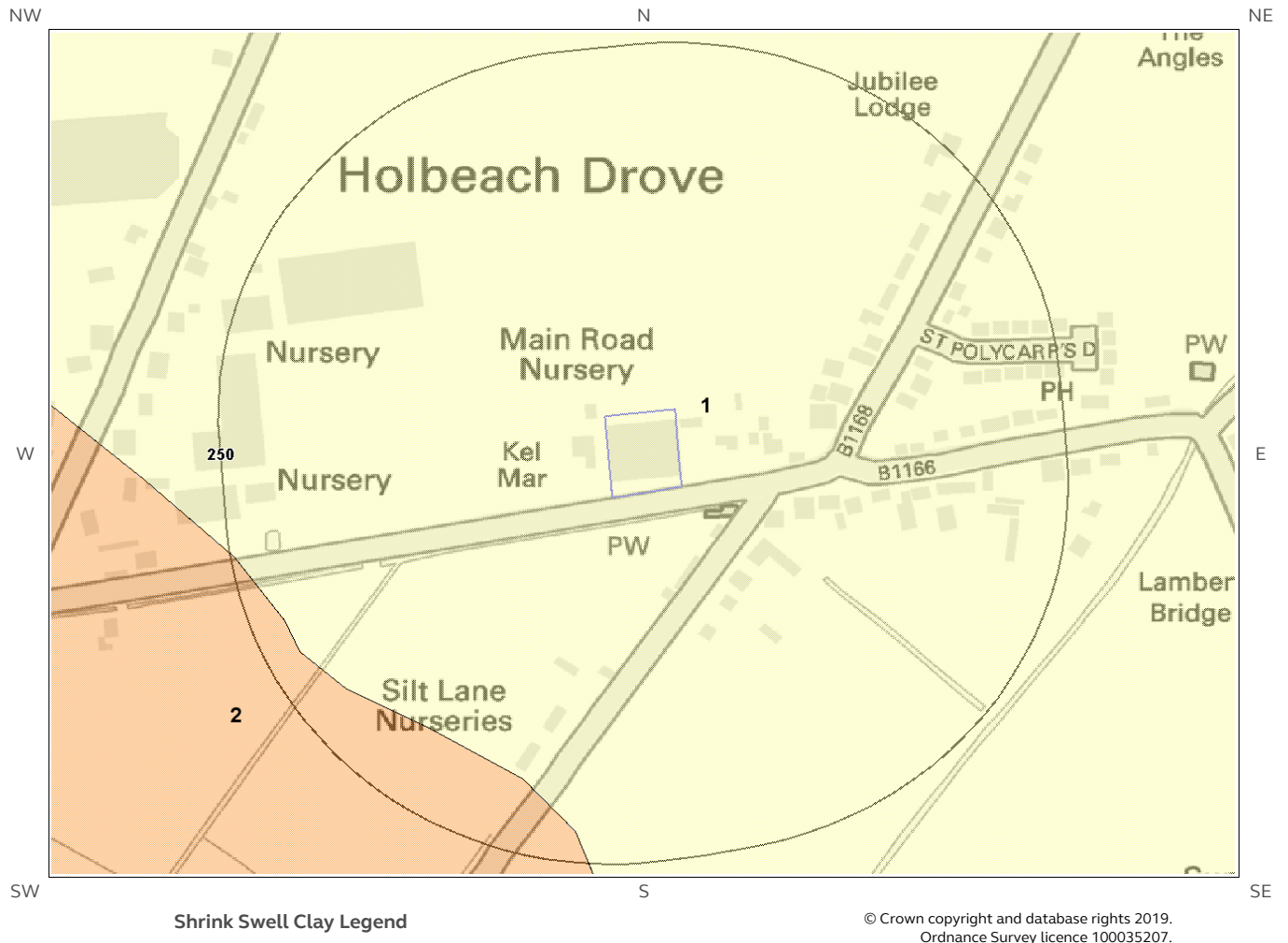
Are there any Clay Mining areas within 1000m of the study site boundary?

No

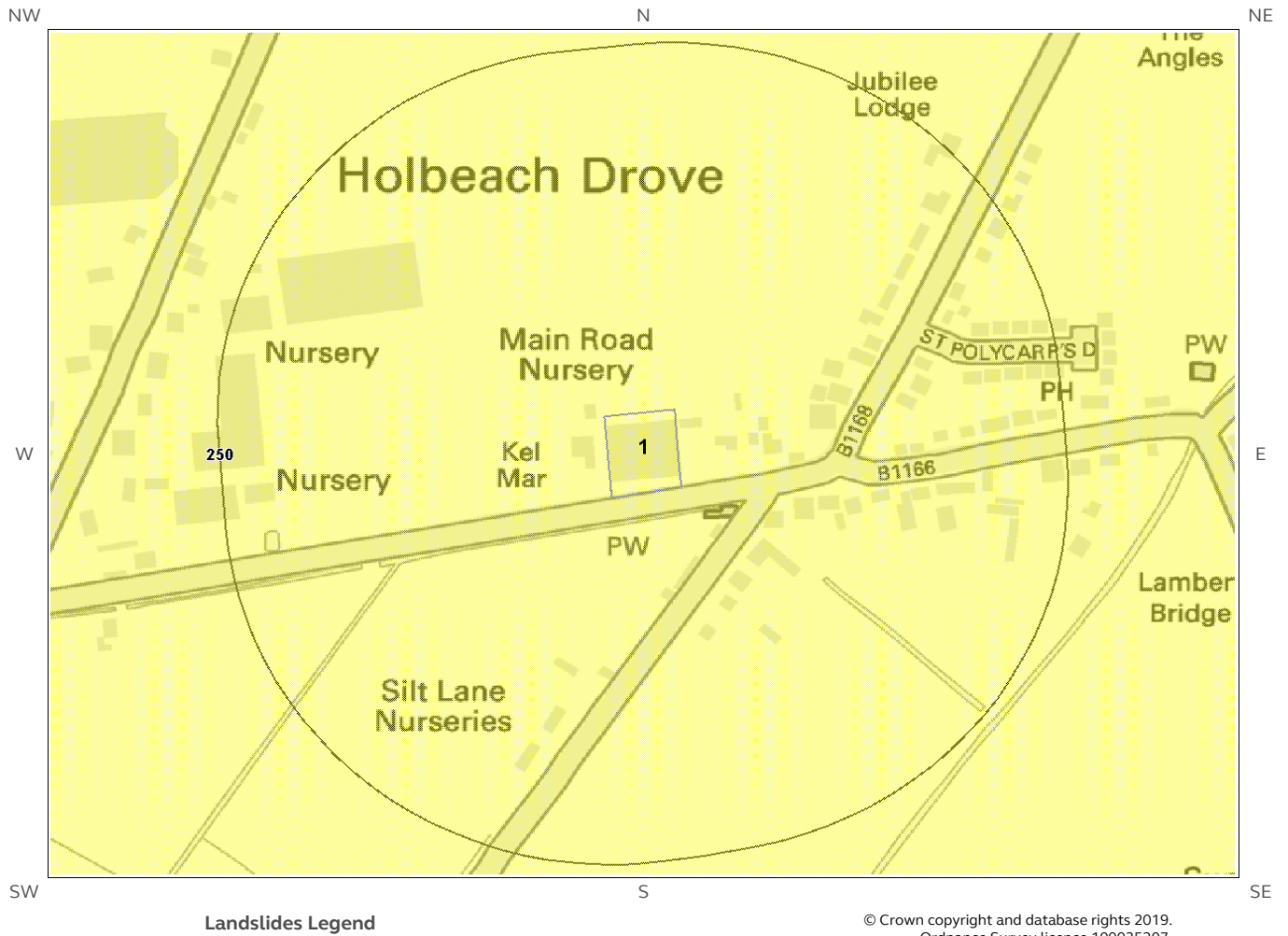
Database searched and no data found.

6 Natural Ground Subsidence

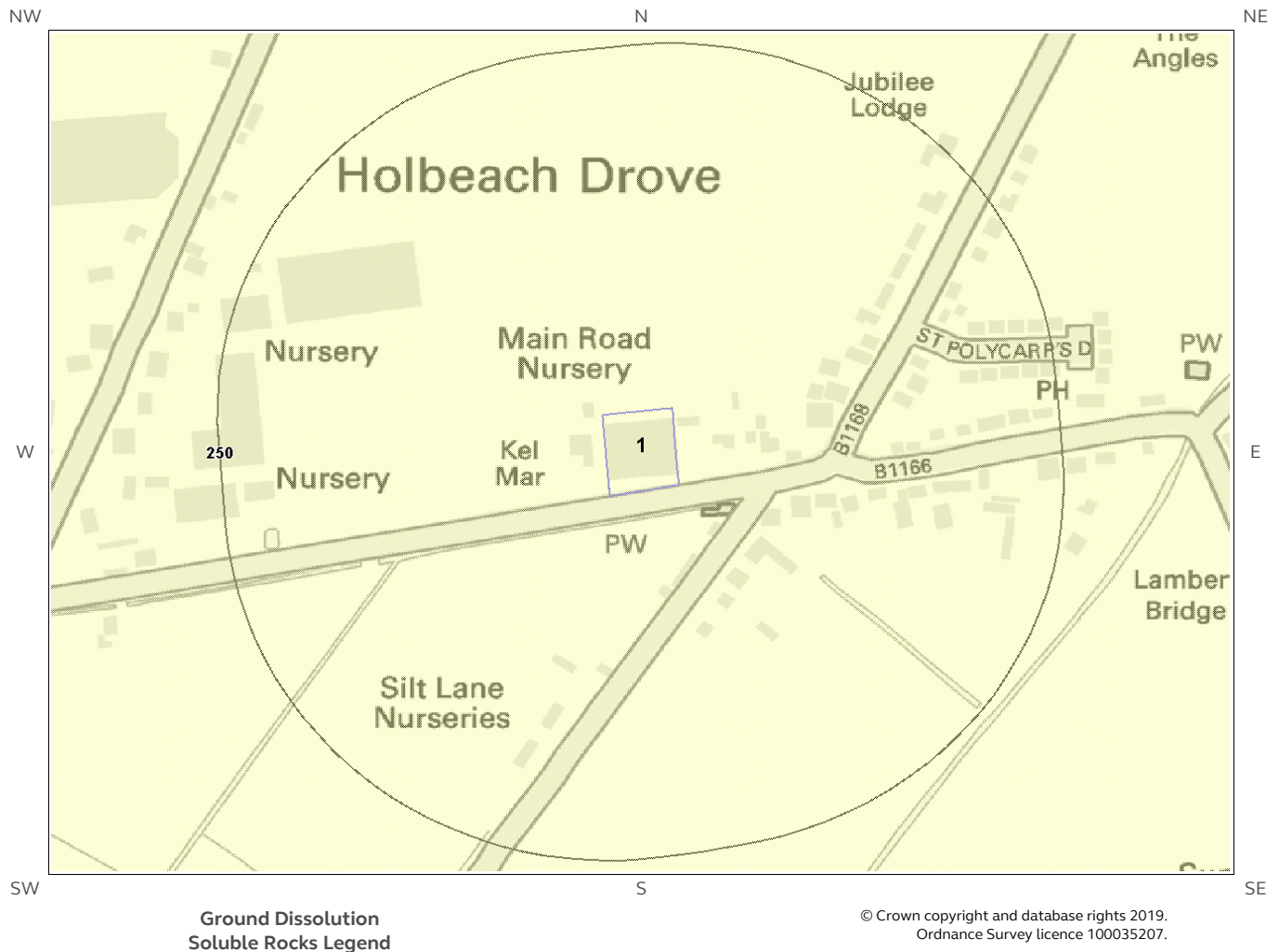
6.1 Shrink-Swell Clay map



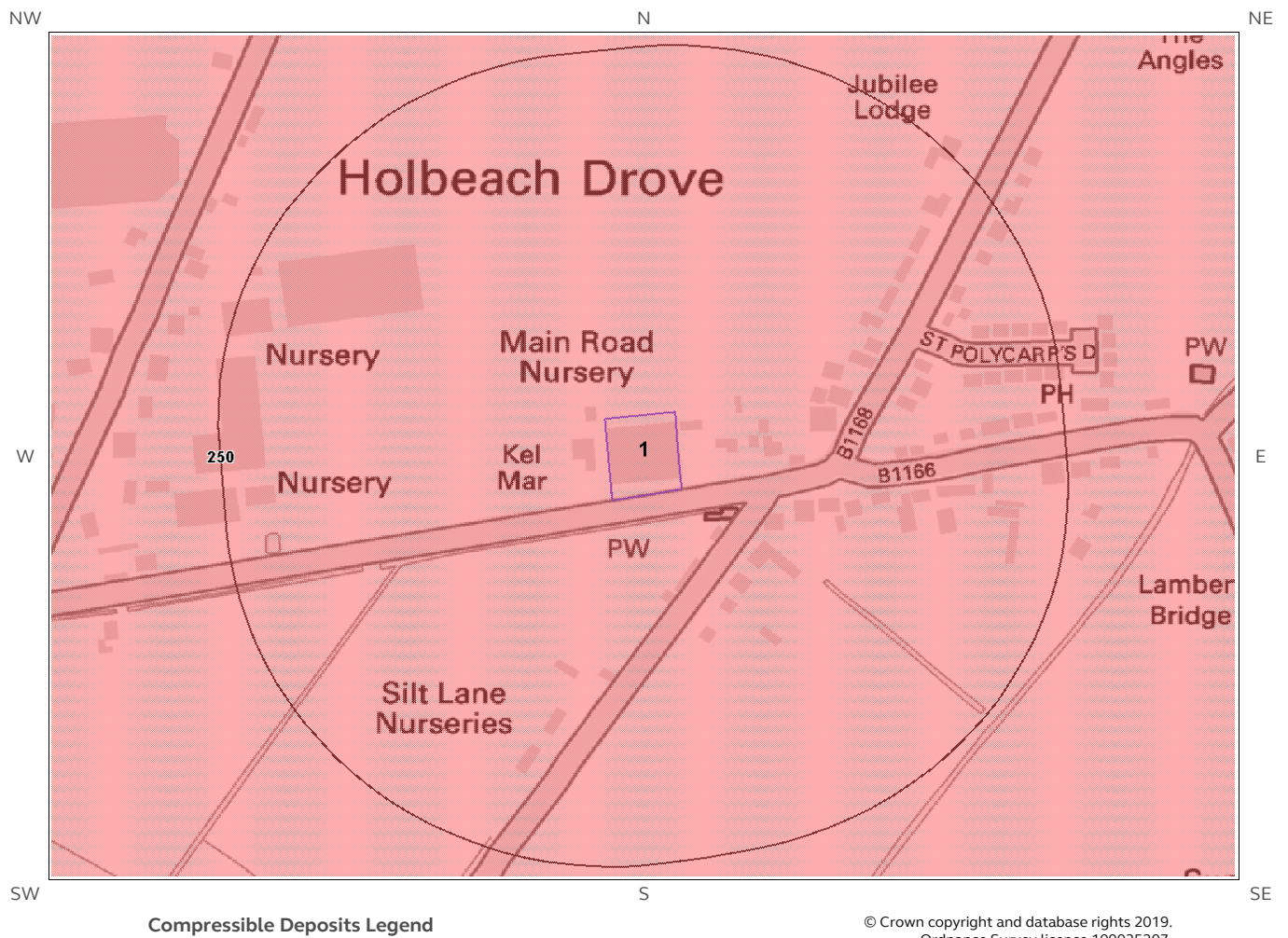
6.2 Landslides map



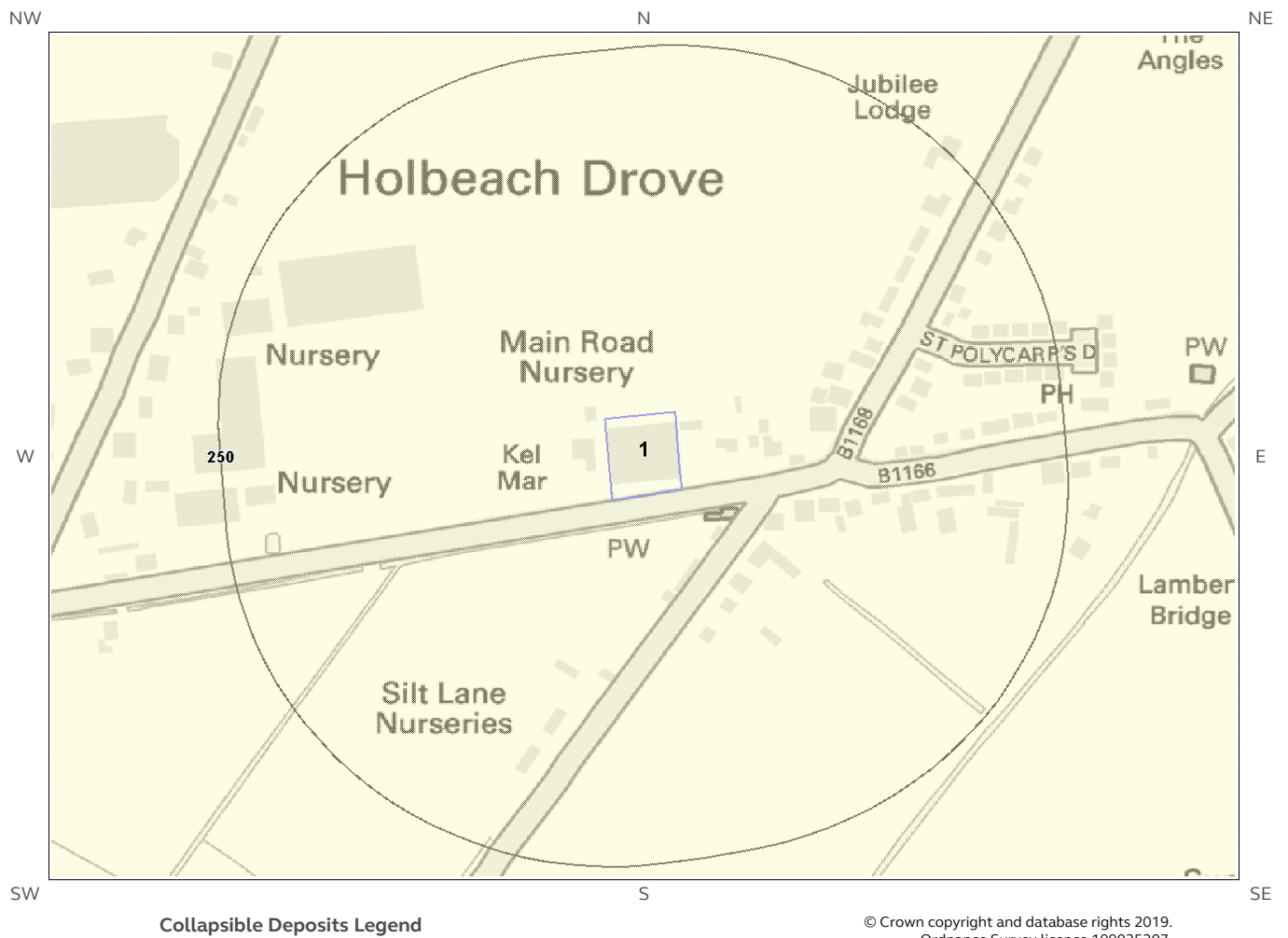
6.3 Ground Dissolution of Soluble Rocks map



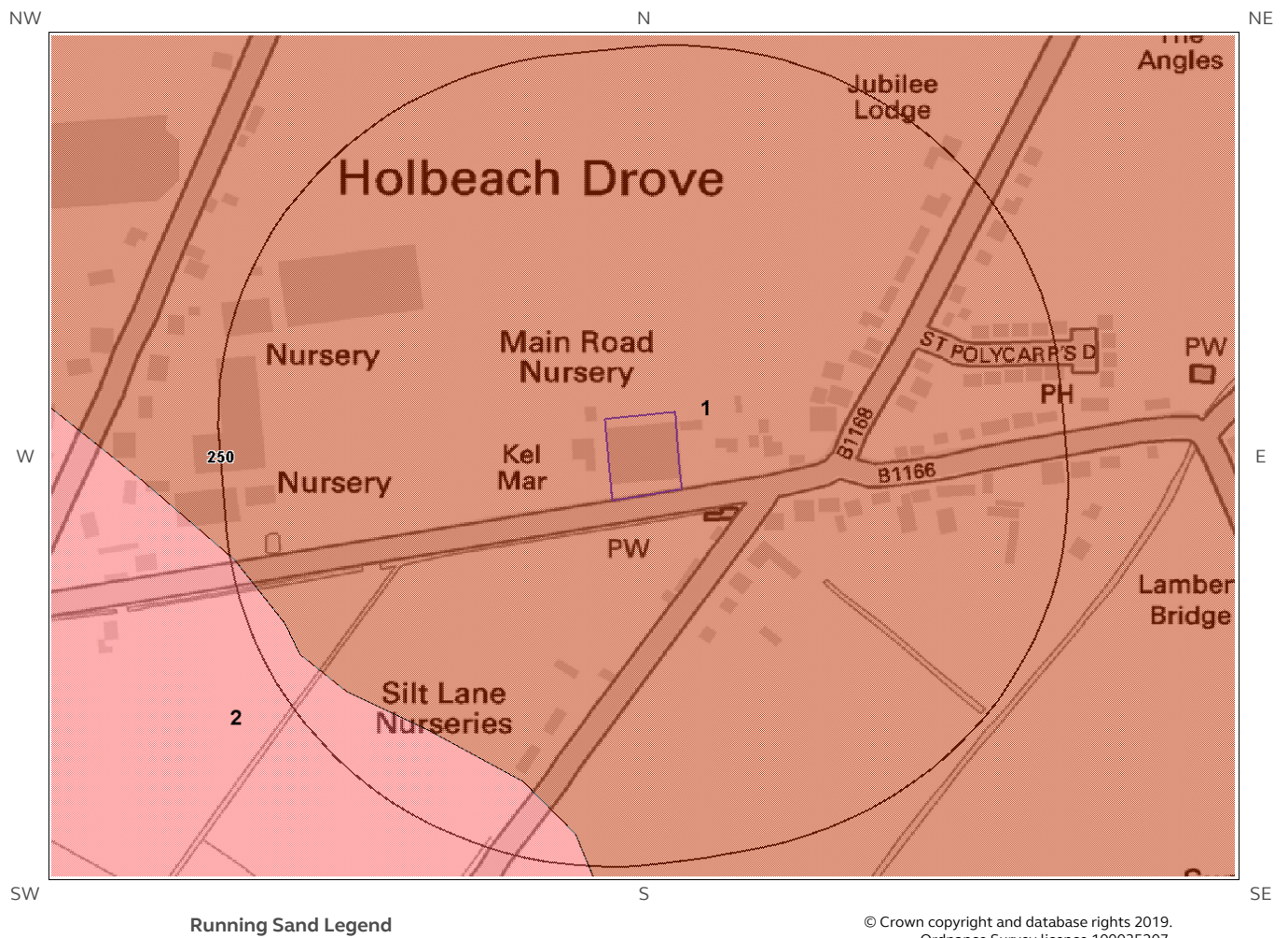
6.4 Compressible Deposits map



6.5 Collapsible Deposits map



6.6 Running Sand map



6 Natural Ground Subsidence

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

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

What is the maximum hazard rating of natural subsidence within the study site** boundary? High

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

6.5 Collapsible Deposits

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

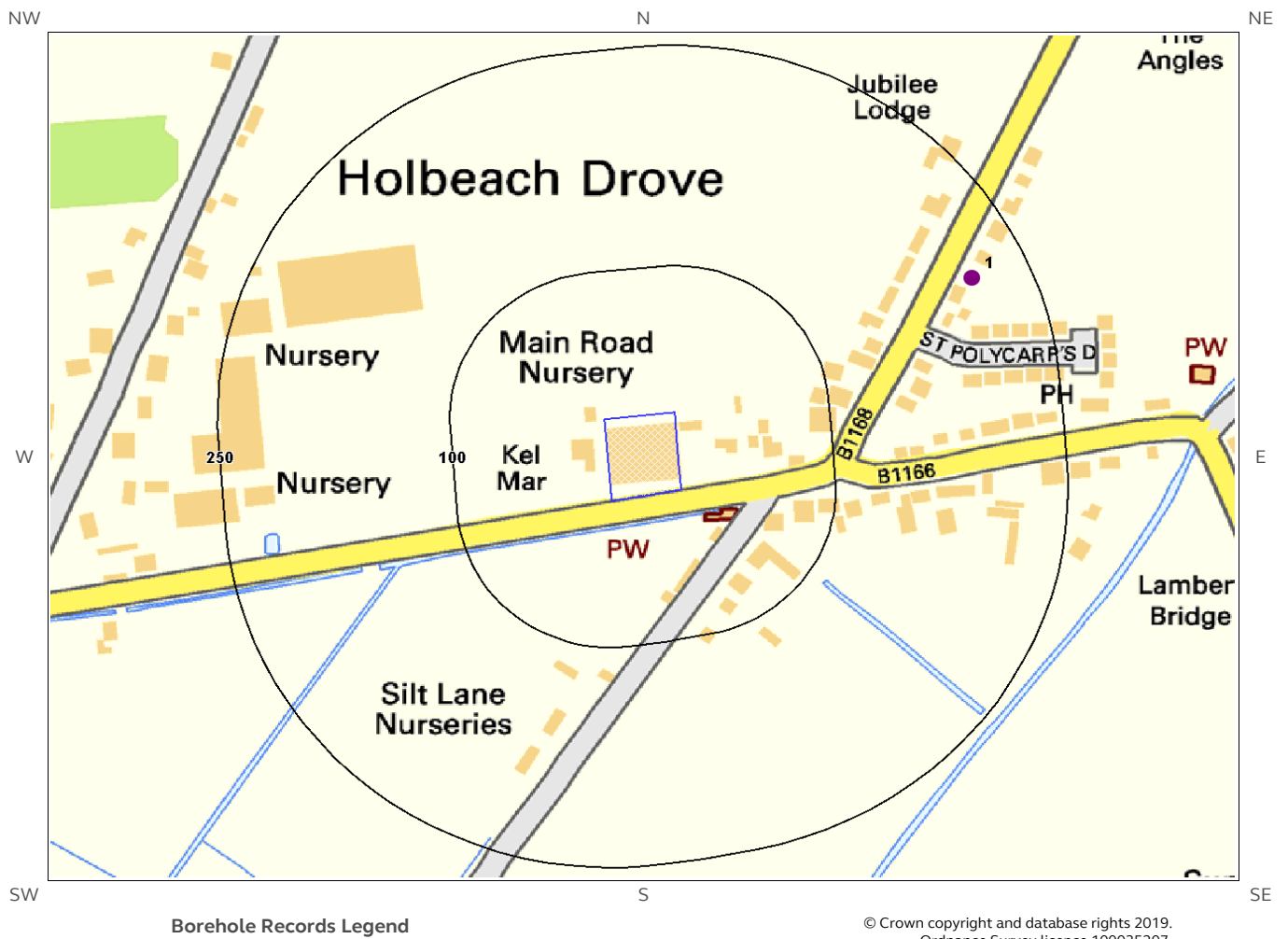
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential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

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	High	Very significant potential for running sand problems. Avoid large amounts of water entering the ground, for example through pipe leakage or soak-aways. Do not dig (deep) holes into saturated ground without technical advice. For new build - consider the consequences of soil and groundwater conditions during and after construction. Possible extra cost during construction. For existing property - possible increase in insurance risk from running sand, for instance ions due to water leakage, high rainfall events or flooding.

7 Borehole Records map



7 Borehole Records

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

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

1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	212.0	NE	532720 312470	TF31SW7	1	HOLBEACH DROVE

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/504033

8 Estimated Background Soil Chemistry

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

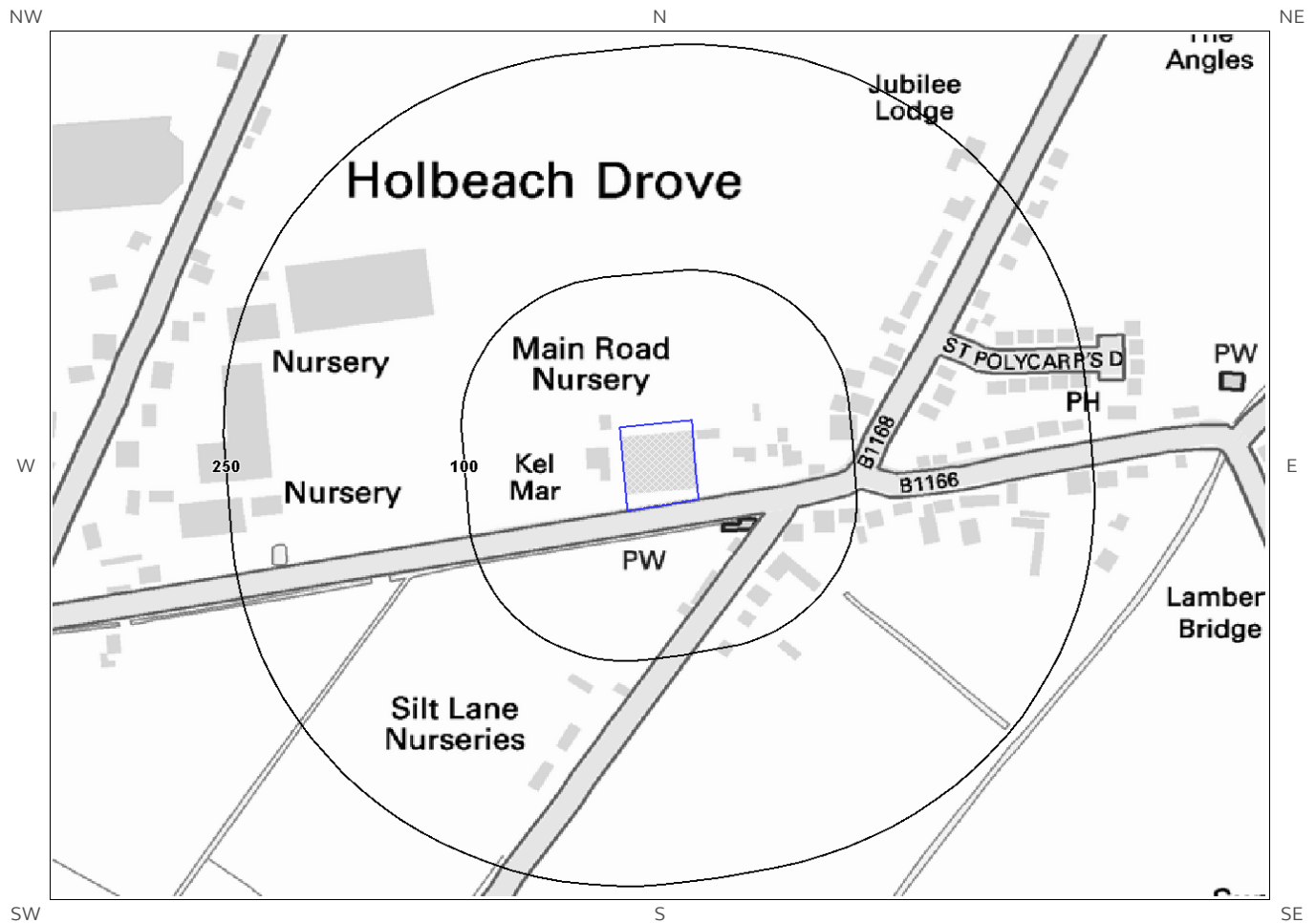
2

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

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

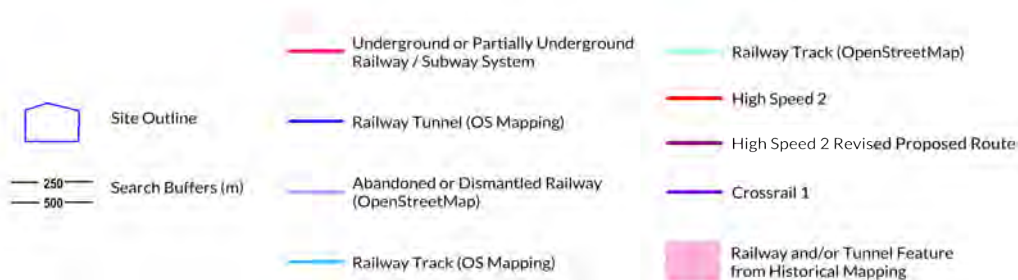
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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

9.3 Historical Railways

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

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

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

Database searched and no data found.

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

9.4 Active Railways

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

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

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

Database searched and no data found.

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

9.5 Railway Projects

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

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

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

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

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

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

Contact Details

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 Fax: 0115 936 3276.
 Email: enquiries@bgs.ac.uk
 Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
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The Coal Authority

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 DX 716176 Mansfield 5
www.coal.gov.uk



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APPENDIX C

CONTENTS

Historical Maps & Aerial Photographs

Site Details:

MAIN ROAD NURSERY, MAIN
ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: County Series

Map date: 1887

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1887
Revised 1887
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1887
Revised 1887
Edition N/A
Copyright N/A
Levelled N/A

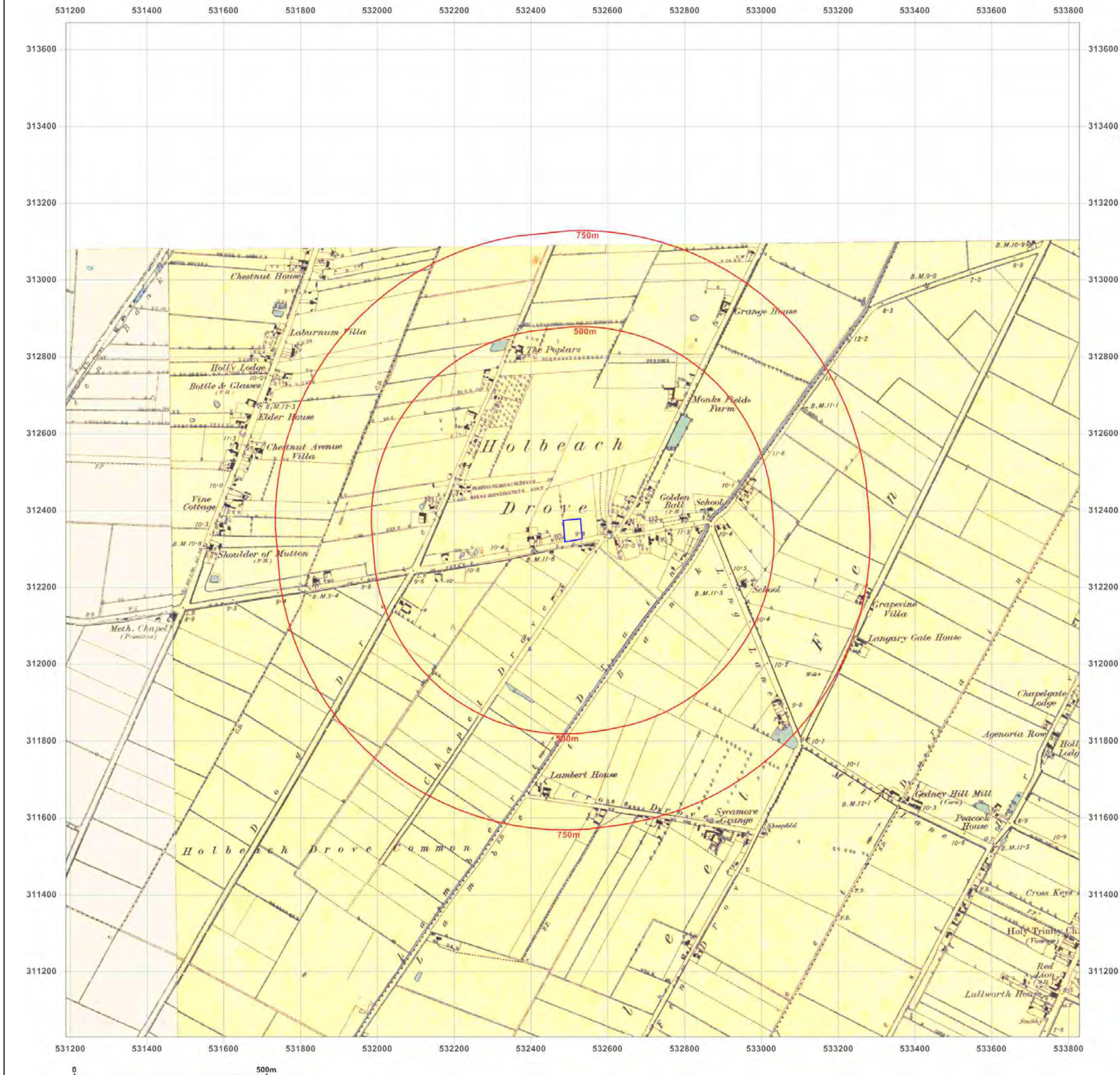


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Production date: 10 July 2019

Map legend available at:
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Site Details:

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ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: County Series

Map date: 1888

Scale: 1:2,500

Printed at: 1:2,500



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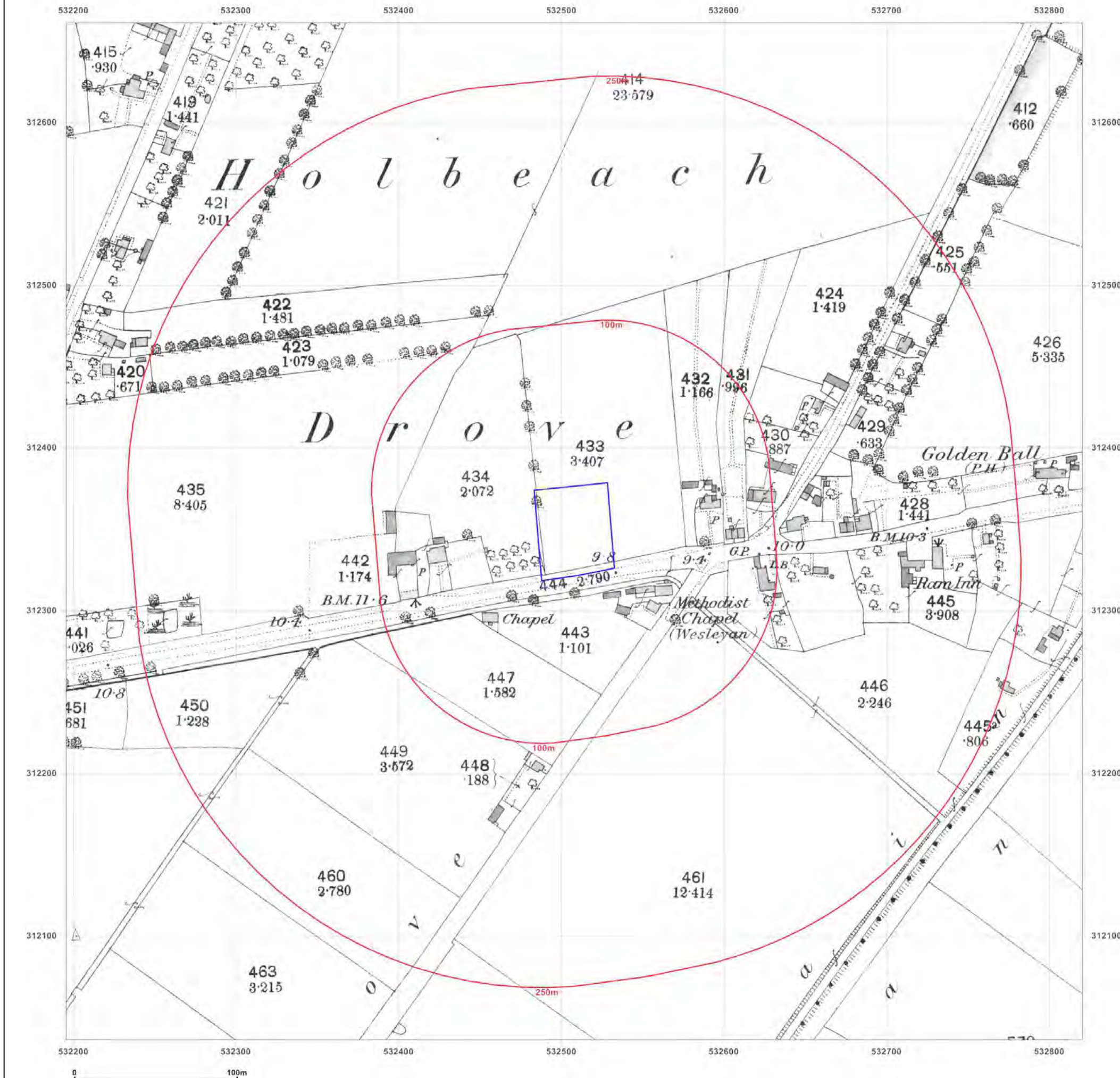


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ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: County Series

Map date: 1904

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1904
Revised 1904
Edition N/A
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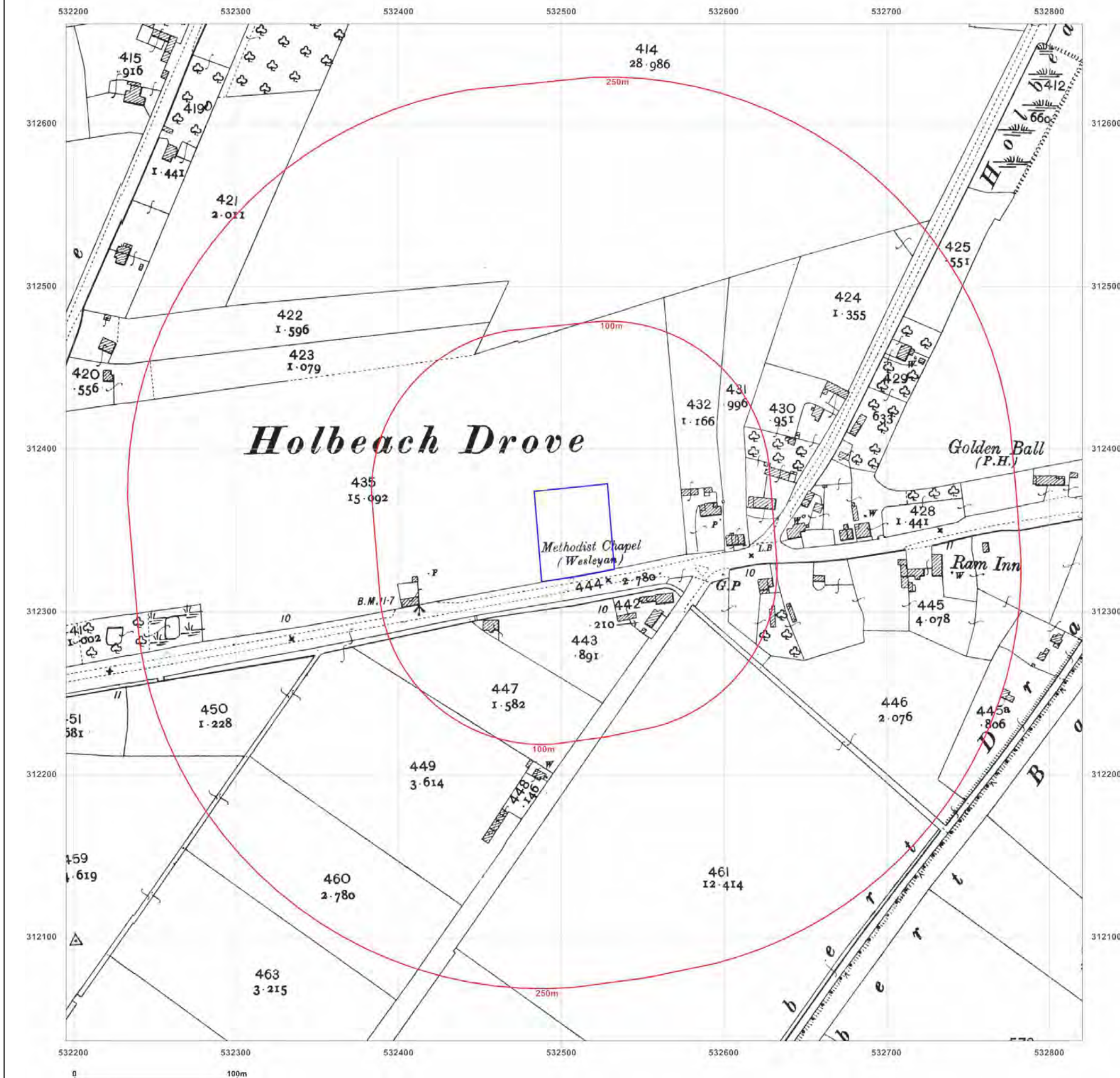


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SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: County Series

Map date: 1903-1906

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886
Revised 1903
Edition N/A
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Levelled N/A

Surveyed 1886
Revised 1905
Edition 1905
Copyright N/A
Levelled N/A

Surveyed 1886
Revised 1906
Edition 1906
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Surveyed 1886
Revised 1905
Edition 1905
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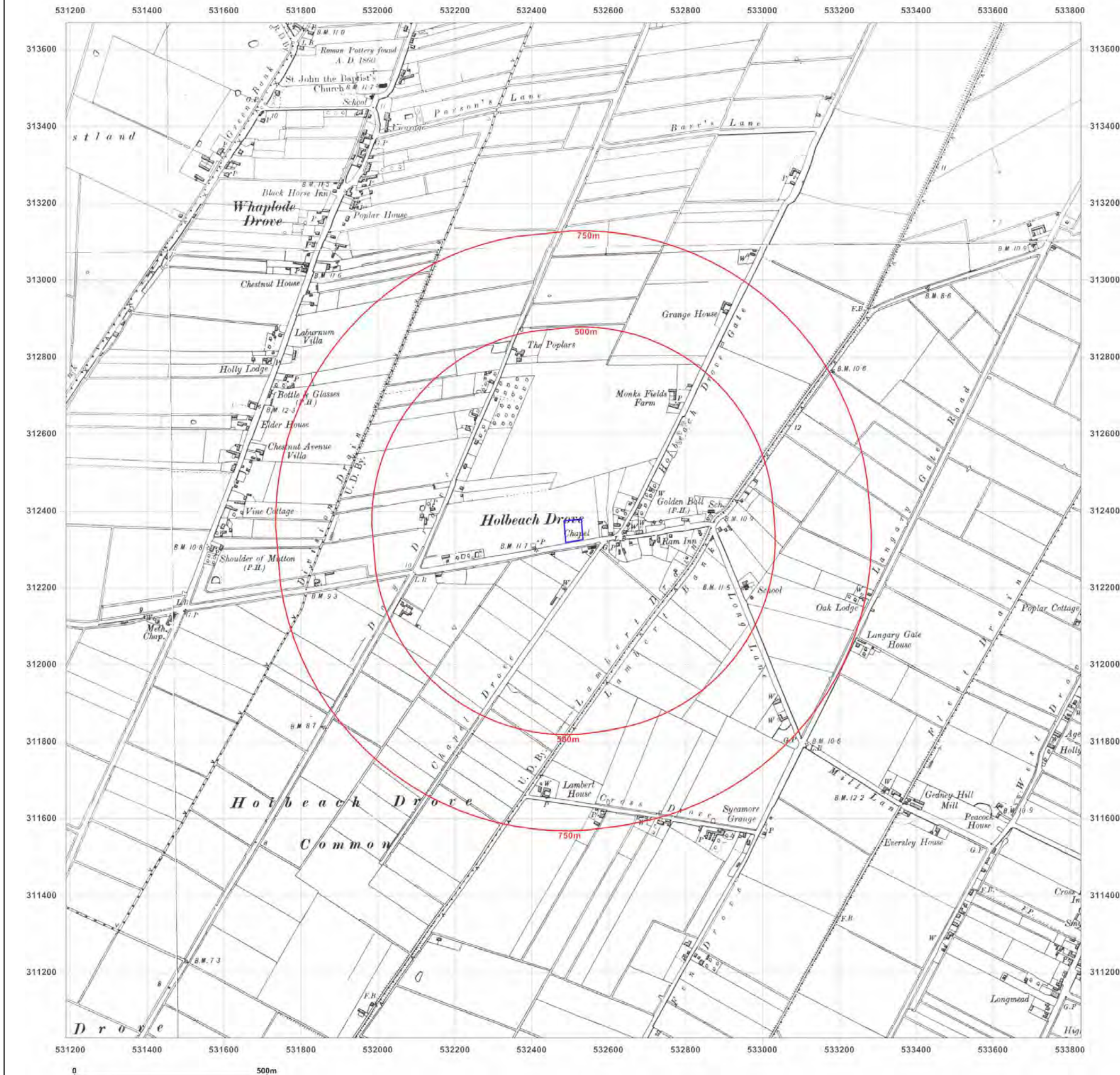


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ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: County Series

Map date: 1950

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1950
Edition N/A
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Revised 1950
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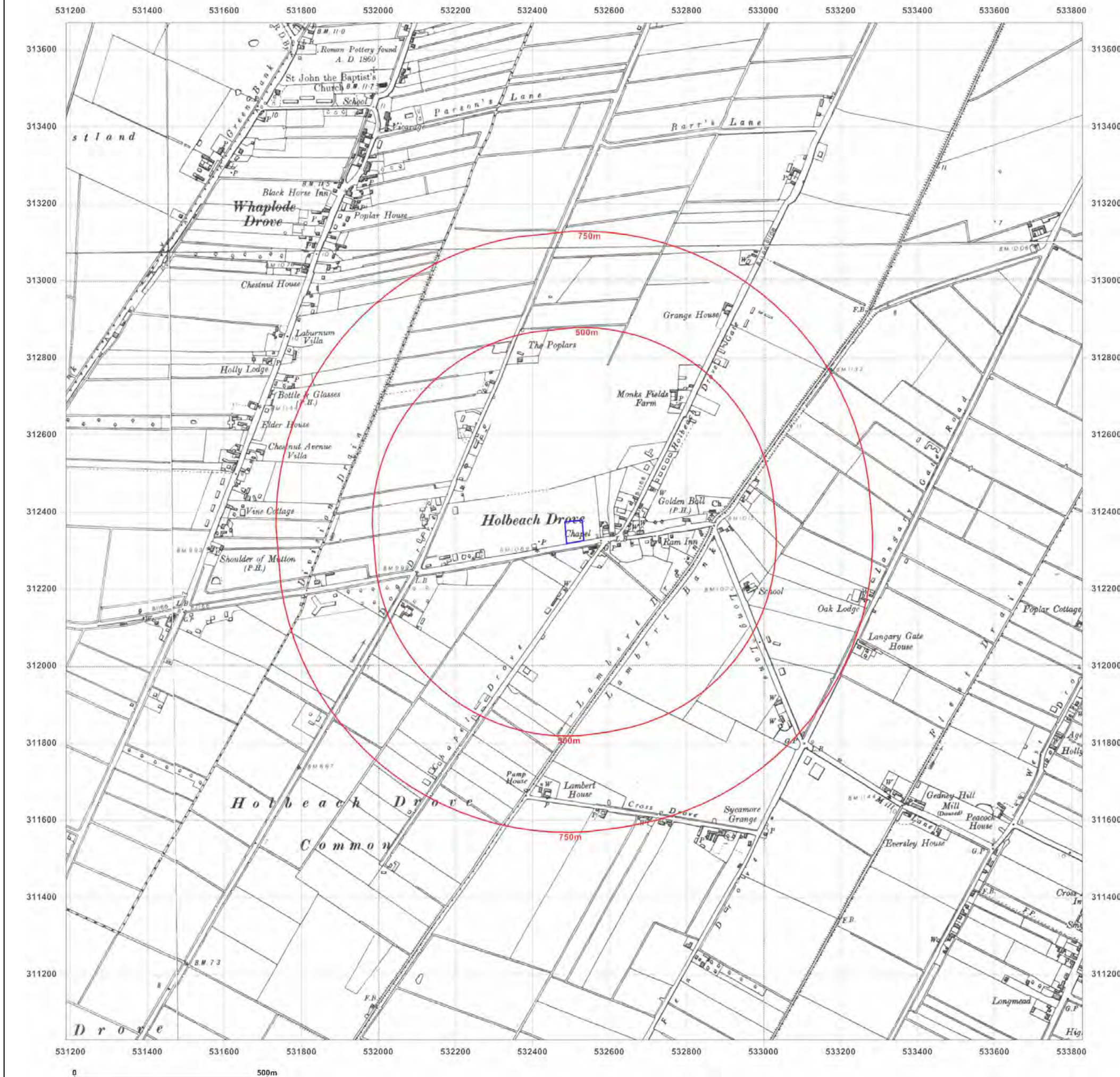


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MAIN ROAD NURSERY, MAIN
ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: Provisional

Map date: 1959

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1950
Revised 1958
Edition N/A
Copyright 1959
Levelled 1959

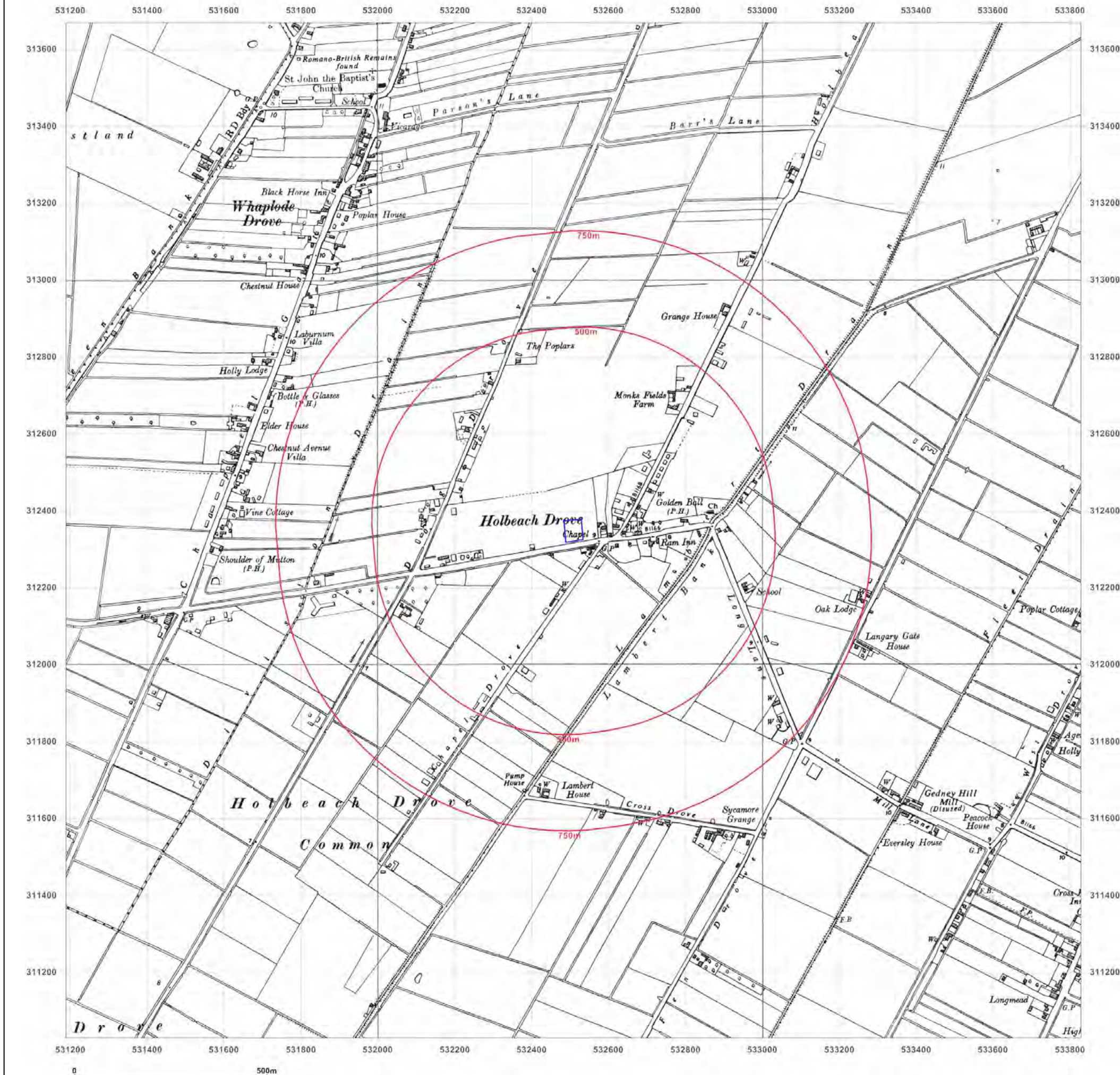


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SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 1975

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1975
Revised 1975
Edition N/A
Copyright 1976
Levelled 1965

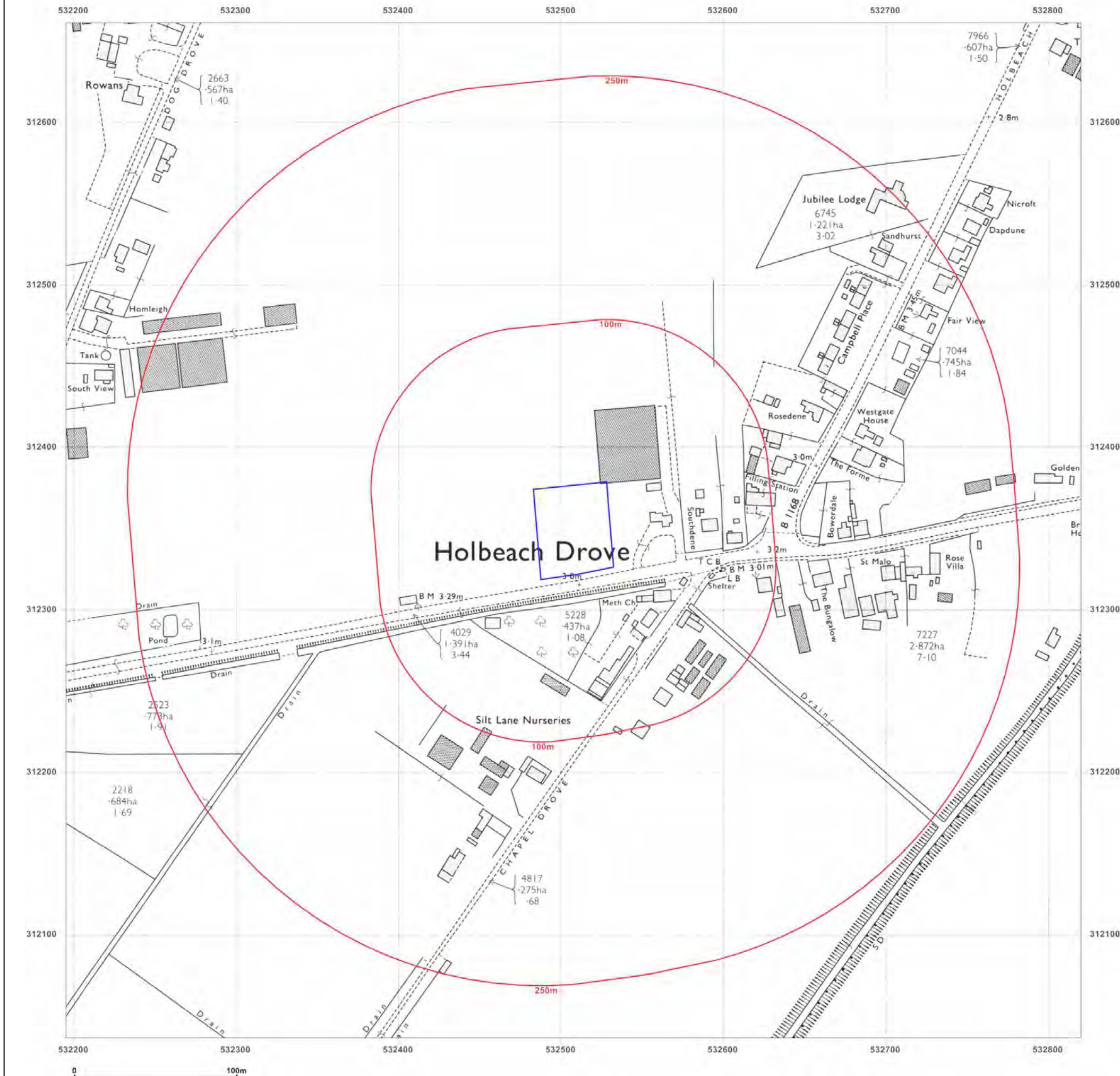


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SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 1980

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

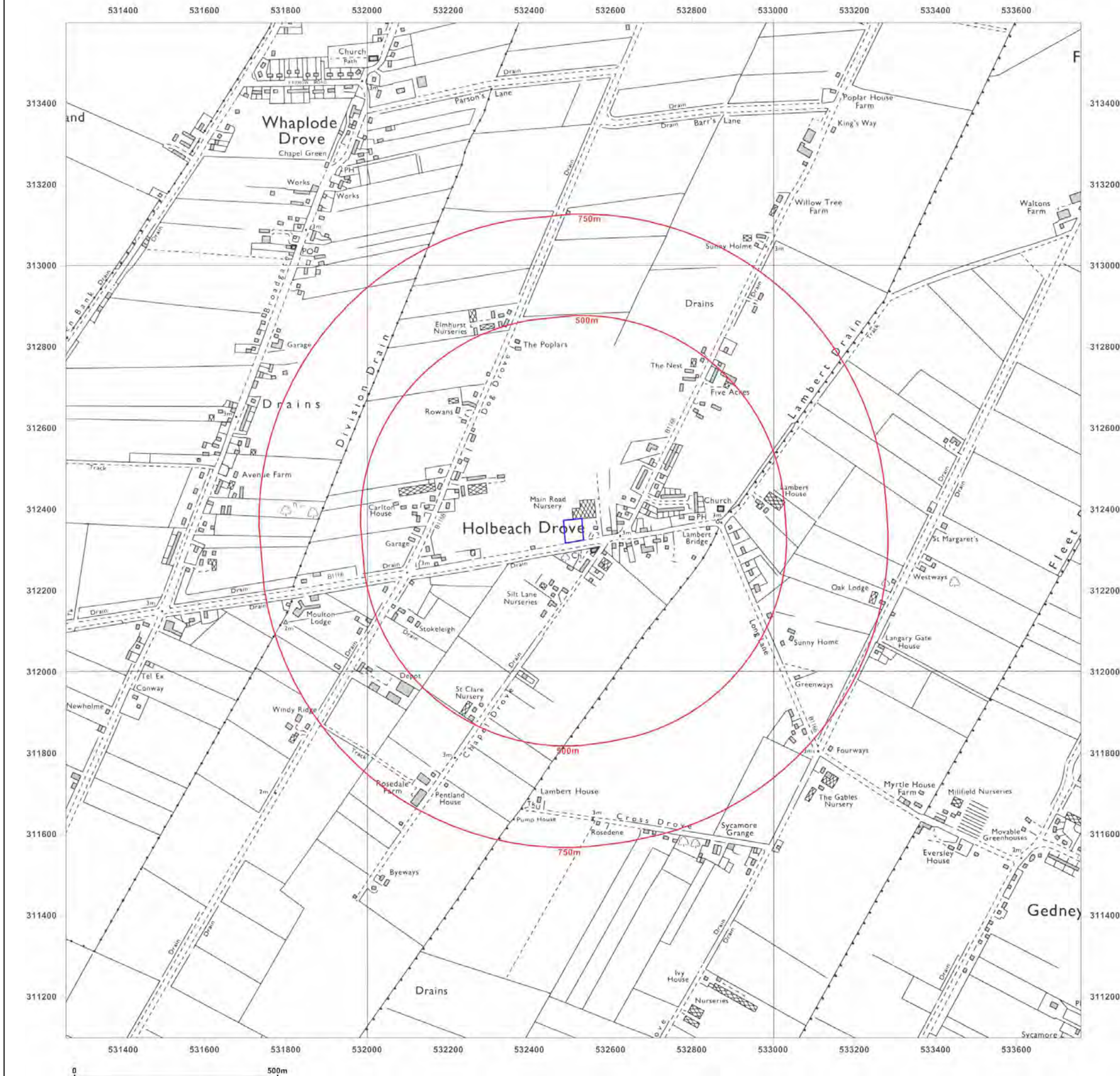


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SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 1992

Scale: 1:2,500

Printed at: 1:2,500



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ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
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Aerial Photographs



Source: Google Earth

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ROAD, HOLBEACH DROVE,
SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

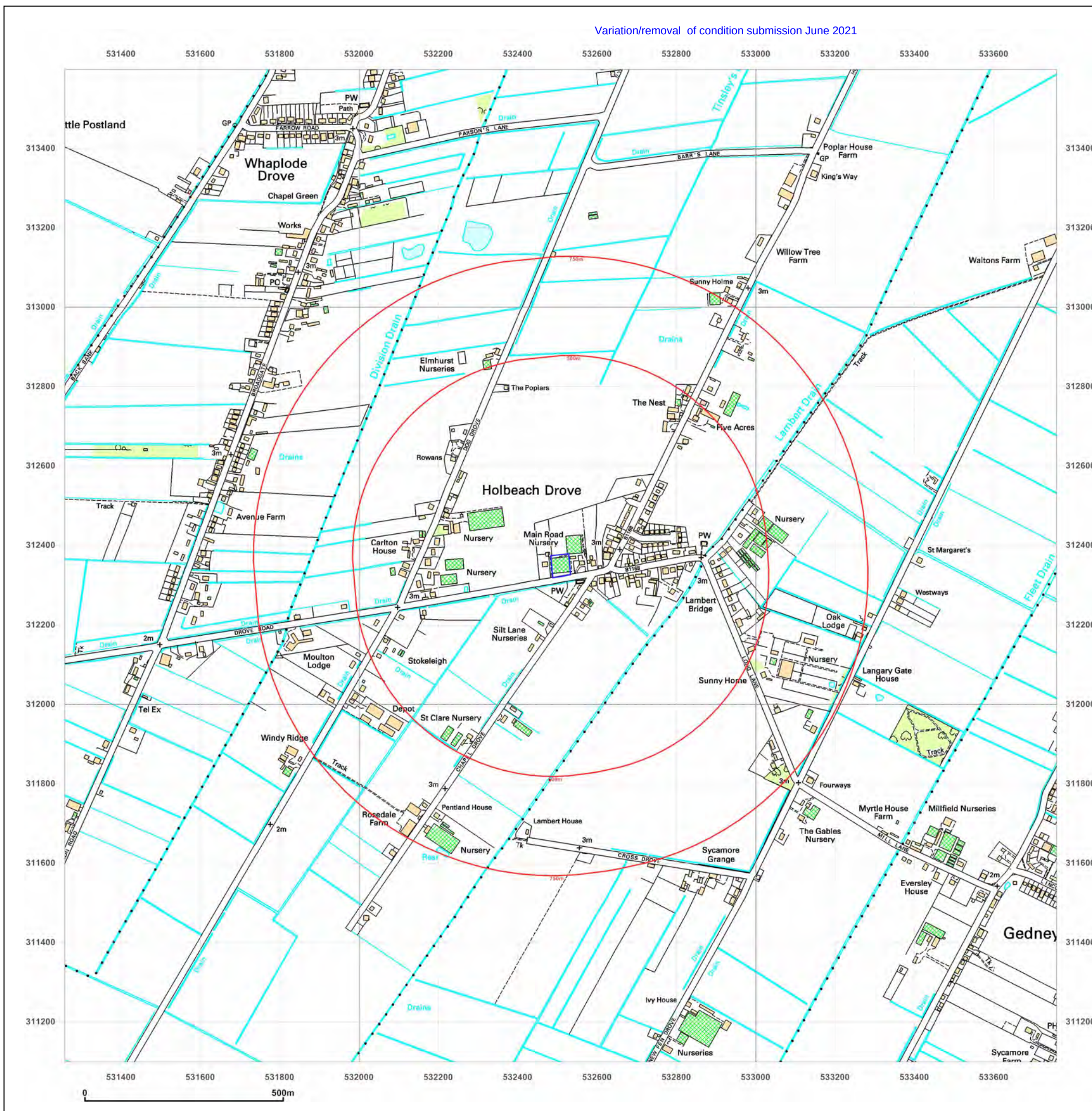


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Aerial Photographs

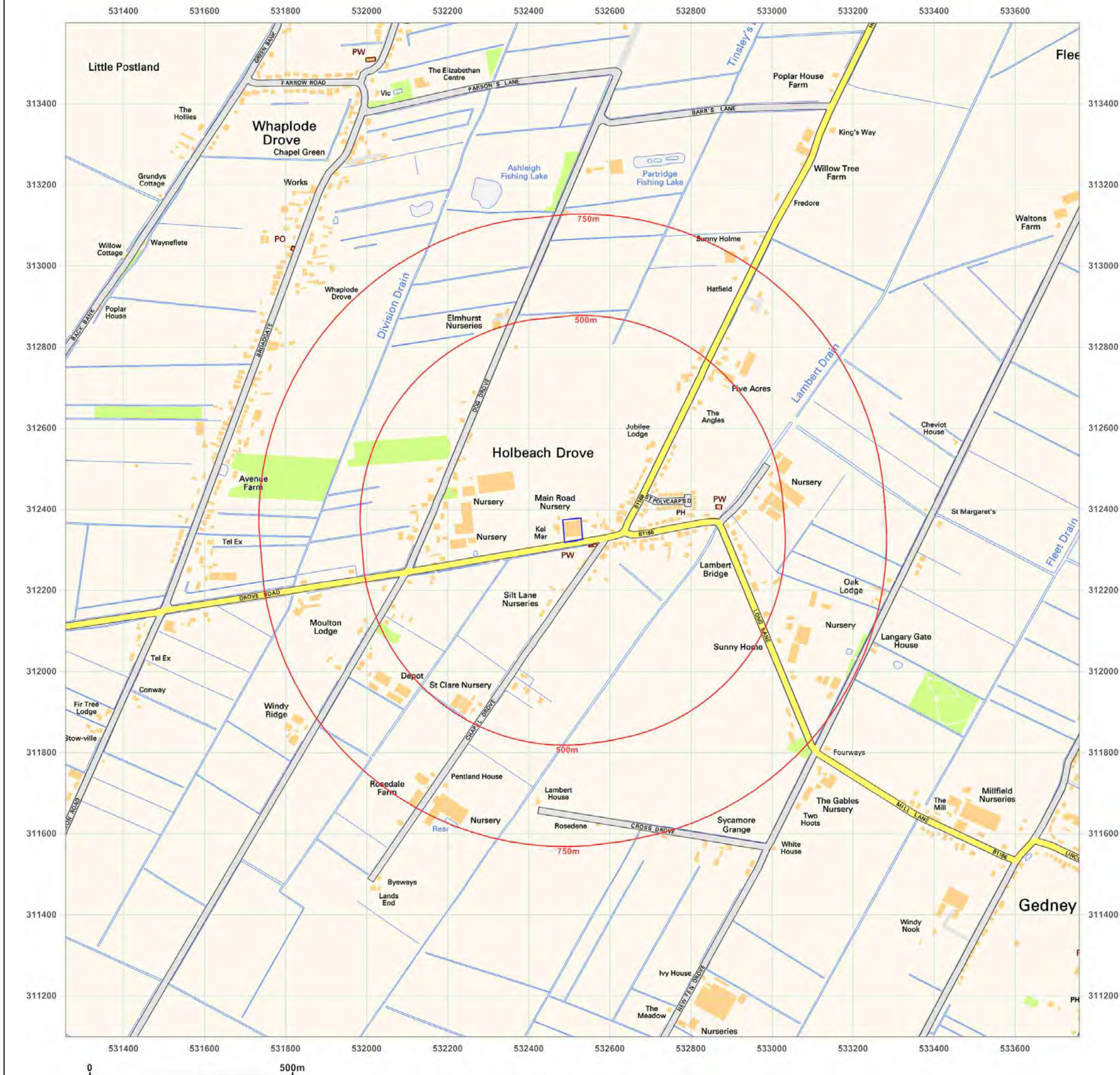


Source: Google Earth

Aerial Photographs



Source: Google Earth

**Site Details:**

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SPALDING, PE12 0PS

Client Ref: 25080
Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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SPALDING, PE12 0PS

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Report Ref: GS-6161040
Grid Ref: 532508, 312349

Map Name: National Grid

Map date: 2014

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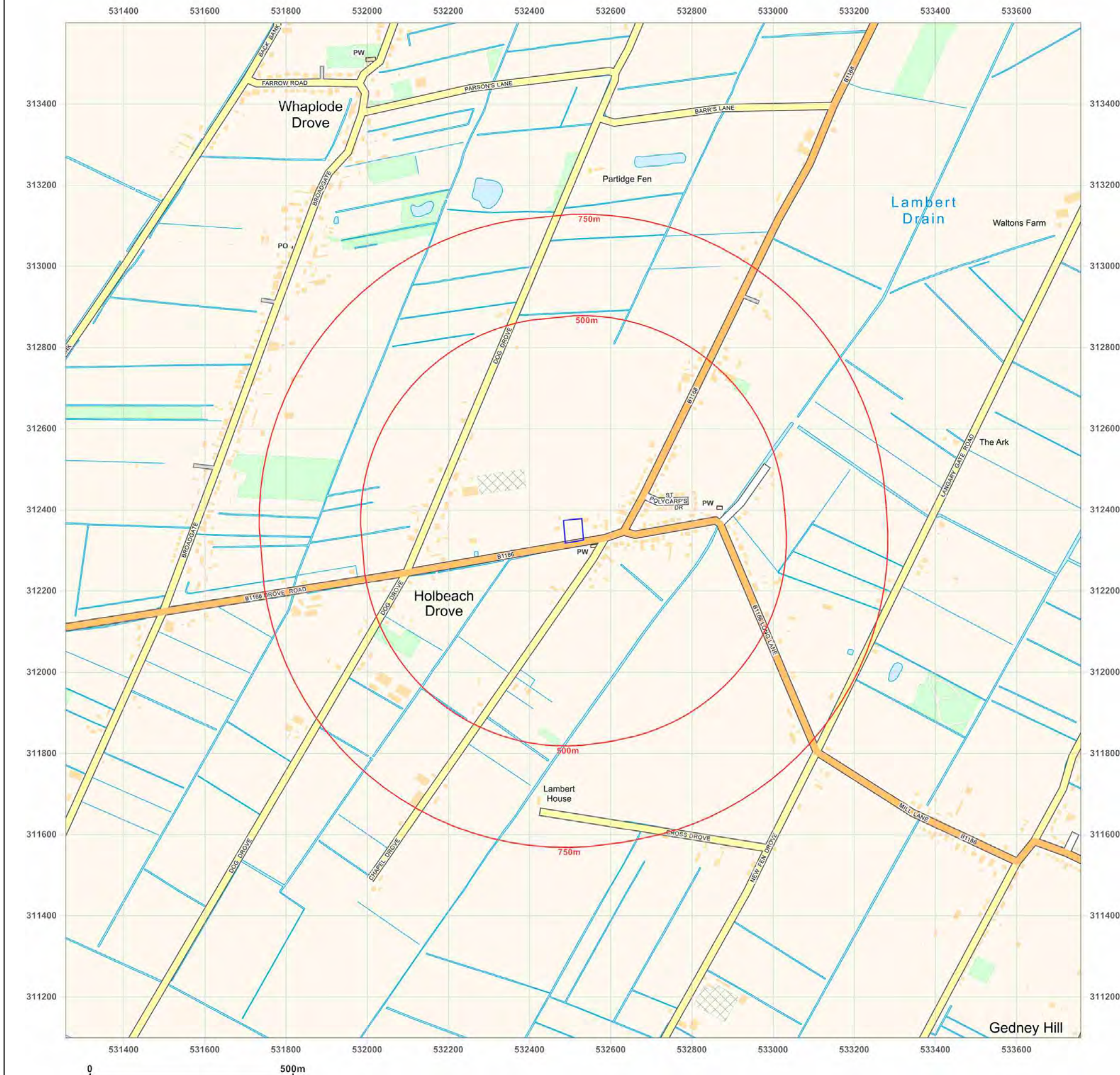


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Aerial Photographs

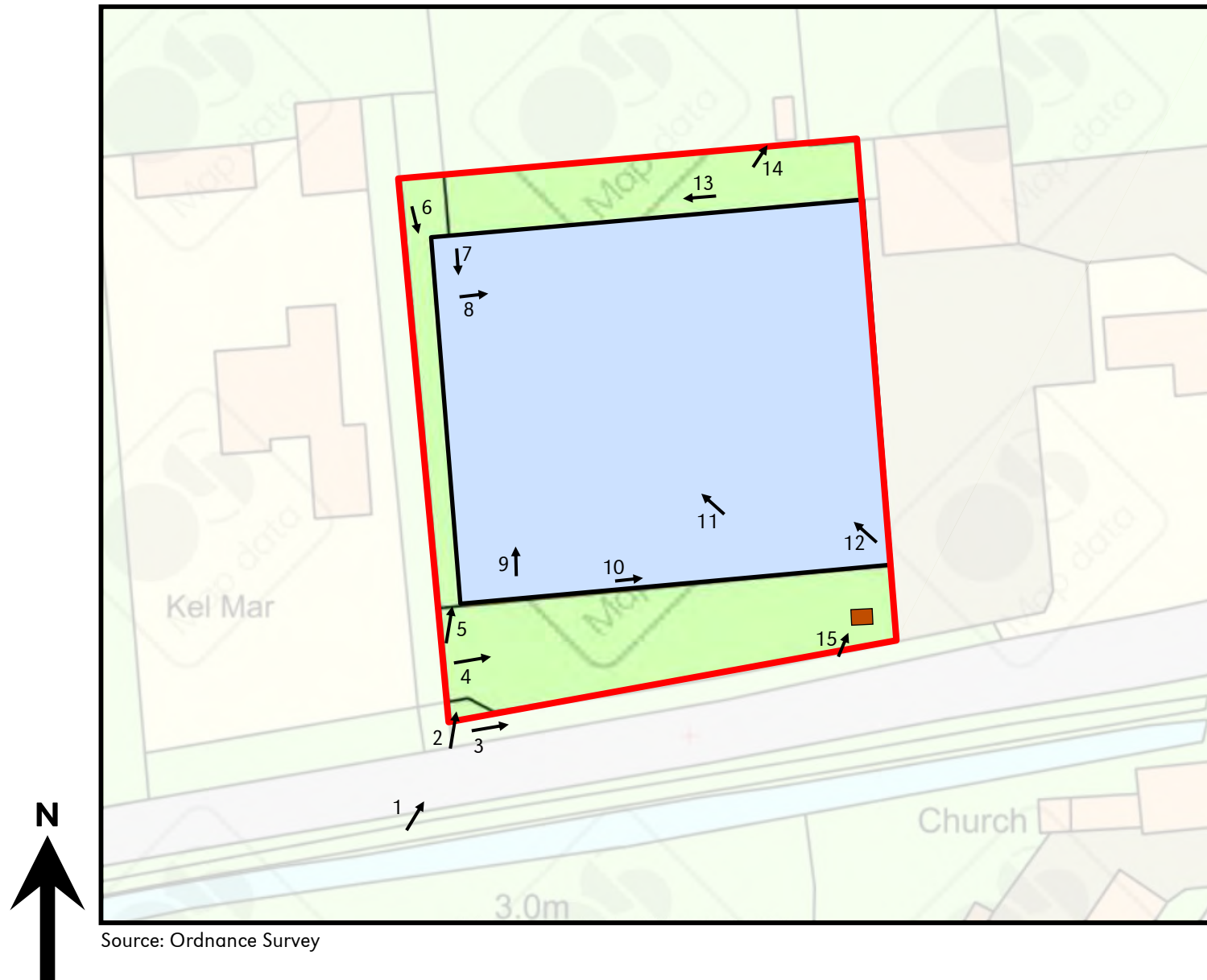


Source: Google Earth

APPENDIX D

CONTENTS

Drawing No. 25080/704 – Photograph Location Plan
Photograph Portfolio



Source: Ordnance Survey

Refer to Drawing No. 25080/702 for additional site information

Legend

- Grassed Garden Area
- Structure
- Gravel Surface
- Site Boundary
- Photograph Location

0	25.07.19	SAR	First Issue
Rev	Date	Chkd	Description

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consulting engineers

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civil / structural / environmental / surveying

Client
David Taylor Associates (UK) Ltd

Project
Residential Development
Main Road
Holbeach Drove
Lincolnshire

Drawing Title
Photograph Location Plan

Scale	U.N.O.	Date	Drawn By
	N.T.S (A4)	July 2019	PJD
Drawing No.	25080/704	Rev	0



Photo 1
South-west of site, view north-east



Photo 2
Western site boundary



Photo 3
Southern site boundary



Photo 4
Vegetative overgrowth along the southern boundary



Photo 5
Western Elevation of glasshouse



Photo 6
Western elevation of glasshouse



Photo 7
Interior of glasshouse



Photo 8
Interior of glasshouse



Photo 9
Interior of glasshouse



Photo 10
Interior of glasshouse



Photo 11
Interior of glasshouse



Photo 12
Interior of glasshouse



Photo 13
Northern Boundary, view west



Photo 14
Large bulk storage tank (off-site)



Photo 15
Corroded empty bulk storage tank

APPENDIX E

CONTENTS

Risk Categorisation and Terminology

RISK ASSESSMENT

Risk Categorisation and Terminology

The preliminary conceptual site model at **Figure 5.6**, establishes the potential source, pathway and receptor linkages which may exist at the project site. These linkages form the baseline from which the following qualitative risk assessment has been made.

The risk for each pollutant linkage identified has been reviewed based on both the likelihood and consequence of potential contamination impacting on each receptor identified within the Conceptual Site Model.

Risk categorization terminology and description has been adopted from Environment Agency and NHBC guidance⁽¹⁾, and is summarised in **Tables 6.1 – 6.2**.

Table 6.1 Categorisation of Risk

		Consequence			
		Severe	Medium	Mild	Minor
Probability (Likelihood)	High Likelihood	Very High Risk	High Risk	Moderate Risk	Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Source: R&D66:2008 Volume 1⁽¹⁾

Table 6.2 Description of Risk Levels

Term	Description
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without appropriate remediation action.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remediation action.
Moderate Risk	It is possible that without appropriate remediation action harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at worst if any harm was realised any effects would be mild.
Very Low Risk	The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.

Source: R&D66:2008 Volume 1⁽¹⁾