



Preliminary Risk Assessment: Desk Study

Leon Cassidy

Holborn Barn, Dane End

Therfield

Hertfordshire

SG8 9RH

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Executive Summary

Brief	This report presents a preliminary Phase I Geo-Environmental Risk Assessment for Holborn Farm, evaluating historical and current site uses, environmental setting, and potential exposure pathways to inform the proposed barn conversion to a four-bedroom dwelling with landscaping.
Site Use & Surrounding Area	The site comprises a barn, two stables, and a lean-to, historically used for agriculture and storage. Minor redevelopment includes barn extensions and ancillary structures. The site is mainly hardstanding with no residential use. Surrounding land is agricultural with scattered residences; no significant industrial or commercial activity occurs within 250 m.
Environmental Setting	Superficial deposits of Head and Lowestoft Formation overlie Lewes Nodular Chalk bedrock, a Principal Aquifer. The site lies within an SPZ Type 3 and a Nitrate Vulnerable Zone. Shallow soils form a Secondary A Aquifer. Hydrogeological sensitivity is moderate to high, but the absence of significant contaminative sources limits controlled water risk. Offsite features, including a pond to the northeast, may be monitored during works.
Contamination Sources	Potential on-site sources are limited to: Localised made ground associated with historical farm structures; Residual materials beneath existing hardstanding; and Potential presence of asbestos-containing materials within the existing building fabric. Off-site sources are minimal and limited to surrounding agricultural activities. Ground gas generation, significant vapour migration, and lateral contaminant migration are considered unlikely due to the low-risk land use history and absence of significant contaminant sources.
Development Considerations	Construction-phase exposure is possible during northern boundary clearance, hardstanding removal, and landscaping. Standard PPE, dust suppression, and controlled soil handling mitigate risk. Future residents are at low risk. Soils intended for landscaping should be tested and classified per BS 10175, and clean imported soils may be used. Gas protection is not anticipated, but any elevated ground gas or VOCs identified during intrusive works should be mitigated. UXO risk is low.
Uncertainty and Data Gaps	The assessment is based on desk study, historical mapping, environmental databases, and a site reconnaissance. Uncertainty exists beneath the northern boundary features, minor areas of made ground, and soils intended for landscaping. Targeted shallow soil sampling is recommended to confirm suitability, safe disposal, and compliance with current guidance. Monitoring of the nearby pond edge is advised to demonstrate absence of contaminant migration.
Recommendations	A targeted intrusive investigation should be undertaken in areas of clearance, minor demolition, and proposed landscaping. Soil testing should focus on hydrocarbons, metals, PAHs, minor asbestos (possible), and residual debris. Excavated soils should be classified to inform safe reuse, off-site disposal, or specialist handling. Imported soils for landscaping must be verified as clean and suitable for residential use in accordance with BS 10175. Standard construction-phase mitigation, including PPE, dust control, and controlled handling of materials, should be maintained throughout the works.

This is intended as a summary only. Further detail and the limitations of the assessment is provided within the main body of the Report.

Contents

Introduction.....	4
Background	4
Objectives	4
Scope of Works	4
Site Context	5
Site Information	5
Data Review	6
Historical Features	6
Environmental Setting	8
Environmental Database Review	11
Planning Review	12
Conceptual Site Model	13
Overview	13
Overall Site Sensitivity.....	13
Contamination Sources	14
Receptors	14
Pathways	14
Pollutant Linkage Assessment.....	15
Conclusions and Recommendations	16
Land Contamination Summary	16
Recommendations and Development	17
Appendices	18
Appendix 1: Risk Evaluation	19
Appendix 2: Site Photographs.....	22
Appendix 3: Groundsure Enviro + Geo Insight	26
Appendix 4: Historical Map Selection	122
Appendix 5: Zetica UXO Mapping	132
Appendix 6: Development Plans.....	134
Appendix 7: Document Production Record	136

Introduction

Background

Arbtech Consulting Ltd (Arbtech) was instructed by Leon Cassidy to produce a Preliminary Geo-Environmental Risk Assessment to inform a planning proposal with North Hertfordshire District Council ref. 25/01539/FP for *Extension and conversion of the existing barn into a four-bedroom dwelling with associated landscaping, following demolition of non-original stable extension, car port and lean to structure* at the site known as Holborn Farm, Dane End, Therfield, Royston, Hertfordshire, SG8 9RH.

A Phase I report is required to assess the historical use and present condition of the site, determine the extent and nature of any contamination risk, and identify potential risks to future users of the land, neighbouring properties, workers, and other offsite receptors. This assessment will ensure that the development can be carried out safely without unacceptable risks to workers, neighbours, controlled waters, property, or ecological systems with suitable recommendations.

Objectives

The objectives of the Arbtech Consulting preliminary geoenvironmental site assessment were to undertake a Phase I Desk Study for the site. Guidance set out in LCRM¹, GPLC1-³², and the National Planning Policy Framework (NPPF)³ states that a Preliminary Risk Assessment with a site reconnaissance is required as a minimum to ascertain if there is a possible contamination risk. If contamination is identified, then site investigation works are carried out to establish a viable pollutant linkage to assess the associated risks to human health and controlled water receptors. Based on the findings of this report, an appropriate site investigation can be derived, if required, once planning approval has been granted.

1 EA (2020). Land contamination risk management (LCRM).

2 EA (2016). Guiding Principles for Land Contamination. GPLC1- Risk Assessment and Conceptual Models GPLC 2. Site Investigation and Good Practice GPLC 3

3 DCL (2025). National Planning Policy Framework. Department of Communities and Local Government.

Scope of Works

- ⇒ Review of the environmental setting of the Site, including the current use / status of the Site and surrounding area, and review of the geology, hydrogeology and hydrology;
- ⇒ Review of the historical activities of the Site and surrounding area;
- ⇒ Review of regulatory information relating to the Site;
- ⇒ Review of the online planning records for the Site;
- ⇒ Consult and review information from the Local Authority in relation to Part 2A of the 1990 Environmental Protection Act; and
- ⇒ Develop an outline Conceptual Site Model and undertake a Preliminary Risk Assessment with respect to the likelihood of contamination focussed on the proposed end use of the Site.

In completing this Assessment, Arbtech Consulting Ltd has utilised the following data sources and third-party information:

- ⇒ Current and Historical Ordnance Survey (OS) maps;
- ⇒ British Geological Survey (BGS) data;
- ⇒ Environment Agency (EA) online data; and Review of third-party environmental reports.

Site Context

Site Information



Fig.1 2021 Aerial Photograph
Contains Data from, © 2025 Groundsure Insights (Appendix 3)

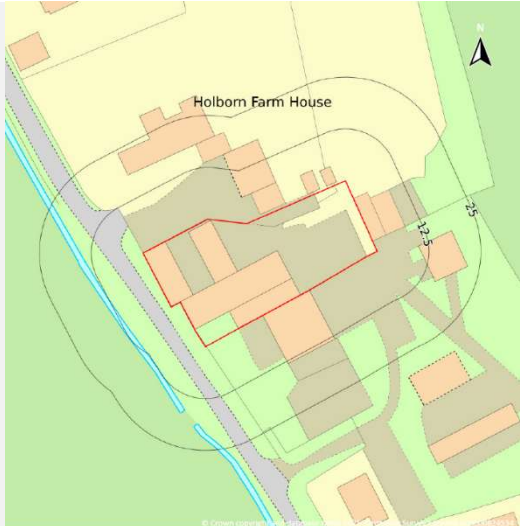


Fig 2 OS Mastermap site plan
Contains Data from, © 2025 Groundsure Insights

Site co-ordinates:	(NGR) 534719 236126	Site Area:	0.12ha
Site Location	The application site is located to the north of Dane End, South of Reed End, to the southwest of Therfield, Hertfordshire. The site is part of a wider farm property known as Holborn Farm which is accessed via Dane End, oriented north to south, to the west of the farm property.		
Current Site use	The site is roughly rectangular oriented slightly northeast to southwest generally level, surfaced predominantly in hardstanding and comprises an existing barn, a non-original stable extension, car port and lean to structure all to the southwest of the site adjacent to Dane End Road. Representative photos from the site reconnaissance carried out on 10 th December 2025 are presented as Appendix 2.		
Surrounding Area features	The site is featured within a densely rural / agricultural area with residential land use to the north and south, also to the east of Dane End. Agricultural land surrounds the site and neighbouring residential / agricultural properties. The A10 London Road is located c. 960m to the east oriented north to south.		

Data Review

Historical Features

Strategy	The Groundsure Report provides a database of environmental information held by various statutory bodies including the EA, Local Authority (LA), Health & Safety Executive (HSE) and HPA amongst others. A full copy of the Groundsure Report is provided in Appendix 3, and the most relevant information is summarised below. The historical development of the Site and surrounding area has been assessed through a review of available historical OS maps and Google Earth historical satellite imagery. A summary of the key historical Site uses and developments in the surrounding area is presented below. Copies of pertinent historical maps are included as Appendix 4.
Historical Features On-Site	Historically, based on the earliest available mapping dated 1877 the site features as part of a wider area identified as Holborn Farm with a building feature to the southwest noted as a rectangular barn-oriented northeast to southwest with a perpendicular building adjoining to the northwest along the site area's boundary forming an 'L' shape. In addition, the corner (southern) part of another building straddles the boundary to the north from offsite, as a rectangular building-oriented north to south. A pond is noted at the northeast boundary offsite. 1898 mapping: The northern most building as well as several smaller buildings offsite to the north are no longer shown as present. The main barn is still present to the southwest, however the adjoining building is noted as offsite to the southwestern boundary. 1923 mapping: The barn to the southwest is shown to be extended slightly to the south and has a perpendicular extension to the north; a rectangular building-oriented northwest to southeast. The wider farm area has also undergone some redevelopment with additional building structures to the north of the subject area. 1975 mapping: The extensions to the north and south have both increased in footprint since previous mapping. A n additional building structure is noted to the northeast, straddling the subject area's boundary with to adjacent buildings, the southern being on the subject area itself. The area to the south offsite is now noted to have undergone increased development. The pond to the northeast corner of the subject area boundary is no longer shown as present. Aerial mapping from 2009 identifies the building to the northeast boundary on site is no longer shown as present. Site shown current configuration with a single barn-oriented northeast to southwest with a smaller extension building to the south (lean to), oriented the same; and two rectangular buildings-oriented northwest to southeast along the main barn (stables).

Historical Features

Contaminative Historical Features Off-Site

Historical mapping and aerial imagery indicate that the land surrounding Holborn Farm has been predominantly agricultural with scattered residential properties and ancillary farm buildings. No significant industrial, commercial, or other potentially contaminative land uses have been recorded within 100 m of the site. The surrounding area remains largely low-density residential and farmland.

Implications for historic Land Contamination Risk

The subject site comprises a barn, associated stables, and a lean-to structure, with the surrounding land (offsite) forming part of the wider Holborn Farm holding. Offsite land is used for residential and agricultural purposes, likely including farming equipment and storage, but the subject site itself has not been used for residential purposes. The site is predominantly covered in hardstanding, and the presence of asbestos-containing materials within the existing barn fabric cannot be dismissed at this stage. Historical mapping indicates a pond was present at the northeast boundary of the site in the late 19th century, but it is no longer shown on maps from the 1970s onwards. Other potential sources of contamination are considered low, limited to minor localised areas of made ground associated with historic farm structures. Any potential risk is primarily related to construction-phase exposure for workers or future occupants following conversion, rather than widespread historic land contamination.

Environmental Setting

Feature		Information	
Published Geology	Artificial	No Artificial and Made Ground recorded on site.	
	Superficial	Superficial geology is recorded on site as: Head-Clay, Silt, Sand and Gravel – to the southwest boundary. Noted as mixed high to very low permeability. Lowestoft Formation-Diamicton – to the majority of the upper northeast ¾'s of the site. Noted as mixed moderate to low permeability. No landslip recorded within 500m.	
	Bedrock	Bedrock geology is recorded as Lewes Nodular Chalk Formation-Chalk. Noted as fractured with very high permeability. No records of Bedrock faults or any other linear features present within 500m.	
	BGS Logs	No BGS logs recorded within 250m	
Hydrogeology	Aquifer Designation	Superficial	Secondary undifferentiated
		Bedrock	Principal Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.
	Source Protection Zone (SPZ)	The site is within a Source Protection Zone – SPZ Type 3 Total catchment on site The site is in an area of medium vulnerability for the combined Aquifer. Bedrock shows well connected fractures.	
	Groundwater Abstractions	No recorded groundwater abstractions within 1km. No potable abstractions within 2km.	
Hydrology	Surface Water Abstractions	1No. surface water abstractions within 1km - historical 388m west for spray Irrigation – Direct.	

Environmental Setting

	Nearest Surface Water	3No. surface water features, and 8No. Water Network (OS Master Map) recorded within 250m – the nearest is 12m southwest for River Rib; Inland River not influenced by normal tidal action. 1No. record on site for WFD Surface water body catchments for the Rib (upper stretches, above confluence with the Quin)
	Water Quality Data	Rib (upper stretches, above confluence with the Quin)) has a recorded overall moderate rating. On site Groundwater body Cam and Ely Ouse Chalk is recorded as overall poor rating.
	Flooding	4No. records within 50m for risk of flooding from rivers or sea. On site – N/A. 0-50m - High. No historical flood events recorded within 250m. No flood defences or areas benefiting from flood defences, and no flood storage areas recorded within 250m. 1No. Flood zone 2 and 3 recorded within 50m – 1m and 2m southwest respectively. Surface water highest flooding risk recorded on site: 1 in 100 year, 0.1m - 0.3m and in 50m – 1 in 30 year, 0.3m - 1.0m Highest groundwater flooding risk recorded on site: and within 50m – Low
	Discharge Consents	2No. Licensed discharge to controlled waters recorded within 500m – the nearest is 379m north for sewage discharges. No Licensed pollutant (Part A(2)/B) release records within 500m.
	Pollution Incidents	1No. pollution incidents recorded within 500m - 339m northwest - Water impact: Cat. 3 (minor impact).
Minerals and Mining	Coal Report	The site and surrounding areas are not recorded to be within a JPB mining area. The site is not recorded to be within an area which could be affected by past, current or future coal mining.
	Coal Mining Development Risk	No recorded development high risk is associated with the site from coal mining.

Environmental Setting

	Surface Extractions	No records within 250m for Surface Ground Workings. No Brit pits recorded within 500m.
	Mining Instability/Non-Coal Mining Area	2No. records for non-coal mining within 1km – the nearest is on site for Chalk. Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
Ground Stability	Shrink/Swell Clay	Low
	Running Sand	Very low
	Compressible Ground	Negligible
	Collapsible Ground	Very low
	Landslide	Very low
	Ground Dissolution	Low
Landfill Site	Registered	No active, recent or historical landfill records within 500m. No licensed or historic waste site records within 500m. 10No. Waste exemption sites within 500m - the nearest is 454m southwest for storage of sludge.
	Infilled land	No Artificial and Made Ground records within 500m.
Radon	Less than 1% no protective measures required.	
Designated Sites	Recorded within 1km: ⇒ Nitrate Vulnerable Zone – on site for surface water and groundwater ⇒ 3No. Listed buildings – the nearest is on site Barn About 35 Metres Southeast off Holborn Farmhouse ⇒ Agricultural Land Classification on site is split – Grade 2 and 3 Very good quality agricultural land to southwest boundary and Good to moderate quality agricultural land across majority of site. ⇒ 2No. Open Access Land from 99m northwest ⇒ 2No. Environmental Stewardship Schemes from 77m southeast ⇒ 3No. Countryside Stewardship Schemes from 77m southeast ⇒ 3No. Priority Habitat Inventory from onsite; Traditional orchard No other environmental designation records.	
Contemporary Trade Directory	No records for Recent industrial land uses within 250m:	

Environmental Setting

Fuel Station Records	No current or recent fuel station records within 500m
Unexploded Bomb Risk (UXO)	Zetica Risk maps presented in Appendix 5 identifies a low risk of UXO.
Environmental Search (other)	

Environmental Database Review

Features on Site	The subject site currently comprises a single barn, two stables, and a lean-to structure, forming part of the wider Holborn Farm holding. The site is predominantly hardstanding and is used for agricultural purposes associated with the farm, including storage of equipment and materials. There is no residential use within the subject area. Potential contamination considerations relate primarily to the building fabric, where asbestos-containing materials may be present, and localised made ground associated with historic farm structures or minor extensions. These features represent the primary considerations for construction-phase exposure and future site users. No significant industrial activities have historically or currently occurred on the site.
Contaminative Features Off-Site (250m)	The land surrounding the site remains predominantly agricultural, with scattered residential properties forming part of the wider Holborn Farm holding. No significant industrial or commercial land uses are recorded within 250 m of the subject site. Minor off-site pathways for potential contamination are limited to typical agricultural activities, such as storage or use of farm machinery, manure, or small-scale chemical applications, which are not expected to pose a significant risk to the subject site.
Implications for Land Contamination Risk	The site has undergone minor redevelopment over time, including extensions to the barn and the addition of stables and a lean-to. The current hardstanding coverage across the site has helped to mitigate any localised contamination associated with historical farm structures. However, with the proposed conversion of the barn to a residential dwelling, much of the existing hardstanding is likely to be removed and landscaped, which may disturb underlying made ground or other minor sources of contamination. On-site risks are therefore limited to localised made ground, potential asbestos-containing materials within the barn fabric, and any residual farm-related materials beneath the hardstanding. Off-site agricultural and residential land uses continue to present minimal risk of contaminant migration. The primary consideration is exposure during construction for workers and potential exposure for future residents. These factors are further addressed in the Conceptual Site Model and Preliminary Risk Assessment.

Planning Review

Planning Records	Portal	inform a planning proposal with North Hertfordshire District Council ref. 25/01539/FP for Extension and conversion of the existing barn into a four-bedroom dwelling with associated landscaping, following demolition of non-original stable extension, car port and lean to structure Indicative development plans are presented as Appendix 6. Planning Applications Summary from Portal (recent) ⇒ Tinkers Cottage, Dane End, Therfield, Royston, SG8 9RH ⇒ Ref. No: 25/02871/FPH – Single storey rear extension; replacement of windows and front door; detached oak-framed BBQ gazebo; insertion of French doors to side of garage (development already carried out). ⇒ Ref. No: 25/02872/LBC – Single storey rear extension; replace windows and front door; internal alterations to modern extended parts (development already carried out). ⇒ Holborn Farm, Dane End, Therfield, Royston, SG8 9RH ⇒ Ref. No: 25/01539/FP – Extension and conversion of existing barn to four-bedroom dwelling with landscaping; demolition of non-original stable extension, car port, lean-to (as amended by drawings received 3rd Oct 2025). ⇒ Ref. No: 25/01540/LBC – Extension and conversion of barn with internal and external alterations; demolition of non-original structures (as amended by drawings received 3rd Oct 2025). ⇒ Land at Layby Along Haywood Lane, Therfield, SG8 9RH Ref. No: 24/02475/SU – Installation of lamp pedestal box. ⇒ Holborn Farm Bungalow, Dane End, Therfield, SG8 9RH Ref. No: 24/01283/FP – Erection of detached stables; replacement of existing storage shed. ⇒ The Noggings, Dane End, Therfield, SG8 9RH Ref. No: 24/00863/FPH – Single storey rear extension; replace rear door and rear window with door. ⇒ Brook Cottage, Dane End, Therfield, SG8 9RH Ref. No: 24/00298/LDCLB – Erection of external flue.
Part 2A of the Environmental Protection Act (EPA) 1990		No recorded sites determined as Contaminated Land within 500m.
Local Authority Records	Authority	Arbtech Consulting Ltd. have not contacted West Suffolk District Council however, the register for contaminated land can be viewed at NHDC CONTAMINATED LAND REGISTER 20 06 2016.pdf. There are no sites within influencing distance from the site. Further consultations can be made at Contaminated land North Herts Council.

Conceptual Site Model

Overview

The Conceptual Site Model (CSM) provides a qualitative representation of the potential relationships between sources of contamination, pathways, and receptors at Holborn Farm, Dane End, Therfield, Royston, Hertfordshire (SG8 9RH). The CSM has been developed in accordance with the Environment Agency's Land Contamination Risk Management (LCRM) guidance and is based on a review of historical land use, current site conditions, environmental setting, and the proposed change of use from agricultural buildings to residential.

Overall Site Sensitivity

The subject site comprises a barn with associated stables and a lean-to structure forming part of the wider Holborn Farm holding and has historically been used for agricultural purposes and storage, with no evidence of industrial or commercial activities. Minor redevelopment has occurred over time through extensions and ancillary farm structures. The site is predominantly surfaced with hardstanding, which currently limits direct exposure to underlying soils.

Potential on-site sources of contamination are limited to localised made ground associated with historic farm buildings, residual materials beneath hardstanding, and the possible presence of asbestos-containing materials within the existing building fabric. Historical mapping records a pond at the northeast boundary of the site during the late 19th century; however, this feature is no longer shown from the 1970s onwards and is not evident at the surface.

The proposed conversion to residential use will involve removal of areas of hardstanding and the introduction of landscaping, which may disturb shallow soils and create potential exposure pathways during construction. The site is underlain by Head deposits and Lowestoft Formation Diamicton over Lewes Nodular Chalk bedrock, which forms a Principal Aquifer. The site lies within a Source Protection Zone (SPZ Type 3) and a Nitrate Vulnerable Zone, indicating sensitivity of controlled waters, although the absence of significant contaminative land uses suggests a low likelihood of groundwater impact.

Potential pathways are limited to direct contact with soils, inhalation of dust during groundworks, and minor downward migration to groundwater. Receptors include construction workers, future residents, and controlled waters, including the Chalk aquifer and the River Rib. Ecological receptors are limited to local agricultural land and on-site priority habitat, with no statutory ecological designations within influencing distance.

Overall, the conceptual site model identifies a low risk of land contamination, with potential risks primarily associated with construction-phase activities and building materials rather than widespread soil or groundwater contamination. Subject to appropriate construction management and consideration of asbestos within the existing structures, the site is considered suitable for the proposed residential use.

Contamination Sources

Ref.	Source	Location	Dates Present	Associated Contaminants of Concern
S1	On-Site Historic	Barn footprint, former stables and lean-to areas	Late 19th century – present	Localised made ground; metals; hydrocarbons (diesel/oils); PAHs; asbestos-containing materials (possible); minor debris
S2	On-Site Current	Hardstanding and areas beneath existing agricultural buildings	Current	Residual farm-related materials; hydrocarbons; metals; PAHs; asbestos-containing materials (possible)
S3	On-Site Historic Feature	Former pond at northeast site boundary	Late 19th century – pre-1970s	Potential organic silts; localised made ground; elevated metals (low likelihood)
S4	Off-Site Current	Surrounding agricultural land and residential properties	Current	Low-level agricultural contaminants (fertilisers, fuels, oils); metals (low likelihood)

Receptors

Relevant receptors are considered to include:

- ⇒ Construction workers during demolition, groundworks, and landscaping
- ⇒ Future residents following conversion to residential use
- ⇒ Adjacent residents and third-party land users
- ⇒ Controlled waters, including the Principal Chalk Aquifer and local surface waters (River Rib)
- ⇒ Built environment, including the converted barn and associated services
- ⇒ Ecological receptors, including on-site priority habitat and surrounding agricultural land

Pathways

The pathways are considered to be:

- ⇒ Direct contact with shallow soils or made ground during excavation and landscaping
- ⇒ Inhalation of dust generated during construction works
- ⇒ Limited downward migration of contaminants through superficial deposits to groundwater
- ⇒ Minor surface water runoff during construction activities

Pollutant Linkage Assessment

Source	Pathway	Receptor	Risk Rating	Justification and any Mitigation	Investigation Required
On-Site Historic: minor made ground, residual farm materials beneath hardstanding (pre-1970s)	Direct contact, shallow soil disturbance, dust inhalation	Construction workers	Low	Localised historic activity; currently hardstanding mitigates exposure. Standard PPE and dust suppression sufficient.	Targeted shallow soil sampling if excavation or landscaping exposes historic made ground.
On-Site Current: existing barn, stables, lean-to, hardstanding	Direct contact	Future site users (residential)	Low	Majority of site protected by structures and hardstanding; exposure minimal.	Test any soils intended for landscaping to confirm suitability in accordance with guidance.
On-Site Current: potential asbestos-containing materials within existing building fabric	Inhalation of fibres	Construction workers, future residents	Low	Standard asbestos management and removal procedures required during works.	Asbestos survey and appropriate removal/disposal prior to construction.
Off-Site Historic: pond at NE boundary (late 19th century, no longer present)	Leaching / lateral migration	Surface water receptors (off-site pond)	Low	Feature no longer present, limited pathways to site.	Optional surface water sampling at pond edge if landscaping or excavation could mobilise soils.
Off-Site Current: agricultural land use, scattered residential properties, minor farm machinery / manure application	Dust deposition, shallow leaching	Construction workers, future residents	Low	Off-site land uses low-risk; lack of direct pathways reduces likelihood of contamination.	None required.
Off-Site Other: SPZ / Nitrate Vulnerable Zone	Leaching	Groundwater (Chalk Principal Aquifer)	Low	Site over fractured Chalk; minimal on-site sources of contamination.	No routine monitoring required; consider only if excavation exposes previously unknown made ground.

Conclusions and Recommendations

Land Contamination Summary

Uncertainty and Data Gaps	Assessment is based on desk study, historical mapping, environmental databases, and a site visit (10th Dec 2025). Limited intrusive investigation introduces uncertainty beneath the barn, stables, lean-to, hardstanding, and minor made ground. Targeted shallow soil sampling is recommended prior to landscaping or excavation to confirm suitability. UXO risk is low; no known military activity on or near site.
Soils	Shallow soils are largely natural with localised made ground beneath ancillary structures and hardstanding. Potential contaminants include residual farm materials, debris, and possible asbestos within the barn fabric. Construction worker exposure is low with PPE and dust control. Future residents’ risk is low if soils intended for landscaping are sampled and verified. Monitoring at the former pond edge is suggested as a precaution.
Groundwater	Superficial deposits overlie Lewes Nodular Chalk (Principal Aquifer). The site is within SPZ Type 3 and a Nitrate Vulnerable Zone. Shallow works are unlikely to contact groundwater, and limited historic agricultural use means risk to controlled waters is very low. Standard surface water and runoff management during works is recommended.
Ground Gas	No significant gas-generating activities identified. Made ground is shallow and associated with historic farm structures. Low risk of ground gas or vapour migration (CIRIA C665, Characteristic Situation 1).
Volatile Organic Vapours	Minor VOCs from residual materials are possible but risks to workers and residents are very low with standard mitigation (PPE, dust suppression, controlled material handling) is sufficient.
Contaminated Land Development Risks	The site presents low contamination risk. Potential exposure is localised to soils beneath structures, hardstanding, or minor made ground. Risks to construction workers, future residents, controlled waters, ecological receptors, and adjacent properties are low. The site is considered low sensitivity and suitable for proposed residential conversion, subject to targeted soil verification and standard construction controls.

Recommendations and Development

Ground Investigation Recommendations

Based on the Phase 1 assessment, a targeted intrusive investigation is recommended to confirm the presence or absence of contamination beneath the barn, stables, lean-to, and hardstanding areas, particularly where minor demolition or soil disturbance is planned, and soils are intended for landscaping. The appointed consultant should define the final scope and methodology following review of this report.

Indicative scope may include:

- ⇒ Targeted shallow soil sampling adjacent to the barn, stables, lean-to, hardstanding, and minor made ground areas, including northern boundary debris if present.
- ⇒ Screening for hydrocarbons, metals, PAHs, minor asbestos (possible), and residual debris associated with historical agricultural structures.
- ⇒ Visual and olfactory assessment of soils during excavation or landscaping preparation.
- ⇒ Assessment for safe reuse or off-site disposal of excavated soils intended for landscaping or construction.
- ⇒ Optional monitoring at the former pond edge to confirm no residual contaminants from historical water features/ small scale infilling.
- ⇒ Testing soils intended for landscaping to ensure compliance with BS 10175 and current guidance.

Results will inform any required mitigation and confirm the suitability of soils for construction, soft landscaping, and future residential use.

Development Considerations

Health and Safety: Standard PPE (gloves, masks) and dust suppression should be employed during all works to minimise exposure to shallow soils and building fabric. UXO risk is considered low; no historical military activity has been recorded nearby.

Mitigation Measures: Given the localised nature of potential contamination, gas protection systems are not anticipated. Should elevated contaminants be identified, appropriate mitigation such as barriers, remediation, or ventilation should be applied.

Material Management: Excavated soils should be classified and managed according to investigation results to determine suitability for on-site reuse, off-site disposal, or specialist handling. Debris removal should be managed to prevent dust or contaminant migration, with documentation of handling and disposal to satisfy regulatory and BS 10175 requirements.

Appendices

Appendix 1: Risk Evaluation

Appendix 2: Site Photographs

Appendix 3: Groundsure Enviro + Geo Insight

Appendix 4: Historical Map Selection

Appendix 5: Zetica UXO Mapping

Appendix 6: Development Plans

Appendix 7: Document Production Record

If you require clarification of the information contained herein, please do not hesitate to contact us via 01244 661170.

Yours Sincerely,

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Appendix 1: Risk Evaluation

PRINCIPLES OF RISK EVALUATION

The risk evaluation methodology presented below is qualitative in nature and is therefore a subjective method. It is based upon guidance presented in CIRIA publication referenced C552, 'Contaminated land risk assessment ~ A guide to good practice', 2001 and involves the classification of the following:

- The magnitude of the consequence (severity) of risk occurring
- The magnitude of the probability (likelihood) of the risk occurring
- These are then considered in conjunction to give a risk matrix

Consequence to Receptor Definition Matrix

	Human Health	Controlled Waters	Buildings/Services
Severe Consequence	Acute or chronic permanent impact on human health.	Sensitive controlled water pollution ongoing, or just about to occur.	Catastrophic collapse
Medium Consequence	Chronic permanent impact on human health	Gradual pollution of sensitive controlled water	Degradation of materials
Mild Consequence	Chronic temporary impact on human health	Gradual pollution of non-sensitive controlled water	Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor Consequence	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc).	Slight discoloration of water	Easily repairable effects of damage to buildings, structures and services, i.e. discoloration of concrete

Probability Definitions

Probability	Definition in Context
Higher	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution. Positive evidence of source, pathway and receptor.
Likely	There is a pollution linkage, and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term. Suspect source, pathway, and receptor
Low Likelihood	There is a pollution linkage, and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term. No evidence of hazard, pathway, and receptor

Standard Risk Matrix

		Consequence/Magnitude of impact			
		Severe	Medium	Mild	Minor
Probability	High	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/low	Low
	Low Likelihood	Moderate	Moderate/low	Low	Very Low
	Unlikely	Moderate/low	Low	Very Low	Very Low

Classified risks and likely action

Significance Level	Definition/Comments
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required. Demonstrable contaminated land situation, highest threat & liability level, urgent action recommended.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term. Likely contaminated land situation, risk assessment and action recommended.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, if it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the liability. Some remedial works may be required in the longer term. Plausible contaminated land situation, risk assessment and possible action recommended.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild. Unlikely contaminated land situation, possible risk assessment and possible action.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe. Negligible risk, no action recommended except vigilance for changes in conditions.

Appendix 2: Site Photographs

Site Walkover Photos



Plate 1: External access road Dane End



Plate 2: Internal stable



Plate 3: Facing neighbouring barn. Lean to shown right hand side



Plate 4: From road to east facing barn to southwest



Plate 5: Northeastern external area



Plate 6: Northeastern external area facing neighbours outbuilding



Plate 7: Northeastern external area facing barn



Plate 8: Northeastern external area facing barn



Plate 9: Northeastern external area facing barn and lean to



Plate 10: Internal of lean-to



Plate 11: Neighbouring building to the south



Plate 12: Northeastern external area facing neighbouring outbuilding



Plate 13: Central external area facing barn



Plate 14: Internal lean-to facing barn

Appendix 3: Groundsure Enviro + Geo Insight

Holborn Barn, Dane End, Therfield, Hertfordshire, SG8 9RH

Order Details

Date: 11/12/2025
Your ref: Holborn Barn, SG8 9RH 44782233
Our Ref: GS-N9I-3K1-5SY-Y4H

Site Details

Location: 534719 236126
Area: 0.12 ha
Authority: [North Hertfordshire District Council](#) ↗



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Summary of findings

[p. 2 >](#)

Aerial image

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#)

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
15	1.1	Historical industrial land uses	0	0	0	0	-
15	1.2	Historical tanks	0	0	0	0	-
15	1.3	Historical energy features	0	0	0	0	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
17	2.1	Historical industrial land uses	0	0	0	0	-
17	2.2	Historical tanks	0	0	0	0	-
17	2.3	Historical energy features	0	0	0	0	-
17	2.4	Historical petrol stations	0	0	0	0	-
18	2.5	Historical garages	0	0	0	0	-
Page	Section	<u>Waste and landfill</u> >	On site	0-50m	50-250m	250-500m	500-2000m
19	3.1	Active or recent landfill	0	0	0	0	-
19	3.2	Historical landfill (BGS records)	0	0	0	0	-
20	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
20	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
20	3.5	Historical waste sites	0	0	0	0	-
20	3.6	Licensed waste sites	0	0	0	0	-
20 >	3.7 >	<u>Waste exemptions</u> >	0	0	0	10	-
Page	Section	<u>Current industrial land use</u> >	On site	0-50m	50-250m	250-500m	500-2000m
22	4.1	Recent industrial land uses	0	0	0	-	-
22	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
23	4.3	Current or recent petrol stations	0	0	0	0	-
23	4.4	Electricity cables	0	0	0	0	-
23	4.5	Gas pipelines	0	0	0	0	-



23	4.6	Sites determined as Contaminated Land	0	0	0	0	-
23	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
24	4.8	Regulated explosive sites	0	0	0	0	-
24	4.9	Hazardous substance storage/usage	0	0	0	0	-
24	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
24	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
24	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
25	4.13	Radioactive Substance Authorisations	0	0	0	0	-
25 >	4.14 >	<u>Licensed Discharges to controlled waters</u> >	0	0	0	2	-
25	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
26	4.16	Pollutant release to public sewer	0	0	0	0	-
26	4.17	List 1 Dangerous Substances	0	0	0	0	-
26	4.18	List 2 Dangerous Substances	0	0	0	0	-
26 >	4.19 >	<u>Pollution Incidents (EA/NRW)</u> >	0	0	0	1	-
27	4.20	Pollution inventory substances	0	0	0	0	-
27	4.21	Pollution inventory waste transfers	0	0	0	0	-
27	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology</u> >	On site	0-50m	50-250m	250-500m	500-2000m
28 >	5.1 >	<u>Superficial aquifer</u> >	Identified (within 500m)				
30 >	5.2 >	<u>Bedrock aquifer</u> >	Identified (within 500m)				
32 >	5.3 >	<u>Groundwater vulnerability</u> >	Identified (within 50m)				
33 >	5.4 >	<u>Groundwater vulnerability- soluble rock risk</u> >	Identified (within 0m)				
33	5.5	Groundwater vulnerability- local information	None (within 0m)				
34	5.6	Groundwater abstractions	0	0	0	0	0
35 >	5.7 >	<u>Surface water abstractions</u> >	0	0	0	1	0
35	5.8	Potable abstractions	0	0	0	0	0
35 >	5.9 >	<u>Source Protection Zones</u> >	1	0	0	0	-
36	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology</u> >	On site	0-50m	50-250m	250-500m	500-2000m



37 >	6.1 >	Water Network (OS MasterMap) >	0	3	5	-	-
38 >	6.2 >	Surface water features >	0	1	2	-	-
38 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
39 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
39 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
40 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
41	7.2	Historical Flood Events	0	0	0	-	-
41	7.3	Flood Defences	0	0	0	-	-
41	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
41	7.5	Flood Storage Areas	0	0	0	-	-
42 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
43 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
44 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
46 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
47	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
48	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
48	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
48	10.4	Special Protection Areas (SPA)	0	0	0	0	0
48	10.5	National Nature Reserves (NNR)	0	0	0	0	0
49	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
49 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	4
49	10.8	Biosphere Reserves	0	0	0	0	0
50	10.9	Forest Parks	0	0	0	0	0
50	10.10	Marine Conservation Zones	0	0	0	0	0
50	10.11	Green Belt	0	0	0	0	0



50	10.12	Proposed Ramsar sites	0	0	0	0	0
50	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
51	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
51	10.15	Nitrate Sensitive Areas	0	0	0	0	0
51 >	10.16 >	Nitrate Vulnerable Zones >	2	0	2	1	8
53 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
54	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
55	11.1	World Heritage Sites	0	0	0	-	-
56	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
56	11.3	National Parks	0	0	0	-	-
56 >	11.4 >	Listed Buildings >	1	1	1	-	-
57	11.5	Conservation Areas	0	0	0	-	-
57	11.6	Scheduled Ancient Monuments	0	0	0	-	-
57	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
58 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
59 >	12.2 >	Open Access Land >	0	0	2	-	-
59	12.3	Tree Felling Licences	0	0	0	-	-
60 >	12.4 >	Environmental Stewardship Schemes >	0	0	2	-	-
60 >	12.5 >	Countryside Stewardship Schemes >	0	0	3	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
61 >	13.1 >	Priority Habitat Inventory >	1	2	0	-	-
62	13.2	Habitat Networks	0	0	0	-	-
62	13.3	Open Mosaic Habitat	0	0	0	-	-
62	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	14.1 >	10k Availability >	Identified (within 500m)				
64	14.2	Artificial and made ground (10k)	0	0	0	0	-



65 >	14.3 >	Superficial geology (10k) >	2	0	0	4	-
66	14.4	Landslip (10k)	0	0	0	0	-
67 >	14.5 >	Bedrock geology (10k) >	1	0	0	2	-
68	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
69 >	15.1 >	50k Availability >	Identified (within 500m)				
70	15.2	Artificial and made ground (50k)	0	0	0	0	-
70	15.3	Artificial ground permeability (50k)	0	0	-	-	-
71 >	15.4 >	Superficial geology (50k) >	2	0	0	4	-
72 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
72	15.6	Landslip (50k)	0	0	0	0	-
72	15.7	Landslip permeability (50k)	None (within 50m)				
73 >	15.8 >	Bedrock geology (50k) >	1	0	0	2	-
74 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
74	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
75	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
76 >	17.1 >	Shrink swell clays >	Low (within 50m)				
77 >	17.2 >	Running sands >	Very low (within 50m)				
78 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
79 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
80 >	17.5 >	Landslides >	Very low (within 50m)				
81 >	17.6 >	Ground dissolution of soluble rocks >	Low (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
83	18.1	BritPits	0	0	0	0	-
84	18.2	Surface ground workings	0	0	0	-	-
84	18.3	Underground workings	0	0	0	0	0
84	18.4	Underground mining extents	0	0	0	0	-



84	18.5	Historical Mineral Planning Areas	0	0	0	0	-
84 >	18.6 >	Non-coal mining >	1	0	0	1	0
85	18.7	JPB mining areas	None (within 0m)				
85	18.8	The Coal Authority non-coal mining	0	0	0	0	-
85	18.9	Researched mining	0	0	0	0	-
86	18.10	Mining record office plans	0	0	0	0	-
86	18.11	BGS mine plans	0	0	0	0	-
86	18.12	Coal mining	None (within 0m)				
86	18.13	Brine areas	None (within 0m)				
86	18.14	Gypsum areas	None (within 0m)				
87	18.15	Tin mining	None (within 0m)				
87	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
88	19.1	Natural cavities	0	0	0	0	-
88	19.2	Mining cavities	0	0	0	0	0
88	19.3	Reported recent incidents	0	0	0	0	-
88	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
90 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
92 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
92	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
92	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
93	22.1	Underground railways (London)	0	0	0	-	-
93	22.2	Underground railways (Non-London)	0	0	0	-	-
93	22.3	Railway tunnels	0	0	0	-	-
93	22.4	Historical railway and tunnel features	0	0	0	-	-
93	22.5	Royal Mail tunnels	0	0	0	-	-

94	22.6	Historical railways	0	0	0	-	-
94	22.7	Railways	0	0	0	-	-
94	22.8	Crossrail 2	0	0	0	0	-
94	22.9	HS2	0	0	0	0	-



Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 17/04/2021

Site Area: 0.12ha



Recent site history - 2018 aerial photograph



Capture Date: 03/08/2018

Site Area: 0.12ha



Recent site history - 2009 aerial photograph



Capture Date: 29/06/2009

Site Area: 0.12ha



Recent site history - 2000 aerial photograph



Capture Date: 08/06/2000

Site Area: 0.12ha



Recent site history - 1999 aerial photograph



Capture Date: 18/07/1999

Site Area: 0.12ha



OS MasterMap site plan



Site Area: 0.12ha



1 Past land use

1.1 Historical industrial land uses

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.



1.4 Historical petrol stations

Records within 500m**0**

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

This data is sourced from Ordnance Survey® / Groundsure.

1.5 Historical garages

Records within 500m**0**

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

This data is sourced from Ordnance Survey® / Groundsure.

1.6 Historical military land

Records within 500m**0**

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

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



2 Past land use - un-grouped

2.1 Historical industrial land uses

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.



2.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



— Site Outline
Search buffers in metres (m)
● Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

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

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

3.5 Historical waste sites

Records within 500m**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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

3.7 Waste exemptions

Records within 500m**10**

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

Features are displayed on the Waste and landfill map on [page 19](#) >

ID	Location	Site	Reference	Category	Sub-Category	Description
A	454m SW	-	WEX145591	Storing waste exemption	On a farm	Storage of sludge



ID	Location	Site	Reference	Category	Sub-Category	Description
A	454m SW	-	WEX001180	Storing waste exemption	On a farm	Storage of sludge
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Storing waste exemption	On a farm	Storage of waste in a secure place
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Disposing of waste exemption	On a farm	Burning waste in the open
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Using waste exemption	On a farm	Use of waste for a specified purpose
B	478m W	Shirlocks Farm, Rooks Nest Lane, Therfield, Royston, Sg8 9qx	WEX451070	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
1	496m W	7 Rooks Nest Lane Royston Hertfordshire Sg8 9qx	EPR/QE5549P P/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m

0

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m**0**

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.11 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

0

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

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m

2

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991. Features are displayed on the Current industrial land use map on [page 22](#) >

ID	Location	Address	Details	
A	379m N	ROSE COTTAGE, DANE END, THERFIELD, HERTFORDSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CLCU.0188 Permit Version: 1 Receiving Water: GW	Status: TRANSFERRED FROM WRA 1963 Issue date: 14/03/1969 Effective Date: 14/03/1969 Revocation Date: 20/12/2012
A	379m N	ROSE COTTAGE, DANE END, THERFIELD, HERTFORDSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CLCU.0188 Permit Version: 2 Receiving Water: GW	Status: VARIED UNDER EPR 2010 Issue date: 21/12/2012 Effective Date: 21/12/2012 Revocation Date: -

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

4.15 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.16 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.18 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.19 Pollution Incidents (EA/NRW)

Records within 500m**1**

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

Features are displayed on the Current industrial land use map on [page 22 >](#)

ID	Location	Details	
1	339m NW	Incident Date: 02/09/2002 Incident Identification: 104631 Pollutant: Sewage Materials Pollutant Description: Final Effluent	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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



4.20 Pollution inventory substances

Records within 500m

0

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

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

4.21 Pollution inventory waste transfers

Records within 500m

0

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

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

4.22 Pollution inventory radioactive waste

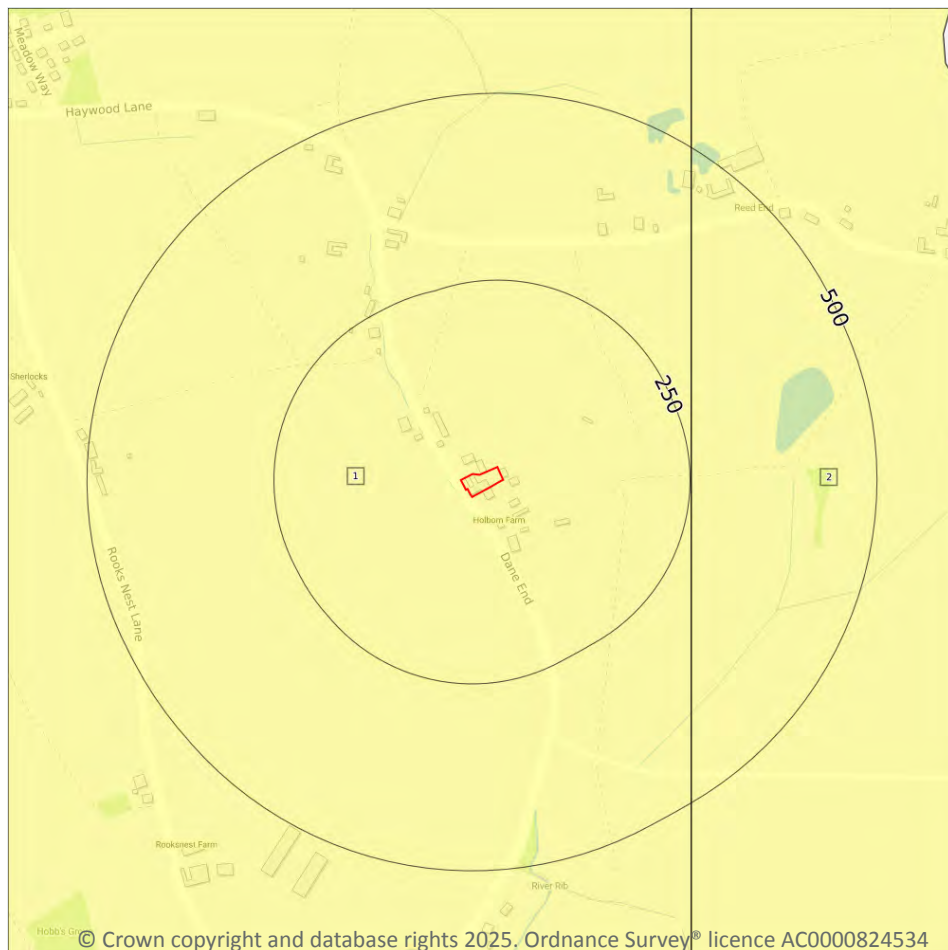
Records within 500m

0

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

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

5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 28](#) >

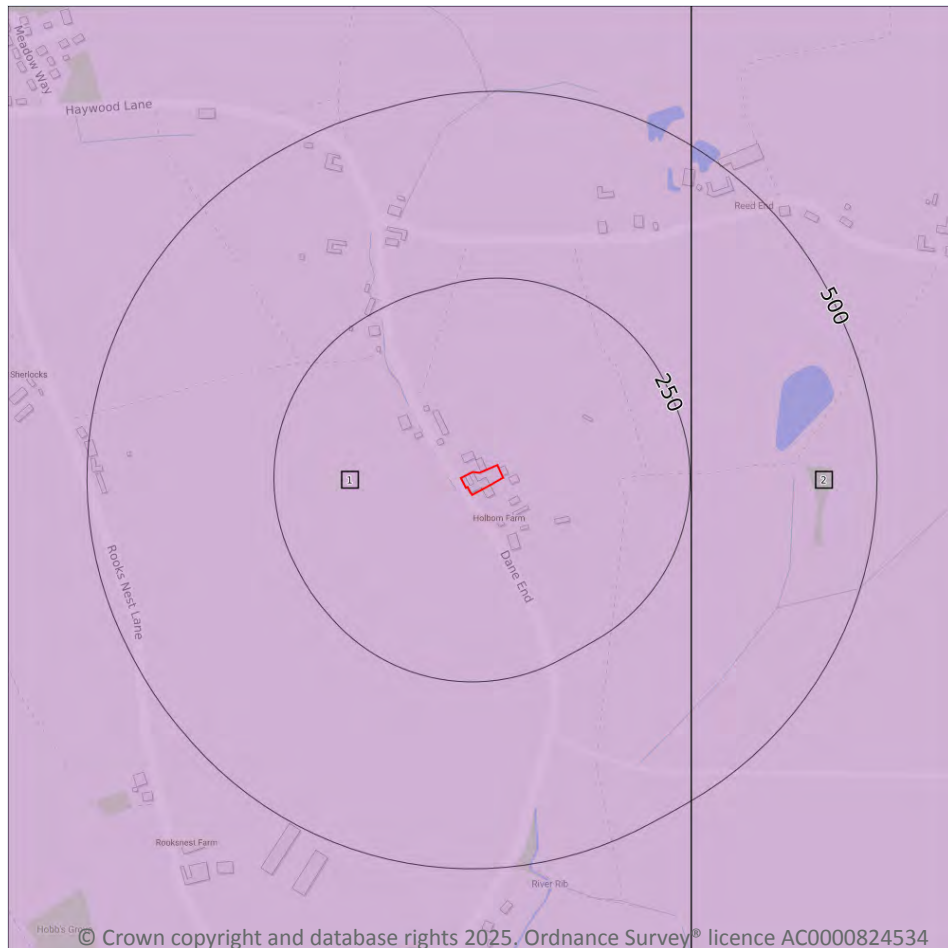
ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	252m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type



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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 30](#) >

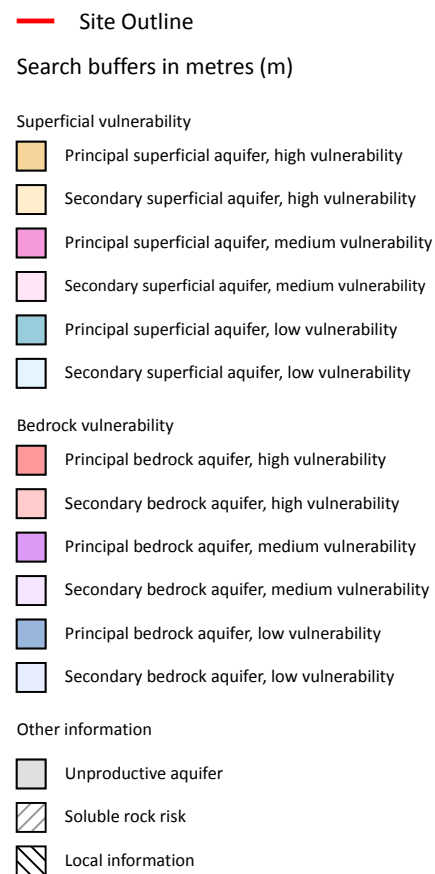
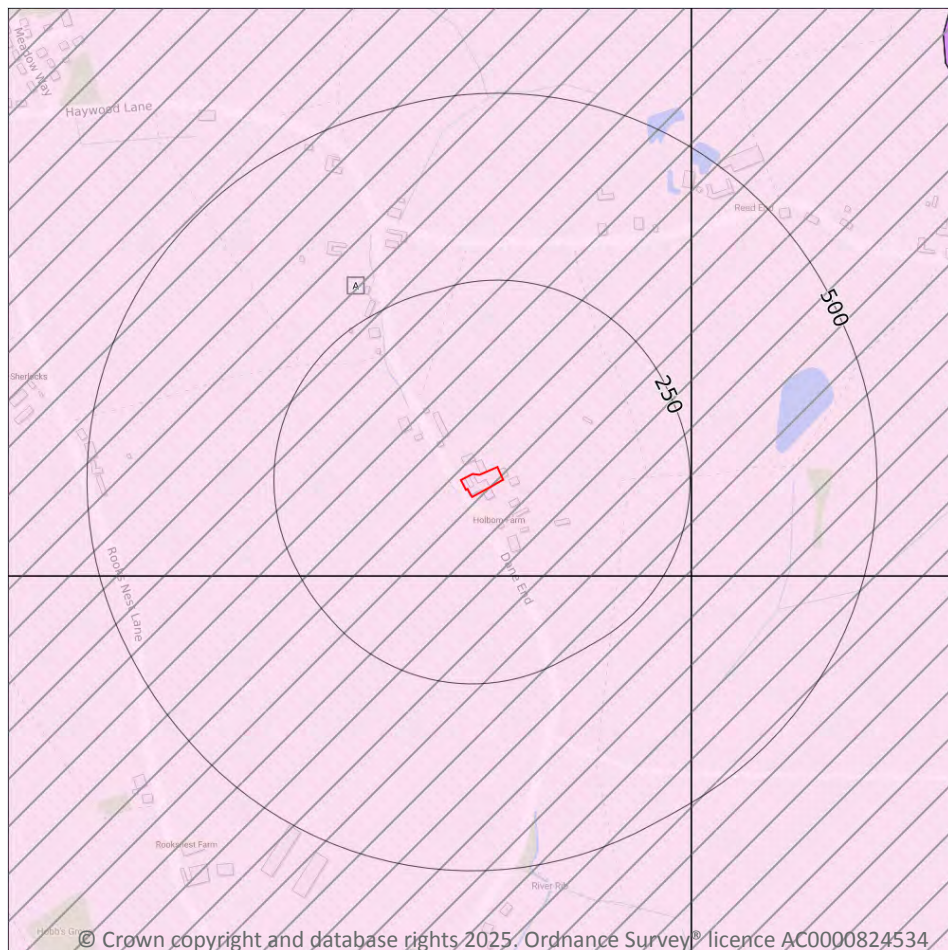
ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	252m E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers



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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on [page 32](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

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

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.	2.0%

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

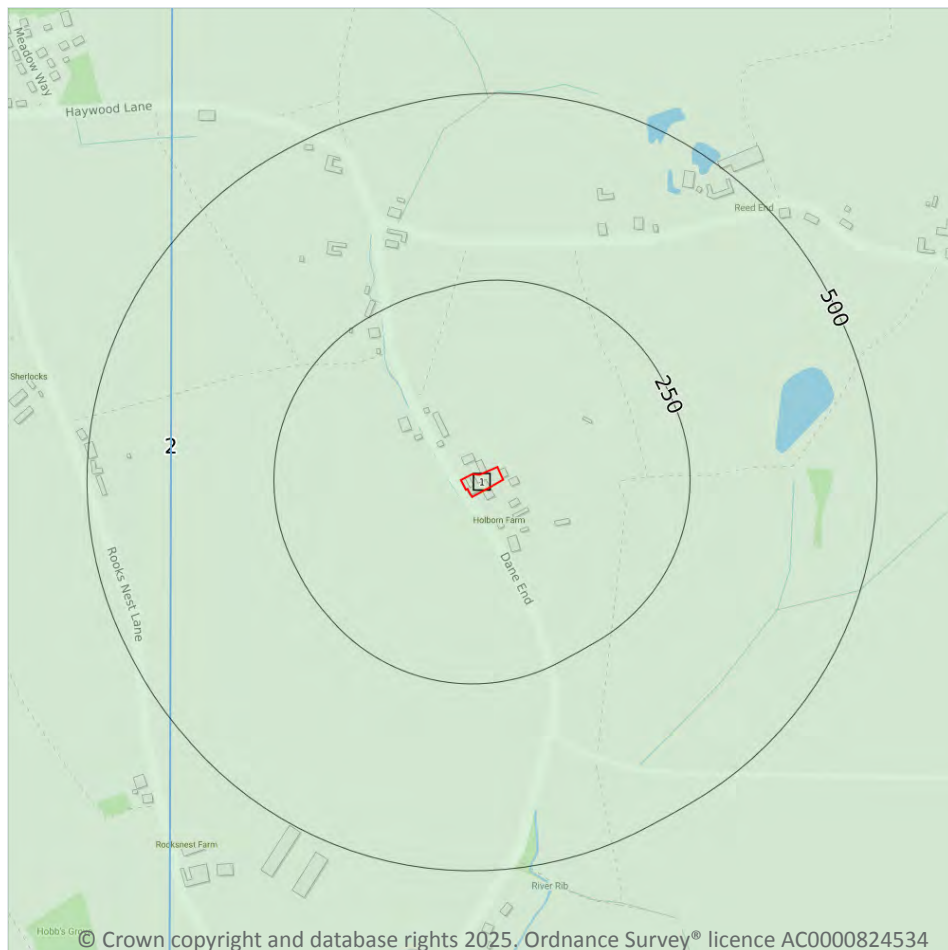
5.5 Groundwater vulnerability- local information

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

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

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

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

0

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

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



5.7 Surface water abstractions

Records within 2000m

1

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

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

ID	Location	Details	
2	388m W	Status: Historical Licence No: AN/033/0053/116/R01 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: DRAIN 2 AT KINGSLAND Data Type: Line Name: G R & P EASTON Easting: 534473 Northing: 299891	Annual Volume (m ³): 21136 Max Daily Volume (m ³): 1308 Original Application No: NPS/WR/041353 Original Start Date: 01/04/2025 Expiry Date: 31/03/2037 Issue No: 1 Version Start Date: 01/04/2025 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

0

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

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

5.9 Source Protection Zones

Records within 500m

1

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

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

ID	Location	Type	Description
1	On site	3	Total catchment

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



5.10 Source Protection Zones (confined aquifer)

Records within 500m

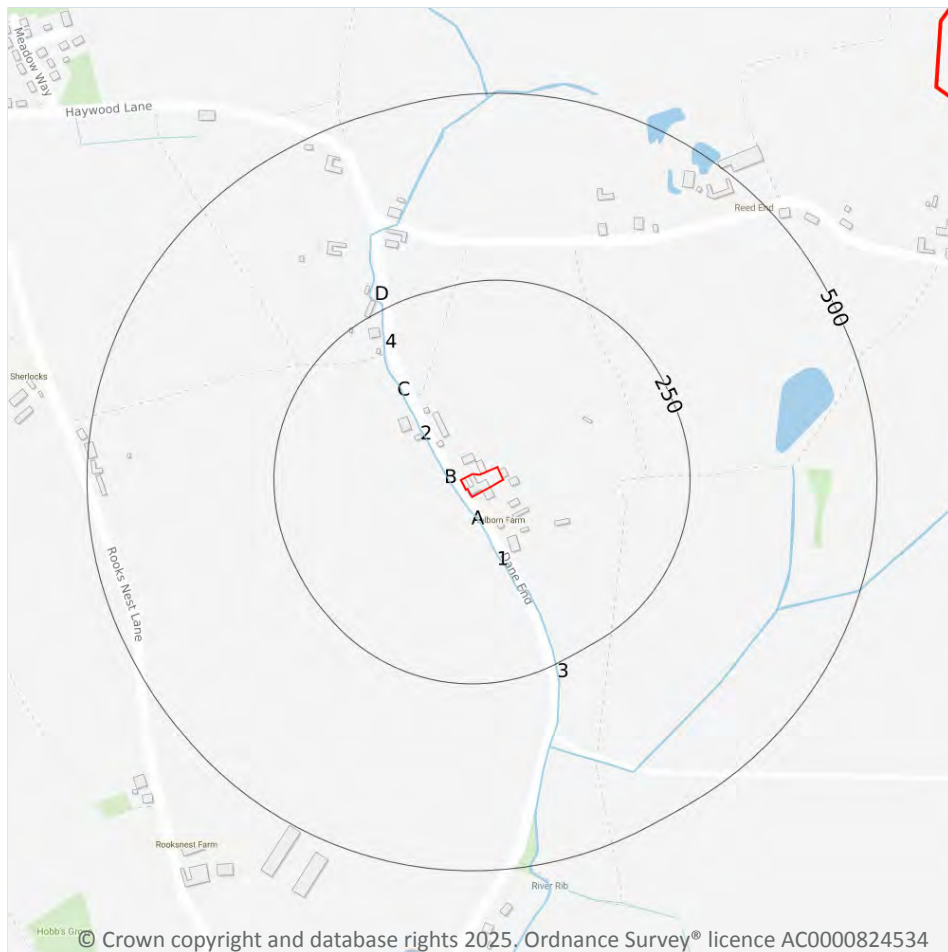
0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

8

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

Features are displayed on the Hydrology map on [page 37 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
B	12m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Rib



ID	Location	Type of water feature	Ground level	Permanence	Name
A	16m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Rib
1	19m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Rib
2	91m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Rib
C	96m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Rib
3	140m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Rib
4	220m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Rib
D	224m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Rib

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m

3

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

Features are displayed on the Hydrology map on [page 37](#) >

This data is sourced from the Ordnance Survey®.

6.3 WFD Surface water body catchments

Records on site

1

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



Features are displayed on the Hydrology map on [page 37 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Rib (upper stretches, above confluence with the Quin)	GB106038040140	Lee Upper	Lee Upper

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

6.4 WFD Surface water bodies

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

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

Features are displayed on the Hydrology map on [page 37 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1006m SW	River	Rib (upper stretches, above confluence with the Quin)	GB106038040140 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

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

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

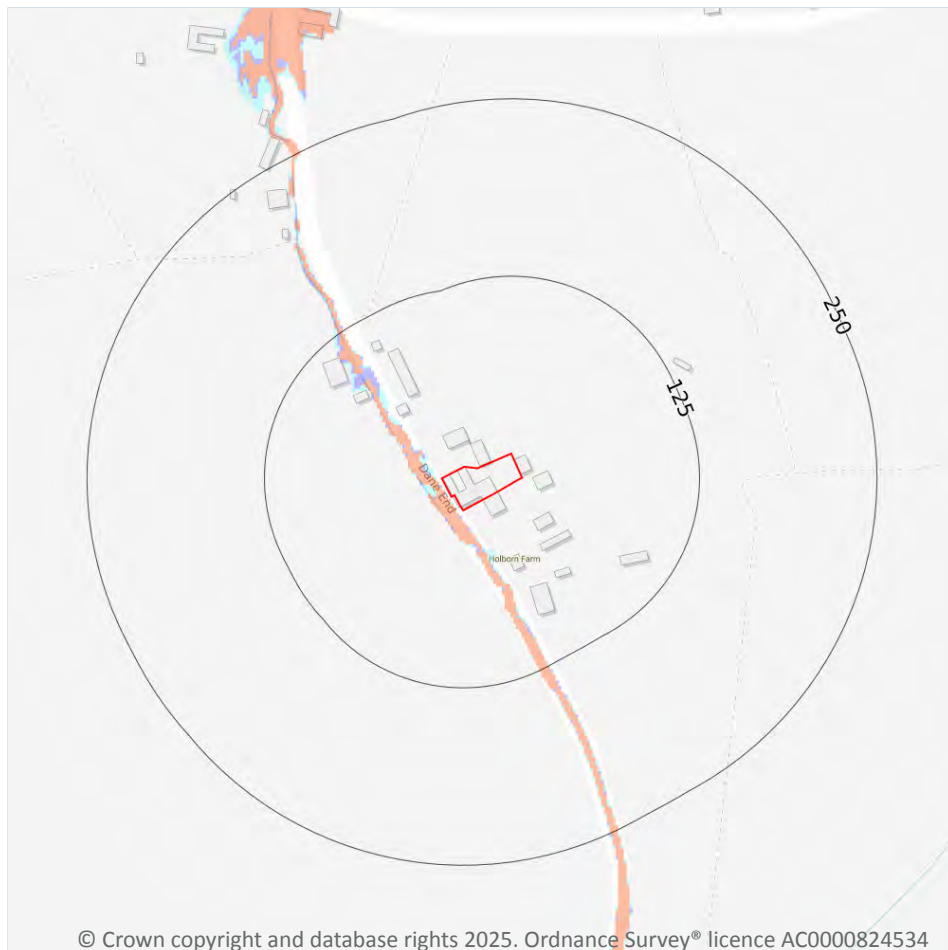
Features are displayed on the Hydrology map on [page 37 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Cam and Ely Ouse Chalk	GB40501G400500 ↗	Poor	Poor	Poor	2019

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



7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- River and coastal flooding:
- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m

4

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 40 >](#)

Distance	Flood risk category
On site	N/A
0 - 50m	High

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

7.2 Historical Flood Events

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

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

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

7.3 Flood Defences

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

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

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

7.4 Areas Benefiting from Flood Defences

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

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

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

7.5 Flood Storage Areas

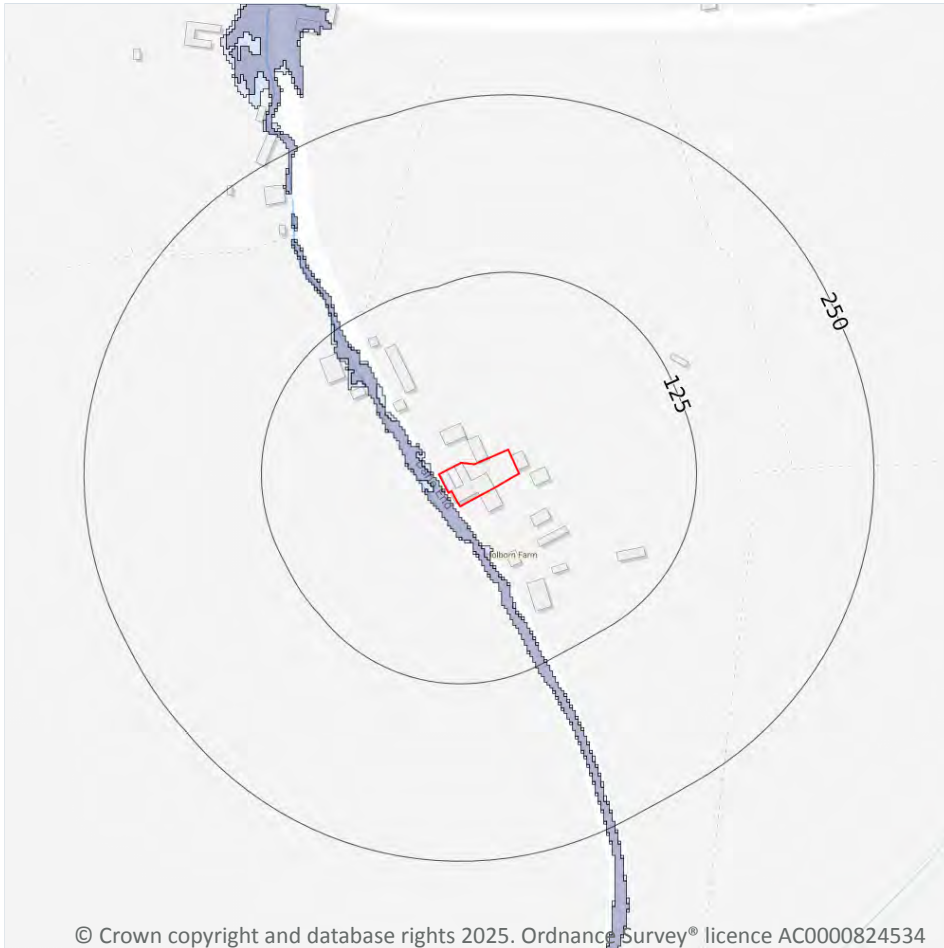
Records within 250m	0
----------------------------	----------

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

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



River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

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

Features are displayed on the River and coastal flooding map on [page 40](#) >

Location	Type
1m SW	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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

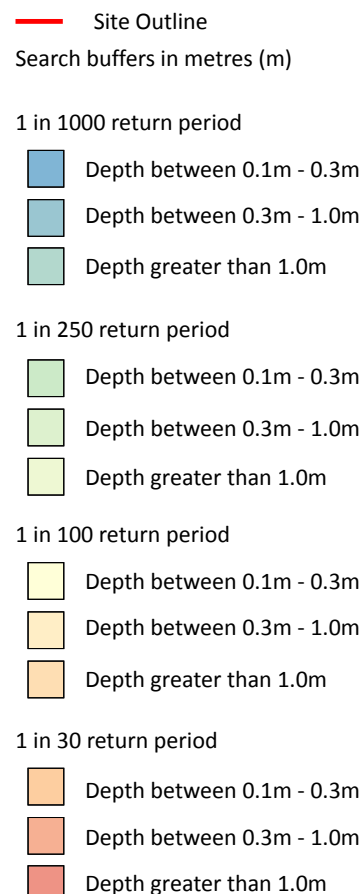
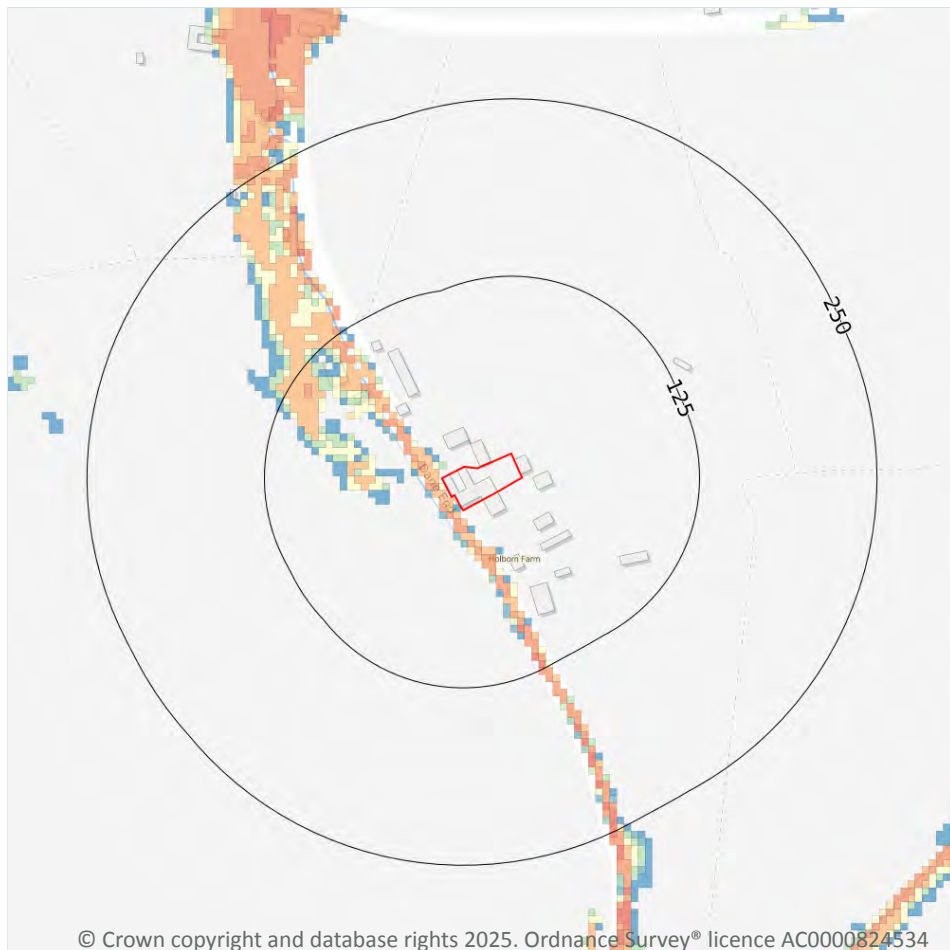
Features are displayed on the River and coastal flooding map on [page 40](#) >

Location	Type
2m S	Zone 3 - (Fluvial /Tidal Models)

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on [page 44 >](#)

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

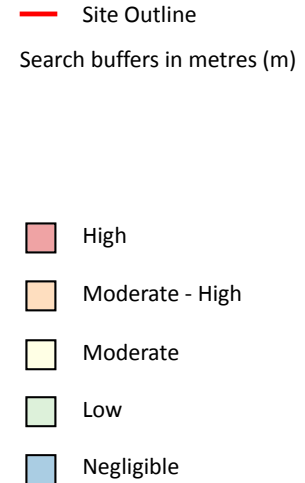
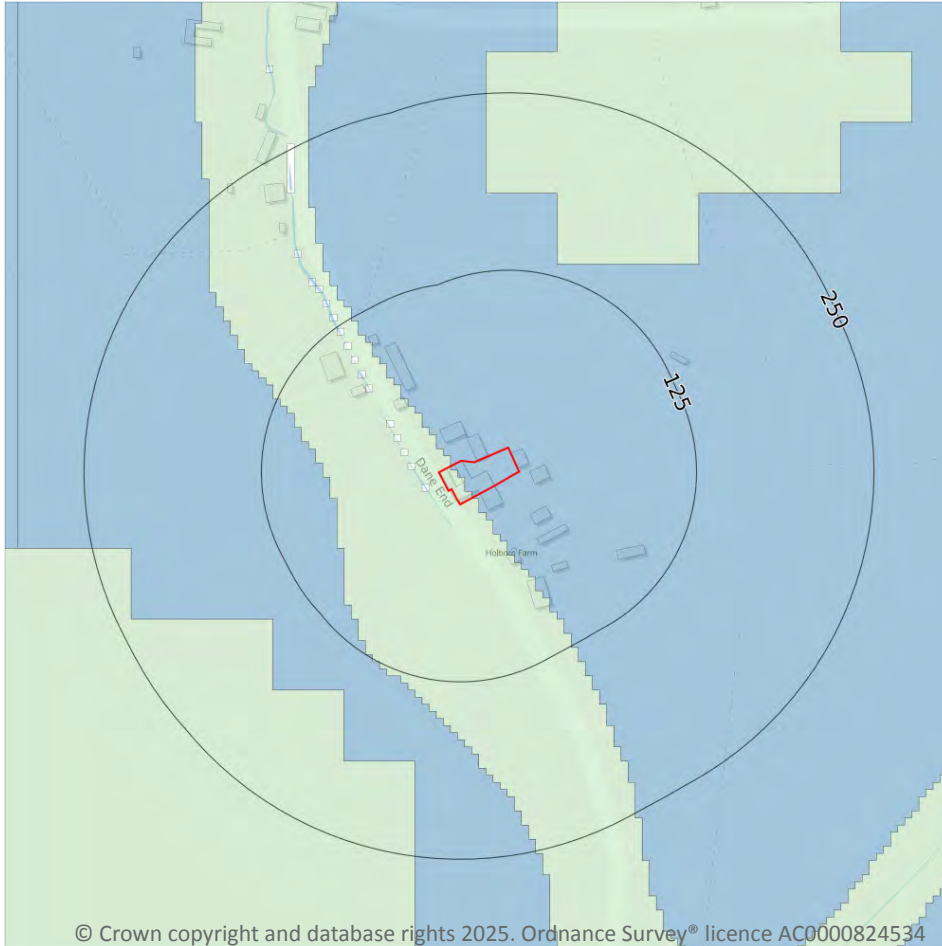
The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

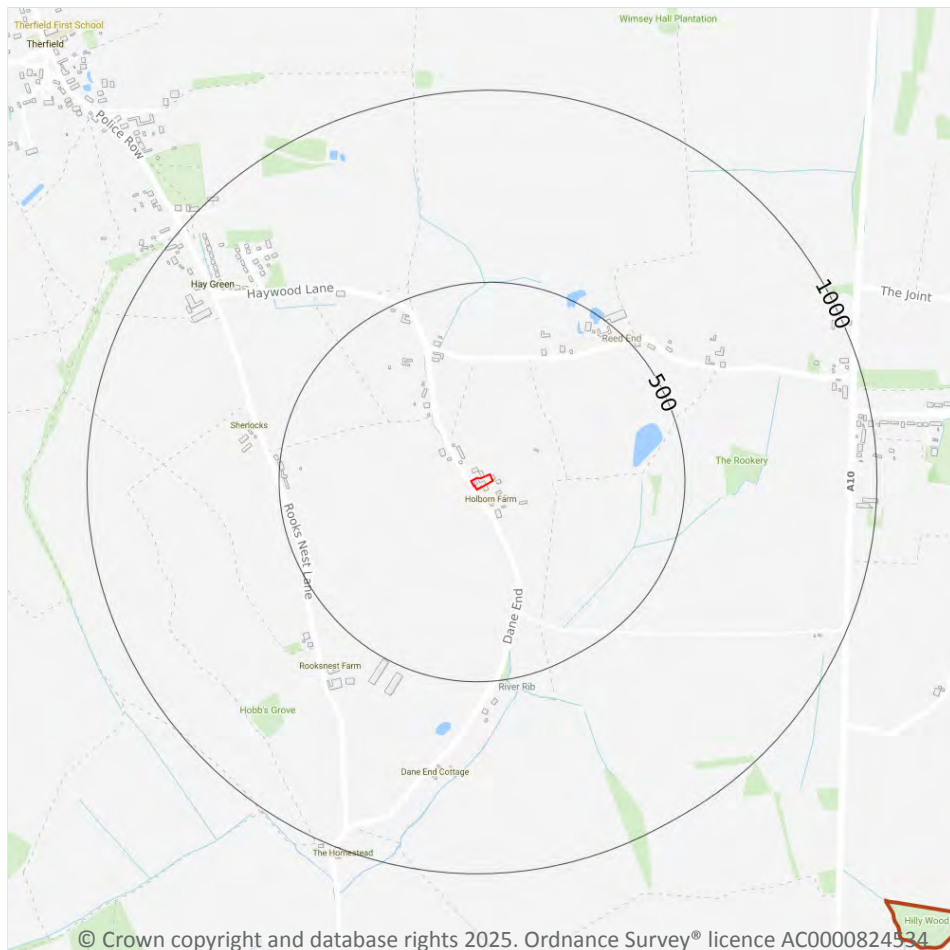
Low

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

Features are displayed on the Groundwater flooding map on [page 46](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m**0**

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

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

10.7 Designated Ancient Woodland

Records within 2000m**4**

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

Features are displayed on the Environmental designations map on [page 47 >](#)

ID	Location	Name	Woodland Type
-	1247m S	Unknown	Ancient & Semi-Natural Woodland
2	1498m SE	Reed/hilly Woods.	Ancient & Semi-Natural Woodland
-	1519m SW	Unknown	Ancient & Semi-Natural Woodland
-	1654m SW	Lords Wood	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m**0**

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

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



10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

0

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

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

13

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

Location	Name	Type	NVZ ID	Status
On site	LEE NVZ	Surface Water	443	Existing
On site	Anglian Chalk	Groundwater	71	Existing
124m S	LEE NVZ	Surface Water	443	Existing
124m S	Anglian Chalk	Groundwater	71	Existing
449m NE	Ely Ouse and Cut-off channel NVZ	Surface Water	390	Existing
600m W	LEE NVZ	Surface Water	443	Existing
600m W	Anglian Chalk	Groundwater	71	Existing
617m W	LEE NVZ	Surface Water	443	Existing

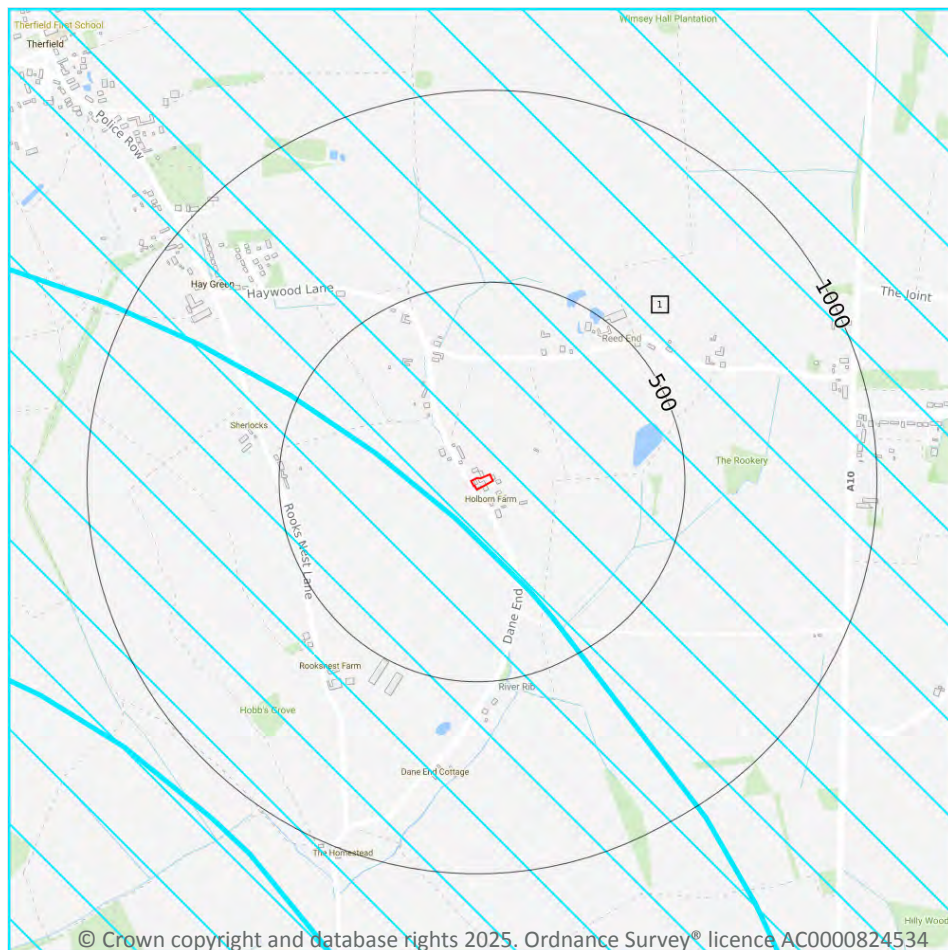


Location	Name	Type	NVZ ID	Status
617m W	Anglian Chalk	Groundwater	71	Existing
1439m NW	Ely Ouse and Cut-off channel NVZ	Surface Water	390	Existing
1751m W	Great Ouse NVZ	Surface Water	391	Existing
1950m W	Great Ouse NVZ	Surface Water	391	Existing
1985m W	LEE NVZ	Surface Water	443	Existing

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 53](#) >

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0300011500000&notes=&location=535871,237310%20(IRZ%20polygon%20centre)

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

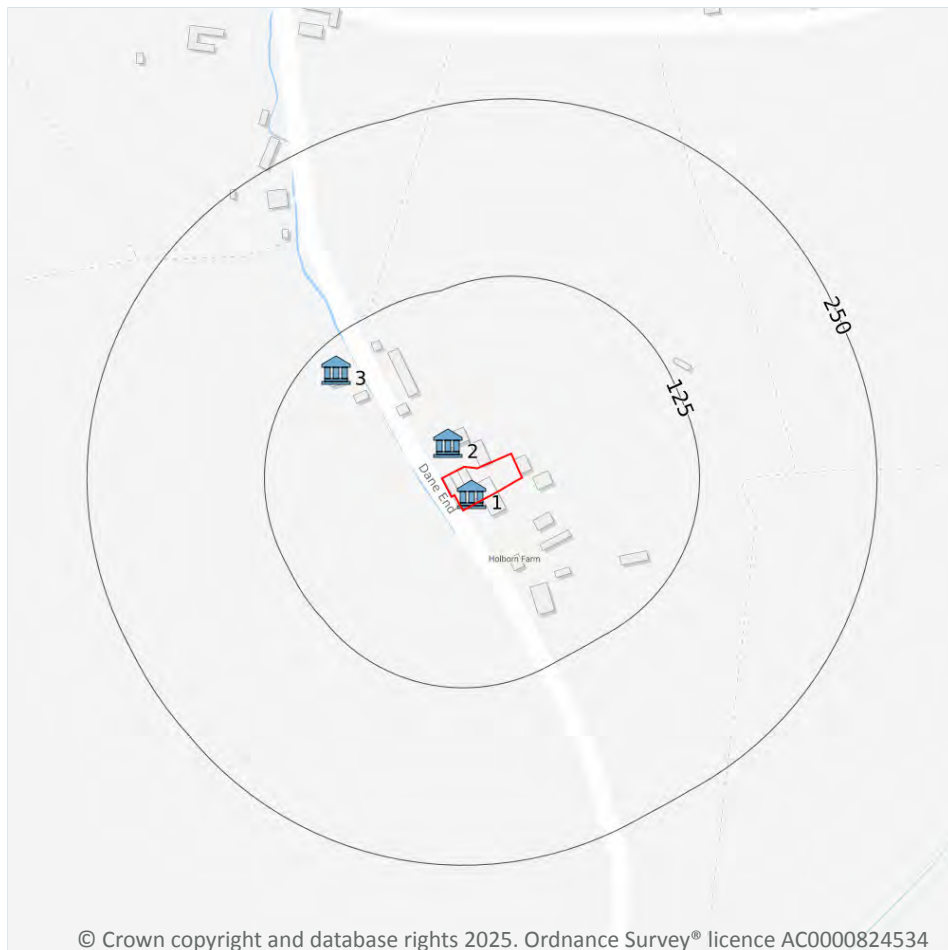
0

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

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



11 Visual and cultural designations



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

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

3

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

Features are displayed on the Visual and cultural designations map on [page 55 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	On site	Barn About 35 Metres South East Of Holborn Farm House	II	1176771	29/01/1986
2	20m NW	Holborn Farm House	II	1347386	29/01/1986
3	107m NW	Casa Mia	II	1307733	29/01/1986

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



11.5 Conservation Areas

Records within 250m**0**

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

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

11.6 Scheduled Ancient Monuments

Records within 250m**0**

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

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

11.7 Registered Parks and Gardens

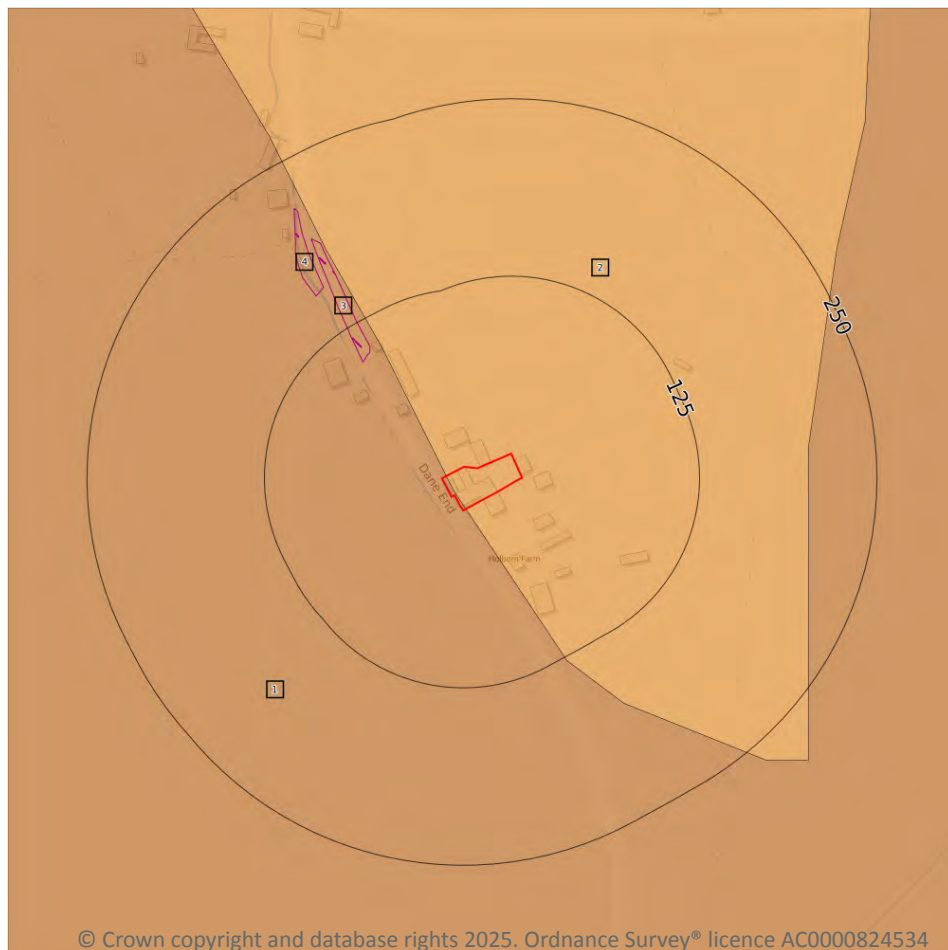
Records within 250m**0**

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

2

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

Features are displayed on the Agricultural designations map on [page 58](#) >

ID	Location	Classification	Description
1	On site	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
2	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	2
----------------------------	----------

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

Features are displayed on the Agricultural designations map on [page 58 >](#)

ID	Location	Name	Classification	Other relevant legislation
3	99m NW	Therfield Heath and Greens	Section 15 Land	POCA 1888
4	156m NW	Therfield Heath and Greens	Section 15 Land	POCA 1888

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

12.3 Tree Felling Licences

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

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

2

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
77m SE	AG00691091	Entry Level plus Higher Level Stewardship	01/07/2010	30/06/2020
184m E	AG00265338	Entry Level plus Higher Level Stewardship	01/05/2008	30/04/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

3

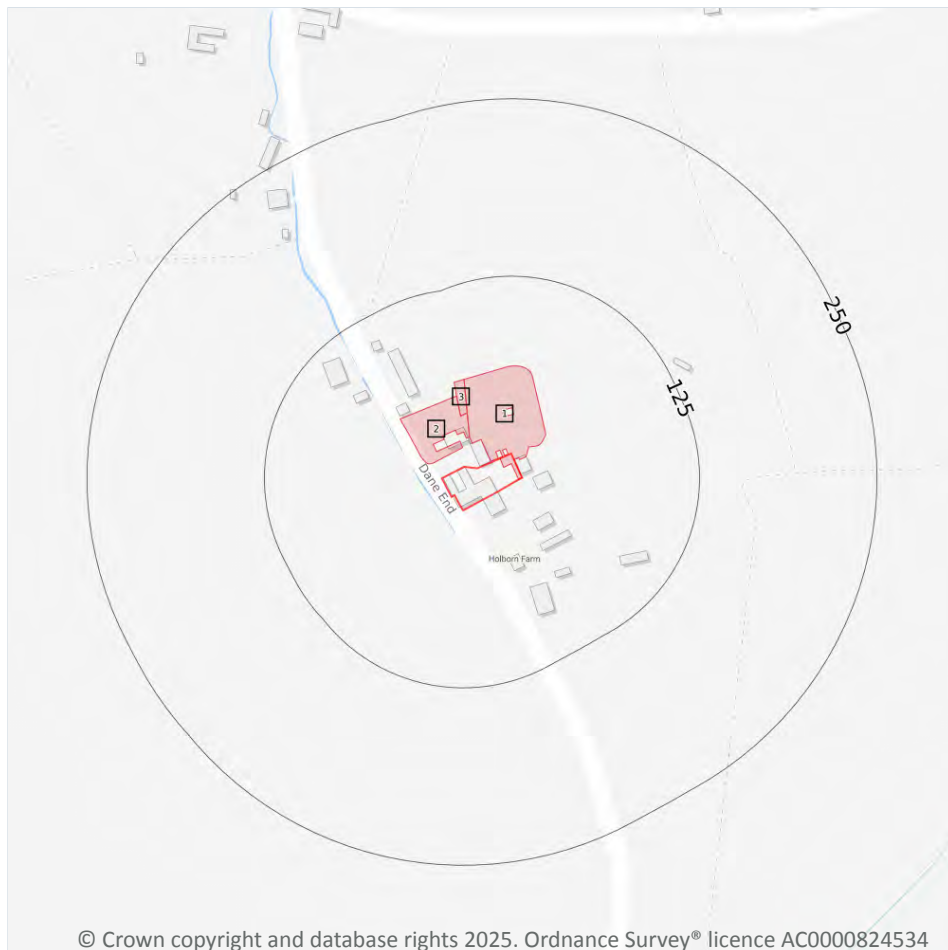
Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
77m SE	1055023	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
184m E	1454987	Countryside Stewardship (Higher Tier)	01/07/2023	30/06/2025
196m NE	1648102	Countryside Stewardship (Middle Tier)	01/01/2024	31/12/2028

This data is sourced from Natural England.



13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

3

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

Features are displayed on the Habitat designations map on [page 61](#) >

ID	Location	Main Habitat	Other habitats
1	On site	Traditional orchard	Overruled by Traditional Orchards HAP Inventory dataset
2	12m NW	Traditional orchard	Main habitat: TORCH (INV > 50%)
3	36m N	Traditional orchard	Main habitat: TORCH (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

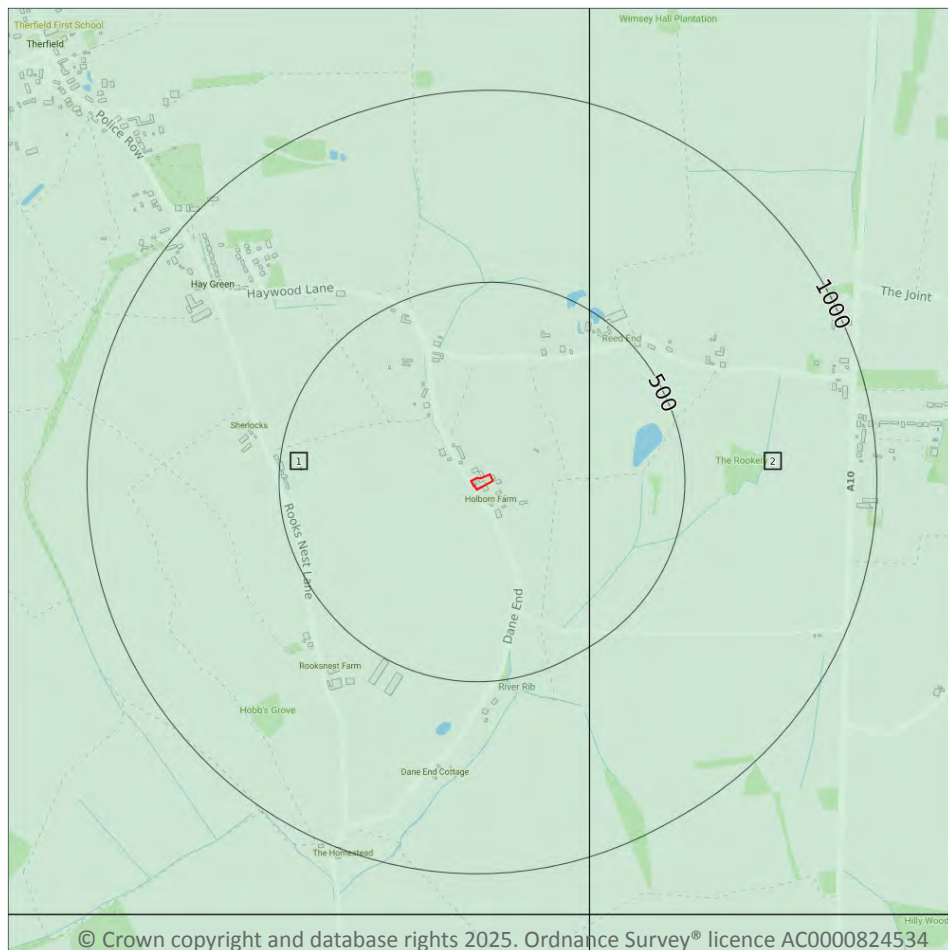
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

2

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 63](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	TL33NW
2	252m E	Full	Full	Full	No coverage	TL33NE

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



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

14.3 Superficial geology (10k)

Records within 500m

6

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 65](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XCZSV	Head-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
2	On site	LOFT-DMTN	Lowestoft Formation-Diamicton	Diamicton
3	252m E	LOFT-DMTN	Lowestoft Formation-Diamicton	Diamicton



ID	Location	LEX Code	Description	Rock description
4	373m SE	HEAD-XCZSV	Head-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
5	451m SE	LOFT-DMTN	Lowestoft Formation-Diamicton	Diamicton
6	489m NE	LOFT-DMTN	Lowestoft Formation-Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

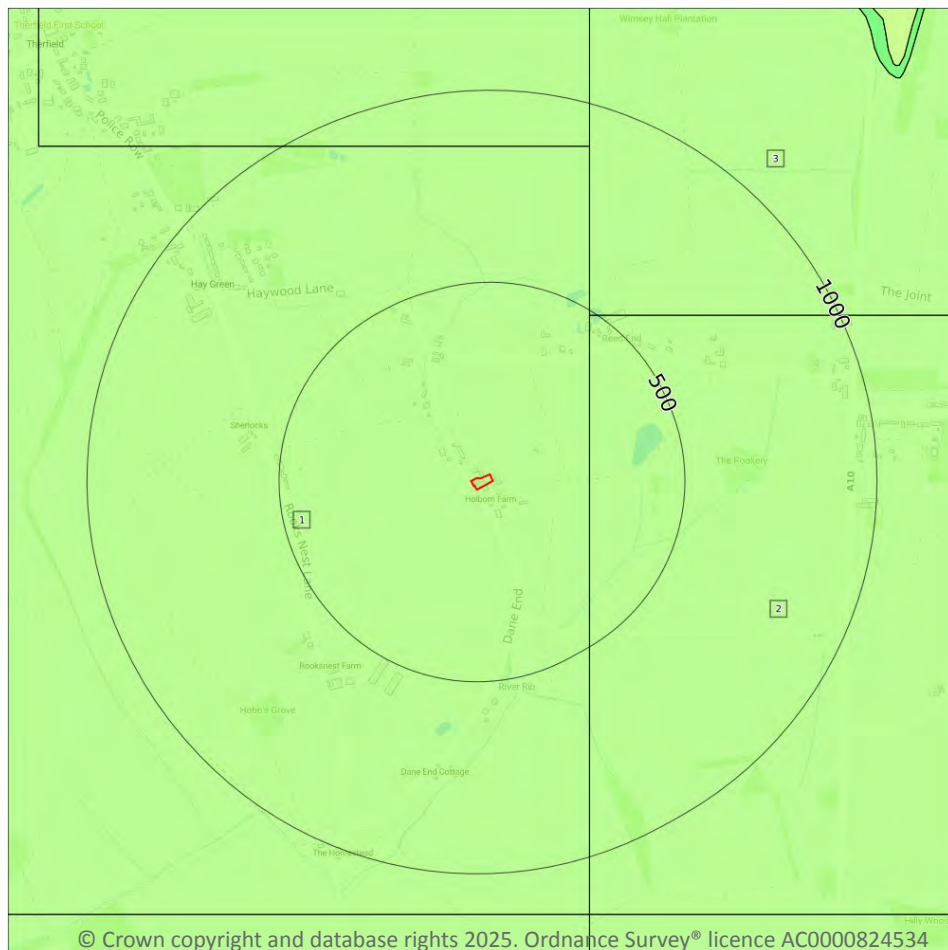
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m

3

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 67](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LECH-CHLK	Lewes Nodular Chalk Formation-Chalk	Turonian
2	252m E	LECH-CHLK	Lewes Nodular Chalk Formation-Chalk	Turonian
3	489m NE	LESE-CHLK	Lewes Nodular Chalk Formation And Seaford Chalk Formation (Undifferentiated)-Chalk	Turonian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

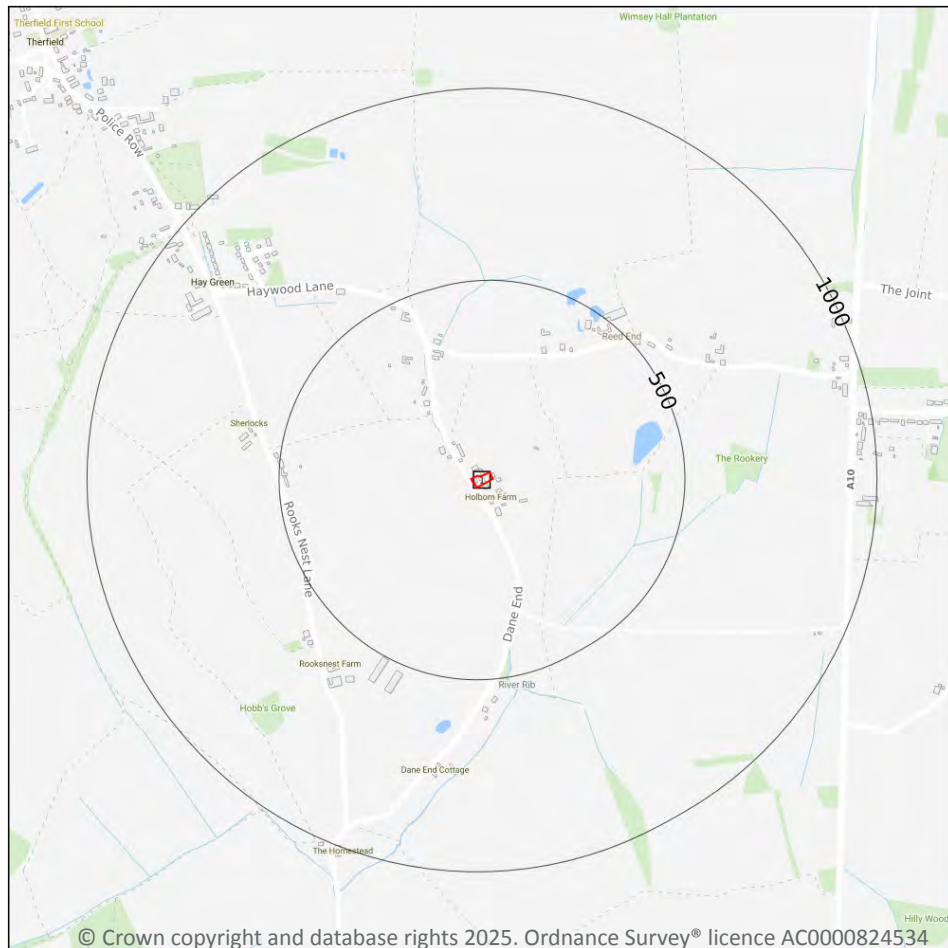
0

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

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



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

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 69](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW221_hitchin_v4

This data is sourced from the British Geological Survey.



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

15.2 Artificial and made ground (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

6

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 71](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XCZSV	Head	Clay, silt, sand and gravel
2	On site	LOFT-DMTN	Lowestoft Formation	Diamicton
3	252m E	LOFT-DMTN	Lowestoft Formation	Diamicton



ID	Location	LEX Code	Description	Rock description
4	373m SE	HEAD-XCZSV	Head	Clay, silt, sand and gravel
5	451m SE	LOFT-DMTN	Lowestoft Formation	Diamicton
6	489m NE	LOFT-DMTN	Lowestoft Formation	Diamicton

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

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

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Very Low
On site	Mixed	Moderate	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

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

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

This data is sourced from the British Geological Survey.

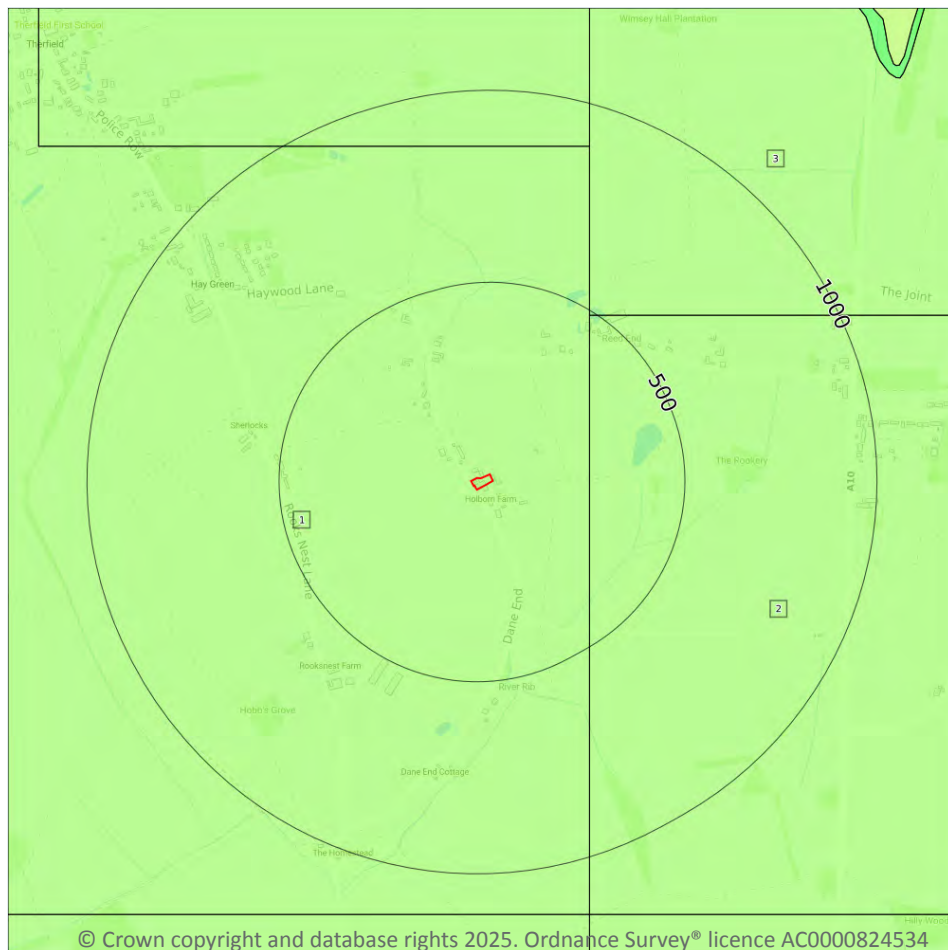
15.7 Landslip permeability (50k)

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

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 73](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LECH-CHLK	Lewes Nodular Chalk Formation-Chalk	Turonian
2	252m E	LECH-CHLK	Lewes Nodular Chalk Formation-Chalk	Turonian
3	489m NE	LESE-CHLK	Lewes Nodular Chalk Formation And Seaford Chalk Formation (Undifferentiated)-Chalk	Turonian

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Very High	Very High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

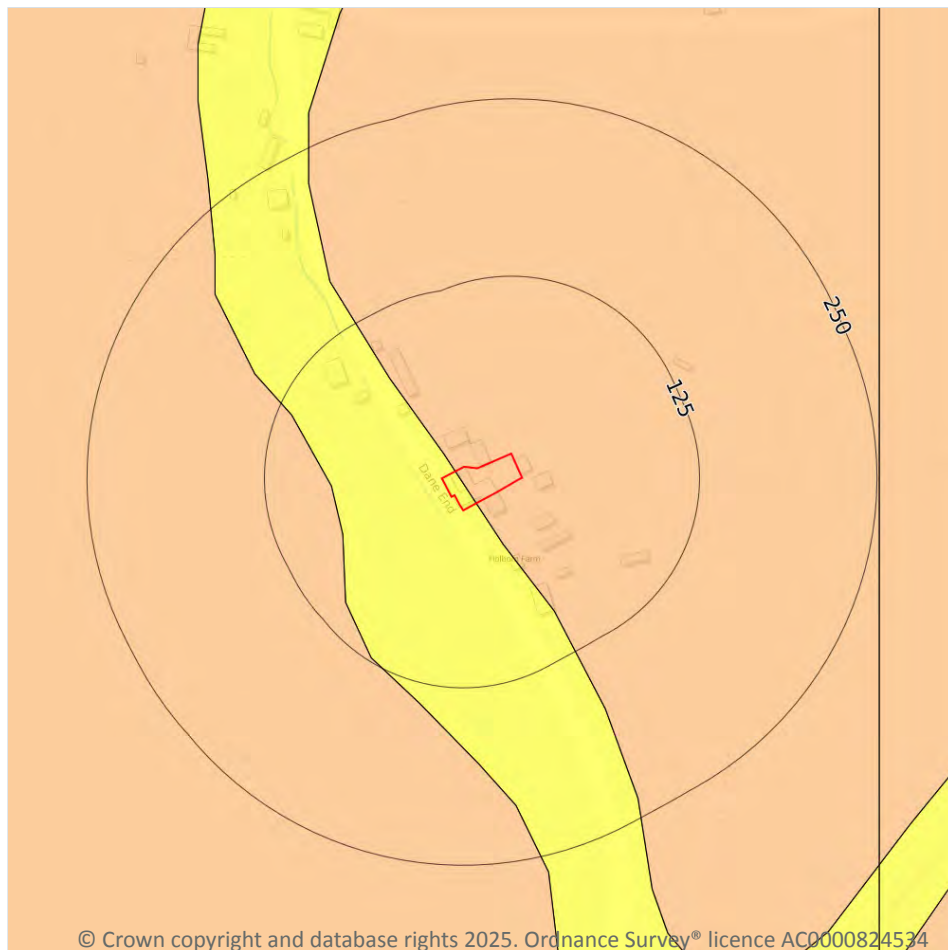
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The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

2

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

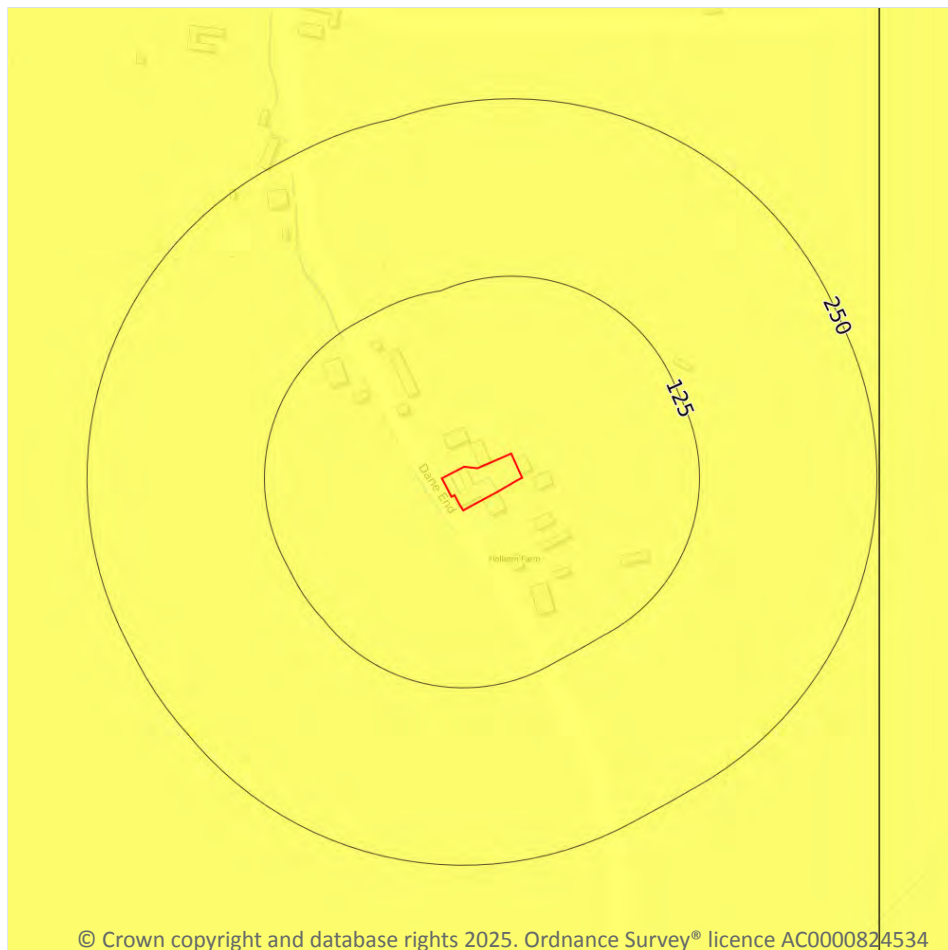
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 76 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

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17.2 Running sands

Records within 50m

1

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

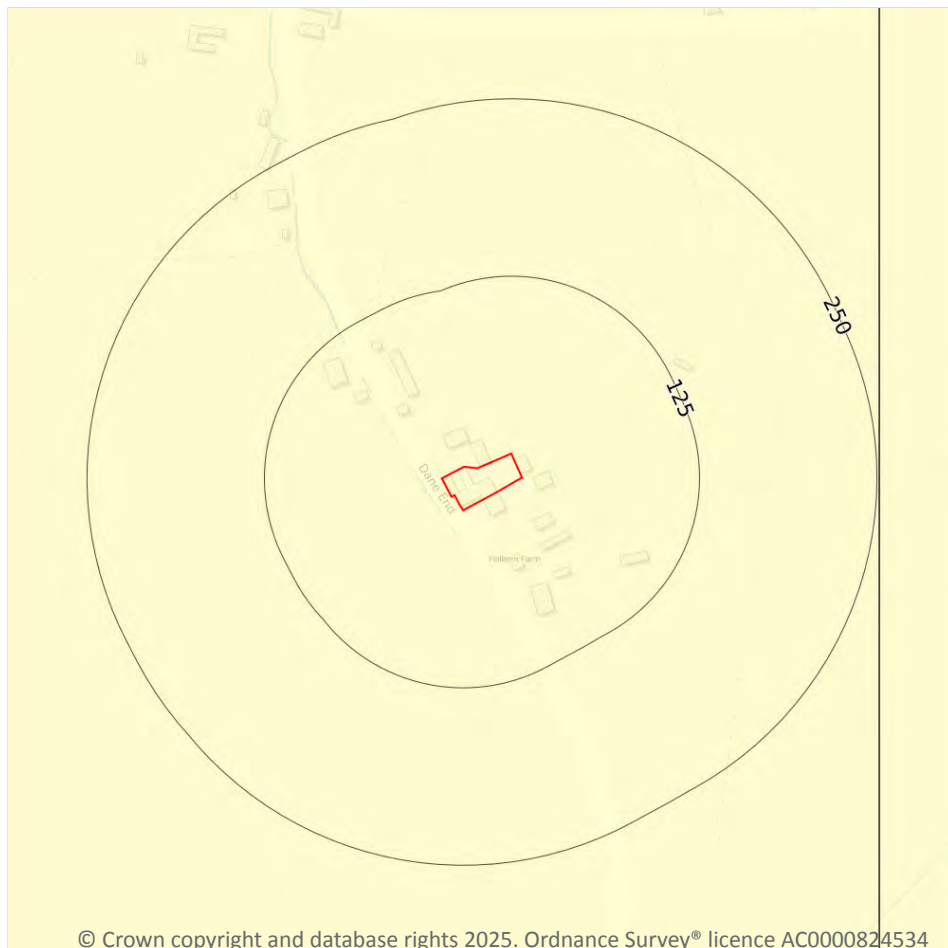
Features are displayed on the Natural ground subsidence - Running sands map on [page 77 >](#)

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

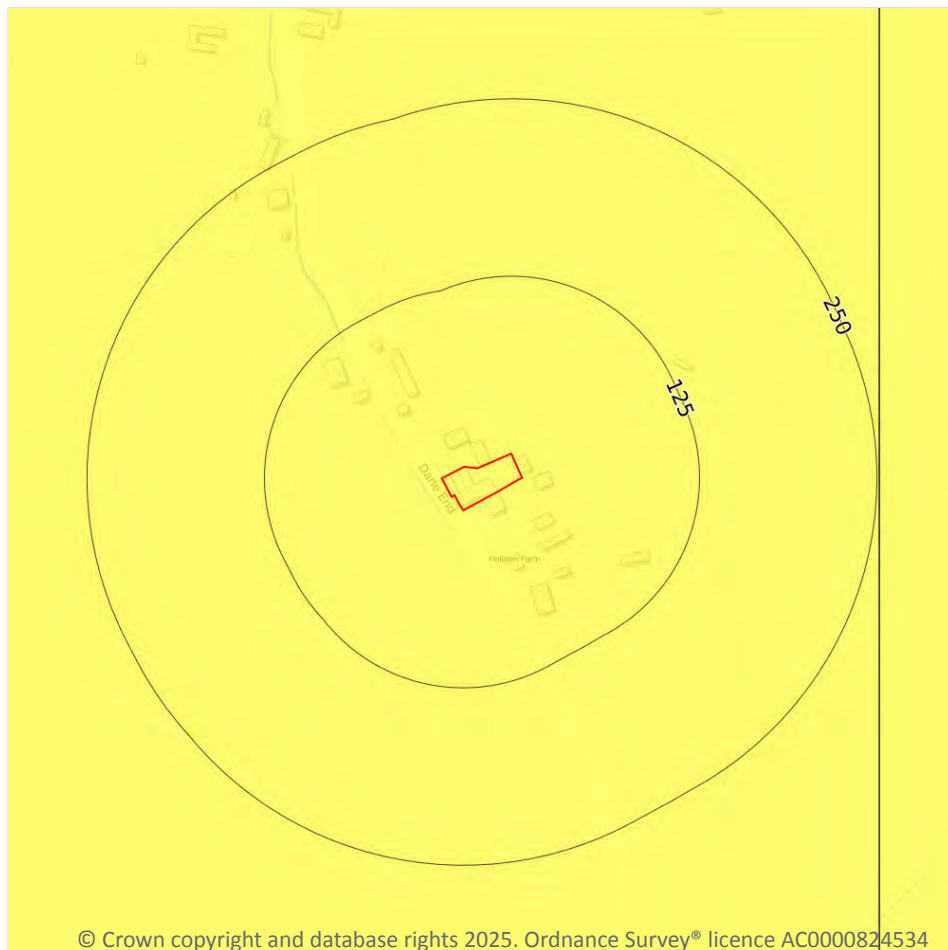
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 78](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

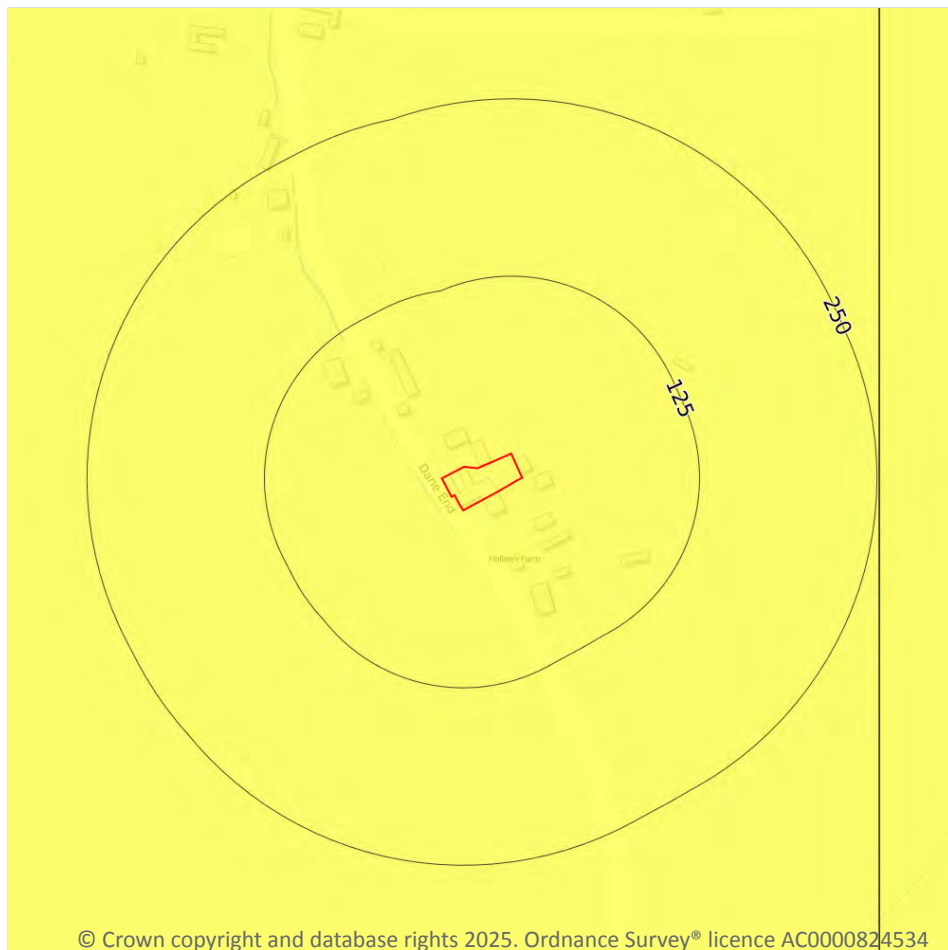
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 79 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

1

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

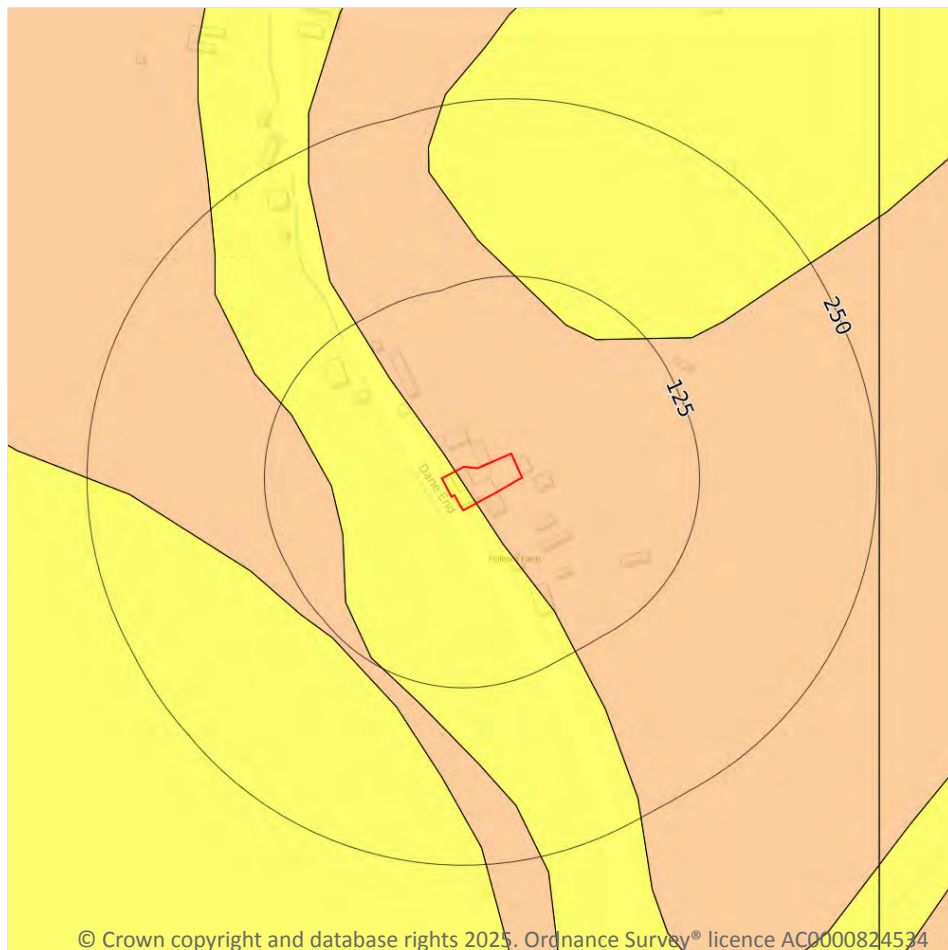
Features are displayed on the Natural ground subsidence - Landslides map on [page 80](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

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17.6 Ground dissolution of soluble rocks

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 81](#)

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

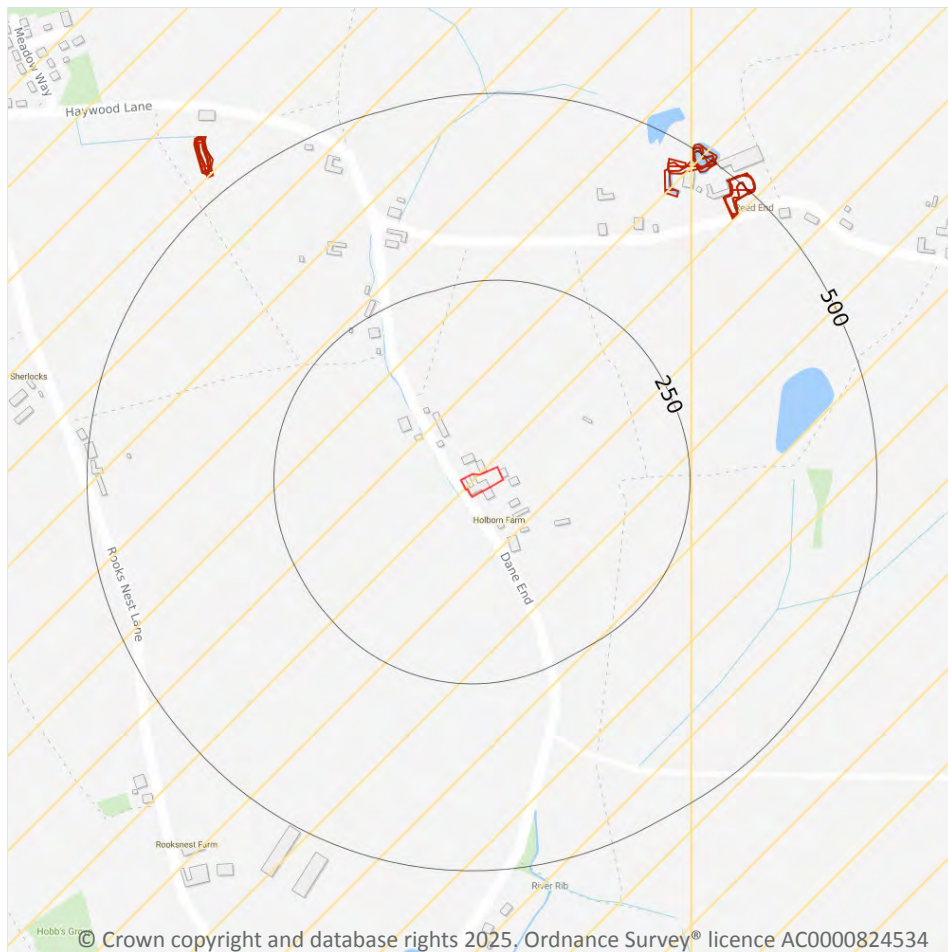


Location	Hazard rating	Details
On site	Low	Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m**0**

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

This data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m**0**

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

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m**0**

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m**0**

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m**2**

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

Features are displayed on the Mining and ground workings map on [page 83](#) >



ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
2	252m E	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

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

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

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

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

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

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m**0**

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**0**

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

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

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey® maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

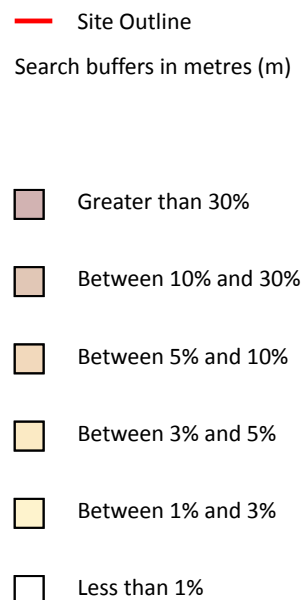
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 90](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

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

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

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

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

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

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

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

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

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

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

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



Appendix 4: Historical Map Selection

Site Details:

Holborn Barn, Dane End,
Therfield, Hertfordshire, SG8
9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: County Series

Map date: 1877

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1877
Revised 1877
Edition N/A
Copyright N/A
Levelled N/A

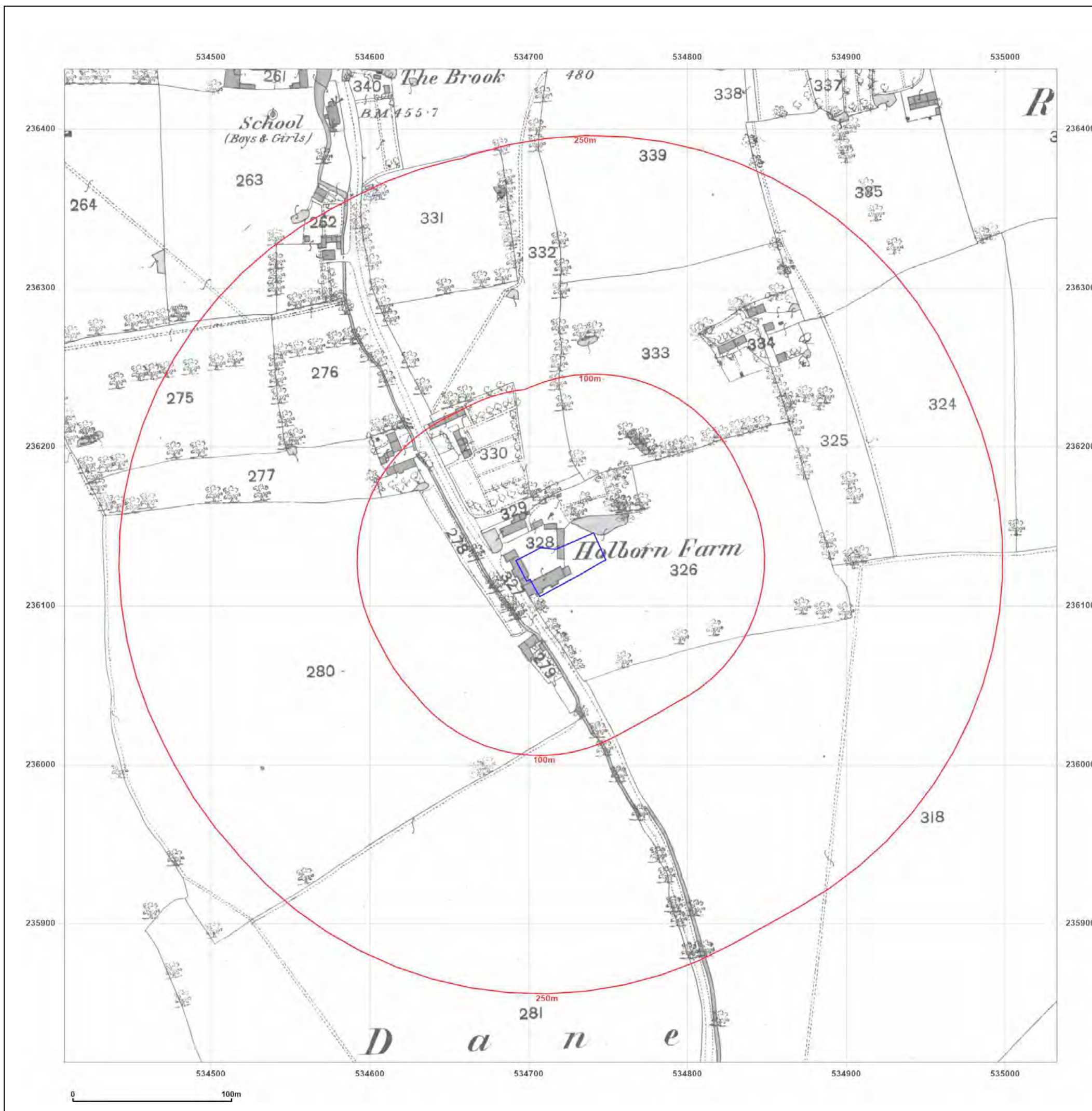


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Production date: 11 December 2025

Map legend available at:
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Site Details:

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9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: County Series

Map date: 1898

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1898
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

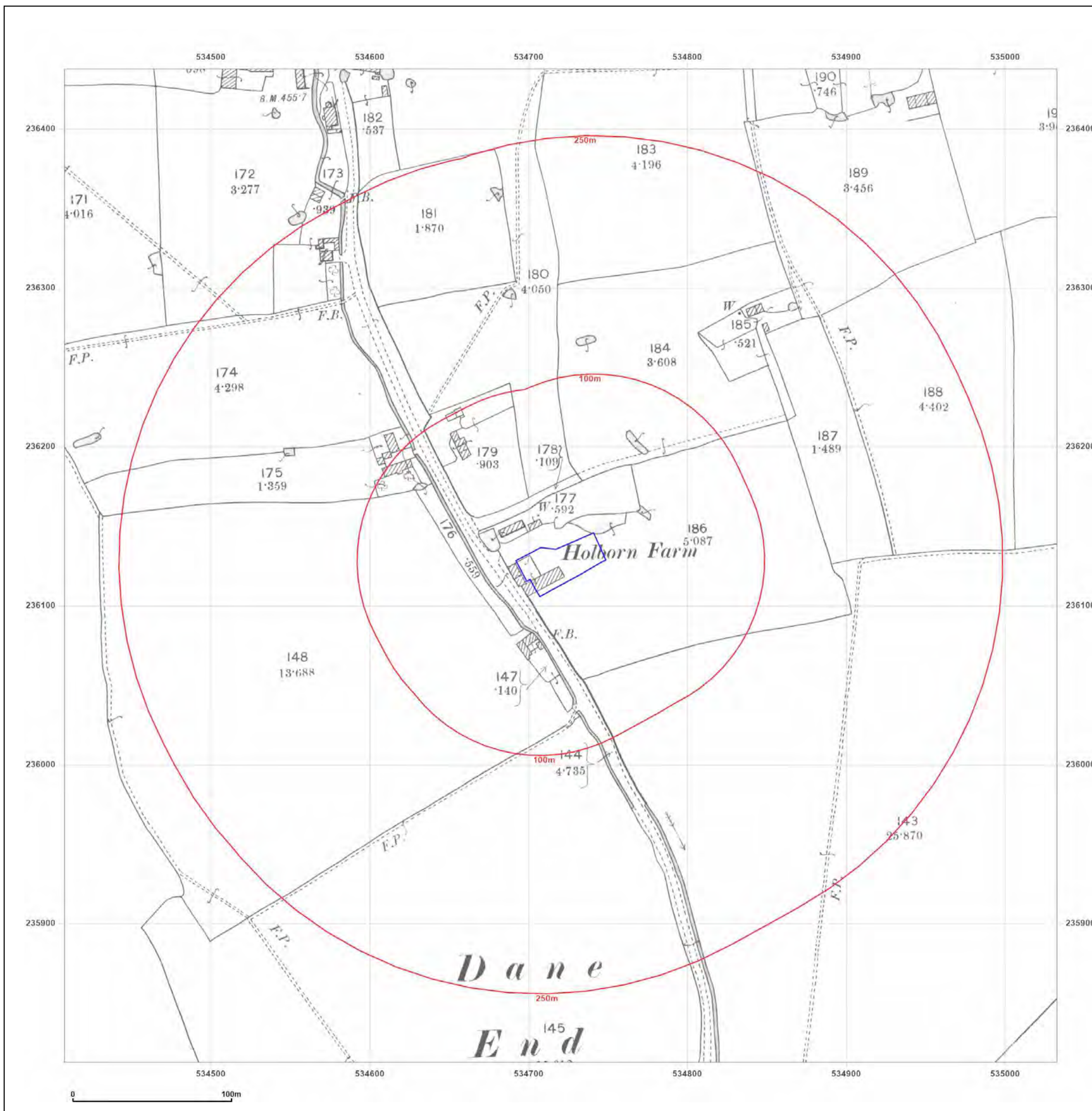


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Site Details:

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Therfield, Hertfordshire, SG8
9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: County Series

Map date: 1923

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1923
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

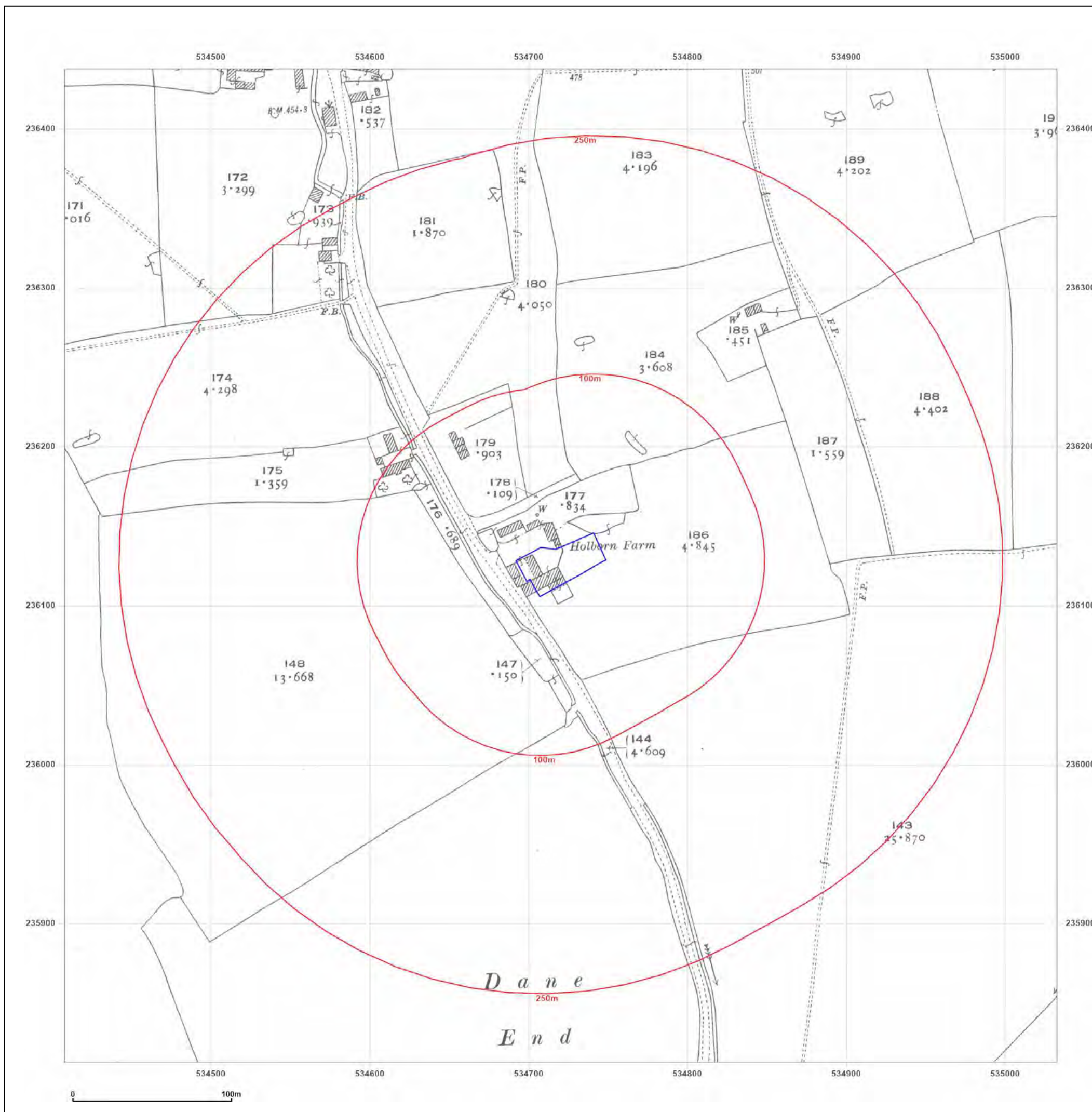


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Site Details:

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9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: National Grid

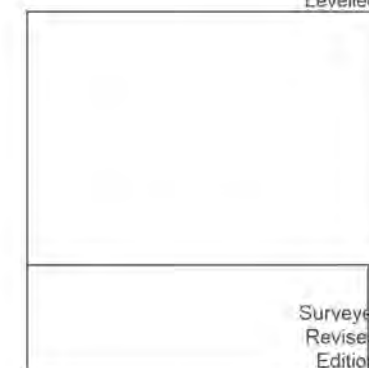
Map date: 1975

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1974
Revised 1974
Edition N/A
Copyright 1975
Levelled 1968



Surveyed 1974
Revised 1974
Edition N/A
Copyright 1975
Levelled 1968

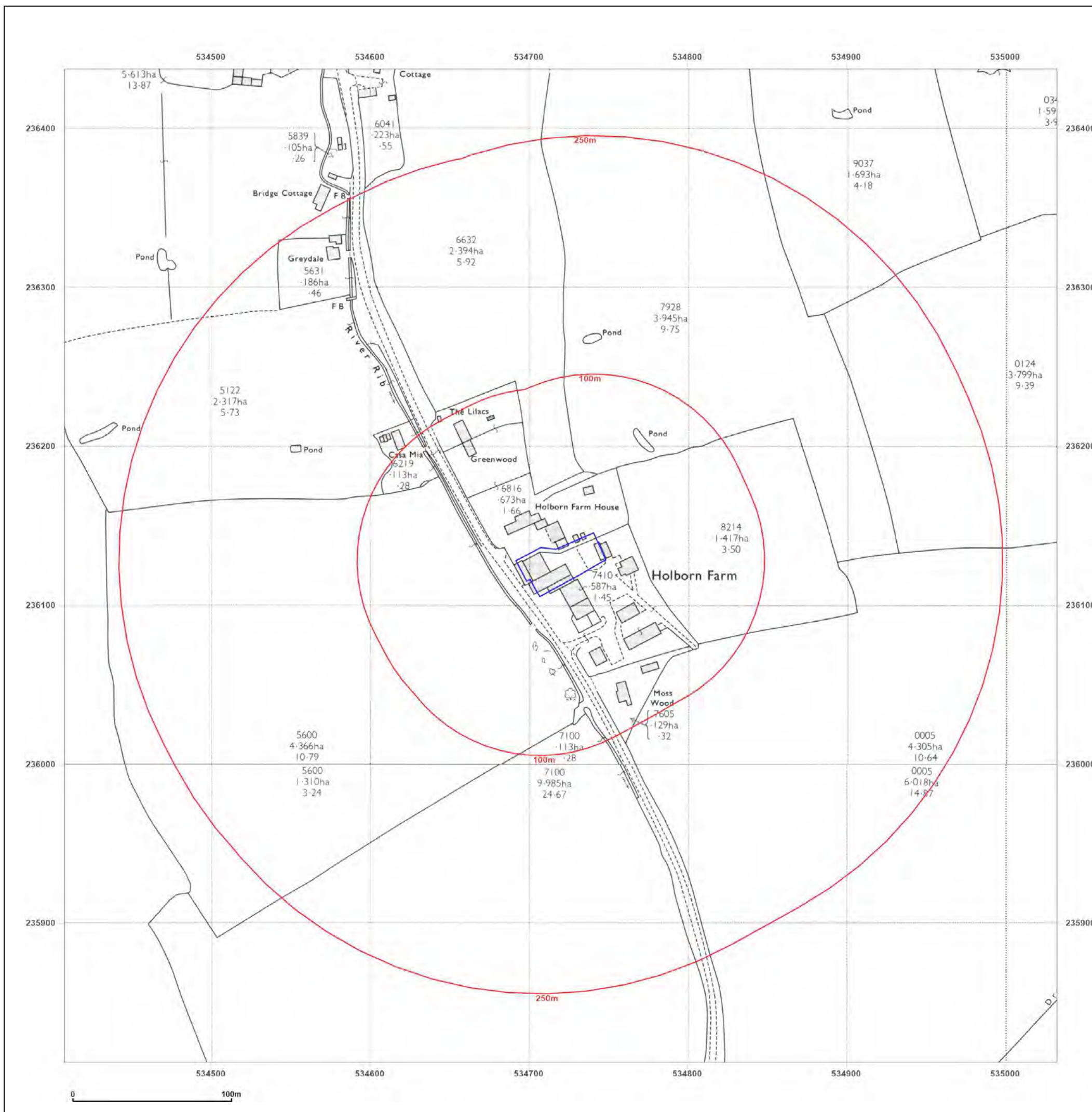


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Site Details:

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Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1993
Revised N/A
Edition N/A
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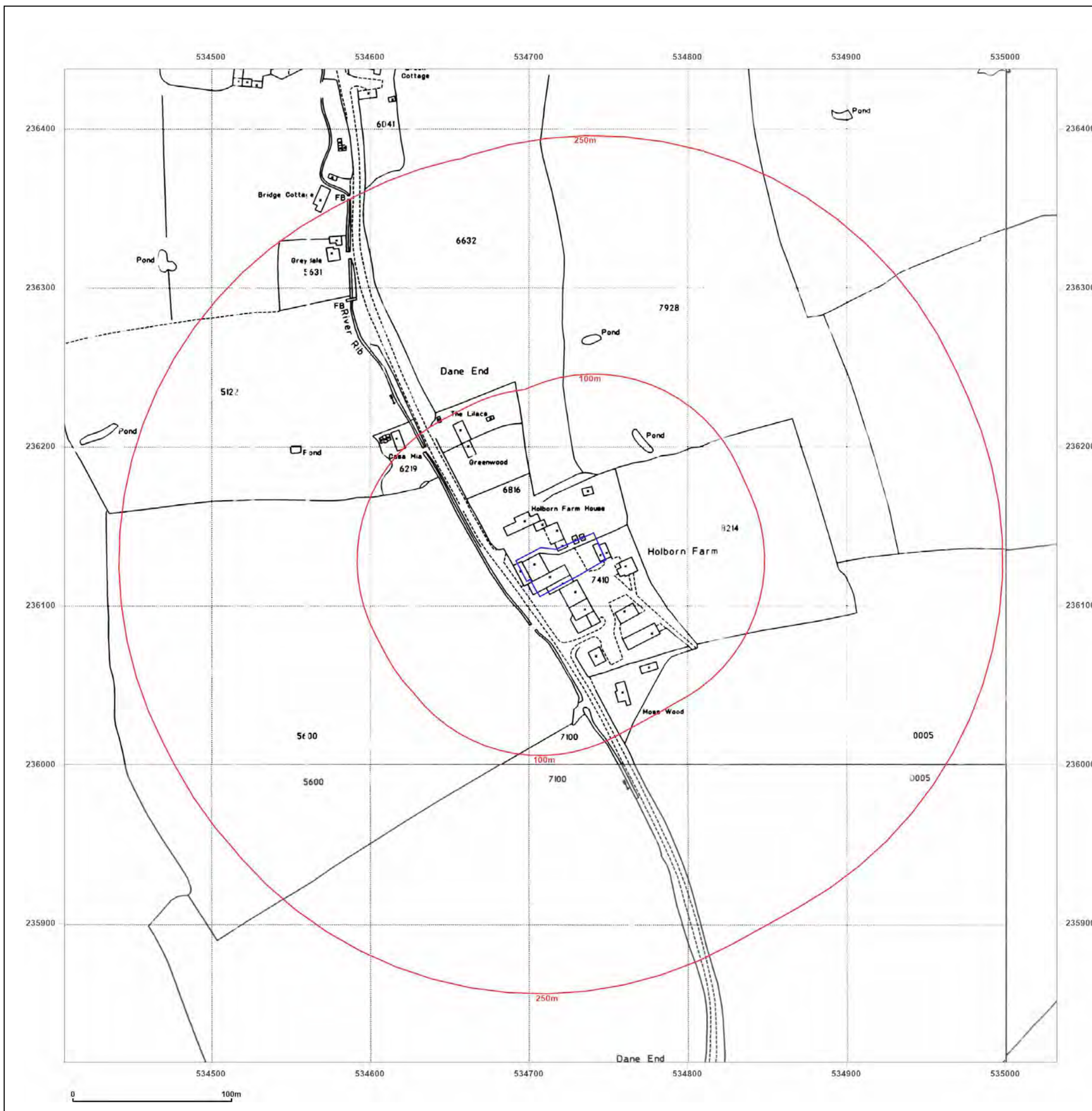


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Site Details:

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9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Site Details:

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Therfield, Hertfordshire, SG8
9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

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9RH

Client Ref: Holborn Barn, SG8 9RH 44782233
Report Ref: GS-SAW-TNN-MDY-I8H
Grid Ref: 534720, 236125

Map Name: National Grid

Map date: 2025

Scale: 1:10,000

Printed at: 1:10,000

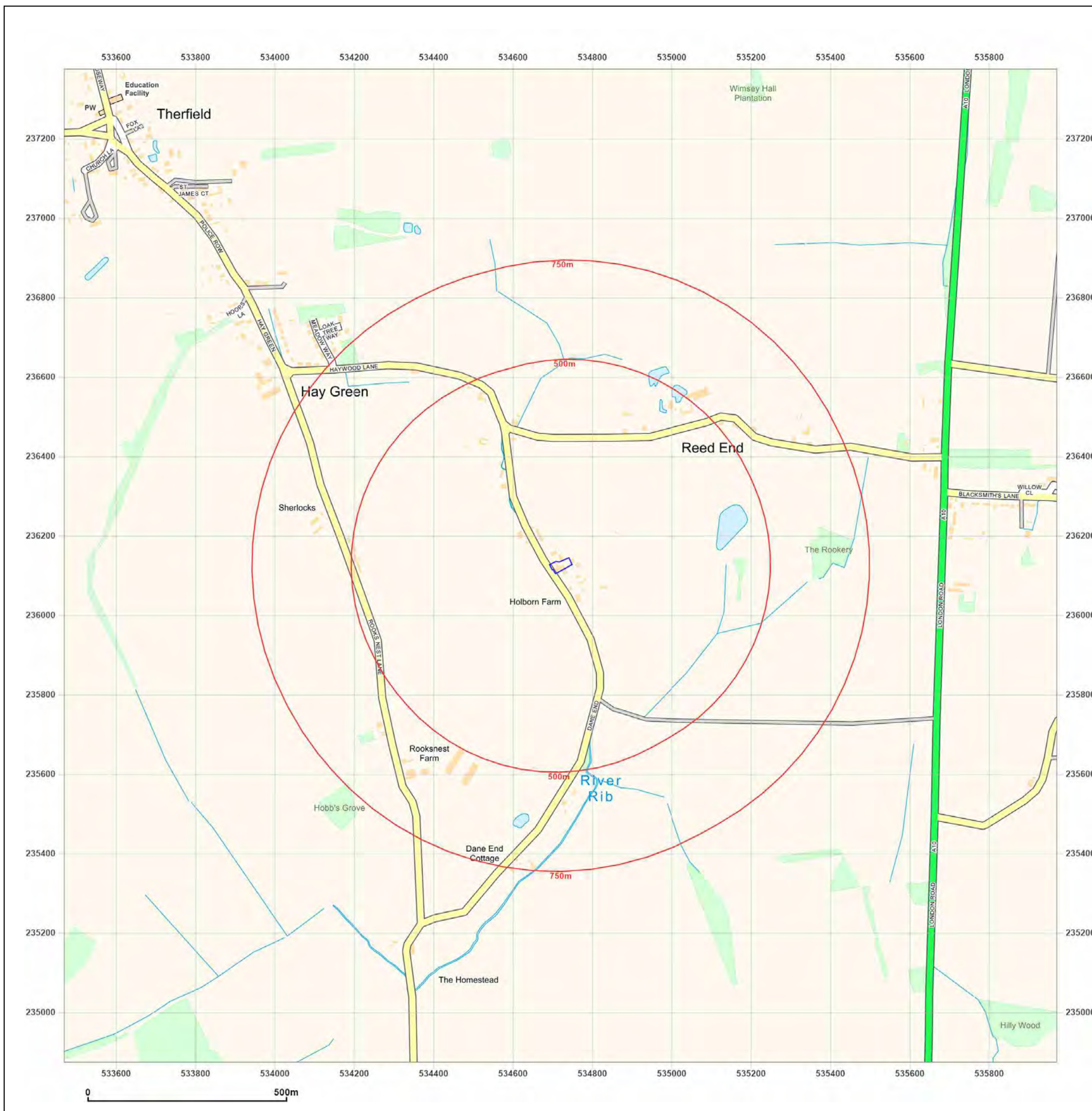


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Map legend available at:
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Appendix 5: Zetica UXO Mapping

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Location: SG8 9RH,
Map Centre: 534660,236212



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- Military**
- Industry**
- UXO find**
- Other**
- Transport**
- Docks**
- Luftwaffe targets**
- Utilities**
- Bombing decoy**
- Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

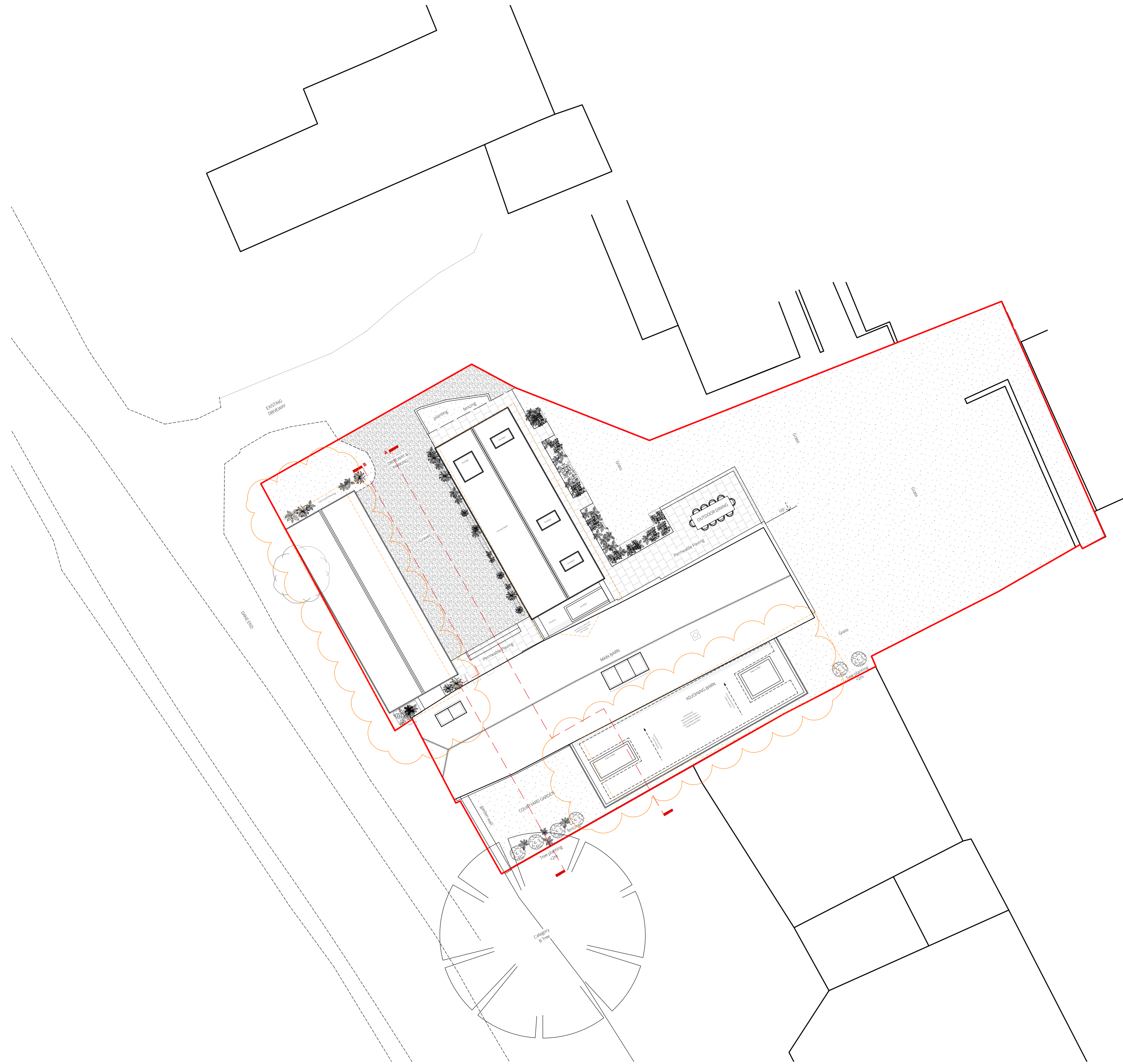
If I have any questions, who do I contact?

tel: [+44 \(0\) 1993 886682](tel:+44(0)1993886682) email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

Appendix 6: Development Plans



Copyright

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All dimensions are to be checked on site by the contractor. Do not scale this drawing. Any errors or omissions are to be reported to the Architect immediately.

This drawing is to be read in conjunction with all the relevant drawings and / or specialists' drawings / documents, any discrepancies or variations to be notified

The contractor shall submit setting out drawings to the Architect for approval, without which, manufacture shall not commence. All work must comply with relevant British Standards and current Building Regulations.

Key

- Site boundary
- Proposed - Turf
- Proposed - Hardstanding (permeable)
- Proposed - Gravel Driveway and parking (permeable)
- Demolition
- Section Location

Notes

Revisions

P1	24/04/2025	Planning Issue
P2	01/10/2025	Car port structure and glazed link reduced to single storey. Internal re-planning of lean-to structure. Elevations amended as appropriate.

PLANNING

Client: Leon Cassidy & Hannah West

Project: Holborn Barn

Scale: 1:200 @ ISO A2

Date: 22/04/2025

300-Pr Site Plan

Unit 2, Foundry Mews / Barnes / London / SW13 9AZ

Appendix 7: Document Production Record

Document number	Editor	Position	Issue number	Date
Arbtech LQ- PRASG89RHR1VO 44782233	C.A.Radiven Bsc Hons MiEnvSci, MIMMM	Geo-Environmental Manager	01	15/12/25

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