KNAPP HICKS & PARTNERS LTD

CONSULTING STRUCTURAL, CIVIL & GEOTECHNICAL ENGINEERS

ISO 9001
REGISTERED FIRM

Prospect House
1 Highpoint Business Village
Henwood Ashford Kent
TN24 8DH
Tel: (01233) 502255

Also at:

Head Office:
Laval House
Great West Quarter
Great West Road Brentford
Middx TW8 0GL
Tel: (020) 8232 1888

Prospect House
24 Prospect Road Ossett
West Yorkshire WF5 8AE
Tel: (01924) 269785

Suite 10 Swan Park Business
Centre 1 Swan Park
Kettlebrooke Road Tamworth
Staffordshire B77 1AG
Tel: (01827) 307691

Web site:
www.knapphicks.co.uk

Directors:
Geoff Davies *(Managing)*
IEng, AMICE

Paul Nicholls
IEng, AMIStructE, AMICE

Pamela Armstrong *(Finance)*
ACMA, MAAT, MCMI

Business Development Director:
Patrick G. Hicks
MSE, PEng, FFB, MRSH

Principal Technical Directors:
Darren Cook
BEng (Hons), CEng, MIStructE
Steve Hazell
IEng, AMIStructE, AMICE
John Moss
IEng, AMIStructE

Technical Directors:
David Chrystal
BEng (Hons), MSc, CEng, MIStructE
Richard Moore
BSc, MSc, FGS, CGeol
Nick Sparrowhawk
BSc (Hons), CEng, MICE, ACILA

Technical Consultant:
David Cherrett
CEng, MIStructE

Associates:
Darryl Bedwell
ACIOB
Sean Fitzpatrick
BSc, CEng, MIStructE
Phillip Taylor-Wright
BSc (Hons) Surveying; Grad BEng; Dip CII; ICIOB

Knapp Hicks & Partners Ltd
Incorporated in England
No. 2886020

Registered office:
Laval House
Brentford, TW8 0GL

DELAWARE BARN
NEWLANDS
DELAWARE FARM
HEVER ROAD
EDENBRIDGE
KENT
TN8 7LD

DESK STUDY REPORT

37011G/R/001/DMB

September 2020

APPROVAL SHEET AND FOREWORD

DELAWARE BARN

NEWLANDS

DELAWARE FARM

HEVER ROAD

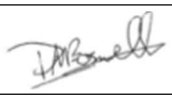
EDENBRIDGE

KENT

TN8 7LD

DESK STUDY REPORT

Report Ref: 37011G/R/001/DMB

Report Status: FINAL		Date of Issue: September 2020
		Signature
Author	**D M Boswell**	
Checked and Approved	**R J Moore**	

This report has been prepared with all reasonable skill, care and diligence within the terms of the contract with the Client and within reasonable limitations of the resources devoted to it by agreement with the Client.

This report is confidential to the Client and Knapp Hicks & Partners Limited accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

This report shall not be used for engineering or contractual purposes unless signed by the author and the approver and on behalf of Knapp Hicks & Partners Limited, and unless the report status is "Final".

EXECUTIVE SUMMARY

Site Location	The site is located 1.65km south east of Edenbridge at grid reference TQ 45910, 45560 and covers an area of approximately 0.17Ha.
Site Description	The site is occupied by an old barn called Delaware Barn (Formerly Brook Field Barn). The building was previously part of the larger Newlands Farm estate. It is a single skin steel portal framed building approximately 5m high, a footprint of 29.1m x 9.6m and orientated north east to south west. The walls are box profile metal sheet steel block walls. The barn is used for agricultural purposes/storage for a motor vehicle and two caravans. The barn is split into three sections; the northern most historical cow shed/hay storage section comprising three bays takes up two thirds of the building with an open south east elevation, the central garage/farm workshop and the stable section with two stables either side of a tack room to the south west gable end. The concrete slab is intact underneath the stable and garage section and the floor underneath the bay section resembles vegetated hardcore. The roof is concrete cement in poor condition underneath the barn bay area with frequent broken cement fragments on the ground. The roof appears to have been previously refurbished under the stable and garage sections albeit with some roof fragments still visible on the ground. The access road is concrete hard standing and runs from the access gate to the south west, along the side of the stable section and along the full length of the building on the south east side. The site slopes gently down to the north east. It is bound by a stream to the south and north west. There are a number of trees along the north east, southern and north west boundaries of the site; Birch, Conifer, Field Maple and Willow were noted.
Proposed Development	The proposed development involves redevelopment of the barn into a residential dwelling with a private garden and driveway.
History	Information gained from historic maps indicates that the site was undeveloped farmland with the current road and stream layout denoted on the 1870 map. No significant changes occurred on site until approximately 1990 when the barn was built. The wider field to the north east was fenced off on the 2003 map as per the present day site boundary.
Geology	The GroundSure Report and the 1:50,000 Geological Map (Onshore Geoindex) indicates that the site is underlain by River Terrace Deposits (Sand And Gravel) underlain by Weald Clay.
Groundwater	No Source Protection Zones (SPZs) are mapped within a 1km radius. No potable water abstractions or groundwater abstractions are noted within a 2km radius.
Surface Waters, Flooding and Surface Water Management	2No surface water abstractions are recorded within a 2km radius of the study site. The closest entry is 1.7kmSE and is an active entry used for spray irrigation. A number of surface water features are denoted within a 250m radius. All entries relate to small tributaries of the River Eden and the closest are small streams situated on the southern and north west boundaries. The site is located within a Zone 2 floodplain for river and coastal flooding and there is a risk of surface water flooding during extreme rainfall events Given the geology, soakaways may be possible into the Sand And Gravel depending on the thickness of the deposits and permeability. Soakaway testing could be undertaken at the same time as trial pits.
Contamination Risk & Recommendations	There is potential for contamination to be present on site. The main concern is the poor condition of the cement sheet roof that potentially contains asbestos. The garage was used for vehicle maintenance activities but the area is clean with no evidence of oil cans or spills. Anecdotally, the northern most section of the barn was used as a cow shed and hay store. Some contamination testing of representative samples should be carried out by way of due diligence to check that any arisings are suitable for re-use and that there is no contamination present which might affect potential receptors such as the adjacent stream, groundworkers and future residents.

TABLE OF CONTENTS

1 INTRODUCTION

Knapp Hicks and Partners Limited (KHPL) were instructed by Mr Peter John Howe (the Client) to prepare a Desk Study for at plot of land at Newlands, Delaware Farm, in Edenbridge, Kent (The Site) to obtain information on ground conditions for a barn redevelopment into a residential dwelling with private gardens and associated parking. This report has been prepared with due diligence and care. However, the contents should be read with due regard to the time and financial resources made available. This report is written in accordance with current guidance.

Whilst every effort has been made to ensure the accuracy of the data supplied and any analysis derived from it, there may be conditions at the site that have not been disclosed by the available records and could not, therefore, be taken into account. In particular, it should be noted that groundwater conditions vary due to seasonal and other effects and may at times be significantly different from those measured by intrusive investigations. No liability can be accepted for any such variations in these conditions.

KHPL have an in-house specialist asbestos investigation consultancy. Any reference to asbestos in this document has been reviewed by our consultancy and deemed accurate as far as is reasonably practicable with the information to hand.

Any guidance provided in this document in reference to radon gas protection measures is current at the time of writing. KHPL recommend the level of protection should be confirmed with the Local Authority Building Control prior to commencing construction on site.

Knapp Hicks and Partners are not specialist arboriculturalists and therefore any plant identifications are advisory and should be confirmed by a suitably qualified specialist in due course.

In addition, any recommendations made are specific to the development as detailed in this report, and no liability will be accepted should they be used for the design of alternative schemes without prior consultation with KHPL.

1.1 Walkover Survey and Site Description

The site was visited by a Knapp Hicks' geo-environmental engineer on 14th September 2020. The weather during the visit was dry with a clear sky. The following text describes the site and incorporates observations made during our site walkover.

The site is occupied by an old barn called Delaware Barn (Formerly Brook Field Barn). The building was previously part of the larger Newlands Farm estate. It is a single skin steel portal framed building approximately 5m high, a footprint of 29.1m x 9.6m and orientated north east to south west. The walls are box profile metal sheet steel and breeze block. The barn is currently used for agricultural purposes/storage for a motor vehicle and two caravans.

The barn is split into three sections; the northern most historical cow shed/hay storage section comprising three bays takes up two thirds of the building with an open south east elevation, the central garage/farm workshop and the stable section with two stables either side of a tack room to the south west gable end.

The access road is concrete hard standing and runs from the access gate to the south west, along the side of the stable section and along the full length of the building on the south east side.

The roof is concrete cement in poor condition underneath the barn bay area with frequent broken cement fragments on the ground. The roof appears to have been previously refurbished under the stable and garage sections albeit with some roof fragments still visible on the ground.

The access road is concrete hard standing and runs from the access gate to the south west in front of the stable section and along the full length of the building on the south east side.

The site slopes gently down to the north east. It bound by a stream to the south and north west. There are a number of trees along the north east, southern and north west boundaries of the site; Birch, Conifer, Field Maple and Willow were noted. The deepest roots will need to be established during the proposed site investigation.

1.2 Geology

The GroundSure Report and the 1:50,000 Geological Map (Onshore Geoindex) indicates that the site is covered with Superficial deposits River Terrace Deposits (Sands And Gravel) overlying Weald Clay.

1.3 Proposed Development

The proposed development involves conversion of a barn redevelopment into a single residential dwelling with private garden and associated parking. It is proposed that the existing concrete slab will be overlaid with insulation and new floor screed/finishes. The steel frame and breeze block walls are to remain in situ.

2. GEO-ENVIRONMENTAL DESK STUDY

2.1 Review of Environmental Information & Historic Maps

A Groundsure Report was obtained by KHPL and the information is reviewed below. The main purpose of the review is to identify potential sources of contamination, or other potential issues on or off site, that could have an impact on the development.

The Groundsure information was gathered by Emapsite and provides selected data collected from a number of agencies and departments, including the following: The Environment Agency, local authorities, English Nature, Health Protection Agency and the British Geological Survey using their computerised database facility. A summary of the information is given below and the full Groundsure Report is provided as an Appendix to this report.

Environmental Permits, Incidents and Registers	3No Licensed Discharge Consents are recorded within a 500m radius of the study site. Two entries within 250m. The first is located 124mN and relates to an unspecified effluent discharge into the River Eden. The second is located 206mN and relates to sewage discharge into the River Eden. There are none of the following within 500m of the site: NIRS List 1 or List 2 incidents; EA/NRW pollution incidents; Historic IPC authorisations; Part A(1) IPP Authorised activities; Part A(2) and Part B activities and enforcements; Red List Discharge Consents; List 1 Dangerous Substances Inventory Sites; List 2 Dangerous Substances Inventory Sites; Category 3 or 4 Radioactive substances authorisations. Records of Planning Hazardous Substance Consents and Enforcements; Sites determined as Contaminated Land under Part 2A EPA 1990; Water Industry Referral sites.
Landfills & Other Waste Site	A historical refuse tip (inert waste) is recorded 453mW and is dated as last active in 1964.
Current Land Use	The Groundsure Report does not record any potential on site potentially contaminative industrial land use within 250m radius. No petrol/fuel sites or high pressure gas pipelines or high voltage electricity cables are denoted within a 500m radius of the site.
Historic Land Use	Historical Land Use shows 5No potentially contaminated past land uses within 500m of the site. The entries relate to a Lime Kiln 258mNW and 4No. cuttings mapped between 429mW and 451mW. There are no historic tanks denoted within a 500m radius. No historical energy features, petrol and fuel sites or garage and motor repairs sites are located within 500m of the site. No potentially infilled land entries are denoted within a 500m radius.
Radon	The site is located in an area where less than 1% of homes are above the Action level as determined by the Health Protection Agency and the British Geological Survey (BGS). It is assessed by the BGS that Radon Protection Measures are not required, based on BRE Guidance (BR211).
Geology, Ground Workings & Natural Hazards	Reference to the Groundsure Report indicates the site is generally at Negligible to Low risk from natural hazards such as ground dissolution, collapsible deposits, running sands and compressible deposits. The Groundsure Report indicates the site is at a low risk of shrink swell clays. Details for each can be found below: • Shrink Swell Clays – Low • Landslides – Very Low • Soluble Rocks – Negligible • Compressible Deposits - Negligible • Collapsible Deposits – Very Low • Running Sands – Very Low

	The permeability of the bedrock is Very Low to Low through fractures in the underlying Weald Clay Formation - Mudstone. The superficial River Terrace deposits (Sand And Gravel) are a Secondary A aquifer. Small-scale underground Iron Ore mining may have occurred on site. Potential for difficult ground conditions are at a level where they should be considered although past underground workings are considered unlikely. No historical mining, coal mining, JPB records or brine affected areas within a 1km radius. No landslips are recorded within 500m of the site. No linear features or artificial grounds are mapped within a 500m radius of the study site. No brine or gypsum extraction, tin or clay mining or natural cavities are recorded within 1km of the study site. No historic surface ground workings within a 250m radius or historic underground workings are recorded within a 1km radius. No current ground working are recorded within 1km radius of the site No boreholes records are recorded within a 250m radius of the study site. One estimated background soil chemistry entry is recorded on site: Arsenic- 15-25mg/kg, Cadmium <1.8mg/kg, Chromium 60-90mg/kg, Nickel 15-30mg/kg and Lead <100mg/kg.
Groundwater Vulnerability	No Source Protection Zones (SPZs) are recorded within a 1km radius. The superficial deposits of the River Terrace Deposits are recorded as a Secondary A Aquifer. The bedrock deposits beneath the superficial soils are considered Unproductive Strata (Weald Clay). This means very low permeability. The soil leaching potential is recorded a Low Leaching Potential (L) due to the underlying Weald Clay. No Groundwater abstractions are recorded within a 2km radius. No potable water abstractions are noted within a 2km radius.
Surface Water	2No surface water abstractions are recorded within a 2km radius of the study site. The closest entry is 367mN and is an active entry used for spray irrigation. A number of surface water features are mapped within a 250m radius. All entries relate to small tributaries of the River Eden and the closest runs along the southern and north west site boundary and is a small stream.
Flooding (Based on Environment Agency and Geological Survey Guidance)	The site located within a Zone 2 floodplain for river and coastal flooding. There is a risk of surface water flooding during extreme rainfall events (1 in 1000 year, 0.1 – 0.3m). There is a low risk from groundwater flooding.
Environmental Sensitivity	There are no Nitrate Vulnerable Zones are recorded within a 2km radius. No Sites of Special Scientific Interest (SSSI) are recorded within a 1km radius. The site is listed as a SSSI Risk Zone but the proposal to redevelop the site is not under a category that requires a consultation. No National Nature Reserves (NNR) are denoted within a 2km radius. 17No Ancient Woodlands are located within 2km of the site. No entry is recorded within a 250m radius. The site is recorded as Green Belt Land and the site is listed as a Conservation Area. No Environmental Sensitive Area, Special Protection Areas (SPA), Ramsar sites, World Heritage Sites, Special Area of Conservation (SAC), Local Nature Reserves or National Parks are recorded within 2km of the site.

Railway & Tunnels	No tunnels or railways are recorded within a 250m radius of the site. No historic railway sidings are present within a 250m radius of the site. There are no active railways or railway projects within 250m of the site.
Site History	A review has been carried out of the available historical Ordnance Survey maps covering the area of the site. The Information shown on the maps is considered relevant to this assessment and given below. The maps are at scales of 1:10,560, 1:10,000, 1:2,500 and 1:1,250. It should be noted, however, that each publication reviewed is based on details recorded at the time of the survey and is subject to surveying and mapping errors, as well as advances in data gathering and improvements in cartography. Revisions to maps are made at irregular intervals and it is possible that some developments and activities have taken place within the area under consideration that may not have been revealed. Maps are attached for reference.
Map *1870, 1897, 1908* *1:2,500* *1870, 1907, 1936-37* *1:10,560*	*On site:* On the first supplied maps, the site occupied the south west corner of an open field. The site is undeveloped at this time. The streams to the north west and to the south are clearly mapped in addition to the sluice gate on the stream to the south. *Off site:* The site is surrounded by open fields. Delaware Farm is mapped 100m to the north.
Maps 1965, 1985 *1:2,500* 1961, 1975-1976 *1:10,560*	*On site:* No significant changes are mapped on site. *Off site:* On the 1964 map three dwellings mapped as the Delaware Cottages are located between 100m south south west and 175m south west. On the 1985 mapping the farmhouse on the adjacent land 80m to the south west is denoted.
Map 2003 *1:2500* 2001, 2010, 2020 *1:10,000*	*On site:* On the 2003 map, Delaware Barn is now mapped and the wider field to the north east is fenced off as per the present day site boundary. Historic Google aerial images show the building on the December 1990 imagery. *Off site:* No significant changes are mapped within the immediate vicinity of the site.

Table 2.1 – Summary of Groundsure environmental information

2.2 Preliminary Ground Engineering Considerations

From the BGS geological mapping data, the geology beneath the site is expected to be topsoil over Superficial Deposits of River Terrace Deposits (Sand And Gravel) overlying Weald Clay - Mudstone interbedded with bands of clay, silt and sand deposited in a fluvial, estuary or delta environment.

The soils representative of the Weald Clay formation are expected to be cohesive and are expected to have medium to high shrinkage potential.

There are a number of trees along the north east, southern and north west boundaries of the site; Birch, Conifer, Field Maple and Willow were noted. One mature 16m high conifer was noted approximately 5m from the building.

The site is recorded to be in an area where small-scale underground Iron Ore mining may have occurred. Potential for localised difficult ground conditions are unlikely or localised but historical activity is at a level where it should be considered.

Given the geology, soakaways into the Sand And Gravel may be possible but will depend on the thickness and permeability of the deposits. However, a high groundwater level is also anticipated due to the stream alongside and may preclude the use of soakaways. Soakage testing could be undertaken at the same time as trial pits.

2.3 Conceptual Site Model

For the assessment of contamination, a risk-based approach is utilised in accordance with the Environment Agency's 'Model Procedures for the Management of Land Contamination' (CLR11). In the development of a Conceptual Site Model, consideration is given to potential sources of contamination, potential targets (receptors) and how the sources and targets may be linked (the pathway). Significant risk due to contamination will only be considered to exist where a reasonable linkage from the source to receptor can be identified.

A proposed residential with plant uptake end-use is considered appropriate for this assessment.

Potential Sources	**Potential Pathways**	**Potential Receptors**
On Site Existing Made Ground & Asbestos Containing Materials (ACMs) associated with the existing barn roof. Heavy metals, pesticides, and herbicides from previous agricultural land usage in the shallow Made Ground. Reworked ground associated with small-scale iron ore mining noted on site.	Inhalation of dust and vapours Dermal contact with and ingestion of soil during site works Migration of metals through root systems Dermal contact with soil during proposed end use	Residents of the proposed development Construction workers during development Site structures and utilities Plant growth in adjacent areas Surface water drains and adjacent streams.
Off Site Tanks are present on the neighbouring farm to the south on the other side of the stream. Heavy metals/TPH/PAHs	Migration via buried services Horizontal/Vertical migration of hydrocarbon plumes from leaks and spills Migration of contaminants through root systems Hydrocarbon VOCs emitting from any plumes	Surface water drains and adjacent streams. Secondary A Aquifer - River Terrace Deposits (Sand And Gravel) Residents of the proposed development Construction workers during development Site structures and utilities Plant growth in adjacent areas

Table 2.3 – Preliminary Conceptual Site Model

Information gained from historic maps indicates that the site was undeveloped farmland until around 1990 when the barn was built. As the barn was built prior to 2000, the cement roofing sheets could potentially contain asbestos and it is a requirement that this be assessed by a specialist asbestos surveyor prior to refurbishment and any ACMs removed as required.

The Garage/Workshop on the south west end of the barn is in use to store a motor vehicle. It was noted that the access road hardstanding (concrete slab) is cracked in places, but the concrete slabs generally appeared clean with no evidence of oil stains etc.

The site is located near other farm buildings associated with Newlands Farm. There are limited off-site sources of contamination identified within the immediate vicinity of the site at the adjacent farm to the south. The diesel, septic tank and heating oil tanks are all understood to be in working order.

There is no sign of contamination in the stream separating the two properties. Therefore, it is not considered to pose a potential contamination risk to the site nor is 'the site' likely to contaminate the stream.

Based on the Conceptual Site Model presented in Table 2.3, and information gained from the earlier investigations, Table 2.4 provides a Preliminary Qualitative Risk Assessment for the site. Classification of consequence, probability and risk used are adopted from CIRIA C552:2001 'Contaminated Land Risk Assessment – a guide to good practice' and a summary of the process is included in Appendix A.

Source/Contaminants	Pathway	Receptor	Consequence of Occurrence	Probability of Occurrence	Risk
Toxic Metals from superficial made ground	Ingestion, Inhalation, Direct Contact	Humans	Medium	Unlikely	Low
		Underground water supply pipes	Medium	Unlikely	Low
Phytotoxic Metals from the superficial made ground	Uptake by roots	Flora	Medium	Unlikely	Low
Petroleum Hydrocarbons from superficial made ground	Ingestion, Inhalation, Direct Contact	Humans	Medium	Unlikely	Low
	Inhibition of concrete setting	Buildings	Minor	Unlikely	Very Low
	Direct contact	Underground water supply pipes	Medium	Unlikely	Low
Leachable and mobile hydrocarbons from made ground or fuel spillages/leakages (associated with the farm machinery, neighbouring farm tanks and made ground) Benzene, toluene, ethyl benzene and xylenes (BTEX), Polychlorinated biphenyl (PCBs) Chlorinated hydrocarbons and polycyclic aromatic hydrocarbons (PAH)	Migration via permeable strata or groundwater	Groundwater	Medium	Unlikely	Low
		Underground water supply pipes	Medium	Unlikely	Low
Pesticides and Herbicides	Ingestion, Inhalation, Direct Contact	Humans	Severe	Low Likelyhood	Moderate
	Migration via permeable strata or groundwater	Local watercourse	Medium	Low Likelyhood	Moderate/Low
Soil gasses arising from superficial made ground	Migration via permeable strata	Humans	Severe	Unlikely	Moderate/Low
		Buildings (explosion, fire)	Mild	Unlikely	Very Low
		Flora and Fauna	Minor	Unlikely	Very Low
Sulphates and Corrosives arising from superficial made ground	Direct contact	Buildings	Mild	Unlikely	Very Low
		Humans	Mild	Unlikely	Very Low
Asbestos from buildings / demolition (ACMs)	Ingestion, Inhalation	Humans	Severe	Likely	High*

Classification of Consequence, Probability and Risk have been defined based on CIRIA C552:2001 guidance (Appendix B). * Risk associated with ACMs is assessed as low based on an assumption that the existing buildings will be surveyed and any ACM products removed in accordance with accepted good practice for dealing with ACMs.

Table 2.4 – Preliminary Risk Assessment (Based on Desk Study)

The most likely risks to human health are as follows:

- Potential for contamination to be present on site due to the use of the land as farmland and the presence of the barn.
- The main concern is the poor condition of the cement sheet roof that potentially contains asbestos.
- The floor slab in the vehicle storage area to the southern end of the existing building seems clean and therefore potential risks from metals, TPHs, PAHs, PCBs, BTEX, ACMs, through vehicle maintenance activities is observed to be low.
- Anecdotally, the northern most section of the barn was used as a cow shed although it may have been used for farm-related storage.

The risks listed above may be reviewed as part of the geotechnical site investigation and when the site is prepared for redevelopment risks can be amended. In the event that deposits of made ground, stained or odorous soils, or elevated test results are encountered.

3.0 GEOENVIRONMENTAL CONCLUSIONS AND RECOMMENDATIONS

Contamination

Overall, the assessed risk for contamination at this site is generally Low. The main risk of contamination is in association with the poor condition of the cement sheet roof.

It is understood that the concrete slab is to be retained in the refurbishment but it should be noted that its condition especially underneath the bay area, is unclear. The visible patchy hardcore and Made Ground Topsoil ground surface and vegetation may indicate a degraded condition which requires further investigation of the foundations.

The surrounding near surface soils designated for gardens use are potentially contaminated with ACMs due to visible fragments of cement roof sheets around the eastern side of the barn. In addition, shallow Made Ground could be present. It is recommended that representative samples of the soils that are to remain on site be sampled during the geotechnical investigation to ensure they are suitable for retention on site in gardens and landscaped areas.

By way of due-diligence, groundworkers should remain vigilant for evidence of made ground, or other potential sources of contamination such as odorous or stained soils or broken concrete roof sheets.

Ground Gas

The British Geological Survey have assessed that no radon protection measures are required.

Localised deposits of shallow Made Ground could be present beneath the site but is unlikely to be present in quantities posing a significant risk of ground gases.

Groundwater

Depth to groundwater is presently not known but is likely to be at the level of the adjacent stream. There are no BGS borehole located within 250m of the site. The Weald Clay has a variable permeability due to the presence of sand lenses and factures, mudstone and sandstone within the Weald Clay.

4. RECOMMENDATIONS FOR FURTHER INVESTIGATION

The following recommendations are proposed on the assumption that the client will have cleared all matters associated with ecology and archaeology at this site.

Contamination

Based on the previous land use of the site for agricultural purposes and grazing it is reasonable to assume that shallow Made Ground will be encountered. It is suggested that suite of testing is carried out for a range of contaminants including asbestos, heavy metals, PAH, BTEX, and TPH at the location of the garden areas.

Given that the site was used for agricultural purposes, it is considered that pesticides and herbicides may have been used in the past. Since the foundation slab is being reused limited excavation will be required and hence limited excavation of soils and removal from site is expected. If any soil is excavated and requires removal from site it is recommended that it be analysed with a Waste Acceptance Criteria (WAC) laboratory analysis to aid the correct disposal.

Further testing is only likely to be required if contamination from the fallen roof sheeting is widespread in the surrounding soils or odorous/unexpected soils are encountered during the construction.

Geotechnical

The soils representative of the Weald Clay formation are expected to be cohesive and are probably medium to high shrinkage potential. There are a few large trees along the north eastern and north western boundary of the site, close to the development area and therefore it is important that detailed consideration be given to the assessment of potential desiccation of these soils to ensure that appropriate foundation types and depths are confirmed to fulfil the requirements of NHBC Chapter 4.2 *Building near trees* and ensure the long term performance of the proposed dwelling.

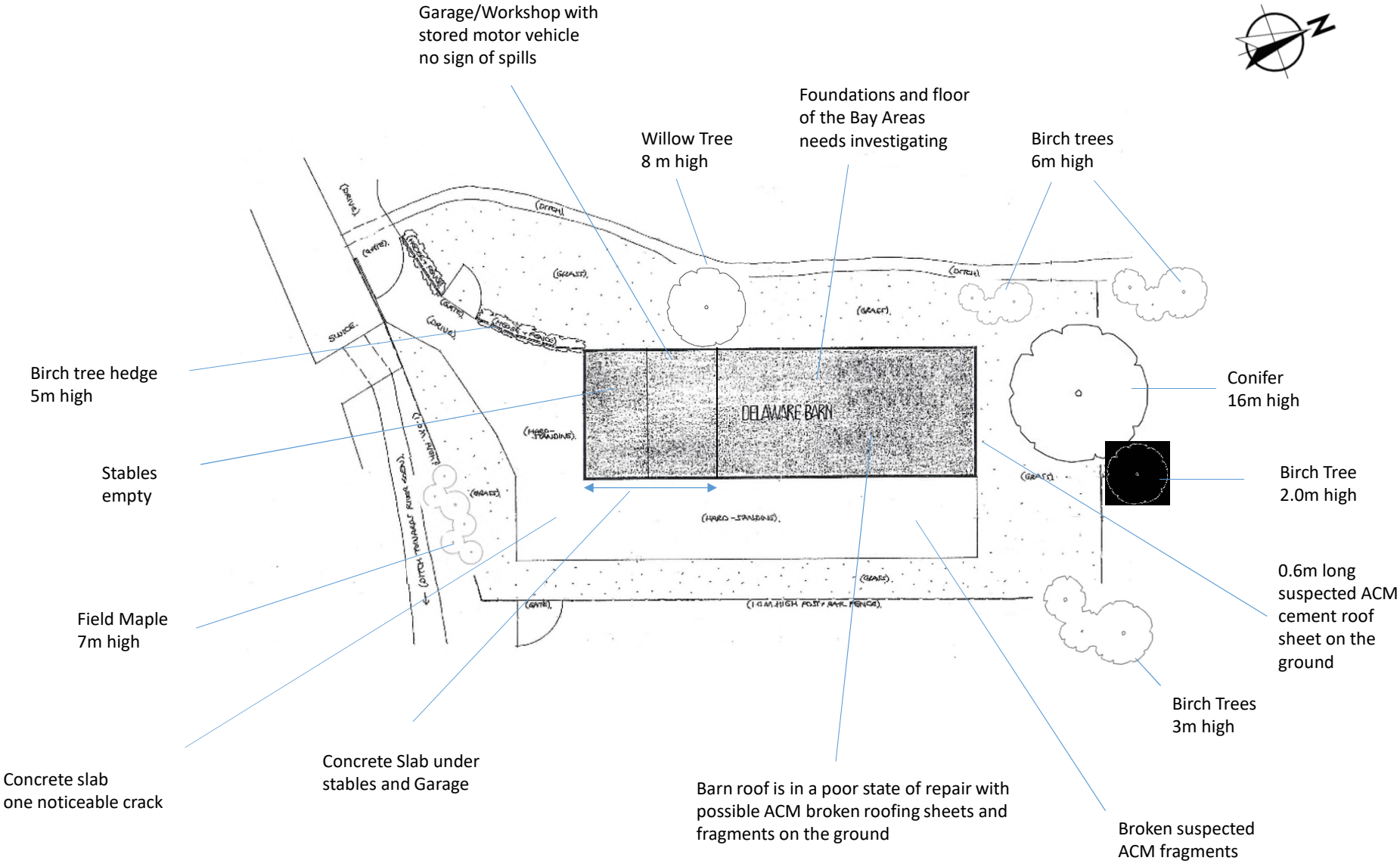
Initially, we recommend that a number of machine dug trial pits are undertaken at representative locations to address the issues described above.

The site is considered to be in an area where small scale underground Iron Ore mining may have occurred. Potential for localised difficult ground conditions are at a level where they should be considered as trial pitting is undertaken.

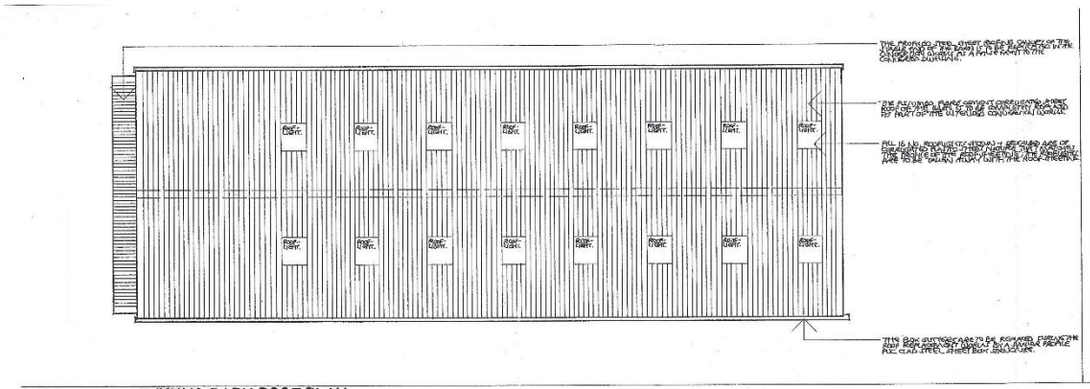
Given the geology, soakaways may be possible into the Sand And Gravel depending on the thickness of the deposits and permeability. Soakage testing could be undertaken at the same time as the trial pits.

Site Plans

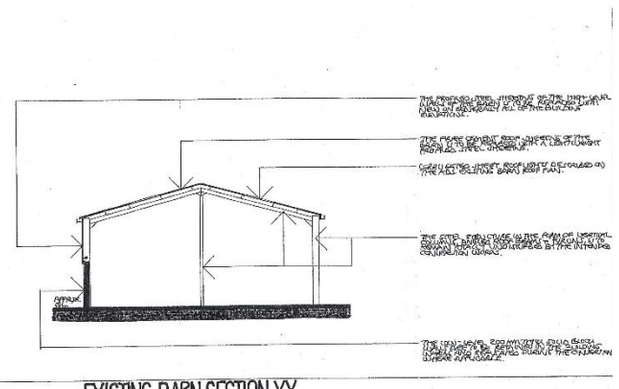
Site Plan


Garage/Workshop with stored motor vehicle no sign of spills
Willow Tree 8 m high
Foundations and floor of the Bay Areas needs investigating
Birch trees 6m high
Birch tree hedge 5m high
Stables empty
Field Maple 7m high
Concrete slab one noticeable crack
Concrete Slab under stables and Garage
Barn roof is in a poor state of repair with possible ACM broken roofing sheets and fragments on the ground
Broken suspected ACM fragments
Conifer 16m high
Birch Tree 2.0m high
0.6m long suspected ACM cement roof sheet on the ground
Birch Trees 3m high
DELAWARE BARN
(DRIVE)
(DITCH)
(GATE)
(GRASS)
SLURRY
(HARD-STANDING)
(1.8M HIGH POST & RAIL FENCE)

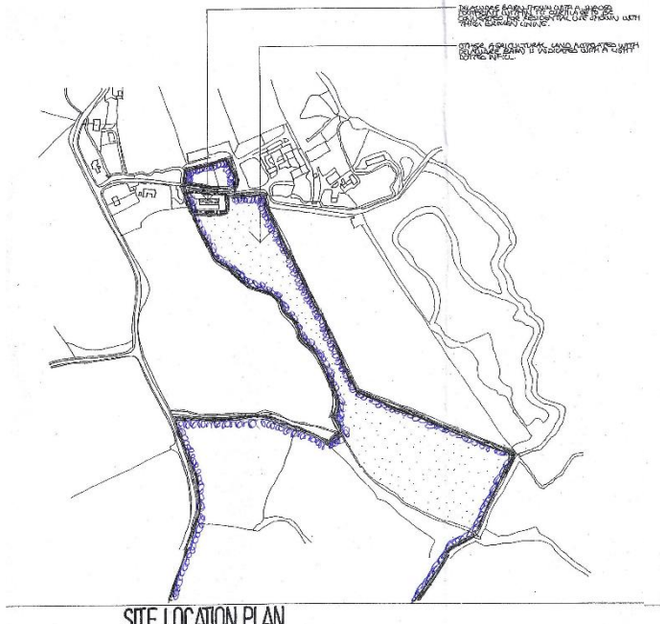
Location and Existing Building Plan



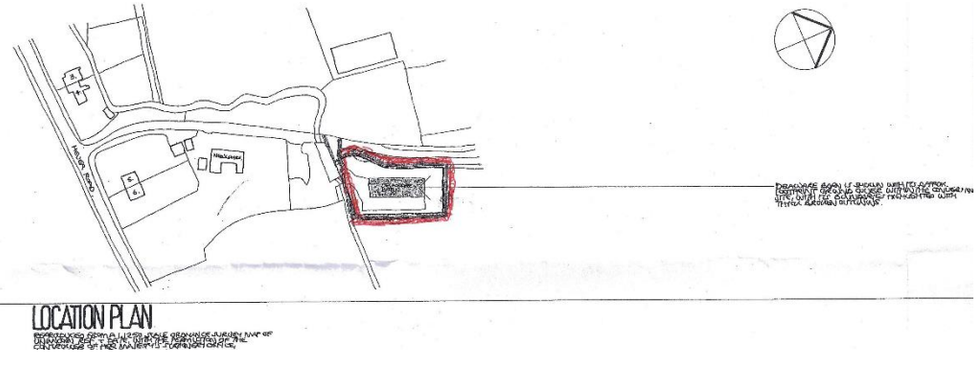
EXISTING BARN ROOF PLAN



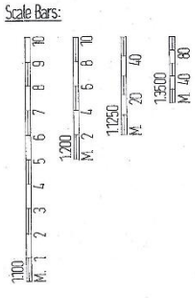
EXISTING BARN SECTION XX



SITE LOCATION PLAN

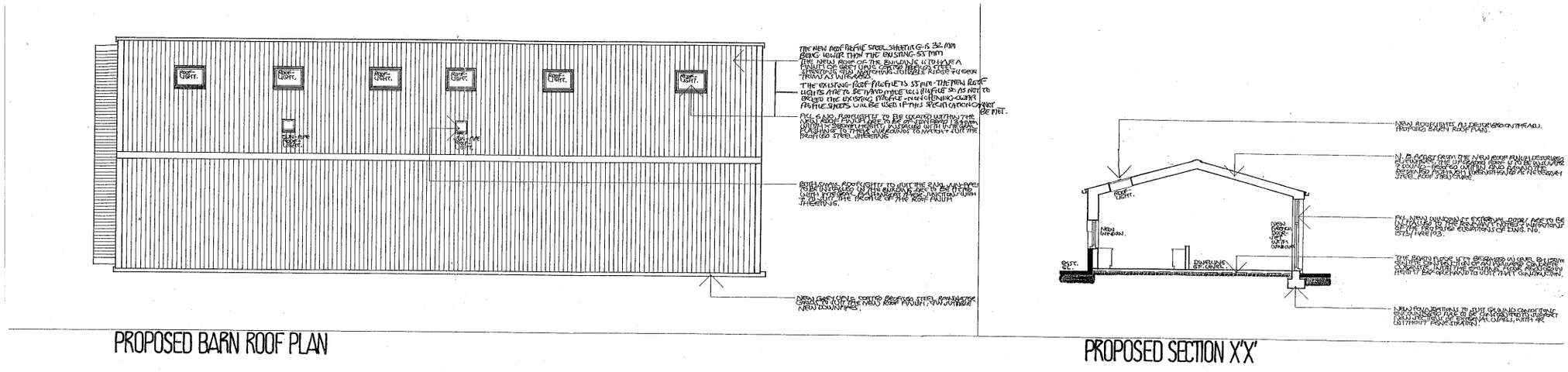


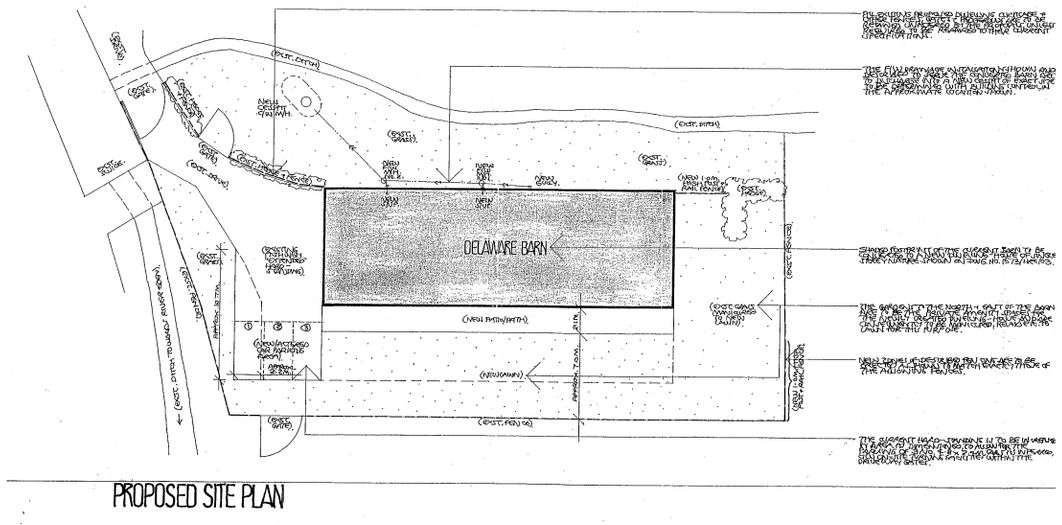
LOCATION PLAN

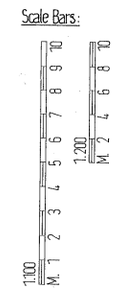


Original Drawing taken from Dwg No. SURV 021. Dated Jan 2018

Previously Approved Scheme for Conversion







Original Drawing taken from Dwg No. PRO 021. Dated Feb 2018

Photographs

1. Sluice Gate on Southern Boundary

2. Field Maple on the Southern Boundary

3. South Eastern Boundary

4. North East Boundary with Large Conifer Tree

5. North West Boundary with Birch Trees and Stream

6. North West Boundary

7. Barn Bays 1 to 3

8. Barn Roof Damage

9. Garage Farm Workshop

10. Neighbouring Farm Buildings to the South

11. Roof Sheet Cement in Bay 1

12. Stables

Appendix A
Groundsure Report

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Newlands Barn, Delaware Farm, Edenbridge, TN8 7LD,

Order Details

Date: 09/09/2020

Your ref: EMS_632688_841485

Our Ref: EMS-632688_841485

Client: emapsite

Site Details

Location: 545951 145629

Area: 0.12 ha

Authority: Sevenoaks District Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	**1.1**	**Historical industrial land uses**	0	0	0	4	-
15	1.2	Historical tanks	0	0	0	0	-
15	1.3	Historical energy features	0	0	0	0	-
15	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	5	-
18	2.2	Historical tanks	0	0	0	0	-
18	2.3	Historical energy features	0	0	0	0	-
18	2.4	Historical petrol stations	0	0	0	0	-
18	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	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	1	-
20	**3.4**	**Historical landfill (EA/NRW records)**	0	0	0	1	-
20	3.5	Historical waste sites	0	0	0	0	-
21	3.6	Licensed waste sites	0	0	0	0	-
21	**3.7**	**Waste exemptions**	0	0	1	0	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
22	4.1	Recent industrial land uses	0	0	0	-	-
22	4.2	Current or recent petrol stations	0	0	0	0	-
23	4.3	Electricity cables	0	0	0	0	-
23	4.4	Gas pipelines	0	0	0	0	-
23	4.5	Sites determined as Contaminated Land	0	0	0	0	-

23	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
23	4.7	Regulated explosive sites	0	0	0	0	-
24	4.8	Hazardous substance storage/usage	0	0	0	0	-
24	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
24	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
24	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
24	4.12	Radioactive Substance Authorisations	0	0	0	0	-
25	**4.13**	**Licensed Discharges to controlled waters**	0	0	2	1	-
25	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
25	4.15	Pollutant release to public sewer	0	0	0	0	-
26	4.16	List 1 Dangerous Substances	0	0	0	0	-
26	4.17	List 2 Dangerous Substances	0	0	0	0	-
26	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	2	-
26	4.19	Pollution inventory substances	0	0	0	0	-
27	4.20	Pollution inventory waste transfers	0	0	0	0	-
27	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
28	**5.1**	**Superficial aquifer**	Identified (within 500m)				
29	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
30	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
31	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
31	5.5	Groundwater vulnerability- local information	None (within 0m)				
32	5.6	Groundwater abstractions	0	0	0	0	0
33	**5.7**	**Surface water abstractions**	0	0	0	2	4
34	5.8	Potable abstractions	0	0	0	0	0
34	5.9	Source Protection Zones	0	0	0	0	-
35	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
36	**6.1**	**Water Network (OS MasterMap)**	3	7	15	-	-

39	6.2	Surface water features	1	2	4	-	-
39	6.3	WFD Surface water body catchments	1	-	-	-	-
39	6.4	WFD Surface water bodies	0	0	1	-	-
40	6.5	WFD Groundwater bodies	0	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
41	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	High (within 50m)				
42	7.2	Historical Flood Events	3	0	1	-	-
42	7.3	Flood Defences	0	0	0	-	-
42	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
43	7.5	Flood Storage Areas	0	0	0	-	-
44	7.6	Flood Zone 2	Identified (within 50m)				
45	7.7	Flood Zone 3	Identified (within 50m)				
Page	Section	Surface water flooding					
46	8.1	Surface water flooding	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
48	9.1	Groundwater flooding	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
49	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
50	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
50	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
50	10.4	Special Protection Areas (SPA)	0	0	0	0	0
50	10.5	National Nature Reserves (NNR)	0	0	0	0	0
51	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
51	10.7	Designated Ancient Woodland	0	0	0	0	17
52	10.8	Biosphere Reserves	0	0	0	0	0
52	10.9	Forest Parks	0	0	0	0	0
52	10.10	Marine Conservation Zones	0	0	0	0	0
52	10.11	Green Belt	1	0	0	0	0
53	10.12	Proposed Ramsar sites	0	0	0	0	0

53	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
53	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
53	10.15	Nitrate Sensitive Areas	0	0	0	0	0
54	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
55	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
56	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
57	11.1	World Heritage Sites	0	0	0	-	-
58	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
58	11.3	National Parks	0	0	0	-	-
58	**11.4**	**Listed Buildings**	0	0	**4**	-	-
59	**11.5**	**Conservation Areas**	1	0	0	-	-
59	11.6	Scheduled Ancient Monuments	0	0	0	-	-
59	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
60	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
61	12.2	Open Access Land	0	0	0	-	-
61	12.3	Tree Felling Licences	0	0	0	-	-
61	**12.4**	**Environmental Stewardship Schemes**	1	1	0	-	-
61	**12.5**	**Countryside Stewardship Schemes**	0	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
63	13.1	Priority Habitat Inventory	0	0	0	-	-
63	13.2	Habitat Networks	0	0	0	-	-
63	13.3	Open Mosaic Habitat	0	0	0	-	-
63	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
64	**14.1**	**10k Availability**	Identified (within 500m)				
65	14.2	Artificial and made ground (10k)	0	0	0	0	-
66	**14.3**	**Superficial geology (10k)**	1	1	0	1	-

67	14.4	Landslip (10k)	0	0	0	0	-
68	14.5	Bedrock geology (10k)	1	0	0	0	-
69	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
70	15.1	50k Availability	Identified (within 500m)				
71	15.2	Artificial and made ground (50k)	0	0	0	0	-
71	15.3	Artificial ground permeability (50k)	0	0	-	-	-
72	15.4	Superficial geology (50k)	1	0	1	1	-
73	15.5	Superficial permeability (50k)	Identified (within 50m)				
73	15.6	Landslip (50k)	0	0	0	0	-
73	15.7	Landslip permeability (50k)	None (within 50m)				
74	15.8	Bedrock geology (50k)	1	0	0	0	-
75	15.9	Bedrock permeability (50k)	Identified (within 50m)				
75	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
76	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
77	17.1	Shrink swell clays	Low (within 50m)				
78	17.2	Running sands	Very low (within 50m)				
79	17.3	Compressible deposits	Negligible (within 50m)				
80	17.4	Collapsible deposits	Very low (within 50m)				
81	17.5	Landslides	Very low (within 50m)				
82	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
83	18.1	Natural cavities	0	0	0	0	-
84	18.2	BritPits	0	0	0	0	-
84	18.3	Surface ground workings	0	0	1	-	-
84	18.4	Underground workings	0	0	0	0	0
84	18.5	Historical Mineral Planning Areas	0	0	0	0	-

85	**18.6**	**Non-coal mining**	1	0	0	0	3
85	18.7	Mining cavities	0	0	0	0	0
86	18.8	JPB mining areas	None (within 0m)				
86	18.9	Coal mining	None (within 0m)				
86	18.10	Brine areas	None (within 0m)				
86	18.11	Gypsum areas	None (within 0m)				
86	18.12	Tin mining	None (within 0m)				
87	18.13	Clay mining	None (within 0m)				

Page	Section	Radon					
88	**19.1**	**Radon**	Less than 1% (within 0m)				

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
89	**20.1**	**BGS Estimated Background Soil Chemistry**	1	2	-	-	-
89	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
89	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
90	21.1	Underground railways (London)	0	0	0	-	-
90	21.2	Underground railways (Non-London)	0	0	0	-	-
90	21.3	Railway tunnels	0	0	0	-	-
90	21.4	Historical railway and tunnel features	0	0	0	-	-
90	21.5	Royal Mail tunnels	0	0	0	-	-
91	21.6	Historical railways	0	0	0	-	-
91	21.7	Railways	0	0	0	-	-
91	21.8	Crossrail 1	0	0	0	0	-
91	21.9	Crossrail 2	0	0	0	0	-
91	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 24/08/2019

Site Area: 0.12ha

Recent site history - 2016 aerial photograph

Capture Date: 23/08/2016

Site Area: 0.12ha

Recent site history - 2009 aerial photograph

Capture Date: 30/06/2009

Site Area: 0.12ha

Recent site history - 2005 aerial photograph

Capture Date: 28/08/2005

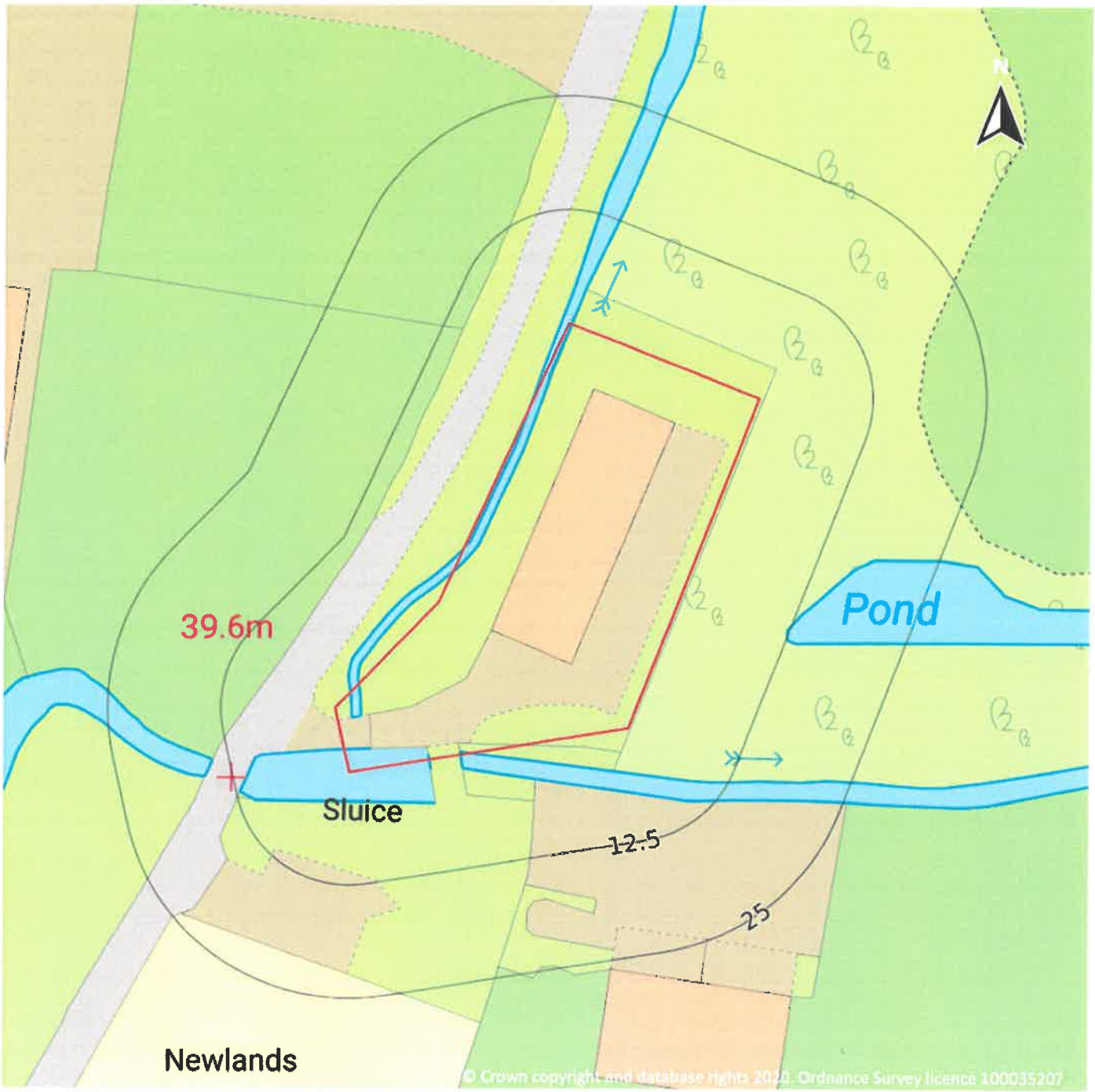
Site Area: 0.12ha

Recent site history - 1999 aerial photograph

Capture Date: 04/09/1999

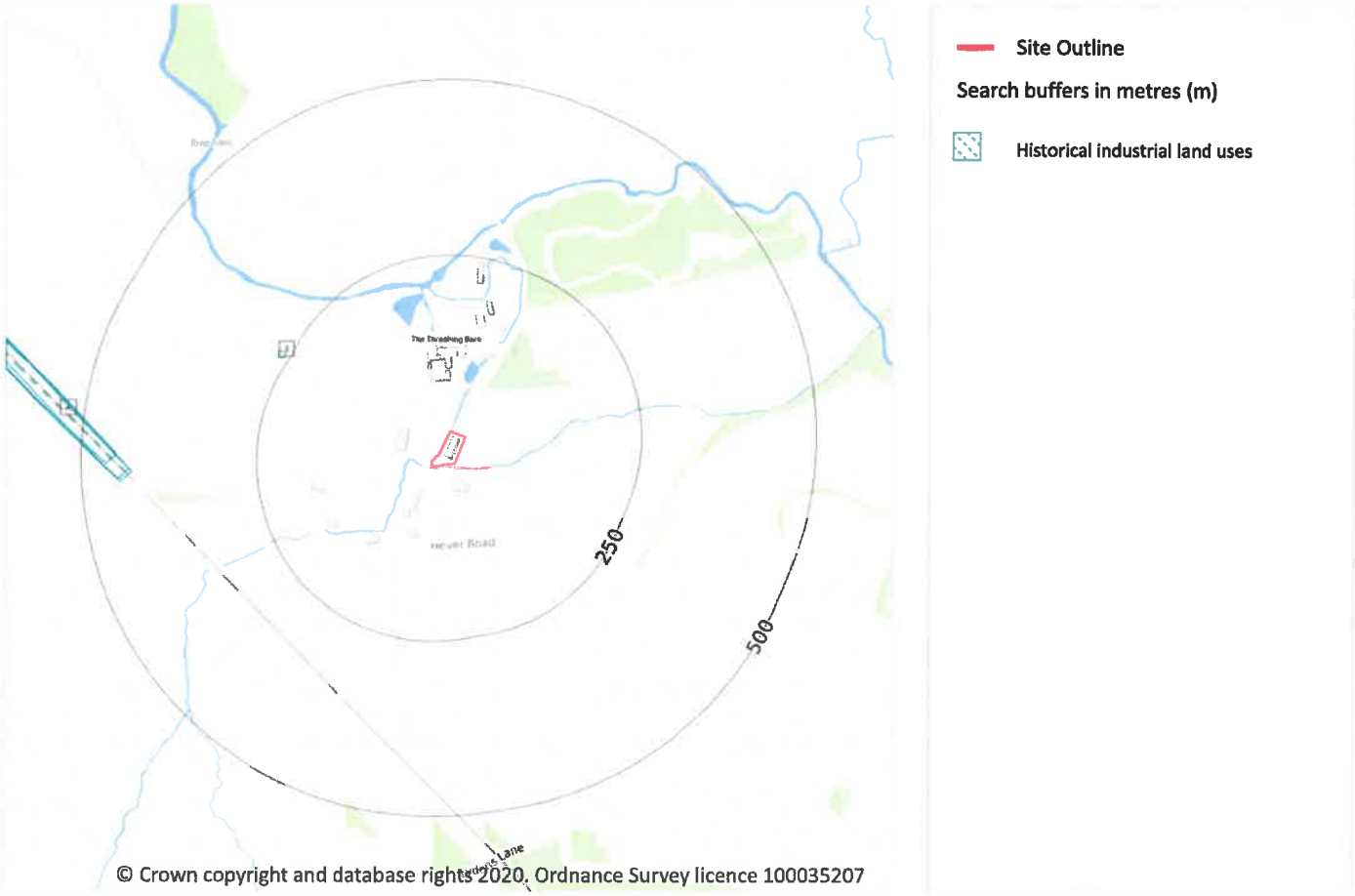
Site Area: 0.12ha

OS MasterMap site plan



Site Area: 0.12ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	4

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

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

ID	Location	Land use	Dates present	Group ID
1	258m NW	Lime Kiln	1870	2167006

ID	Location	Land use	Dates present	Group ID
A	429m W	Cuttings	1896	2257333
A	432m W	Cuttings	1907 - 1936	2240223
A	451m W	Cuttings	1955	2214421

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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

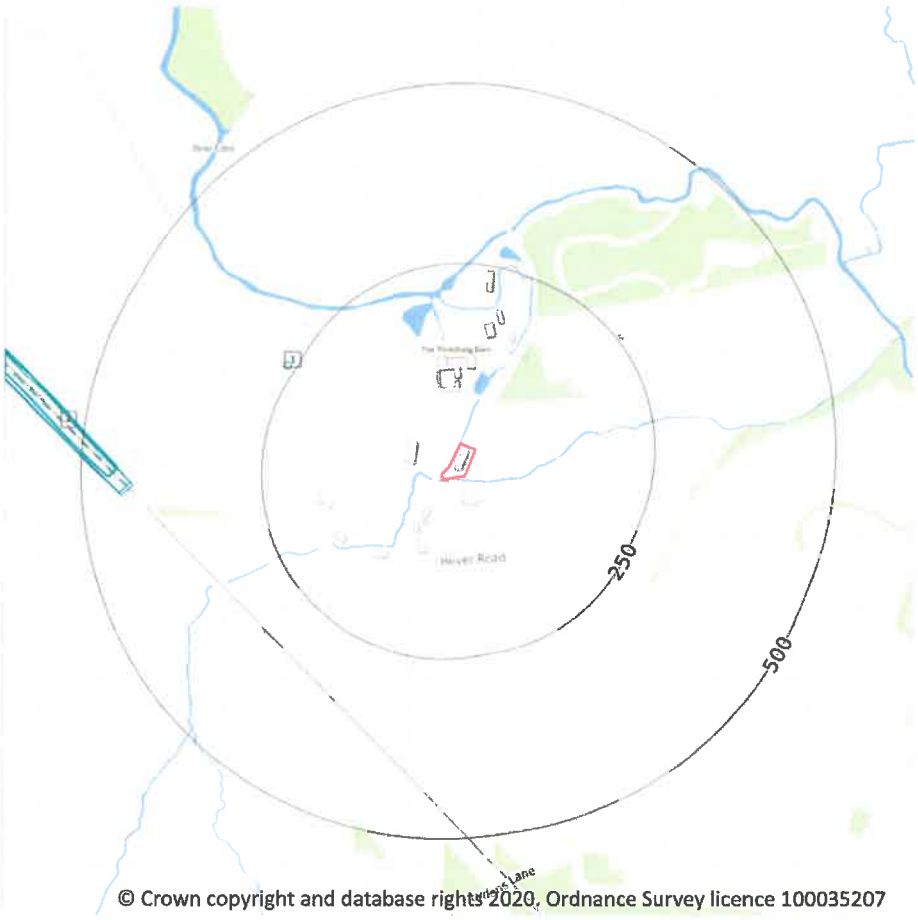
1.6 Historical military land

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	5

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

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

ID	Location	Land Use	Date	Group ID
1	258m NW	Lime Kiln	1870	2167006
A	429m W	Cuttings	1896	2257333
A	432m W	Cuttings	1907	2240223

ID	Location	Land Use	Date	Group ID
A	449m W	Cuttings	1936	2240223
A	451m W	Cuttings	1955	2214421

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.

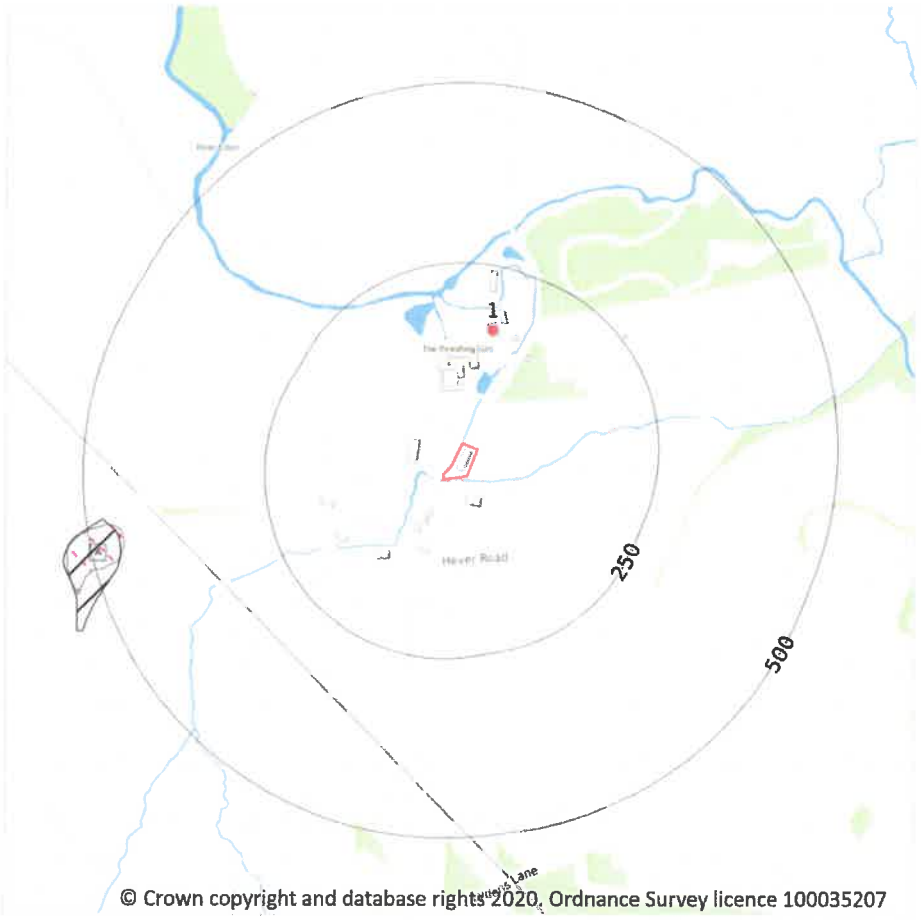
2.5 Historical garages

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



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	1

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

Features are displayed on the Waste and landfill map on **page 19**

ID	Location	Site address	Source	Data type
A	453m W	Refuse Tip	1964 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

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.

Features are displayed on the Waste and landfill map on **page 19**

ID	Location	Details		
A	459m W	Site Address: Hever Road, West Kingsdown, Sevenoaks, Kent Licence Holder Address: -	Waste Licence: Yes Site Reference: SE10 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01/01/1976 Licence Surrender: -	Operator: - Licence Holder: Borough Council First Recorded - Last Recorded: -

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	1

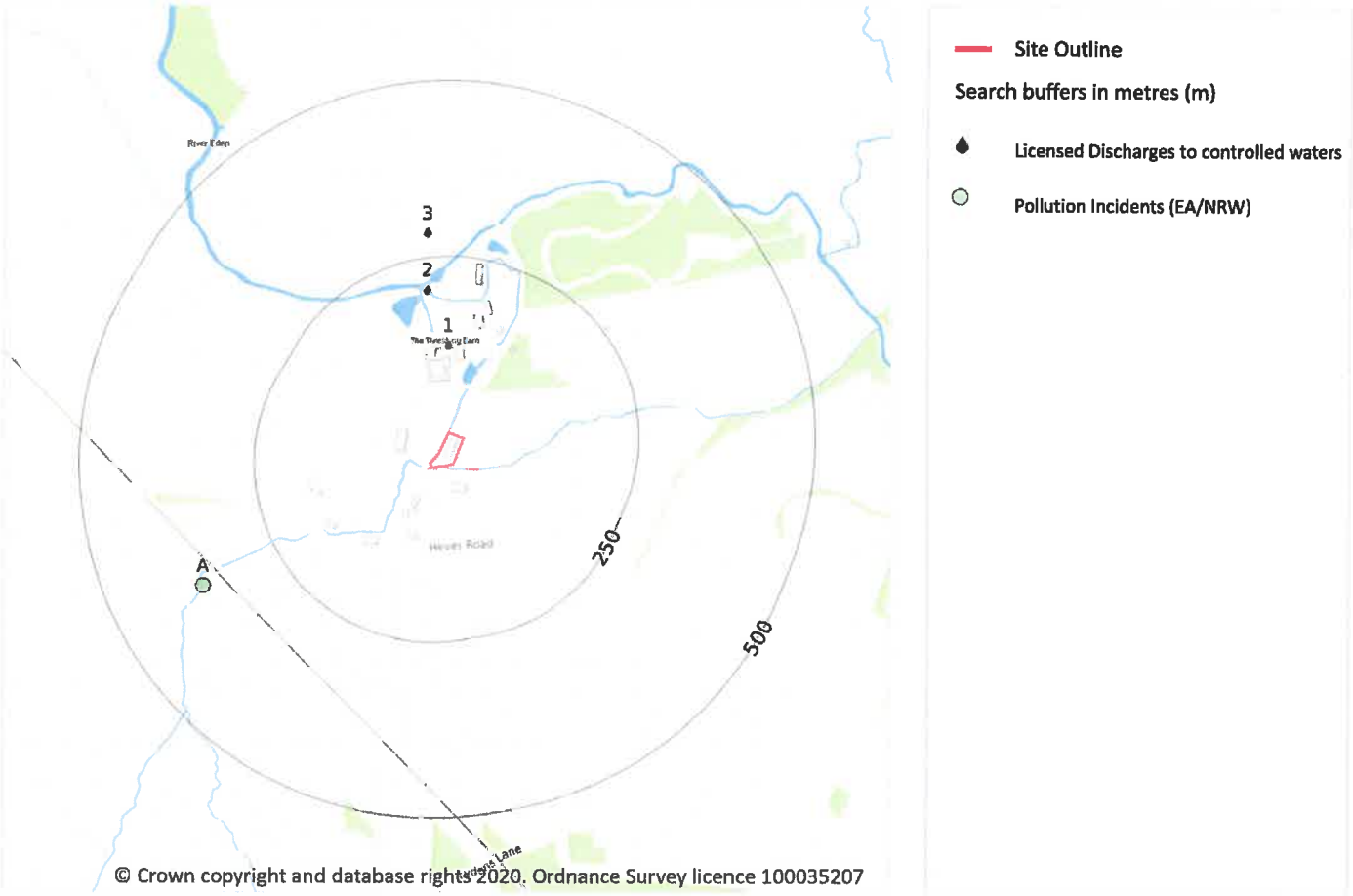
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 19**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	162m N	41, OLDFIELDS ROAD, SUTTON, SM1 2NB	WEX093952	Using waste exemption	On a farm	Use of waste in construction

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

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m	0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	3

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	
1	124m N	DELAWARE FARM, EDENBRIDGE, KENT	Effluent Type: UNSPECIFIED Permit Number: D01045 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 30/01/1963 Effective Date: 30/01/1963 Revocation Date: 01/07/1991
2	206m N	DELAWARE FARM, HEVER ROAD, PEERLAND HOUSE, EDENBRIDGE KENT	Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: P02293 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 05/07/1989 Effective Date: 05/07/1989 Revocation Date: 31/03/1997
3	285m N	DELAWARE FARM, HEVER ROAD	Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: P02503 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 23/08/1989 Effective Date: 23/08/1989 Revocation Date: 31/03/1997

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	2

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	
A	365m SW	Incident Date: 19/06/2012 Incident Identification: 1003203 Pollutant: Agricultural Materials and Wastes Pollutant Description: Fertiliser	Water Impact: Category 1 (Major) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
A	365m SW	Incident Date: 19/06/2012 Incident Identification: 1003203 Pollutant: Organic Chemicals/Products Pollutant Description: Pesticides and Biocides	Water Impact: Category 1 (Major) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

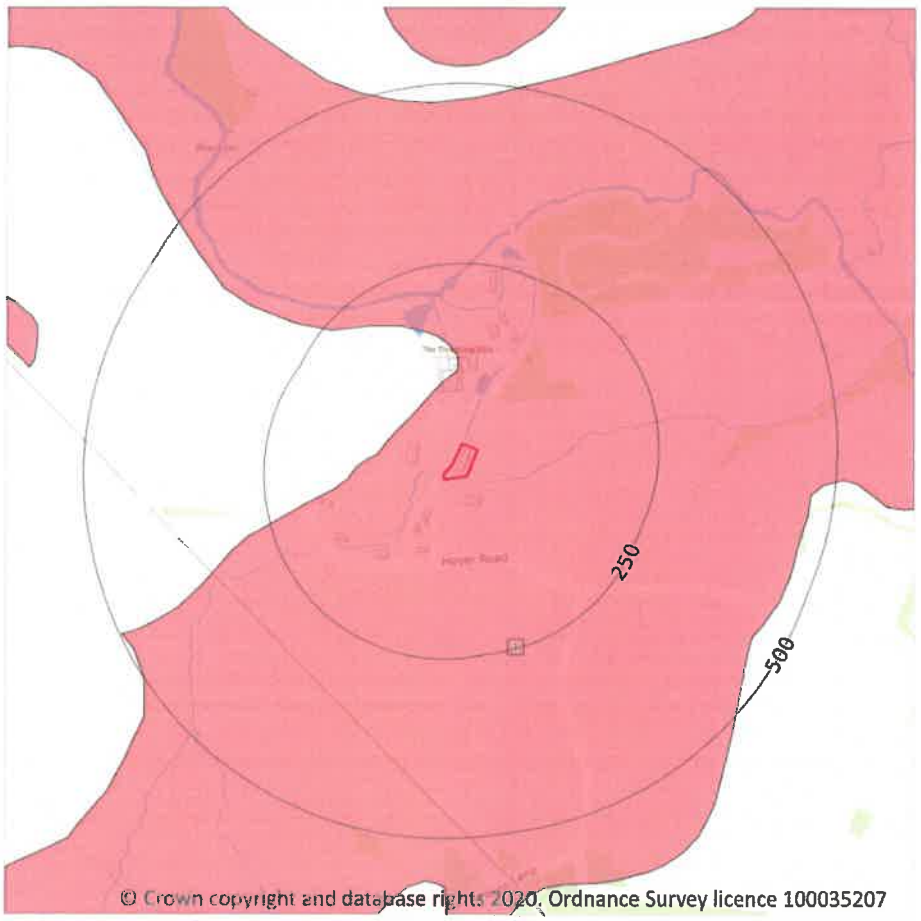
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	1

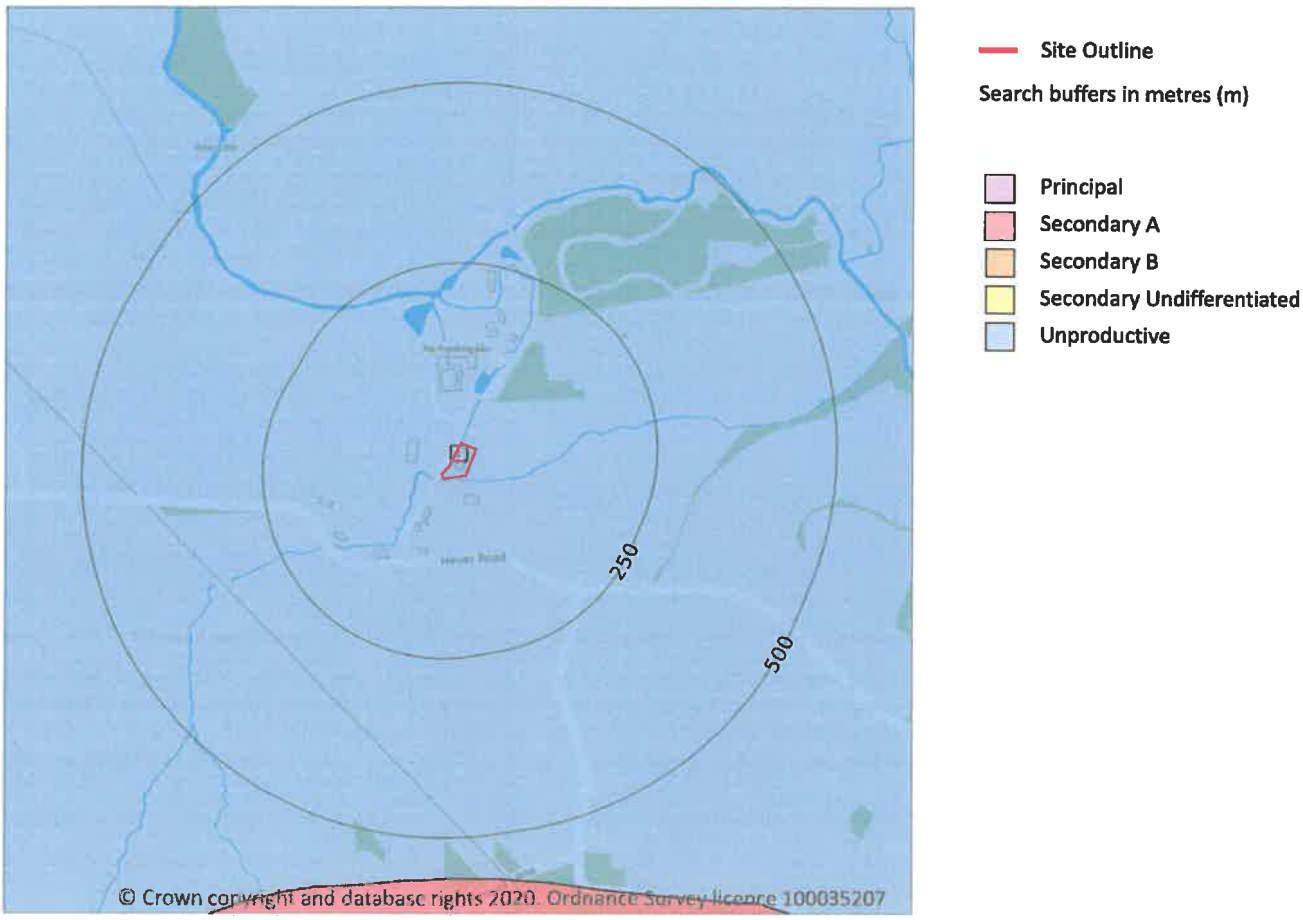
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 28**

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

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	1

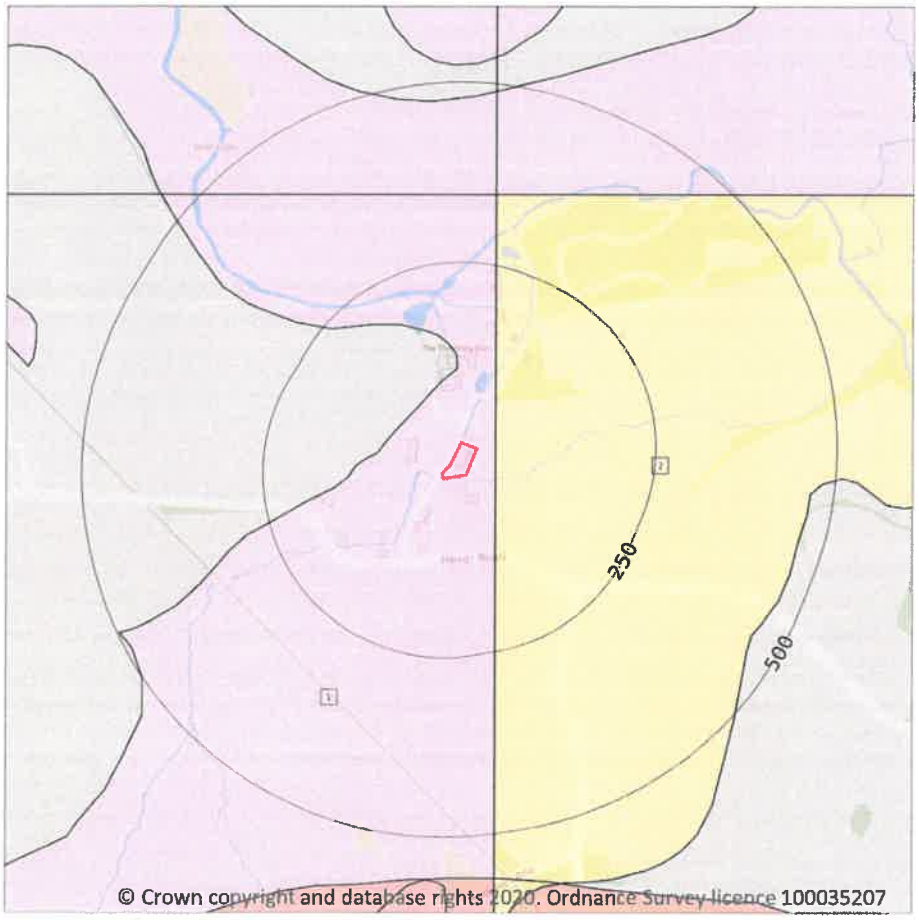
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 29**

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability
- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability
- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information
- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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 30**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Unproductive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Medium**	**Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Well connected fractures**
2	27m E	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Unproductive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Medium	Vulnerability: Unproductive Aquifer type: Unproductive 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	**0**

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

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

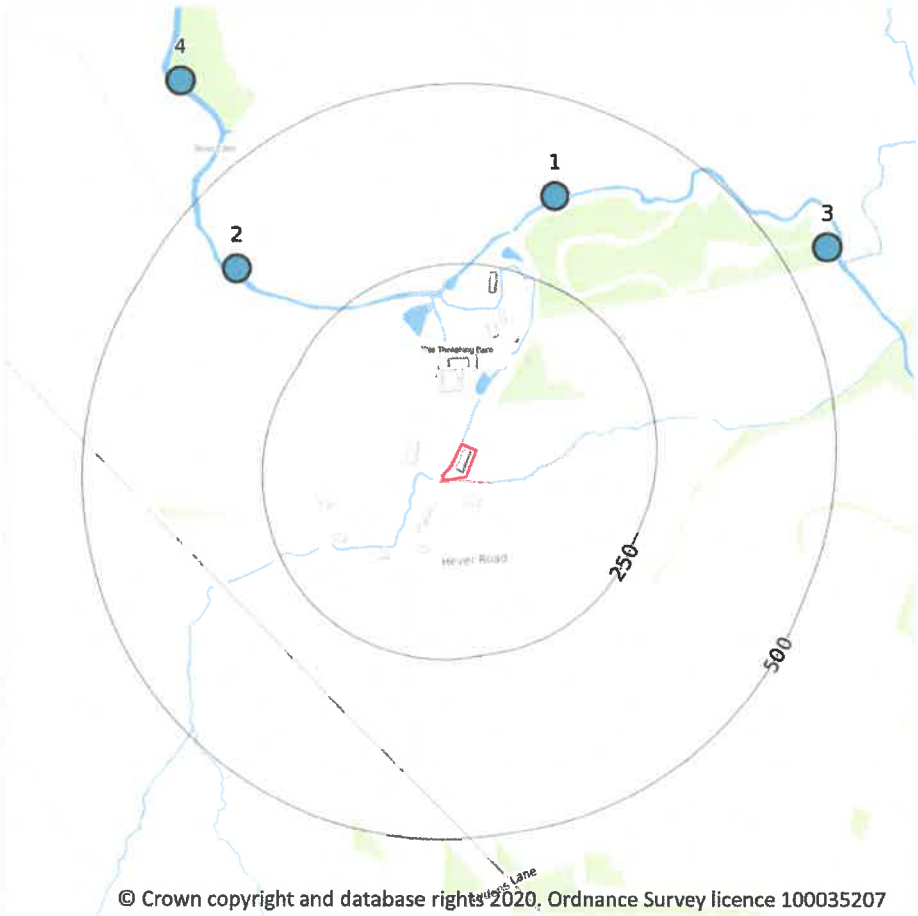
5.5 Groundwater vulnerability- local information

Records on site	**0**

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

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

Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m	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	6

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 32**

ID	Location	Details	
1	367m N	Status: Active Licence No: 9/40/03/0599/S Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: RIVER EDEN AT WHISTLERS FARM, FOUR ELMS (POINT A) Data Type: Point Name: Allan Esq Easting: 546080 Northing: 146000	Annual Volume (m^3): 4,500 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 09/02/1990 Expiry Date: - Issue No: 100 Version Start Date: 27/02/2017 Version End Date: -
2	396m NW	Status: Active Licence No: 9/40/03/0601/S Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: POINT C, RIVER EDEN AT EDENBRIDGE. Data Type: Point Name: Boomaars Easting: 545640 Northing: 145900	Annual Volume (m^3): 3,500 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 09/04/1990 Expiry Date: - Issue No: 101 Version Start Date: 27/02/2017 Version End Date: -
3	563m NE	Status: Active Licence No: 9/40/03/0599/S Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: RIVER EDEN AT WHISTLERS FARM, FOUR ELMS (POINT B) Data Type: Point Name: Allan Esq Easting: 546460 Northing: 145930	Annual Volume (m^3): 4,500 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 09/02/1990 Expiry Date: - Issue No: 100 Version Start Date: 27/02/2017 Version End Date: -
4	638m NW	Status: Active Licence No: 9/40/03/0601/S Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: POINT B, RIVER EDEN AT EDENBRIDGE. Data Type: Point Name: Boomaars Easting: 545560 Northing: 146160	Annual Volume (m^3): 3,500 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 09/04/1990 Expiry Date: - Issue No: 101 Version Start Date: 27/02/2017 Version End Date: -

ID	Location	Details	
-	950m NW	Status: Active Licence No: 9/40/03/0601/S Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: POINT A, RIVER EDEN AT EDENBRIDGE. Data Type: Point Name: Boomaars Easting: 545430 Northing: 146450	Annual Volume (m^3): 3,500 Max Daily Volume (m^3): 120 Original Application No: - Original Start Date: 09/04/1990 Expiry Date: - Issue No: 101 Version Start Date: 27/02/2017 Version End Date: -
-	1502m W	Status: Historical Licence No: 9/40/03/0575/S Details: Water Wheels Not Used For Power Direct Source: Southern Region Surface Waters Point: RIVER EDEN AT HONOURS MILL, EDENBRIDGE (POINT A) Data Type: Point Name: Aux Quat' Saisons Limited T/A Moulin Blanc Easting: 544480 Northing: 146020	Annual Volume (m^3): 47733 Max Daily Volume (m^3): 136.4 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 22/07/2003 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	0

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

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

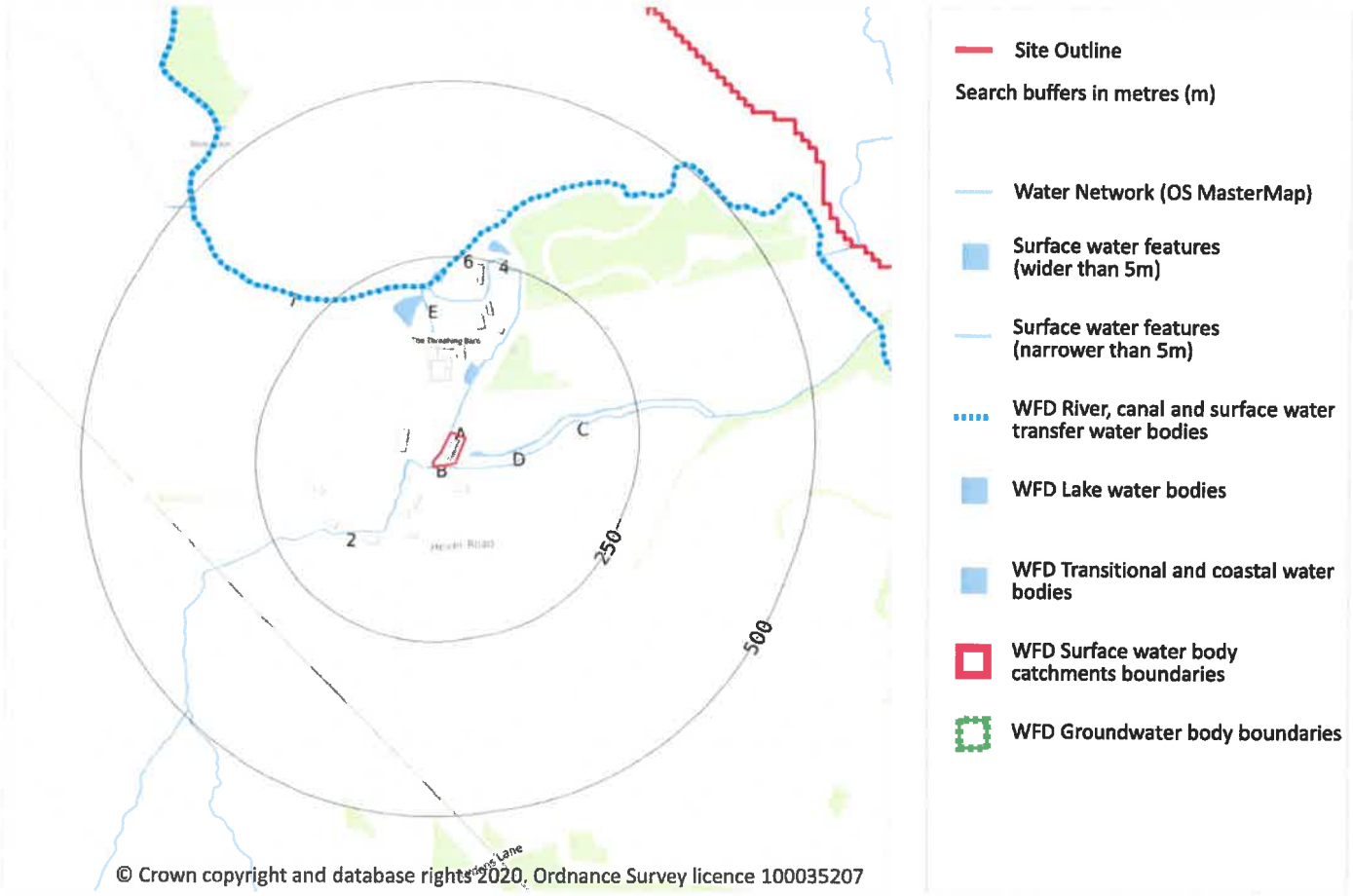
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	25

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

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

ID	Location	Type of water feature	Ground level	Permanence	Name
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Greybury Gill**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**Greybury Gill**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Greybury Gill**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Greybury Gill**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	11m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Greybury Gill
2	14m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Greybury Gill
D	29m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	66m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Greybury Gill
A	71m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	Greybury Gill
A	99m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Greybury Gill
C	105m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
A	124m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Greybury Gill
A	129m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Greybury Gill
A	137m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Greybury Gill
4	141m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Greybury Gill
E	173m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	192m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	197m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	203m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	210m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Eden
E	210m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Eden
7	211m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Eden

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	7

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

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

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

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
B	**On site**	**River WB catchment**	**Lower Eden**	**GB106040018160**	**Eden**	**Medway**

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

6.4 WFD Surface water bodies

Records identified	1

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

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

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
8	212m N	River	Lower Eden	GB106040018160	Moderate	Fail	Moderate	2016

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

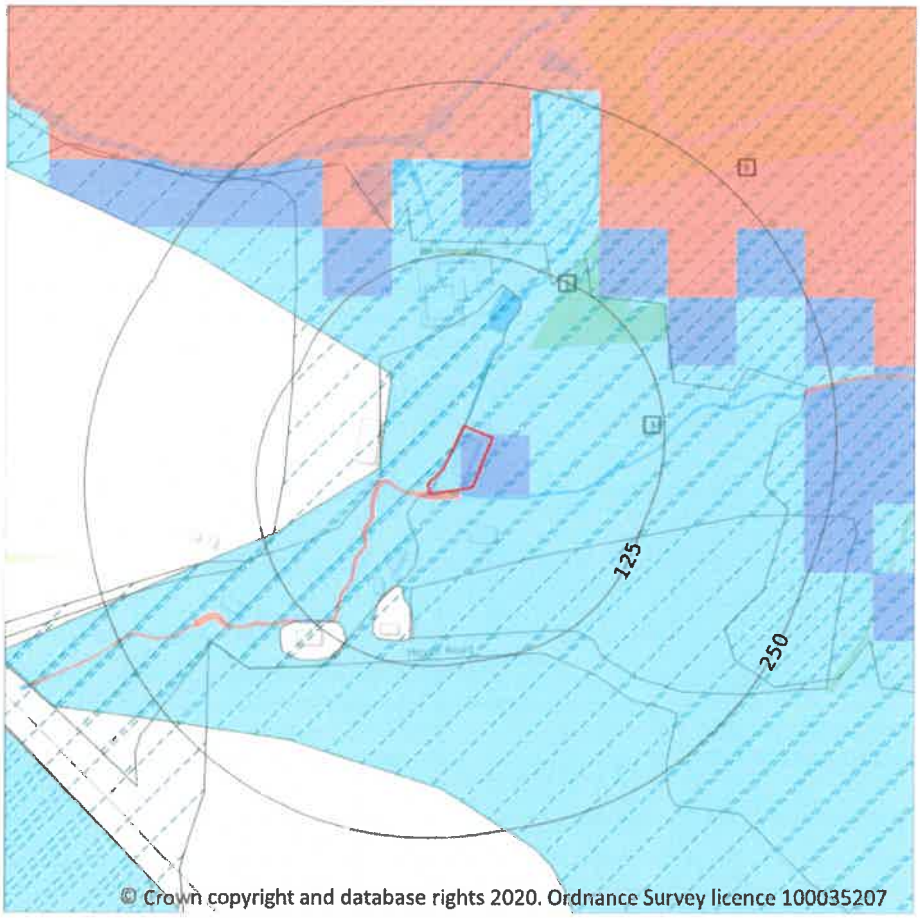
6.5 WFD Groundwater bodies

Records on site	0

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.

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

Environment Agency 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 Sea (RoFRaS)

Records within 50m	6

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

Features are displayed on the River and coastal flooding map on **page 41**

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

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

7.2 Historical Flood Events

Records within 250m	4

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.

Features are displayed on the River and coastal flooding map on **page 41**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
1	**On site**	**07303c500_Nov1960_Eden_Edenbridge**	**1960-11-02 1960-11-04**	**Main river**	**Channel capacity exceeded (no raised defences)**	**Fluvial**
3	**On site**	**07303c500_Sept1968_Edenbridge**	**1968-09-14 1968-09-18**	**Main river**	**Channel capacity exceeded (no raised defences)**	**Fluvial**
A	**On site**	**07303c500_Sept1958_Eden_Edenbridge&chiddingstone**	**1958-09-05 1958-09-05**	**Other**	**Local drainage/surface water**	**Fluvial**
9	119m N	07302c200_Dec2013_Medway_Eden_Teise_Beult	2013-12-23 2013-12-27	Main river	Channel capacity exceeded (no raised defences)	Fluvial

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.

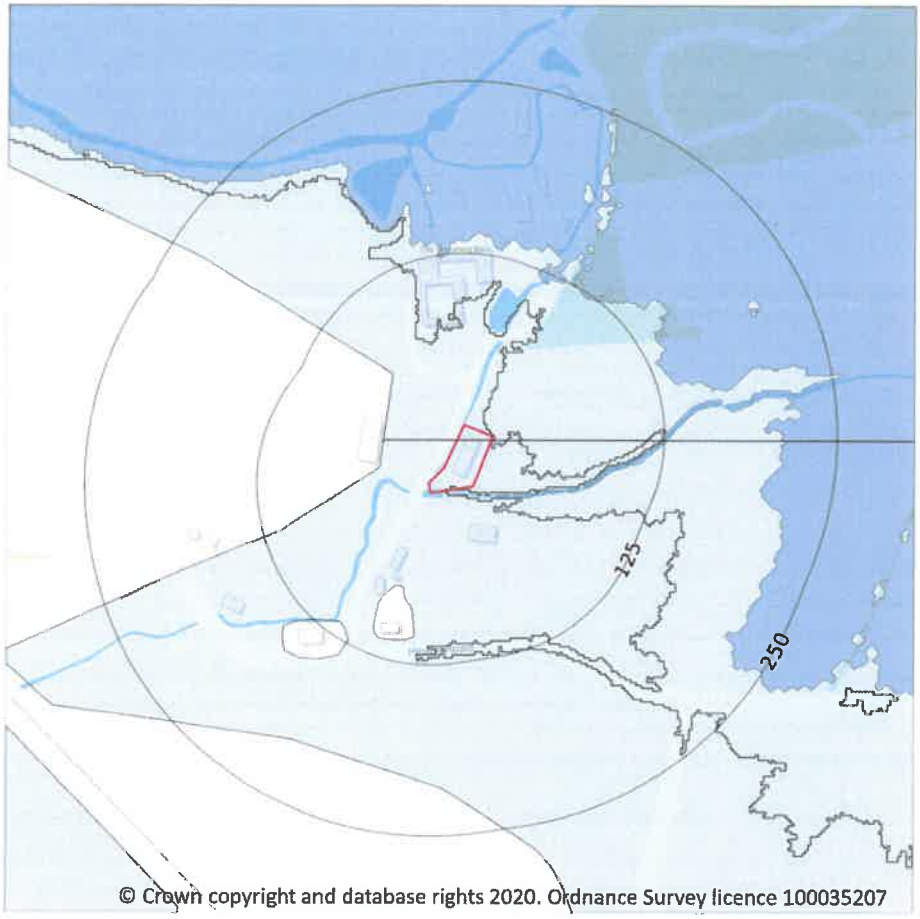
7.5 Flood Storage Areas

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 41**

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

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

7.7 Flood Zone 3

Records within 50m	1

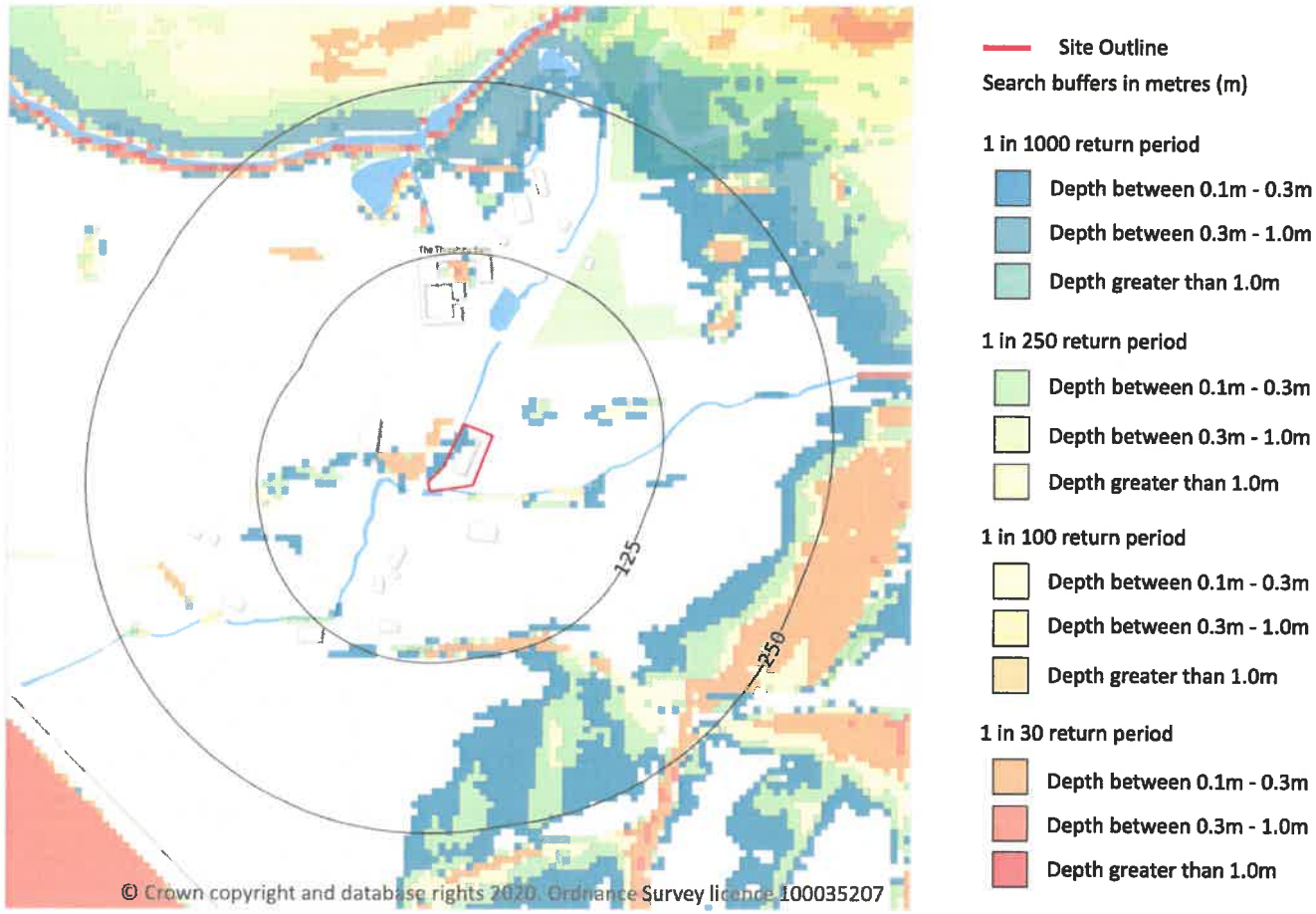
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 41**

Location	Type
19m E	Zone 3 - (Fluvial Models)

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

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site	**1 in 1000 year, 0.3m - 1.0m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

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

Features are displayed on the Surface water flooding map on **page 46**

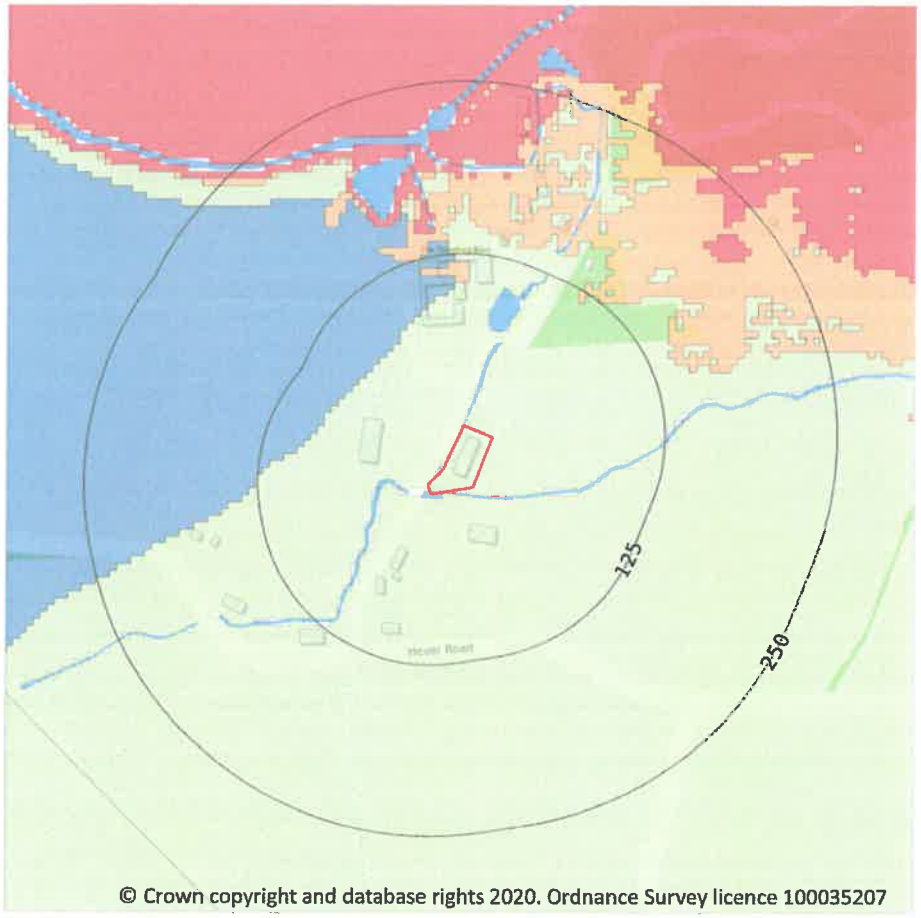
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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 0.3m and 1.0m
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

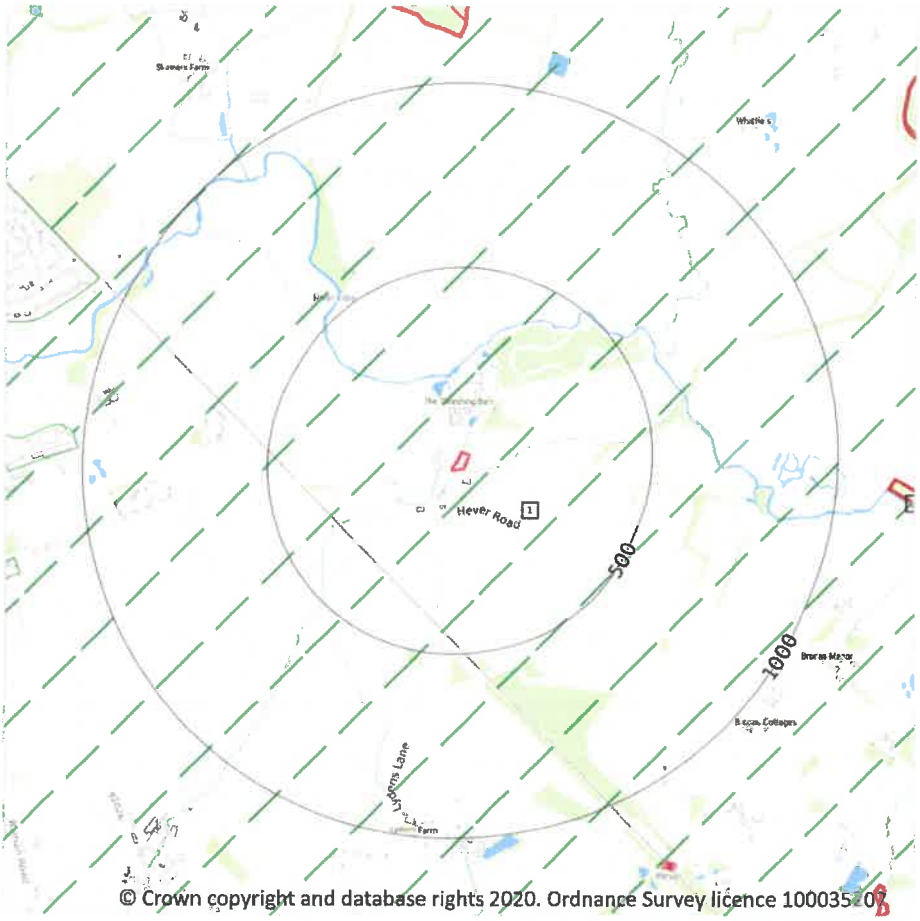
Highest risk on site	**Low**
Highest risk within 50m	**Low**

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 48**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

Green Belt

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	17

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 49**

ID	Location	Name	Woodland Type
2	1128m N	Cauk Wood	Ancient & Semi-Natural Woodland
3	1141m E	Unknown	Ancient & Semi-Natural Woodland
-	1224m S	Unknown	Ancient & Semi-Natural Woodland
-	1257m S	Unknown	Ancient & Semi-Natural Woodland
-	1416m S	Unknown	Ancient & Semi-Natural Woodland
-	1462m S	Unknown	Ancient & Semi-Natural Woodland
8	1478m NE	Rook Birch Wood	Ancient Replanted Woodland
-	1515m S	Unknown	Ancient & Semi-Natural Woodland
10	1598m SE	Unknown	Ancient & Semi-Natural Woodland
-	1736m SE	Unknown	Ancient & Semi-Natural Woodland
-	1828m S	Stickhill Wood	Ancient & Semi-Natural Woodland
-	1862m NE	Unknown	Ancient & Semi-Natural Woodland
-	1868m SE	Unknown	Ancient & Semi-Natural Woodland
-	1922m SE	Unknown	Ancient & Semi-Natural Woodland
-	1941m E	Unknown	Ancient & Semi-Natural Woodland
-	1964m E	Lodge Wood	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
-	1971m SE	Unknown	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	1

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

Features are displayed on the Environmental designations map on **page 49**

ID	Location	Name	Local Authority name
1	**On site**	**London area**	**Sevenoaks**

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.

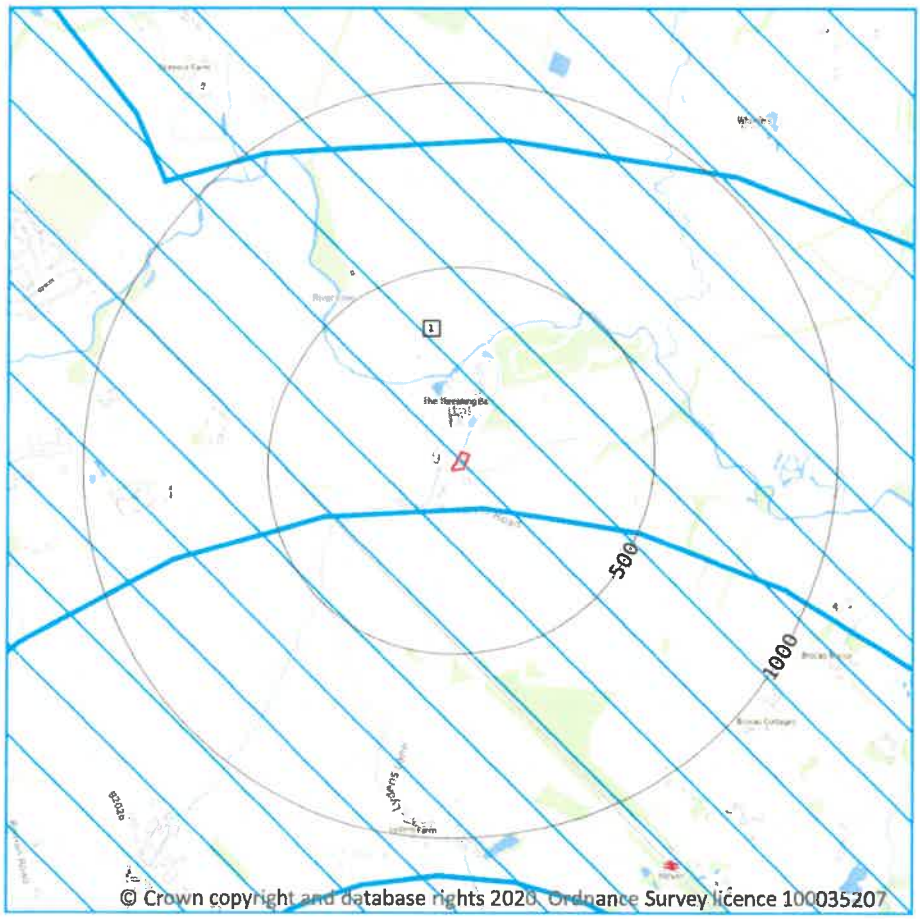
10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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.

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 55**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals.** **Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.**

This data is sourced from Natural England.

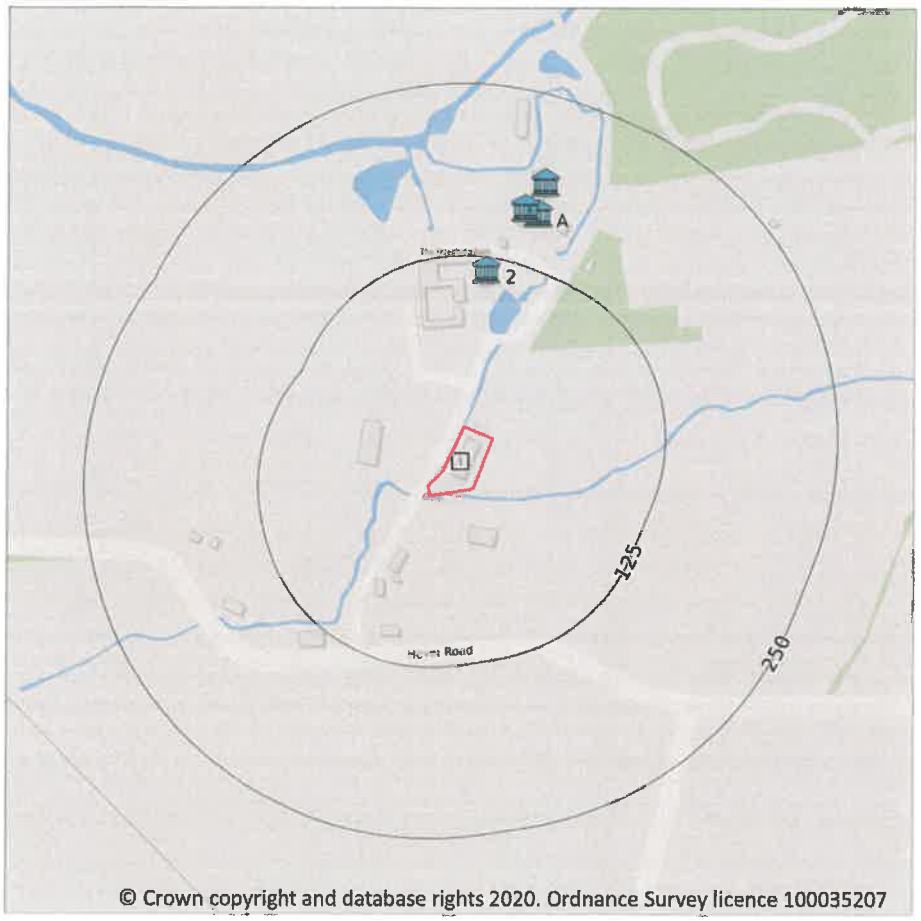
10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	4

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

Features are displayed on the Visual and cultural designations map on **page 57**

ID	Location	Name	Grade	Reference Number	Listed date
2	116m N	Granary To South West Of Delaware, Edenbridge, Sevenoaks, Kent, TN8	II	1085938	16/01/1975
A	165m N	Mounting Block At Side Entrance Of Delaware, Edenbridge, Sevenoaks, Kent, TN8	II	1085957	16/01/1975
A	166m N	Delaware, Edenbridge, Sevenoaks, Kent, TN8	II	1261515	10/09/1954
A	188m N	Outbuilding To North East Of Delaware, Edenbridge, Sevenoaks, Kent, TN8	II	1336404	10/09/1954

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

11.5 Conservation Areas

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 57**

ID	Location	Name	District	Date of designation
1	**On site**	**The Local Authority for this area have not supplied conservation area data.**		-

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

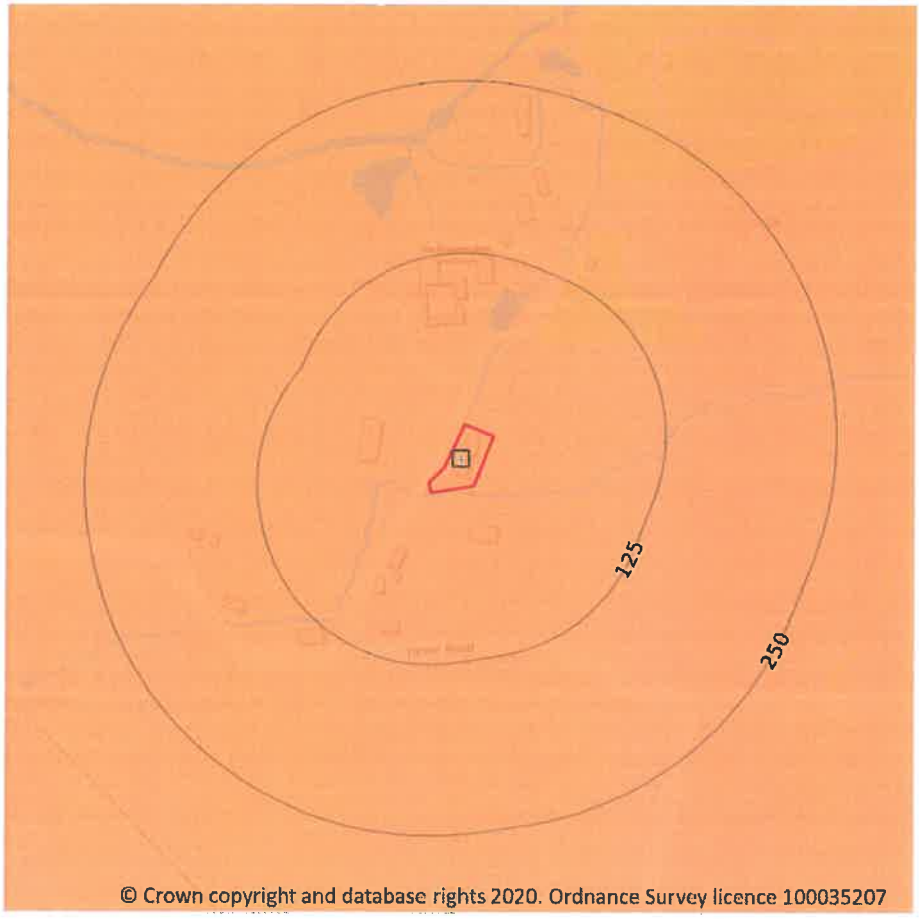
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on **page 60**

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

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	2

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

Location	Reference	Scheme	Start Date	End date
On site	**AG00434390**	**Entry Level plus Higher Level Stewardship**	**01/03/2013**	**28/02/2023**
8m W	AG00434390	Entry Level plus Higher Level Stewardship	01/03/2013	28/02/2023

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	1

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
215m NW	496427	Countryside Stewardship (Middle Tier)	01/01/2018	31/12/2022

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

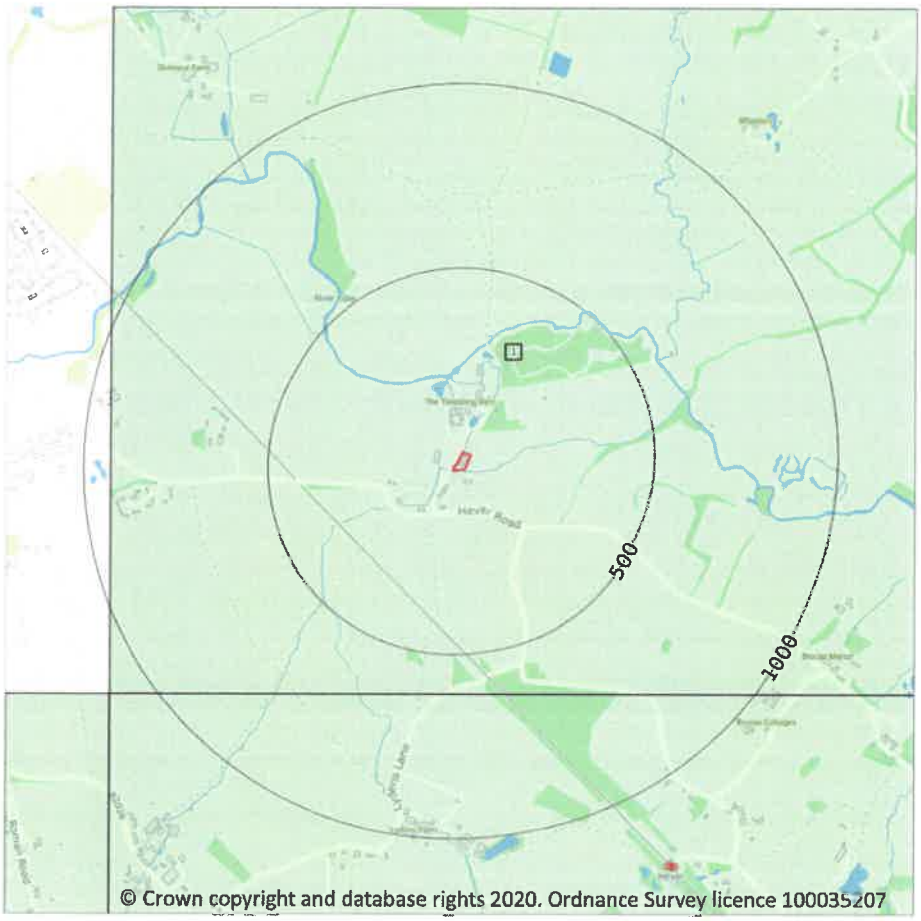
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m 1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 64**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**TQ44NE**

This data is sourced from the British Geological Survey.

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

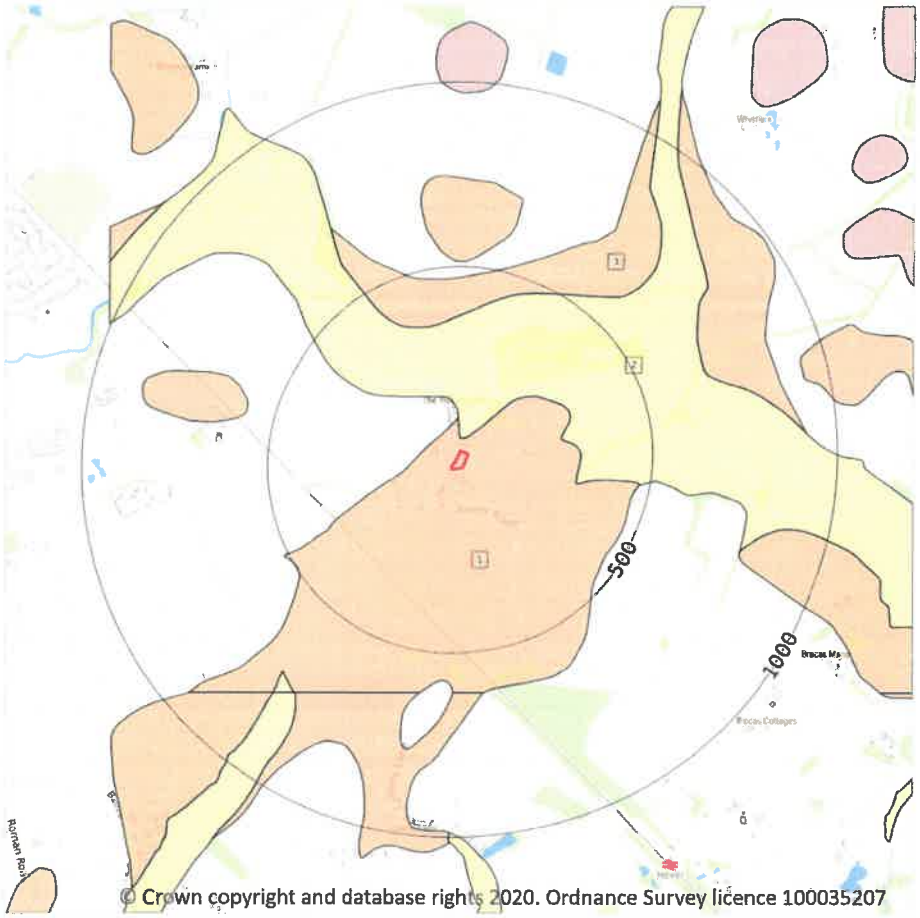
14.2 Artificial and made ground (10k)

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 3

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 66**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**RTD1-XSV**	**River Terrace Deposits, 1 - Sand And Gravel**	**Sand And Gravel**
2	35m N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	348m N	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

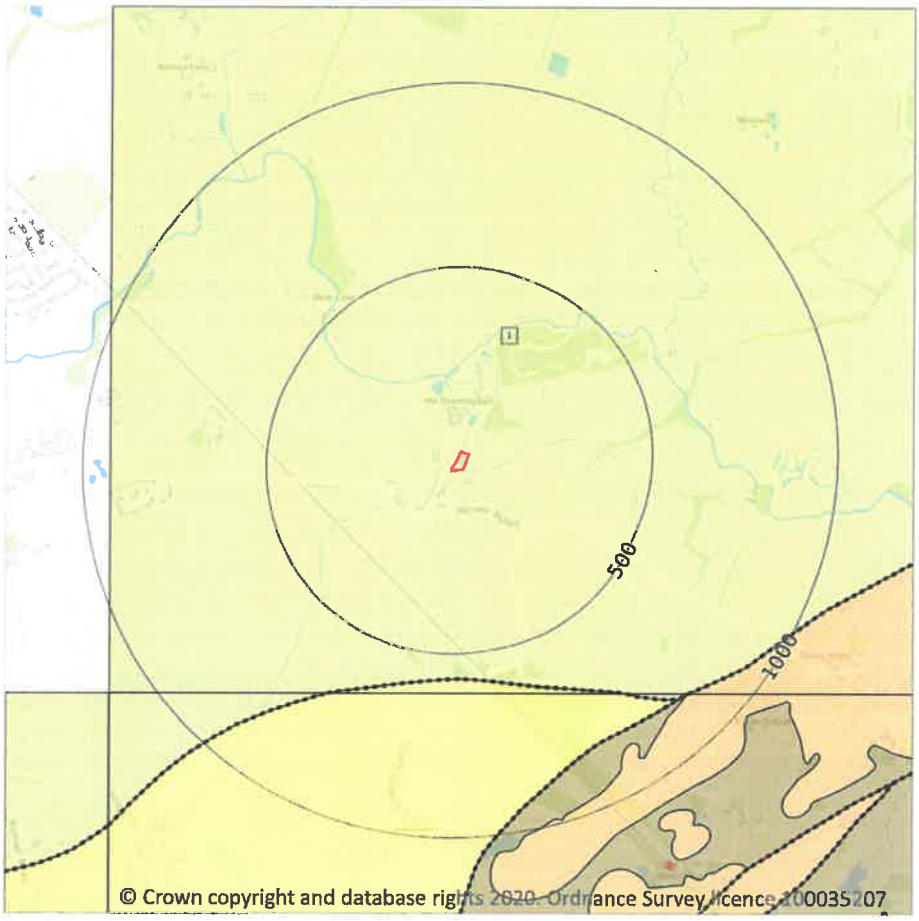
14.4 Landslip (10k)

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 **1**

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 68**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WC-MDST**	**Weald Clay Formation - Mudstone**	**Barremian Age - Hauterivian Age**

This data is sourced from the British Geological Survey.

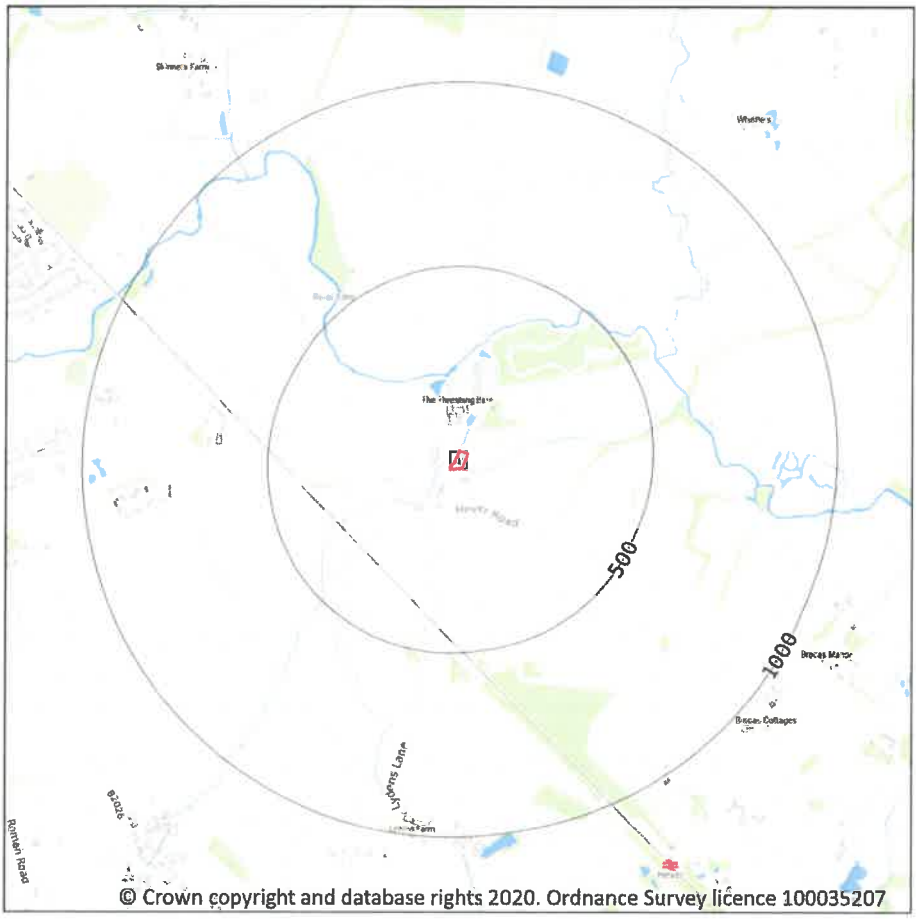
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 70**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW287_sevenoaks_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.

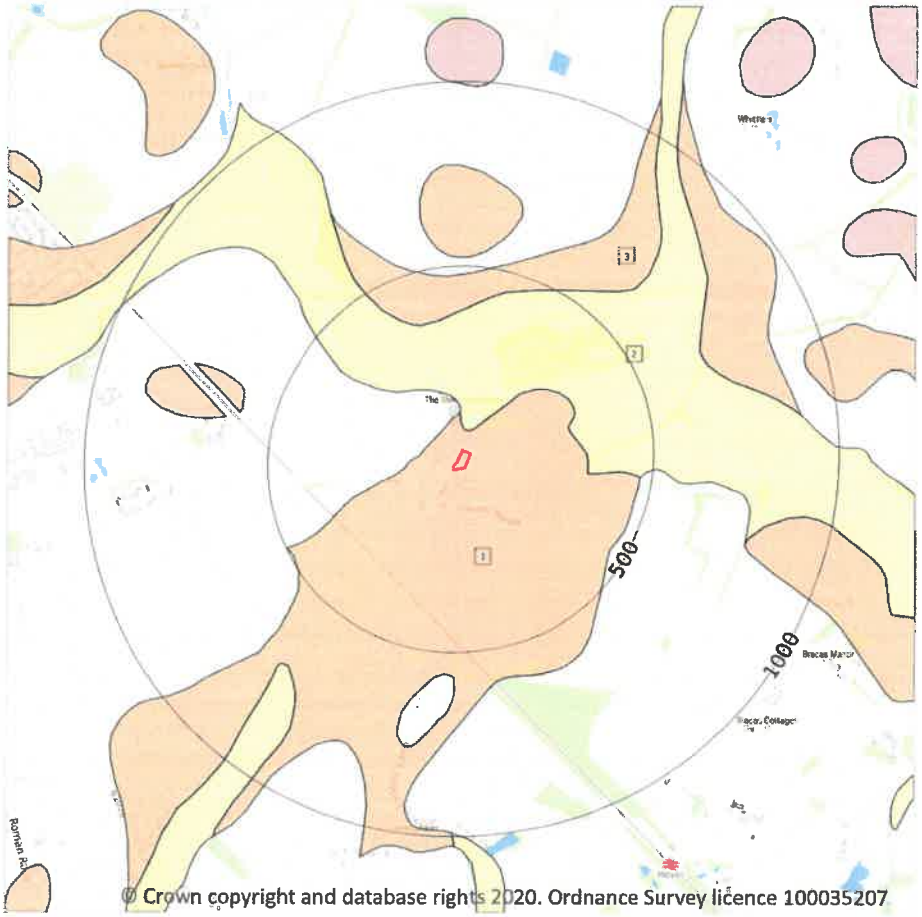
15.3 Artificial ground permeability (50k)

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	3

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 72**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**RTD1-XSV**	**RIVER TERRACE DEPOSITS, 1**	**SAND AND GRAVEL**
2	55m N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	357m N	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Very High**	**High**

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.

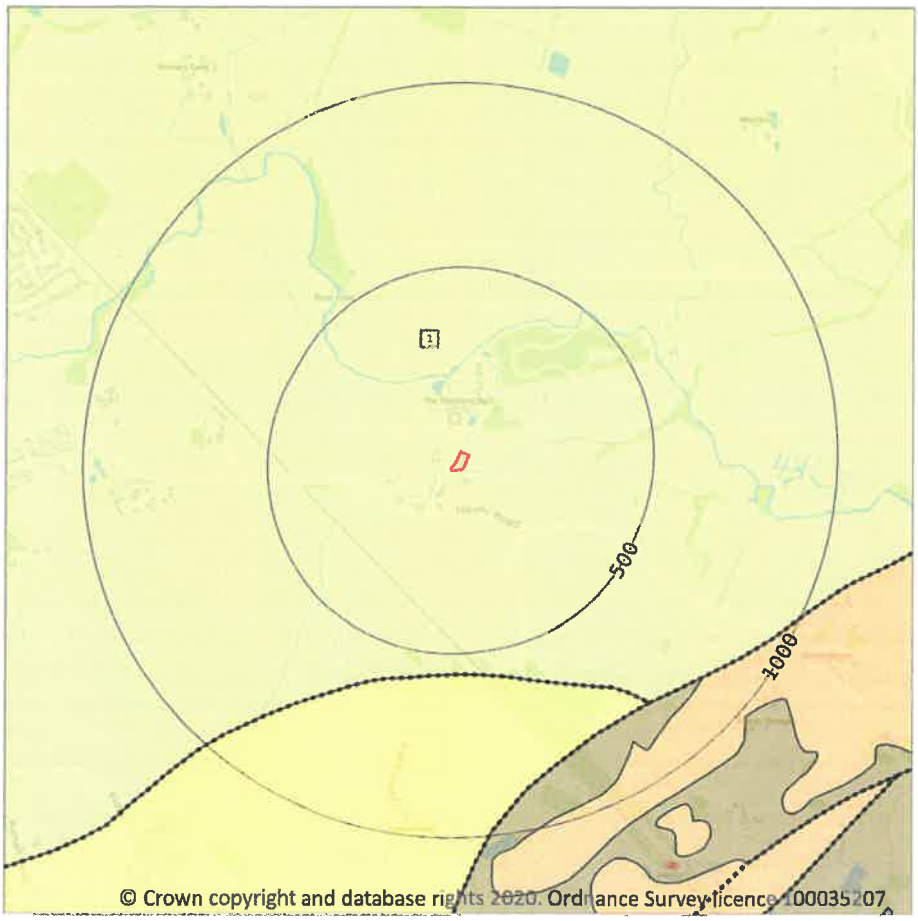
15.7 Landslip permeability (50k)

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 1

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 74**

ID	Location	LEX Code	Description	Rock age
1	On site	WC-MDST	WEALD CLAY FORMATION - MUDSTONE	HAUTERIVIAN

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**	**Low**	**Very Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

16 Boreholes

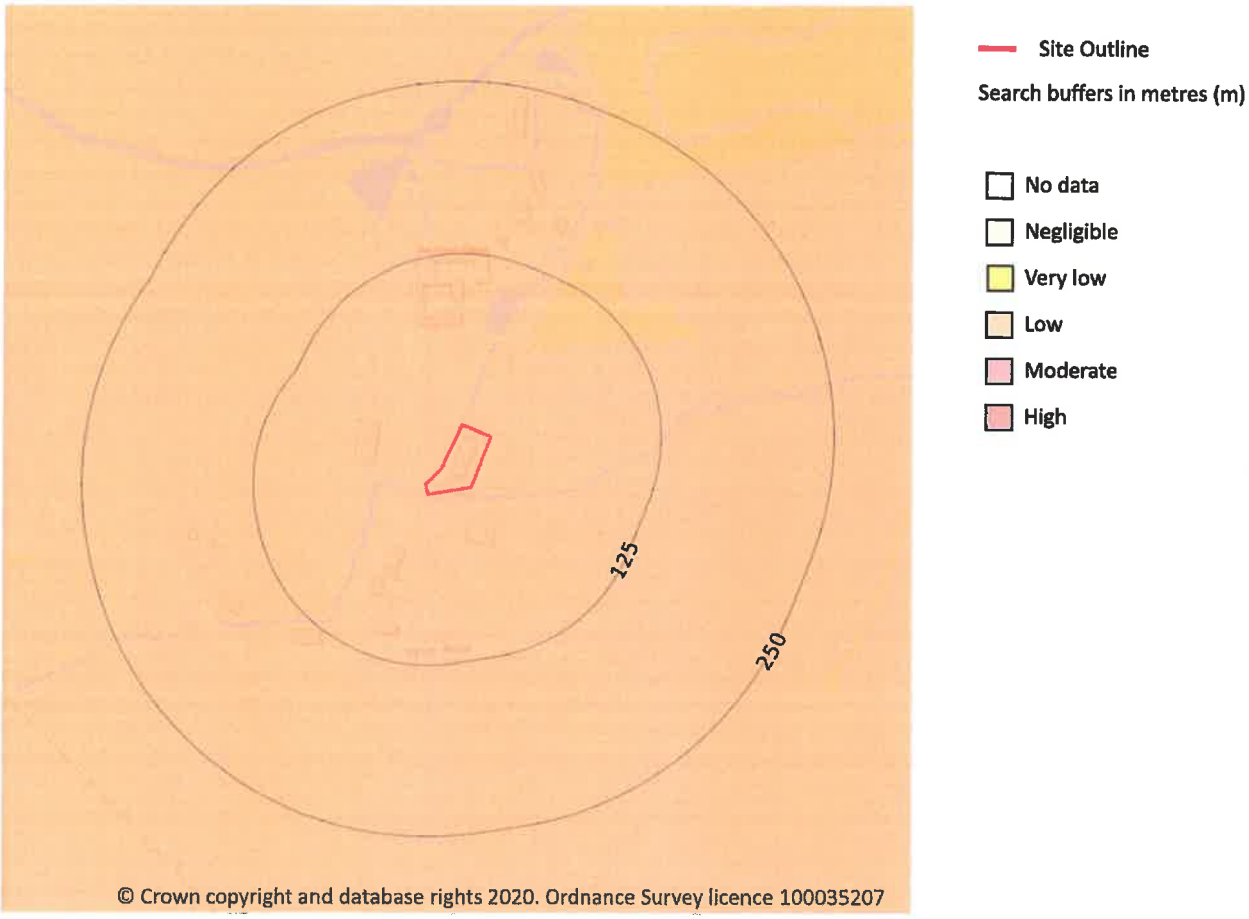
16.1 BGS Boreholes

Records within 250m	0

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

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m	1

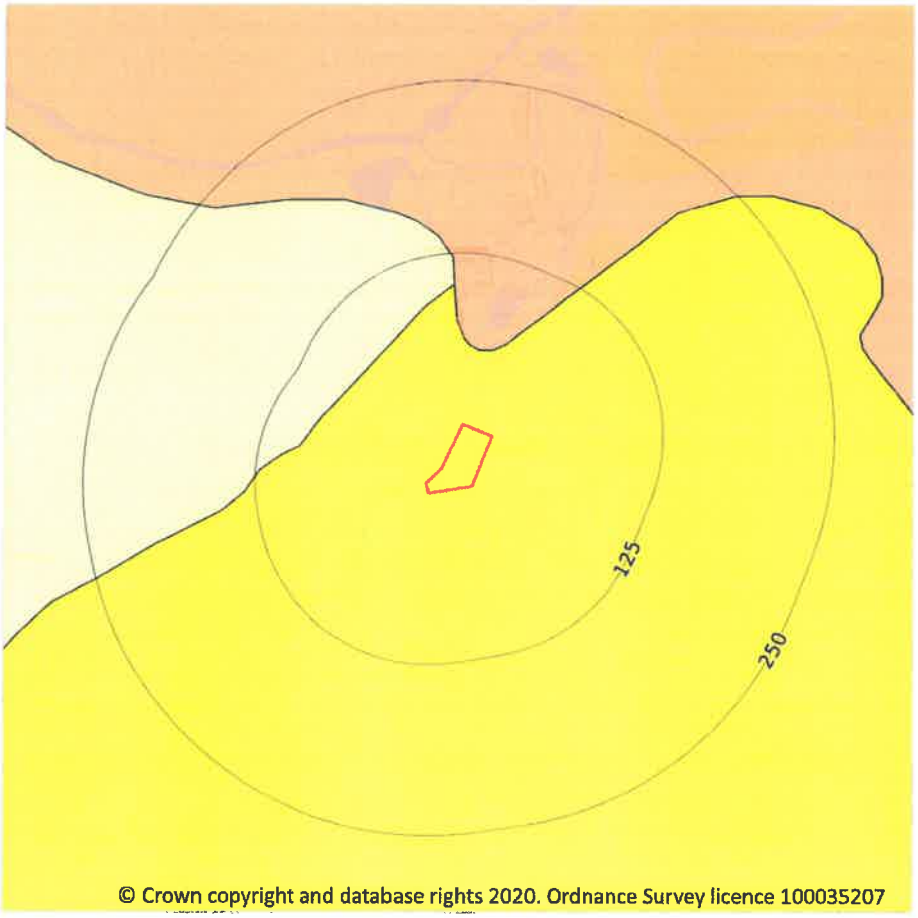
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 77**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

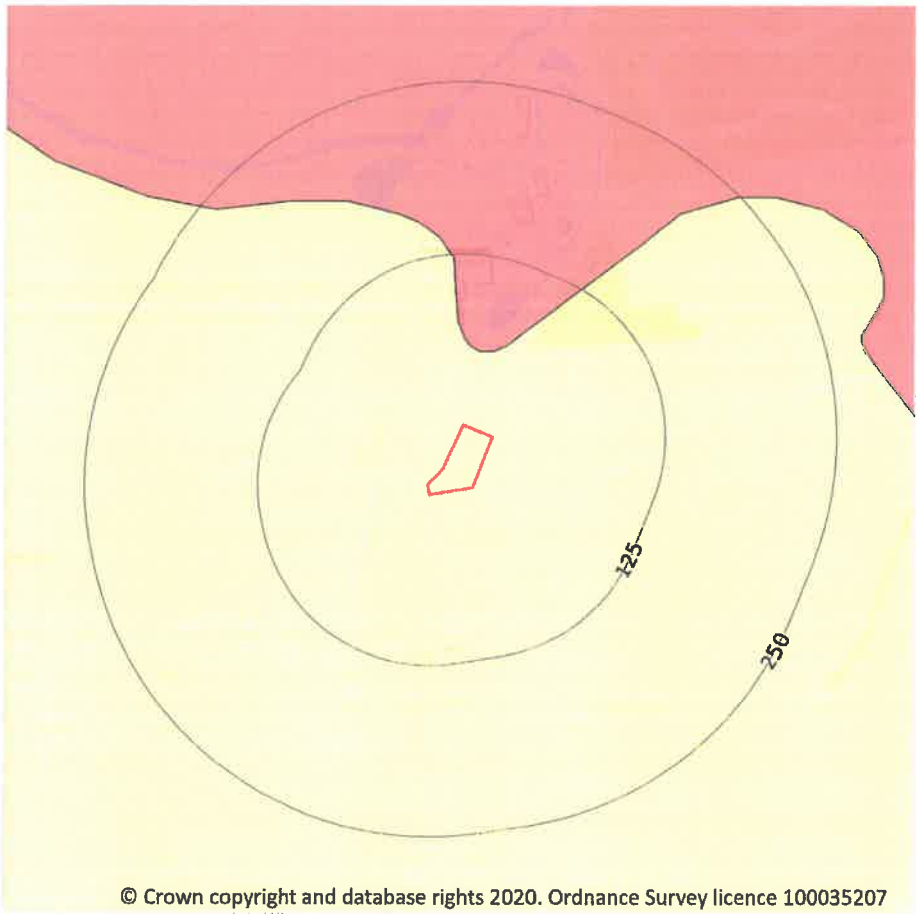
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 78**

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

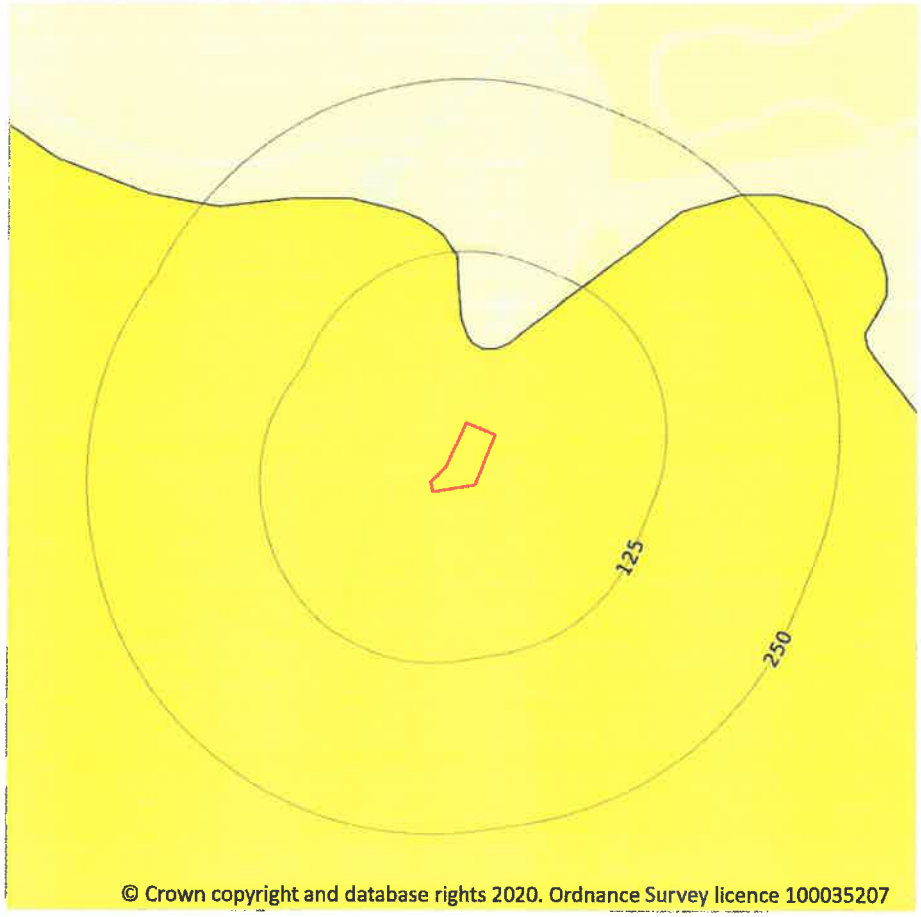
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 79**

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

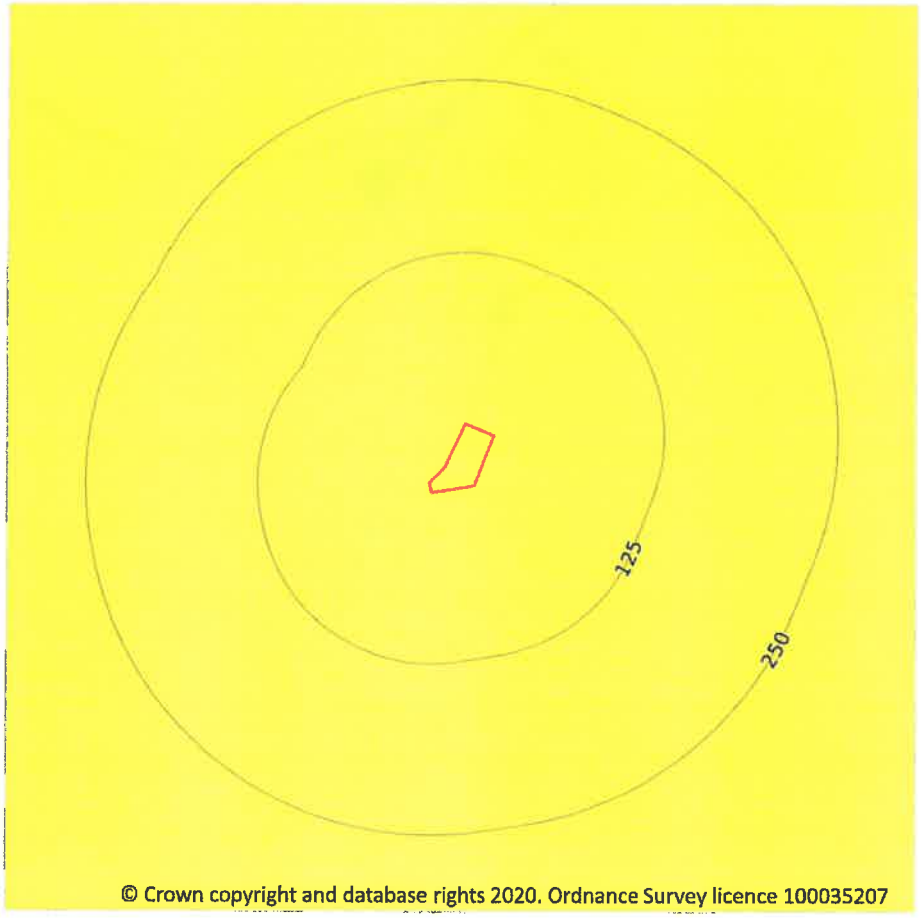
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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

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

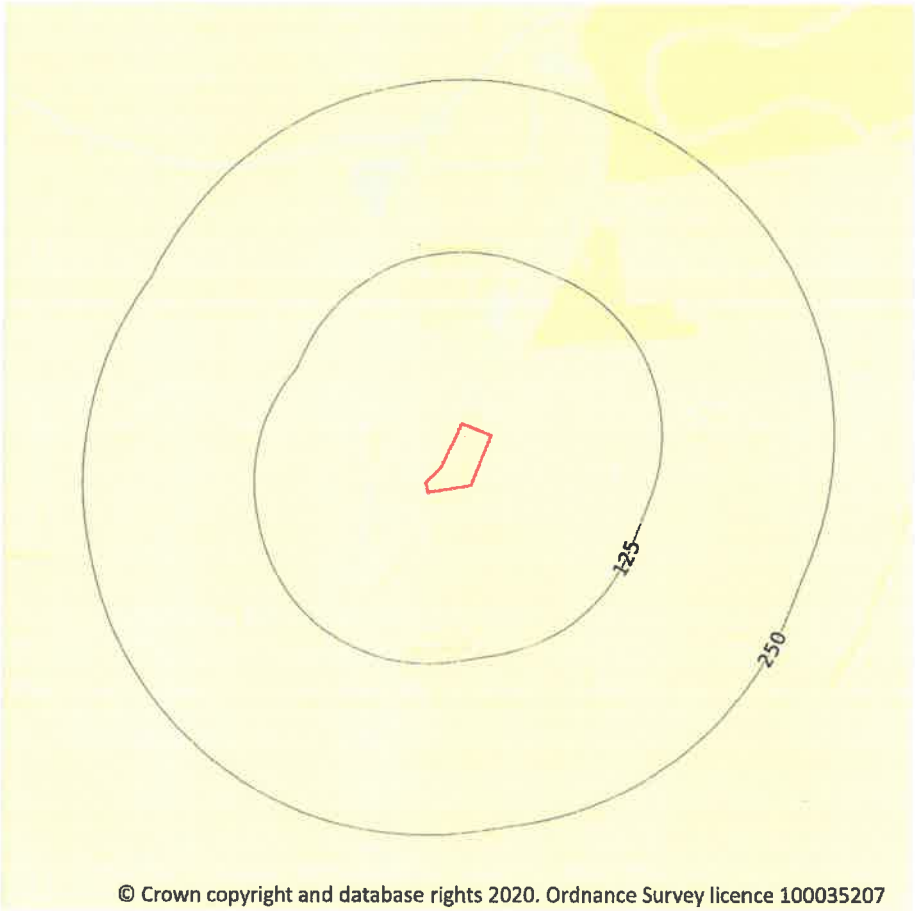
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 81**

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

17.6 Ground dissolution of soluble rocks

Records within 50m	**1**

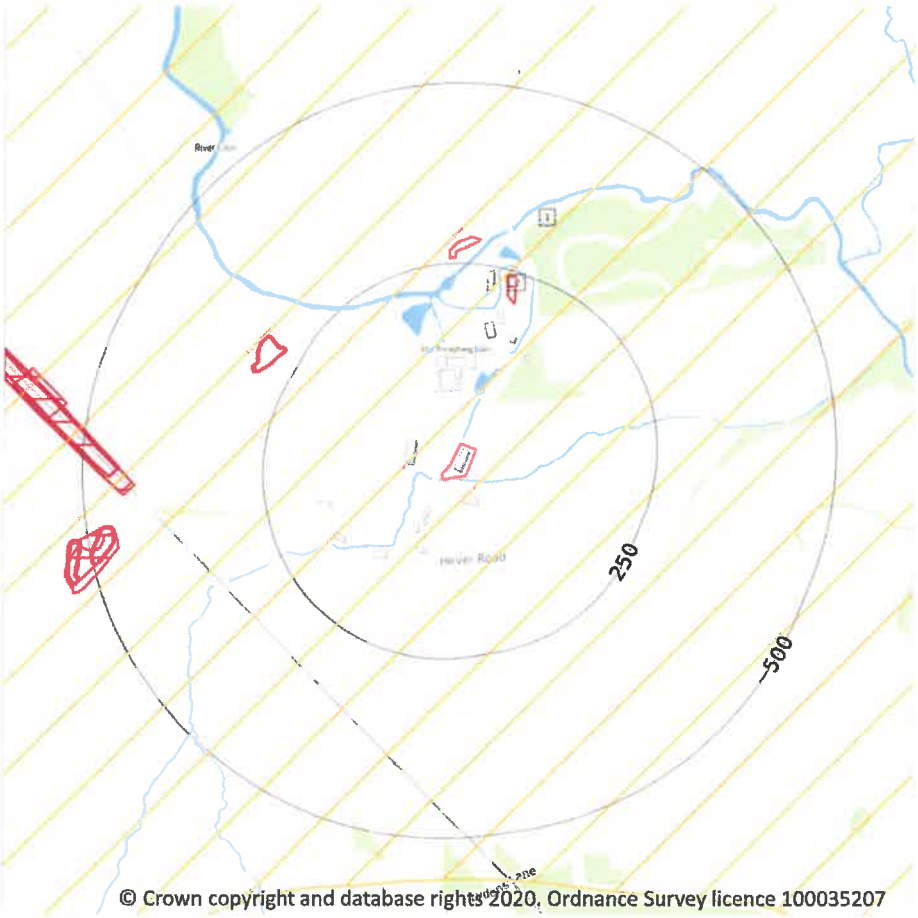
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 82**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

Natural cavities (Area)

Natural cavities (Point)

BritPits

Surface ground workings

Underground workings

Historical Mineral Planning Areas

Mining Cavities

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

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

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

18.2 BritPits

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 83**

ID	Location	Land Use	Year of mapping	Mapping scale
2	207m N	Pond	1870	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	**4**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 83**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Iron Ore**	**B**	**Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered**
-	691m SW	Not available	Iron Ore	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	762m SE	Not available	Iron Ore	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	926m W	Not available	Iron Ore	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	**0**

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

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

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

Records on site	0

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

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

19 Radon

19.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 88**

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

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

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m 3

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 km^2. 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 km^2; 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 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
27m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
27m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m 0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m 0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

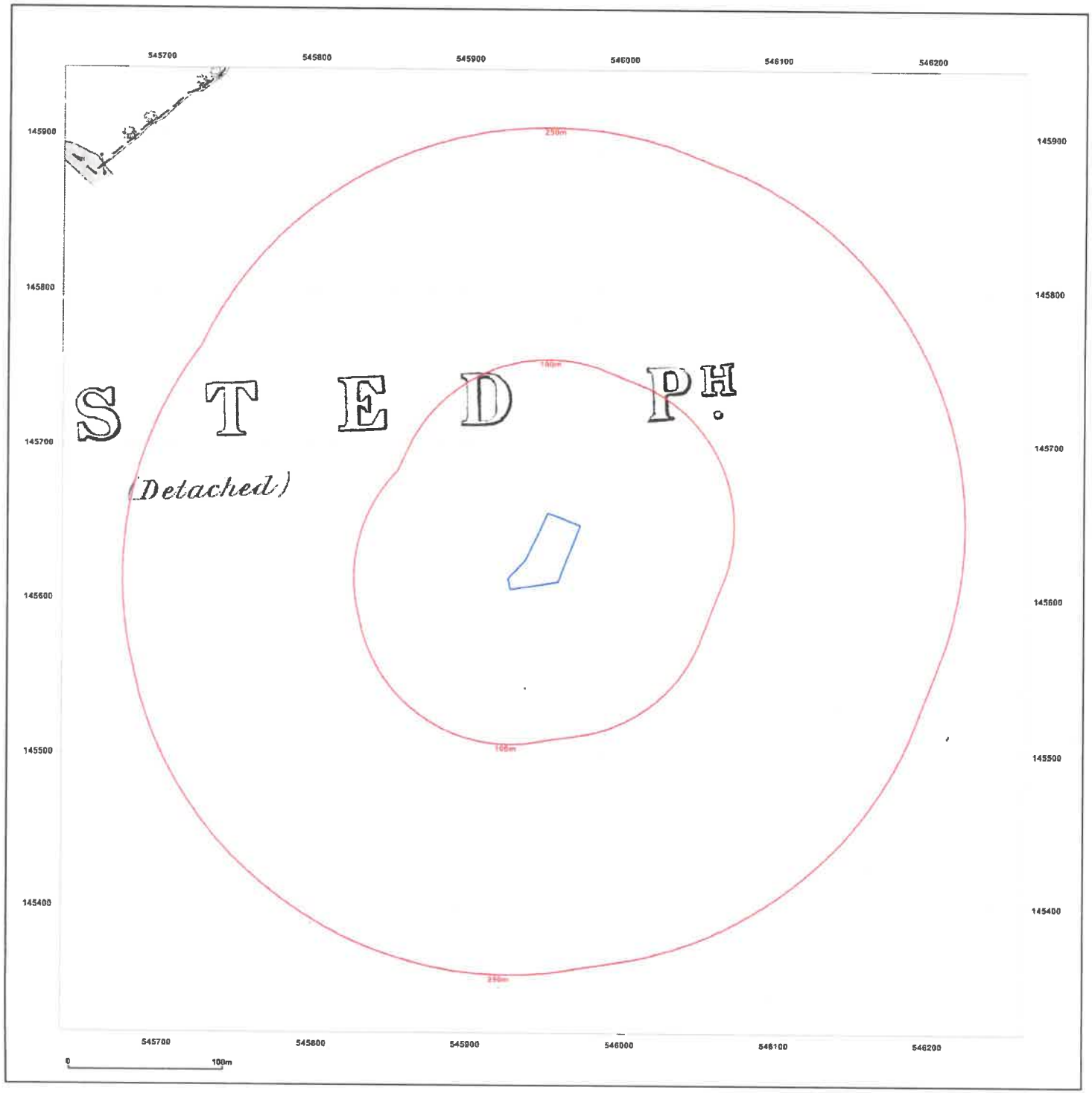
This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: County Series
Map date: 1870
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1870
Revised 1870
Edition N/A
Copyright N/A
Levelled N/A

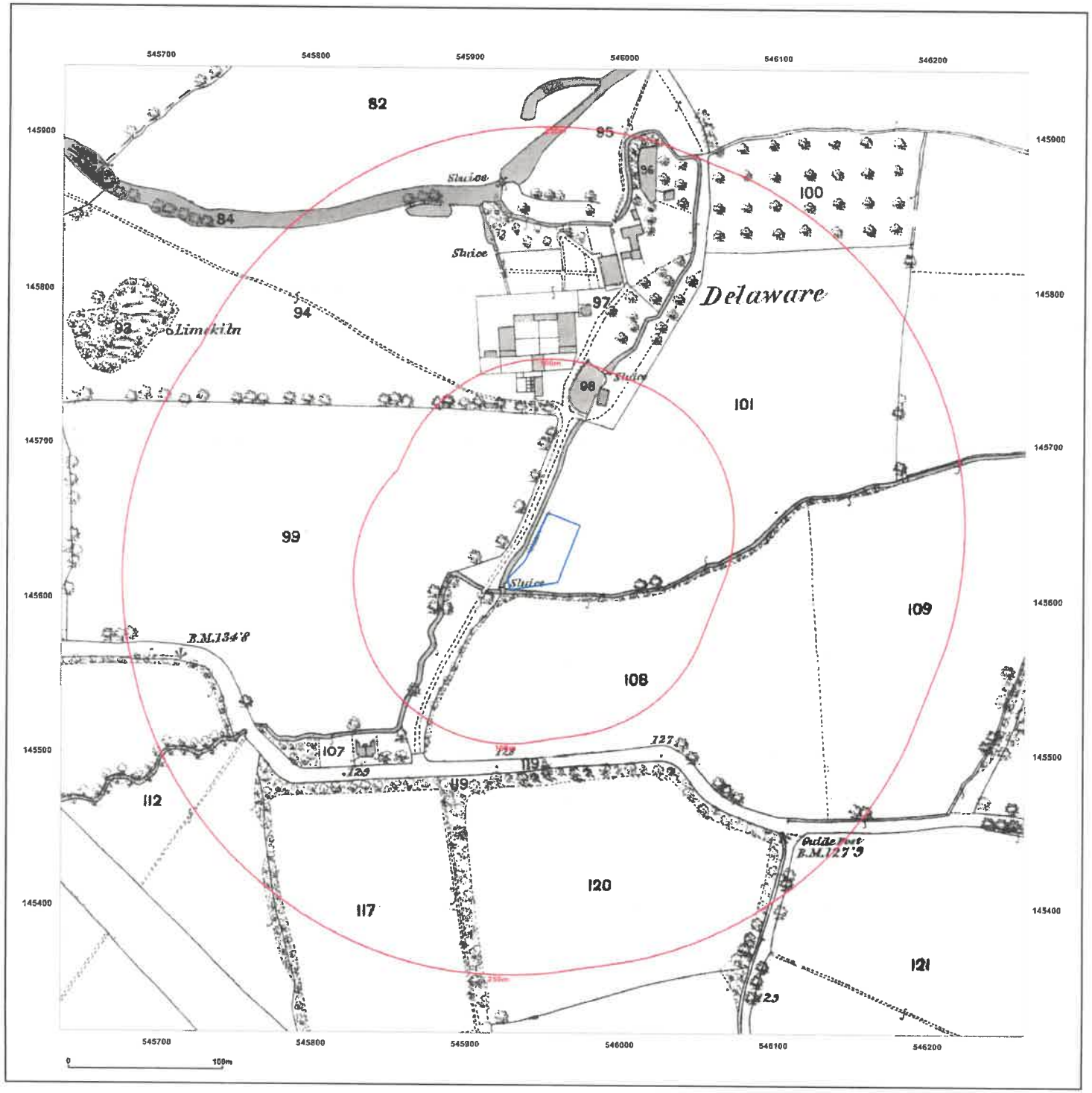
Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref:	EMS_632688_841484
Report Ref:	EMS-632688_841484
Grid Ref:	545950, 145631

Map Name:	County Series
Map date:	1870
Scale:	1:2,500
Printed at:	1:2,500

N
W E
S

Surveyed 1870
Revised 1870
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

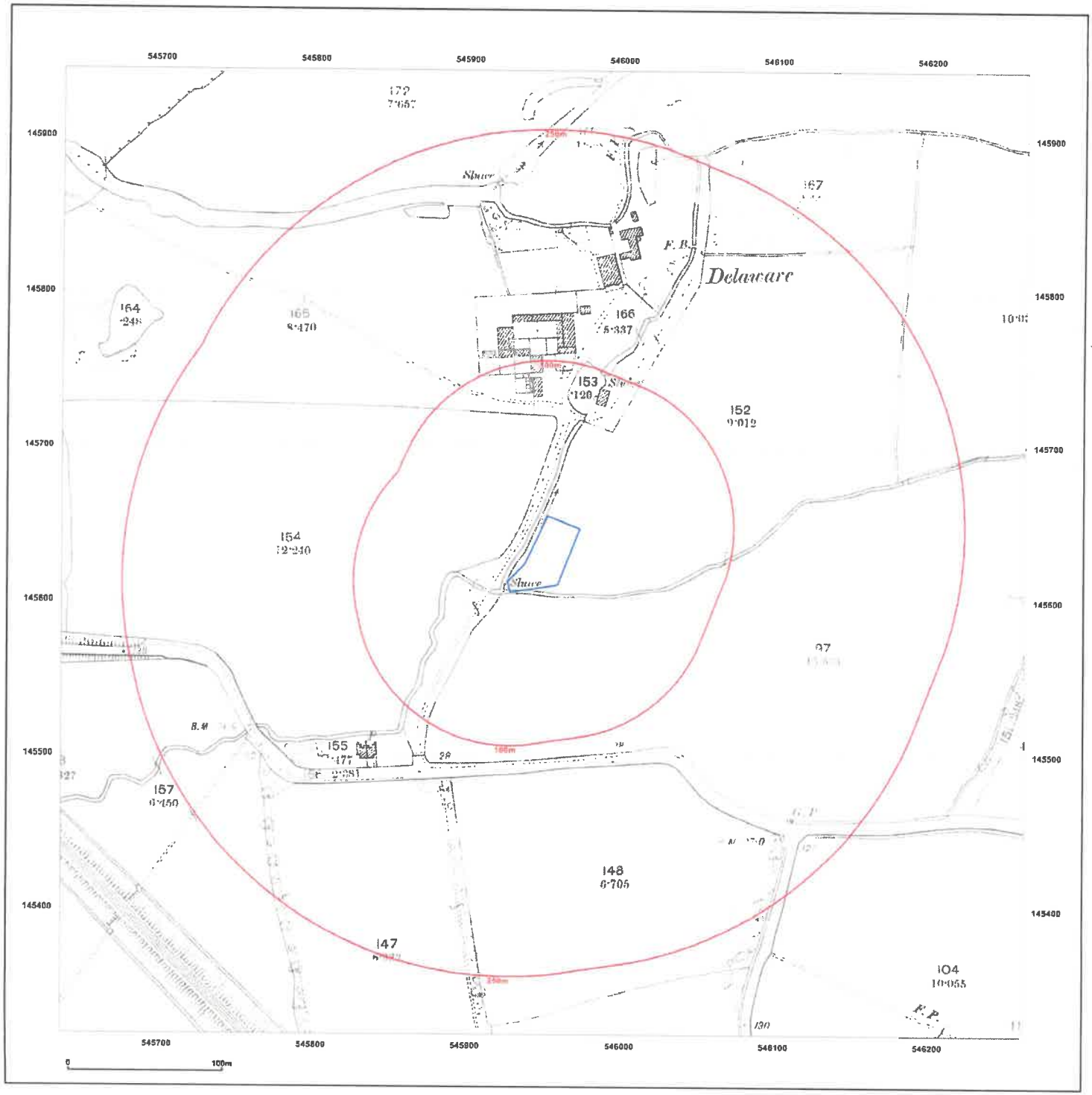
Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: County Series
Map date: 1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

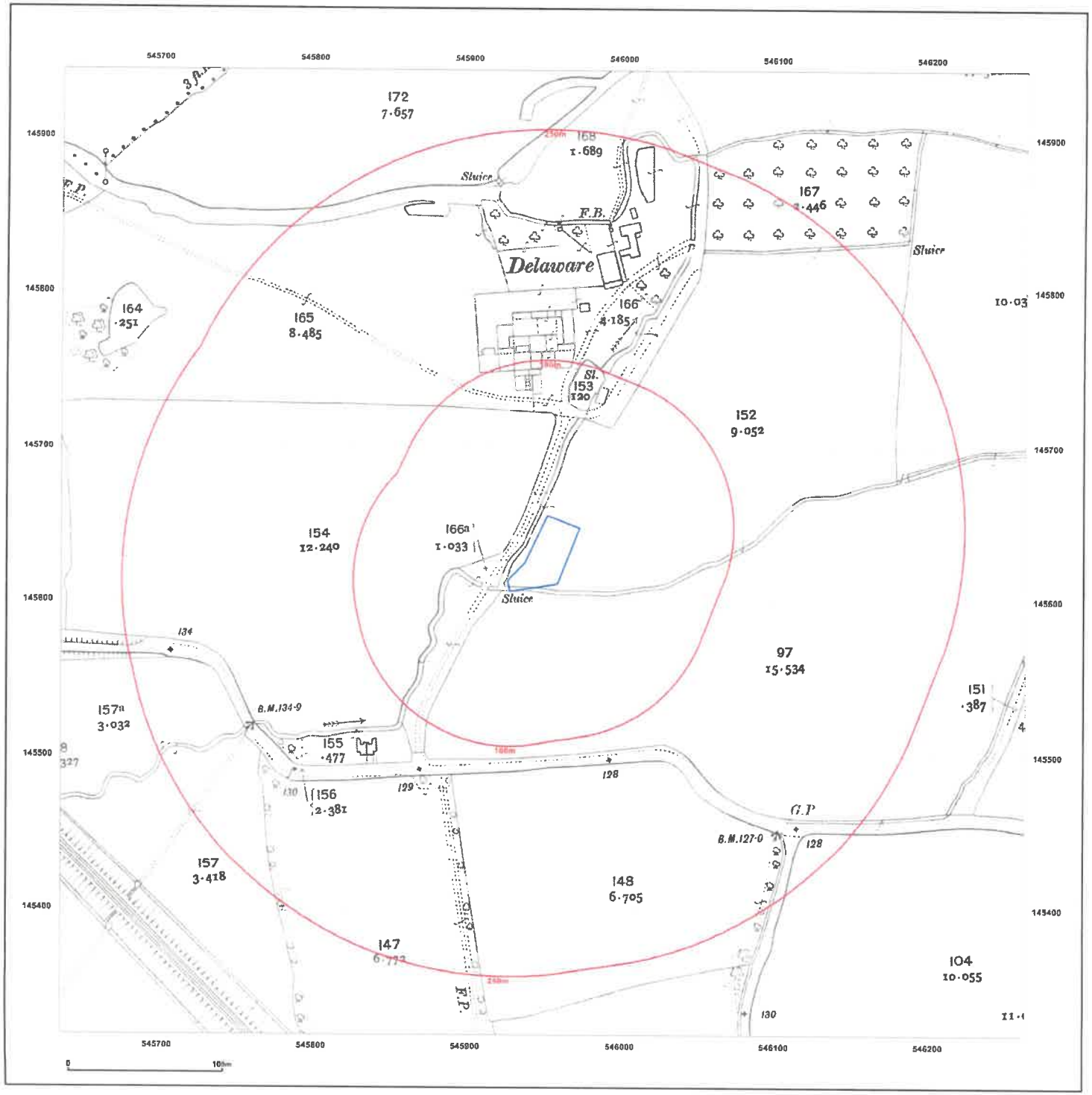
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: County Series
Map date: 1908
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1908
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

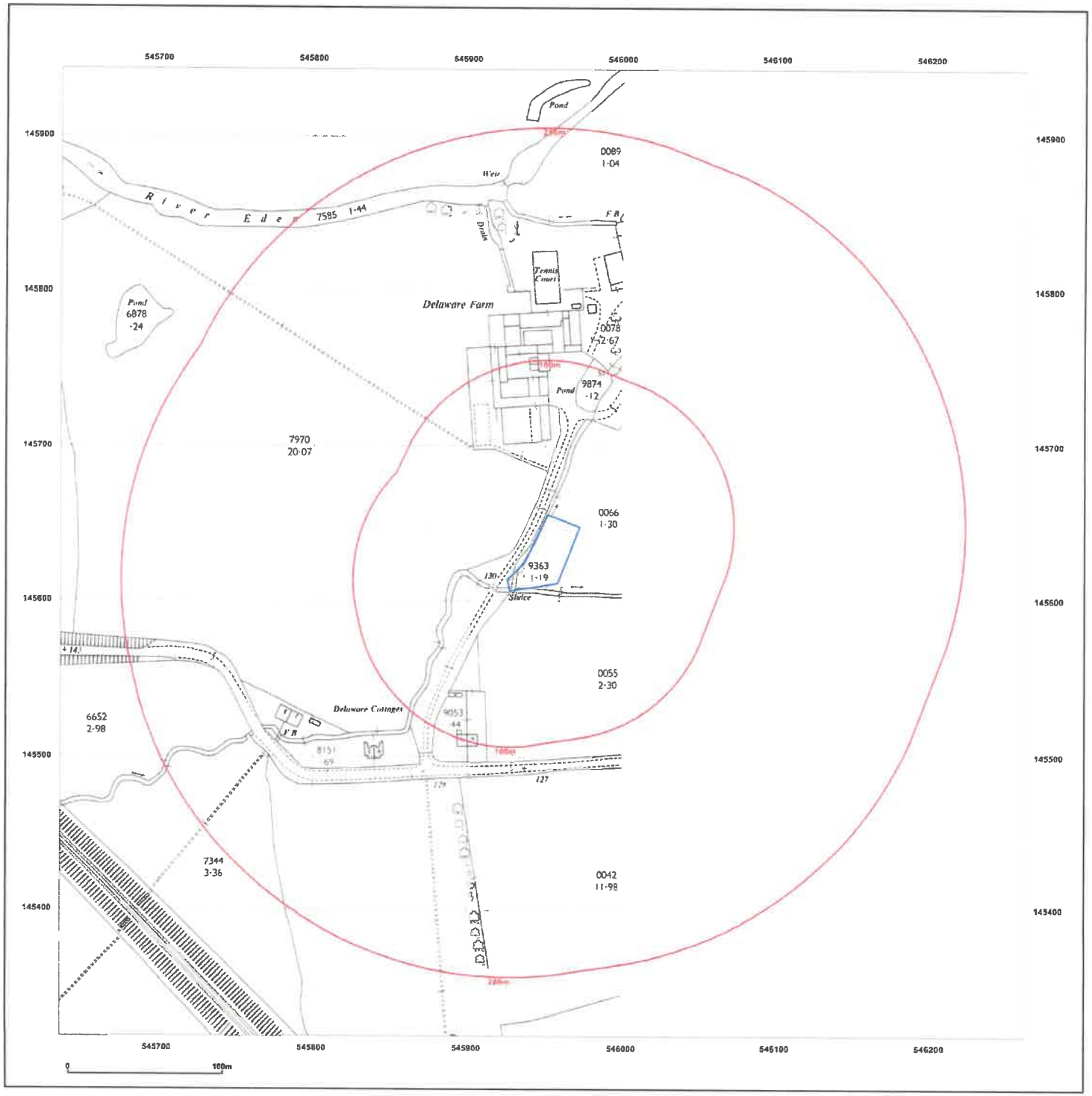
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1964
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1964
Revised 1964
Edition N/A
Copyright 1965
Levelled 1951

Groundsure INSIGHTS

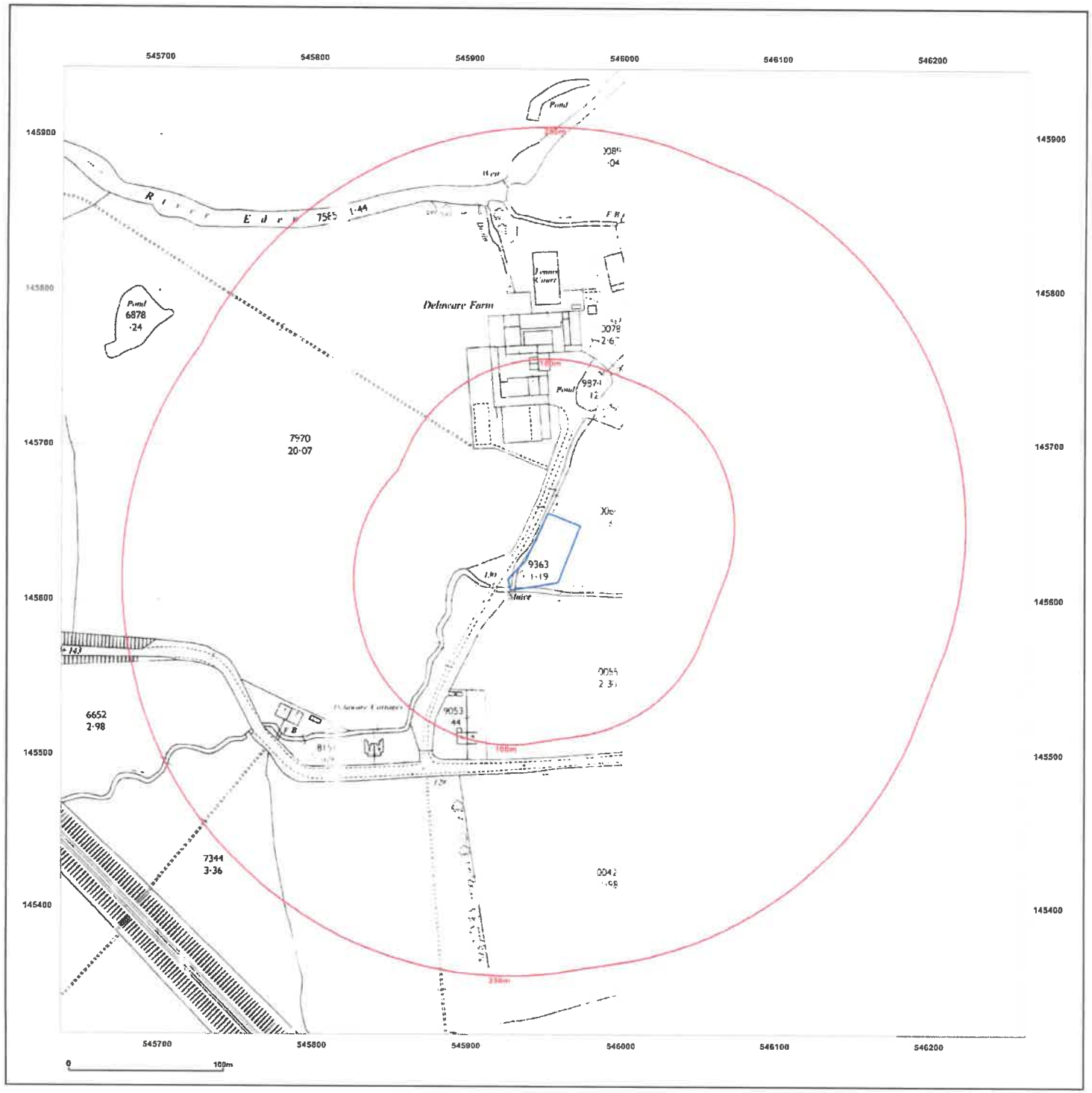
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1965
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

Groundsure INSIGHTS

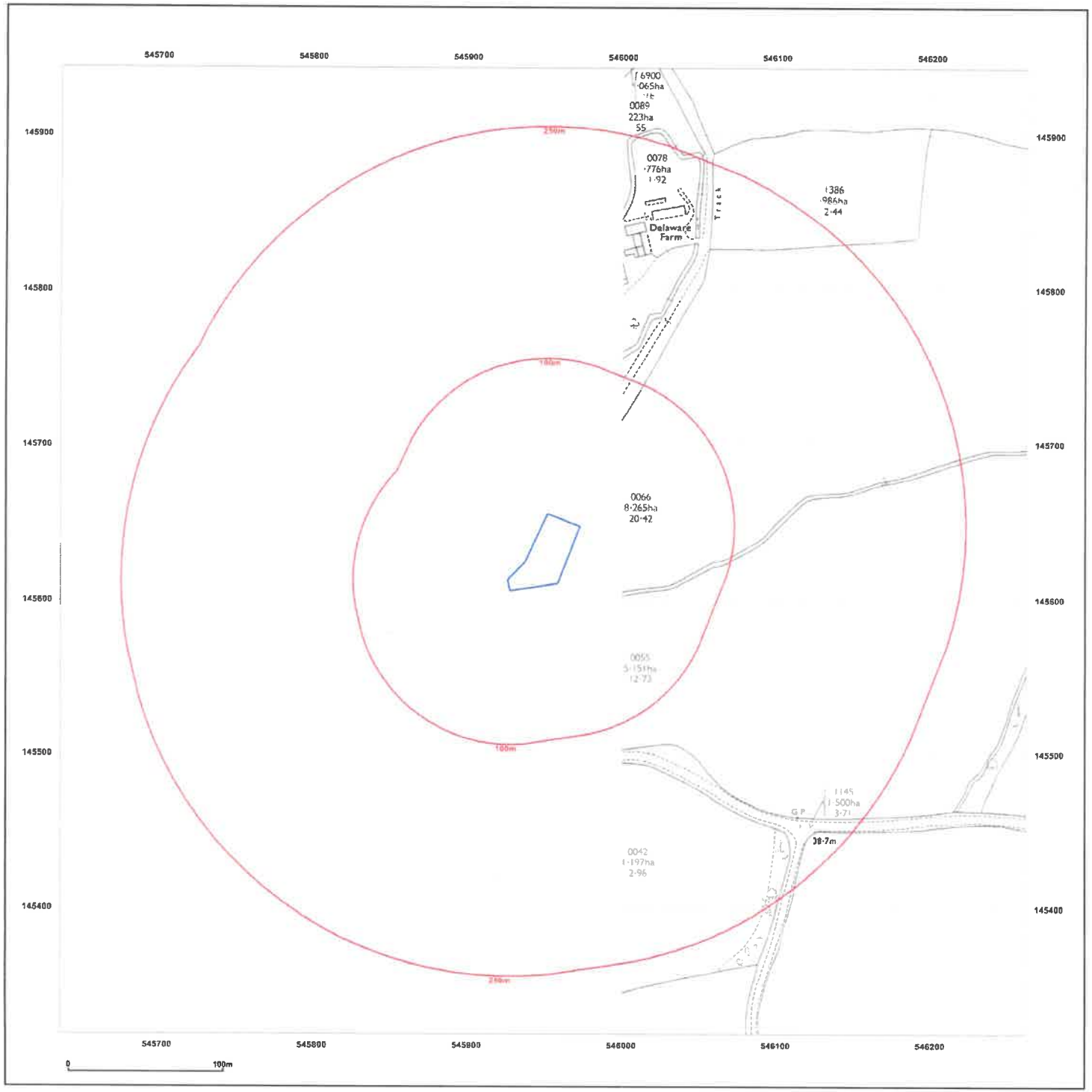
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

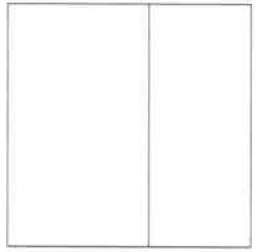
Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1973
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1973
Revised 1973
Edition N/A
Copyright 1974
Levelled 1951

Groundsure INSIGHTS

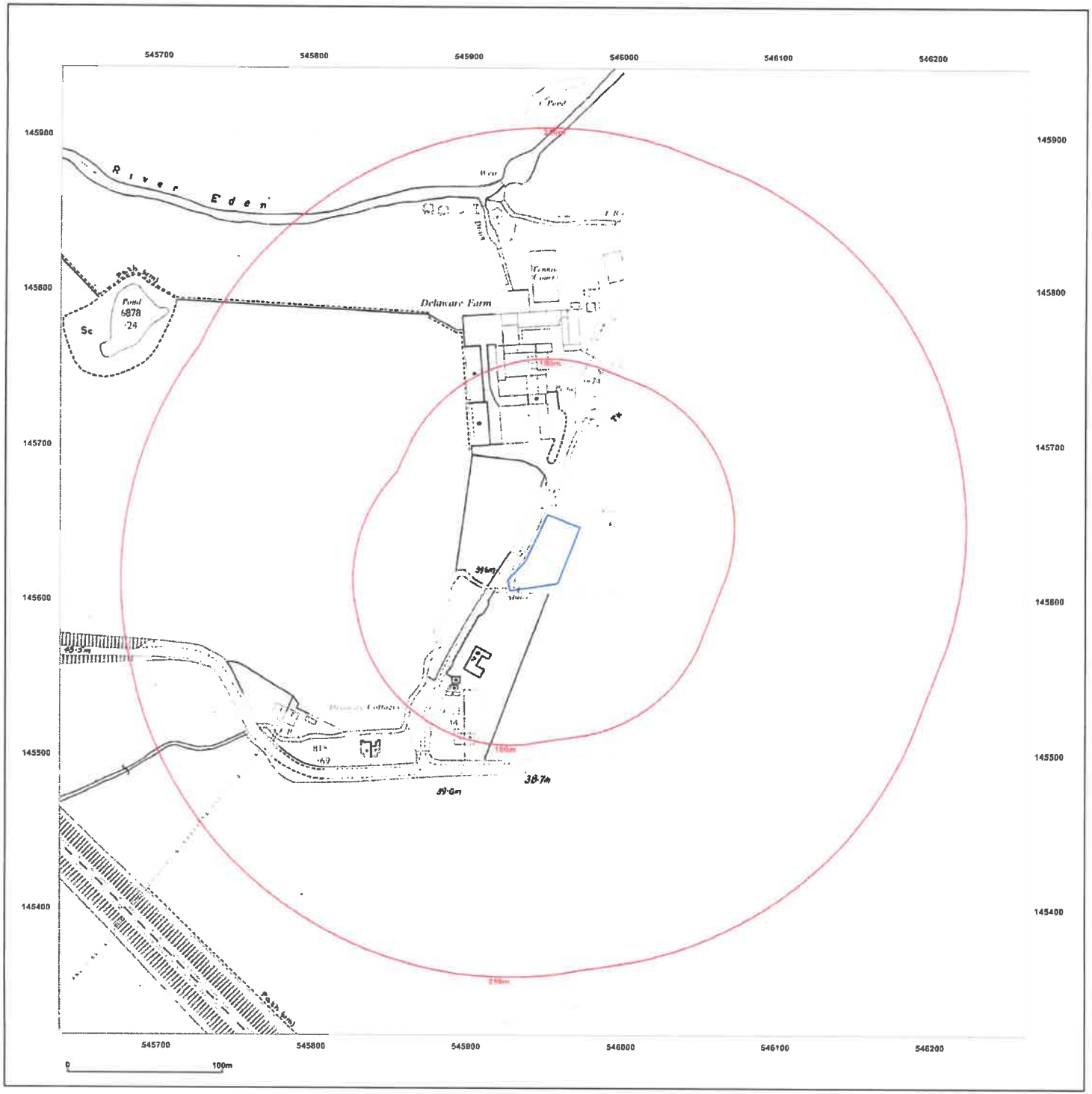
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

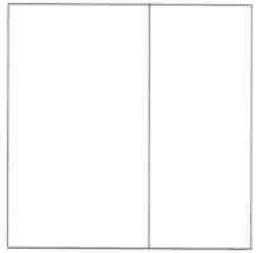
Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1985
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1950
Revised 1985
Edition N/A
Copyright 1985
Levelled 1950

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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

emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1988-1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1988
Revised 1988
Edition N/A
Copyright 1989
Levelled 1951

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

Groundsure INSIGHTS

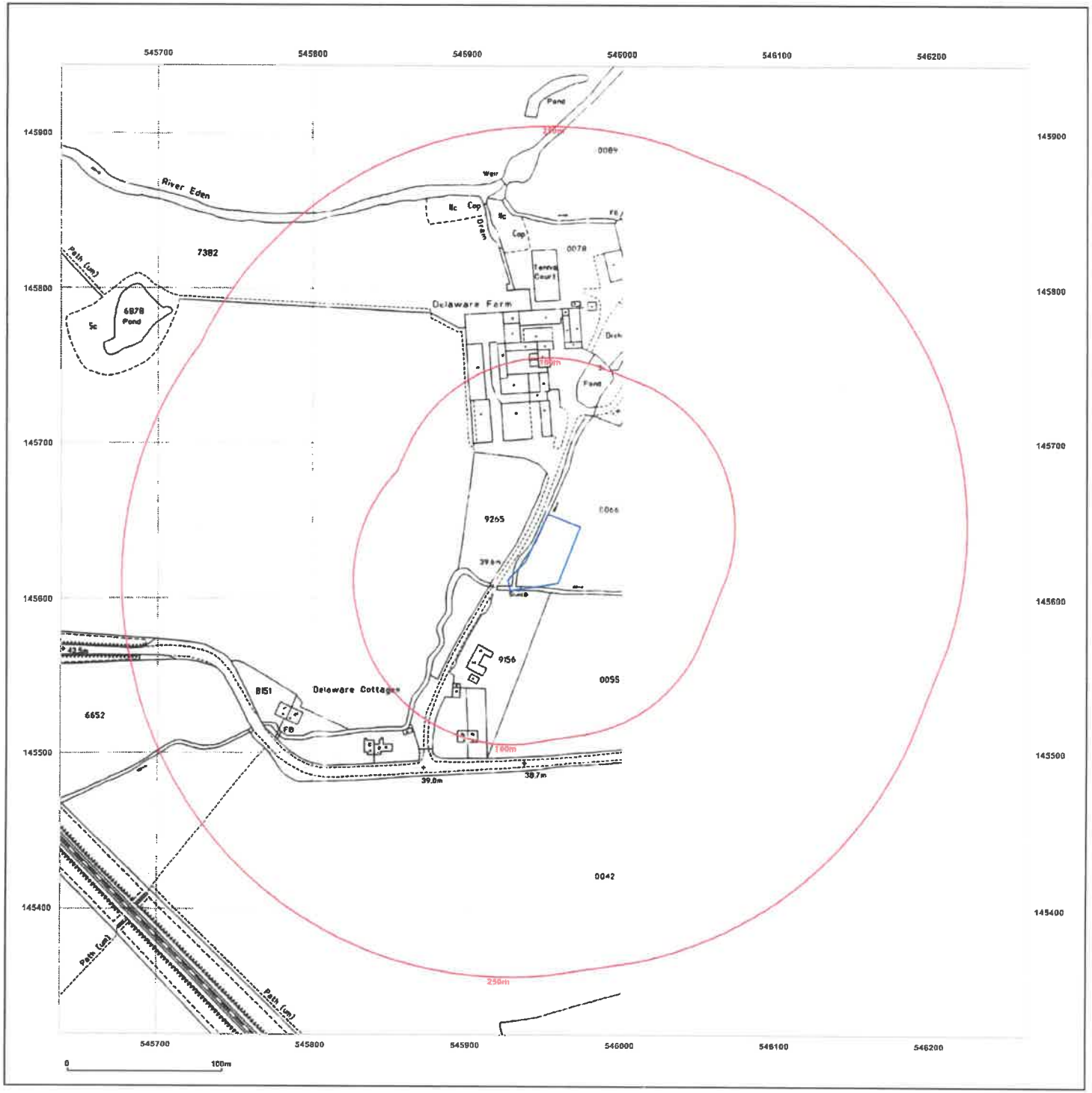
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

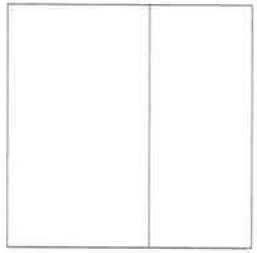
Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

Map Name: National Grid
Map date: 1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



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

Groundsure INSIGHTS

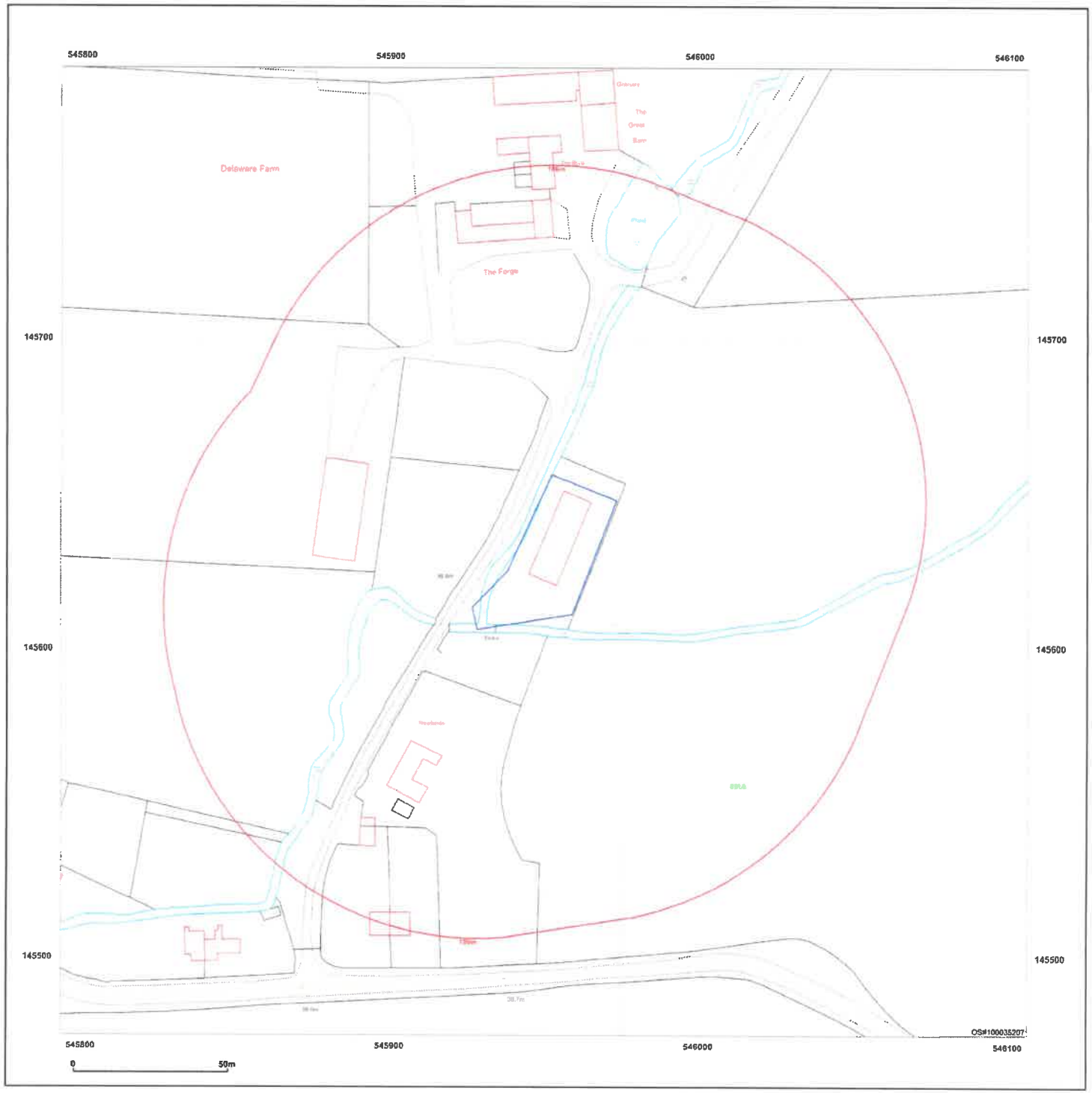
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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



emapsite™

Site Details:

Newlands Barn,Delaware Farm,Edenbridge,TN8 7LD

Client Ref: EMS_632688_841484
Report Ref: EMS-632688_841484
Grid Ref: 545950, 145631

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

N
W E
S

2003

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 09 September 2020

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

Appendix B
Environmental Risk Assessment Guidance Note

	Definition	Examples
Severe	Short term (acute) risk to human health likely to result in significant human harm. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. Short-term risk to a particular ecosystem or organism forming part of such ecosystem.	• High concentrations of cyanide on the surface of an informal recreation area. • Major spillage of contaminants into controlled water. • Explosion, causing building collapse.
Medium	Long-term (chronic) risk to human health likely to result in significant harm. Pollution of sensitive water resources. Significant change in a particular ecosystem or organism forming part of such ecosystem.	• Concentrations of contaminant in excess of generic, or site specific assessment criteria. • Leaching of contaminants to a major or minor aquifer. • Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant harm to crops, buildings, structures, services or the environment. Damage to sensitive buildings, structures, services or the environment.	• Pollution of non-classified groundwater. • Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant which may resulting financial loss, or expenditure to resolve. Non-permanent health effects to humans (easily prevented by means such as protective clothing etc). Easily reparable effects of damage to buildings, structures or services.	• The presence of contaminants at such concentrations that protective equipment is required during site works. • The loss of plants in a landscaping scheme. • Discoloration of concrete.

Classification of Consequence*

	Definition
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable in the long term, or, there is evidence at the receptor of harm or pollution.
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.
Low Likelyhood	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 it 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.

Classification of Probability*

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelyhood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

Risk Matrix – Comparison of Consequence and Probability*

* taken from CIRIA C552:2001 'Contaminated Land Risk Assessment – a guide to good practice'